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Zagreb, 10 March 2017

**30<sup>th</sup> Meeting of the Permanent Expert Group for Flood Protection  
REPORT FROM THE MEETING**

Zagreb, 10 March 2017

Venue: Premises of the International Sava River Basin Commission, Kneza Branimira 29/II, Zagreb

## Table of Contents

<b>I. ATTENDANCE.....</b>	<b>3</b>
<b>II. CHAIRMANSHIP.....</b>	<b>3</b>
<b>III. ADOPTED AGENDA .....</b>	<b>3</b>
<b>IV. DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS.....</b>	<b>4</b>
<b>AD.1. OPENING OF THE MEETING .....</b>	<b>4</b>
Welcome and opening remarks by the PEG FP Chairman .....	4
Adoption of the Agenda.....	4
<b>AD.2. ISRBC ACTIVITIES BETWEEN THE TWO PEG FP MEETINGS .....</b>	<b>4</b>
Presentation on the ISRBC activities .....	4
Short statements/presentations on the relevant activities in the Parties .....	4
<b>AD.3. EXCHANGE OF INFORMATION ON FLOOD RELATED PROJECTS .....</b>	<b>4</b>
<b>AD.4. DEVELOPMENT OF THE FLOOD RISK MANAGEMENT PLAN FOR THE SAVA RIVER BASIN</b>	<b>4</b>
<b>AD.5. DEVELOPMENT OF THE FLOOD FORECASTING AND WARNING SYSTEM FOR THE SAVA</b>	
<b>RIVER BASIN.....</b>	<b>5</b>
<b>AD.6. U.S. GOVERNMENT SUPPORT – 2ND PHASE.....</b>	<b>5</b>
<b>AD.7. SAVA GIS .....</b>	<b>6</b>
<b>AD.8. OTHER RELEVANT PROJECTS AND ACTIVITIES .....</b>	<b>7</b>
<b>AD.9. WORK PLAN FOR FY 2017.....</b>	<b>7</b>
<b>AD.10. ANY OTHER ISSUES.....</b>	<b>7</b>
<b>ANNEX I. LIST OF PARTICIPANTS.....</b>	<b>8</b>
<b>ANNEX II. LIST OF DOCUMENTS .....</b>	<b>9</b>

## **I. ATTENDANCE**

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The PEG members from Slovenia, Croatia, Bosnia and Herzegovina and Serbia attended the meeting. Additional expert from Serbia attended the meeting. The expert from the UNESCO Regional Bureau for Science and Culture in Europe, Venice (UNESCO Venice Office) also participated at the respective agenda item via web link.

The list of participants is annexed to this report.

## **II. CHAIRMANSHIP**

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Mr. Dragan Zeljko chaired the meeting.

## **III. ADOPTED AGENDA**

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- 1. Opening of the meeting**
  - Welcome address
  - Adoption of the Agenda
- 2. Overview of the activities between the two PEG FP meetings**
  - Presentation on the ISRBC activities
  - Short statements/presentations on the relevant activities in the Parties
- 3. Exchange of information on flood related projects**
  - Status of collection of information on the projects
  - Discussion & conclusions
- 4. Development of the Flood Risk Management Plan for the Sava River basin**
  - Introduction
  - Status of the “WBIF” project - component 1
  - Discussion & conclusions
- 5. Development of the Flood Forecasting and Warning System for the Sava River basin**
  - Status of the “WBIF” project - component 2
  - Discussion and conclusions
- 6. U.S. Government support – 2nd phase**
  - Hydrologic modelling
  - Hydraulic modelling
  - Sava LiDAR
  - Discussion and conclusions
- 7. Sava GIS**
  - Presentation of the latest updates
  - Status of collection of national FRM related datasets
  - Discussion & conclusions
- 8. Other relevant projects and activities**
  - Improving Resilience to Emergencies through Advanced Cyber Technologies I-REACT
- 9. Work plan for FY 2017 Introduction (D. Zeljko)**
  - Introduction
  - Discussion & conclusions
- 10. Any other issues**

## **IV. DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS**

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### **AD.1. OPENING OF THE MEETING**

#### *Welcome and opening remarks by the PEG FP Chairman*

The Chairman, Mr. Dragan Zeljko opened the meeting, welcomed the participants and informed the participants on some logistical issues.

#### *Adoption of the Agenda*

PEG FP adopted the proposed agenda of the 30<sup>th</sup> meeting (*Doc.Ref.No: 3-17-2/2-2*), with agenda items presented in Part III of this report. (Meeting document: *Ad.1. PEG FP\_30th meeting\_AdoptedAgenda*).

### **AD.2. ISRBC ACTIVITIES BETWEEN THE TWO PEG FP MEETINGS**

#### *Presentation on the ISRBC activities*

The Secretary, Mr. Dejan Komatina, informed the PEG FP on the most important activities and events since the last, 29<sup>th</sup> PEG FP meeting held in May 2016, as well as on the upcoming meetings and events.

More information can be found in presentation (*Ad.2\_Presentation on ISRBC activities\_PEG FP 30*).

#### *Short statements/presentations on the relevant activities in the Parties*

Members informed the PEG about the activities in the implementation of the EU Floods Directive in their countries and the current status in the flood risk management planning. Relevant information about ongoing flood related projects were also given.

After the short statements, the Slovenian member has shown an explicative video - *Živeti s poplavami* about the project: *Cross-border cooperation for flood risk reduction (FRISCO)*, see link: <https://frisco-project.eu/sl/multimedija/video/>.

### **AD.3. EXCHANGE OF INFORMATION ON FLOOD RELATED PROJECTS**

Mr. Mirza Sarač, from the Secretariat, presented the current status of collection of information on the projects.

More information can be found in presentation (*Ad.3\_Presentation\_Exchange of information on flood related projects*).

The PEG took note on the information provided and concluded the following:

- The countries will deliver the remaining information on projects for the 2nd cycle of information collection until April 14, 2017;
- Any further exchange of information will be carried out via the SavaGIS Metadata Catalogue;
- The Secretariat will create the accounts for all members of the PEG FP to upload and download data via the SavaGIS Geoportal and web-applications.

### **AD.4. DEVELOPMENT OF THE FLOOD RISK MANAGEMENT PLAN FOR THE SAVA RIVER BASIN**

Mr. Zeljko informed the PEG that the Program for development of Flood Risk Management Plan in the Sava River Basin was adopted at the 44<sup>th</sup> Session of ISRBC, held in Zagreb on February 21-22, 2017.

The approved Program has been delivered to the PEG FP members as one of the meeting document (*Ad.4\_Program\_SFRMP\_ADOPTED*).

Mr. Zeljko also briefly informed the PEG on the current status of the WBIF project component 1 (development of the Sava FRM Plan) stressing that World Bank has not yet been officially informed ISRBC about the selected consultant.

PEG FP members have shortly discussed the Program and the WBIF project component as well as necessity of establishment of the core working group for following the implementation of the project. It was also discussed about the proposal to hold a PEG FP meeting, back to back with the ICPDR FP EG, on May 11, 2017 in Ljubljana, which would be dedicated to the WBIF project component.

The PEG took note on the information provided and after discussion the following was concluded:

- After the official notification from WB, the Secretariat will held an introductory meeting with the selected consultant
- If necessary, the Secretariat will inform the PEG members to hold a meeting on May 11, 2017 in Ljubljana, otherwise the first meeting regarding the project will be at the kick-off.

#### **AD.5. DEVELOPMENT OF THE FLOOD FORECASTING AND WARNING SYSTEM FOR THE SAVA RIVER BASIN**

Mr. Sarač briefly informed the PEG on the current status of the WBIF project component 2 (development of the Sava FFWS) stressing that after the PEG FP 29, the World Bank has finalized the procedure of selection of the consultant and the project was formally launched on June 21, 2016 with the kick-off meeting held in Zagreb.

The following main accomplishments so far are:

- Project organizational structure has been established. It consists of the:
  - Steering Board (SB) – to perform the overall monitoring of the project performance
  - International Working Group (IWG) – to harmonize the input of the Country Working Groups, follow the overall progress, and provide input to the Steering Board
  - Country Working Groups (CWG) – to provide all data and other related information required for development of the Sava FFWS, and provide input to the International Working Group.

One meeting of the SB and one of the IWG were held, as well as one round of the CWGs meeting in all countries, except Montenegro where the meeting is planned soon.

- First pre-release of the Sava FFWS was setup in mid-January 2017
- Trainings for system administrators and for end-users were held in January and February.

In the course of the project, several versions of the Sava FFWS will be released and tested by the country experts. The next version of the system is expected in May 2017.

After the presentation Mr. Sarač gave a live demo of the Sava FFWS pre-release 0.1.

- PEG FP took note on the information.

Details on the project activity are available in *Ad.5\_SavaFFWS\_WBIF\_Component 2-Summary Sheet* and more information can be found in presentation (*Ad.5\_Development of Sava FFWS*).

#### **AD.6. U.S. GOVERNMENT SUPPORT – 2ND PHASE**

Mr. Sarač informed the PEG about the project progress. He gave an overview presentation and emphasized that the hydrologic modelling for the Sava River Basin was completed and the final models were distributed to Ministries of the Parties to FASRB and agencies/institutions responsible for water management and hydro-meteorological services of the Parties on January 16, 2017.

This effort was finalized with a hydrologic modeling workshop held in Zagreb from 02-03 March 2017. The workshop was attended by approximately 40 participants from the ISRBC member countries, Montenegro, and hydropower agencies.

Mr. Sarač stressed that since the calibrated hydrologic model is completed, the efforts have begun for further development and calibration of the hydraulic HEC-RAS model of the Sava River mainstem. He informed the PEG that the consultant for the Sava LiDAR project, as the first step of the hydraulic modelling activity, has been contracted at the end of June, 2016. Once the LiDAR derived products are completed, the USACE experts will, assisted by the Secretariat, start with setting up of a new geometry of the model. The results from the calibrated hydrological HEC-HMS model, will then be used in hydraulic modelling. It is expected that the fully calibrated Sava HEC-RAS model will be completed by mid-2017 and delivered to ISRBC.

Mr. Zeljko informed the PEG members that the purchase of IT equipment for the Sava FFWS is currently being scoped, within the 2<sup>nd</sup> U.S. Government support, and all advance procurement steps are being taken to be prepared for the approval of the funding for this purchase.

After the presentation Mr. Sarač briefly showed the new hydrological model to the PEG members for the Sava River basin and gave a demonstration of capabilities how the SavaHIS database can be used to download and import data directly into HEC-DSSVue and once this data has been imported into HEC-DSSVue, how the data can be utilized by other HEC software products such as HEC-HMS.

- PEG FP took note on the information.

Details on the project activities are available in *Ad.6\_ US Government support 2nd phase-Summary Sheet* and more information can be found in presentation (*Ad.6\_U.S. Government support – 2nd phase*).

## **AD.7. SAVA GIS**

Mr. Sarač informed the PEG that the need for certain improvements has been noticed, primarily for the SavaGIS Geoportal, after a period of about a year of very successful use and simultaneous testing of all SavaGIS functionalities. He stressed that the issue was discussed at the 14<sup>th</sup> PEG GIS meeting with conclusion that these improvements for the upgrade functionalities will contribute to even higher quality technical solution of the system and further customize the Geoportal interface to the end users. Thereafter these activities are contracted and implemented. Mr. Sarač gave a brief demonstration of these improvements.

- PEG FP took note on the information.

Thereafter, Mr. Sarač informed the PEG about the amount of the FRM data collected and imported into the SavaGIS central database so far and stressed the earlier agreed actions, especially those related to the development of the Sava FRM Plan. He pointed out that the PEG GIS members were informed about the ongoing activities related to the development of Sava FRM Plan on its 14<sup>th</sup> meeting when the following was agreed:

PEG GIS will only check the imported data so far (by the Secretariat) in the central SavaGIS FRM database, as follows:

- PFRA & APSFR (collected for all countries) - Flood Events, Flood Locations, Flood Characteristics, Flood Summary Information, Flood Mechanism Types, Flood Sources, Flood Consequences for Human Health, Economic Activity, Environment, Cultural Heritage)
- Flood Hazard Maps (collected for HR, SI) - for all identified APSFR, for the following scenarios (i) floods with a medium probability, and (ii) floods with a low probability, or extreme event scenarios)
- Flood protection structures (collected for BA, RS) - along the Sava River and the tributaries with catchment area larger than 1,000 km<sup>2</sup> for the following structures: dykes, retentions, pumping stations, floodgates, dams, overflows)

PEG GIS will upload the remaining data in the central SavaGIS FRM database for the following datasets, by countries:

- PFRA & APSFR
  - BA - upload remaining attributes
  - HR - check and confirm
- Flood hazard maps
  - BA - upload spatial and attribute data, if any
  - HR - check and confirm the data
  - RS - upload spatial and attribute data, if any
- Flood protection structures
  - BA - upload additional data, if any
  - HR - upload spatial and attribute data
  - RS - upload additional data, if any
  - SI - upload spatial and attribute data.

Conclusions:

- The countries will upload the remaining and available data, immediately after the next PEG GIS meeting (March 16, 2017)
- The Secretariat will inform PEG GIS about the previous conclusion and necessity of these data.

Details are available in *Ad.7\_SavaGIS-Summary Sheet* and more information can be found in presentation (*Ad.7\_SavaGIS*).

#### **AD.8. OTHER RELEVANT PROJECTS AND ACTIVITIES**

After a short explicative video: <https://www.youtube.com/watch?v=4t5ScCh6XU0>, Mr. Davide Poletto, representative of the UNESCO Venice Office, provided a short presentation on the project *I REACT - Improving Resilience to Emergencies through Advanced Cyber Technology* via web link. He stressed that I REACT will be the first European-wide platform to integrate emergency management data coming from multiple sources, including that provided by citizens through social media and crowdsourcing.

Mr. Poletto pointed out that the UNESCO is keen to closely work with ISRBC and its member states to introduce the I REACT concept and its solutions, which are now on their making. UNESCO is willing to cooperate also to test with ISRBC and with the involvement of other local stakeholders (Civil protection sector) the functioning of I REACT solutions during the demonstration phase of the project.

Details on the project activity are available in *Ad.8\_Ad.8\_UNESCO\_I REACT-Summary Sheet*.

- PEG FP took note on the information
- The Secretariat, jointly with the UNESCO representatives, will investigate the possibility of connection of the I REACT project and ongoing flood related activities within the WBIF project
- The UNESCO representatives and the I REACT project consultants will be invited to one of the following meetings of the WBIF project, to present the technical details of I REACT.

#### **AD.9. WORK PLAN FOR FY 2017**

PEG FP took note on the Work plan for FY 2017 (*Ad.9\_Work Plan for FY 2017\_ADOPTED*).

#### **AD.10. ANY OTHER ISSUES**

The next 31<sup>th</sup> meeting of PEG FP could be held in May 2017, back to back with the ICPDR FP EG meeting, but that will be confirmed after meeting of the WBIF project component 1.

## ANNEX I. LIST OF PARTICIPANTS

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<sup>1</sup> Participated via web link

## ANNEX II. LIST OF DOCUMENTS

Agenda item	Document	ENG	HRV	SLO	BIH-BOS	BIH-HRV	BIH-SRP	SRP
1.	Ad.1. PEG FP_30th meeting_AdoptedAgenda.docx	↓						
2.	Ad.2_Presentation on ISRBC activities_PEG FP 30.ppt	↓						
3.	Ad.3_Presentation_Exchange of information on flood related projects.ppt	↓						
4.	Ad.4_Program_SFRMP_ADOPTED.pdf	↓						
5.	Ad.5_SavaFFWS_WBIF_Component 2-Summary Sheet.doc	↓						
5.	Ad.5_Development of Sava FFWS.ppt	↓						
6.	Ad.6_US Government support 2nd phase-Summary Sheet.doc	↓						
6.	Ad.6_U.S. Government support – 2nd phase.ppt	↓						
7.	Ad.7_SavaGIS-Summary Sheet.doc	↓						
7.	Ad.7_SavaGIS.ppt	↓						
8.	Ad.8_UNESCO_IReact-Summary Sheet.doc	↓						
9.	Ad.9_Work Plan for FY 2017_ADOPTED.pdf	↓						