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Zagreb, May 25, 2018

33rd Meeting of the Permanent Expert Group for Flood Protection
REPORT FROM THE MEETING
Zagreb, 26 April 2018

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

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I. ATTENDANCE

The PEG members from Slovenia, Croatia, Bosnia and Herzegovina and Serbia as well as an expert from Slovenia attended the meeting. The Consultant representatives engaged for the development of Sava FRMP, also participated at the respective agenda item.

The list of participants is annexed to this report.

II. CHAIRMANSHIP

Ms. Dragana Milovanović chaired the meeting.

III. ADOPTED AGENDA

- 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. Development of the Flood Risk Management Plan for the Sava River basin**
 - Project progress status
 - Presentation/discussion on the PFRA conclusions
 - *Approval of proposal on the areas of mutual interest for flood protection*
 - Presentation/discussion on the FHR maps conclusions
 - *Joint methodology for preparation of the flood maps*
 - Presentation/discussion on the objectives of flood risk management of common interest on the Sava River basin level
 - Presentation/discussion on the measures to achieve the objectives of common interest
 - *Catalogue of measures*
 - *Summary of measures*
 - Presentation/discussion on the draft Sava FRMP
 - Work plan
- 4. Development of the Flood Forecasting and Warning System for the Sava River basin**
 - Status of the “WBIF” project - component 2
- 5. U.S. Government support – 2nd phase**
 - Status of the activity on hydraulic modelling
- 6. Any other issues**

IV. DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

AD.1. OPENING OF THE MEETING

Welcome and opening remarks by the PEG FP Chairman

Ms. Dragana Milovanović opened the meeting, welcomed the PEG FP members, national experts, as well as the Sava FRMP project experts and informed the participants on some logistical issues.

Adoption of the Agenda

PEG FP adopted the proposed agenda of the 33rd meeting (*Doc.Ref.No: 3-18-5/2-2*), with agenda items presented in Part III of this report. (Meeting document: *Ad.1. PEG FP_33rd meeting_AdoptedAgenda*).

AD.2. OVERVIEW OF THE ACTIVITIES BETWEEN THE TWO PEG FP MEETINGS

Presentation on the ISRBC activities

Mr. Zeljko, the Secretary of ISRBC informed the PEG FP on the most important activities and events since the last 32nd PEG FP meeting held in December 2017, as well as on the upcoming meetings and events.

The 7th Meeting of the Parties to the FASRB will be held in Slovenia on June 7, 2018.

The PEG members were informed that Protocol on Prevention of Water Pollution caused by Navigation to the FASRB and the Protocol on Sediment Management to the FASRB entered into a force on October 8, 2017. Based on the Sava Commission`s conclusion Secretariat initiated the preparation of the Strategy on Implementation of the FASRB and Action Plan for the period 2018-2023.

WB and EU initiated a dialogue on Regional Program for the Integrated Development of the Sava and Drina River Corridor with meeting held in Brussels on January 22, 2018 and activities (meetings) in the region related the process of discussion and implementation of this Regional Program. One of basic documents for the Regional Program is Joint Plan of Actions (JPA) for the Sava River Basin, presented at the previous meeting also delivered to the PEG and available at the ftp folder: /Documents/Joint Plan of Actions - JPA. At the meeting in Brussels the priorities of Sava Commission were presented.

It was stressed that the results of Sava FRMP project and the content of Sava FRMP is one of the very important inputs for all activities in the flood management on basin level. The Sava FRMP is recognized as an opportunity that the structural and non-structural national measures and projects of the basin wide importance be included and become part of regional initiative. Therefore the great expectations from the Sava FRMP project, the Consultants and the countries were once again emphasized.

More information can be found in presentation (*Ad.2_Presentation on ISRBC activities_PEG FP 33*).

Short statements/presentations on the relevant activities in the Parties

PEG FP 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.

Slovenia

Mr. Luka Štravs informed the PEG that an update of the national PFRA is ongoing in Slovenia. During the preparation of update 30-day public consultations will be held, although the EU FD does not foreseen it. Areas along the Sotla and Kolpa Rivers, defined within the determination of the AMIs for Sava FRMP, will be analyzed on the national level and probably included in the updated PFRA. The bilateral FRISCO 1 project (SI-HR) is in focus and the H&H modeling activity is in the final stage for which the Sava HEC-HMS hydrological model has been partially used.

The Regional Workshop on the Floods Directive Implementation was announced. The workshop will be held in Ljubljana, 22 - 23 May 2018 and all PEG members are invited.

Croatia

Mr. Darko Barbalić informed the PEG that the activities for the improvement of topographic database are in progress in cooperation with State geodetic Administration. Climate change adaptation activities will be implemented by Croatian Waters and DHMZ jointly. There are a large number of projects related to the implementation of the Flood Directive and the improvement of knowledge on various aspects of the directives. Update of the Multi-Annual Programme of Constructing Water Regulation and Protection Facilities and Amelioration Facilities is in progress. Activities related to different projects (RAINMAN, FRISCO1, FORRET, etc.) are also ongoing.

Bosnia and Herzegovina

Mr. David Latinović and Mr. Almir Bajramlić informed the PEG about the current status in the flood risk management planning and about the actual works in the dyke reconstruction along the Sava River and main tributaries.

Serbia

Ms. Merita Borota informed the PEG that the draft national FRMP for Serbia, which was prepared but not adopted, shall be a basis for the preparation of the national plans on the catchment areas level. Works on the construction of the right embankment on the Drina in Mačva between Drenovac and Čevrntija started. Also, Serbian Flood Recovery project started.

AD.3. DEVELOPMENT OF THE FLOOD RISK MANAGEMENT PLAN FOR THE SAVA RIVER BASIN

Ms. Milovanović briefly informed the PEG on the current status of the WBIF project component 1 and development of the Sava FRMP, emphasizing conclusions from the 3rd meeting of Core Working Group, held in Belgrade on February 23, 2018. Minutes of the 3rd CWG meeting is available in Annex II of this report, where all related information and recommendations from the meeting are provided.

A proposal of the disclaimer, similar to one made for the Sava RBMP, was presented. The PEG has agreed with the proposal and noted that it should be reviewed and inserted in documents in order to clarify purpose, objectives, how and why some elements of Sava FRMP are created.

Project progress status

Ms. Omerbegovic informed the PEG on the development of the background documents (BDs) and Sava FRMP.

Activity B: BDs are prepared and delivered to ISRBC. However, the opinion/agreement of PEG on proposed Areas of mutual interest (AMIs) was precondition for finalisation of set of BDs related to Tasks B2-B5. The delivery of other set of BDs related to Tasks B6-B8 is postponed until first set of documents will be approved.

Activity C: Designing the FRMP database module is completed, discussed with PEG GIS and the final proposal for approval is expected soon.

Activity D: Involving stakeholders and the public, i.e. organisation of the Stakeholder forum is underway.

Activity F: Prepare strategy for follow-up will be initiated upon completion of the public consultation.

Presentation/discussion on the PFRA conclusions and AMIs

After the Consultant's presentation on B2: Preliminary Flood Risk Assessment, which now includes a chapter on AMIs for flood protection and discussion of all participants, the following is concluded:

- All members confirmed importance of AMIs for Sava FRMP and in general agree with methodology how they are created
- Some comments (Croatia, Montenegro and the Secretariat) are still not reflected in the document and that should be corrected
- The final comments on AMIs and eventual new AMIs proposed by the countries, should be delivered by 11 May 2018. It will be anticipated that countries confirm proposed AMIs if no comments would be submitted by that time.

Presentation/discussion on the FHR maps conclusions and joint methodology for preparation of the flood risk maps

After a brief presentation on improvement of B3: FHR maps and simplified methodology for preparation of flood maps, questions and discussion of the PEG, it was concluded as follows:

- Along with two scenarios for medium and low probability, defined in the Program for the Sava FRMP development, the additional scenarios for determining the flood hazards at AMIs should be added. The PEG agreed that the joint methodology for flood hazard maps should include scenarios for the following likely return period: 20, 50, 100, 500, 1000/extreme
- Related to the flood risk maps, the PEG agreed that two scenarios, defined in the Program, should be used in the joint methodology as well as that determination of the flood risks at AMIs should be by categories of all sub-receptors (10 in total), taking into account that the spatial presentation should be in all possible formats (point, line, polygon)
- Proposed methodology should be tested during the project and examples/results of methodology testing should be presented in the draft Sava FRMP.

Presentation/discussion on the objectives of flood risk management of common interest on the Sava River basin level

The documents B4: Objectives of flood risk management of common interest has not been revised as it should be adjusted to AMIs. It was concluded:

- Objectives should be extended in line with previous comments and recommendation of the CWG and PEG FP.

Presentation/discussion on the measures to achieve the objectives of common interest and Draft Sava FRMP

The Consultant informed the PEG that the Catalogue of measures (CoM) and the Summary of measures (SoM) were not revised as they should be reorganised/harmonised with AMIs. The contents of draft Sava FRMP depend on the conclusions made from BD. Therefore,

- CoM and SoM should be completed within a week after AMIs will be confirmed, not later than May 21, 2018.
- The Consultant will prepare the first list of projects within the SoM, using the national FRMPs (SI and HR), all relevant planning documents collected during the project (BA, RS and ME) as well as projects available at the Sava GIS Metadata Catalogue. This list will be basis for the countries which then should provide available additional information on the projects related to national measures relevant for the proposed AMIs.

Work plan

- Will be updated together with the Secretariat, based on dynamic of finalisation of the first set of BDs.
- Tentative schedule for 4th CWG meeting is May 28, 2018.
- Information on exact date for the Stakeholder forum will be discussed with the Secretariat upon delivery of draft final set of documents B2-B5.

More information can be found in presentation (*Ad.3_Status of development of the Sava FRMP*).

AD.4. DEVELOPMENT OF THE FLOOD FORECASTING AND WARNING SYSTEM FOR THE SAVA RIVER BASIN

Mr. Mirza Sarač, from the Secretariat, briefly informed the PEG on the current status of the WBIF project component 2 and development of the Sava FFWS.

After the last PEG meeting the Sava FFWS release 1.0 was delivered at the training workshop held in RHMZ Serbia, February 26-28 2018. From that point the Sava FFWS is in the pre-operational testing phase which will last 6 months. In the release 1.0 all data and models, which have been provided by the

countries (project beneficiaries), are already integrated under the common Sava FFWS platform, as follows:

- 8 numerical weather prediction models
- 3 available weather radar and satellite imagery
- outputs of 4 existing national forecasting systems
- Sava HIS replica as the data hub for the collection of real-time data (precipitation, air temperature, snow, water levels, discharges)
- 12 hydrological models, including the Sava HMS model as the backbone of system
- 30 hydraulic models, including the Sava RAS model.

Also all hosting system servers were installed, starting with the primary system at the ARSO, followed by the backup system in RHMZ Serbia Belgrade and the other two backups in AVP Sava Sarajevo and in DHMZ Zagreb, including the archive & web systems at the ISRBC.

First round of in-depth training sessions for the representatives of foresting organizations were held:

- 4-day End-users basic training hosted at AVP Sava, March 19-22, 2018 for Bosnia and Herzegovina, Serbia, and Montenegro
- 3-day End-users advanced training hosted at DHMZ, March 26-29, 2018 for Croatia, and Slovenia.

Forthcoming activities are:

- Consultation process on the Post Project Organization (May-September 2018)
- Second round of in-depth training sessions for the end-users and IT support (June 2018)
- Workshop on the testing results (August 2018)
- Release 2.0 delivery and training workshop (October 2018)
- Final Report (October 2018).

Given the delay of inception phase and delivery of the IT equipment, which were needed for setup of the system servers, the extension of project until October 2018 was approved by WBIF.

All project outputs and documents as well as conclusions from the project meetings are available at the ftp folder: /WBIF/Component 2 - SavaFFWS/03-Meetings.

- PEG FP took note on the information.

More information can be found in presentation (*Ad.4_Status of implementation of the Sava FFWS*).

AD.5. U.S. GOVERNMENT SUPPORT – 2ND PHASE

Mr. Sarač shortly informed the PEG about the project progress and remaining activities related to the hydraulic modeling. Results of the Sava Lidar activity were delivered in beginning of April, 2018, after the final approval by the supervisor, and distributed to responsible institutions.

The hydraulic Sava HEC-RAS model is in process of the further upgrade using the new model elements/structures and geometry from the LiDAR based Digital Terrain Model. This hydraulic model is incorporated in the common Sava FFWS flood forecasting platform, and will be fully implemented within the testing of release 1.0 version. Delivery of the Sava HEC-RAS model and the hydraulic modeling workshop is planned for 15-17 May, 2018. Final delivery of the Sava HEC-RAS model to the relevant national institutions is planned after the workshop.

Along with the previously described main activities, the 2nd phase of the U.S. support was also used for the purchase of IT equipment, necessary for delivery of results of the 2nd phase of U.S. support, as well as for the functioning of the Sava FFWS. The IT equipment were delivered in December 2017 to the relevant national institutions, and successfully installed during January 2018.

- PEG FP took note on the information.

More information can be found in presentation (*Ad.5_U.S. Government support – 2nd phase_H&H modelling activities*).

AD.6. ANY OTHER ISSUES

The next 34th meeting of PEG FP will be held in June 2018.

ANNEX I. LIST OF PARTICIPANTS

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ANNEX II. LIST OF DOCUMENTS

Agenda item	Document	ENG	HRV	SLO	BIH-BOS	BIH-HRV	BIH-SRP	SRP
1.	Ad.1. PEG FP_33th meeting_AdoptedAgenda.docx	↓						
2.	Ad.2_Presentation on ISRBC activities_PEG FP 33.ppt	↓						
3.	Ad.3_ Status of development of the Sava FRMP.ppt		↓					
	Ad.3_B1_SavaFRMP_Disclaimer.docx	↓						
	Ad.3_B1_SavaFRMP_Nacrt_0418 1.docx	↓	↓					
	Ad.3_B2_SavaFRMP_PFRA_Nacrt_0418_1.docx		↓					↓
	Ad.3_B3_SavaFRMP_FHRM_Nacrt_0418.docx		↓					↓
	Ad.3_B4_SavaFRMP_Zajednicki_ciljevi_Nacrt_0418_1.docx		↓					↓
	Ad.3_B5_SavaFRMP_Katalog_mera_0418 1.docx		↓					↓
	Ad.3_B5_SavaFRMP_Pregled_mera_042018_1.docx		↓					↓
	Ad.3_6 Zabilješka sa 3. sastanka Projektne radne skupine (CWG) Zagreb, 17. listopada 2017.		↓					
4.	Ad.4_ Status of implementation of the Sava FFWS.ppt	↓						
5.	Ad.5_U.S. Government support – 2nd phase_H&H modelling activities.ppt	↓						

Documents are available at the PEG's ftp site.