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SAVA NEWSFLASH

INTERVIEW - MARTA SZIGETI BONIFERT:
Without economic development and social inclusion, there is no chance to have a better environment

- Implementation of FASRB, the view of B&H: *ISRBC is a very successful regional story*
- Enhancement of the hydrological model of the Sava River Basin
- Web application for navigation safety inspection

INTERNATIONAL SAVA RIVER BASIN COMMISSION

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Source of the Bosna River

DEAR READERS,

Foreword to the previous edition of *Sava NewsFlash* provided a brief review of the first ten years of ISRBC. It also indicated that the accomplishments, although being significant, present just a beginning and only provided a good basis for further improvement of cooperation under *Framework Agreement on the Sava River Basin* (*FASRB*) and for more rapid progress toward the achievement of its goals.

To that effect, the period from the last issue distinguished not only with the continuation of activities in all fields of ISRBC work, but also with the preparation or the commencement of realization of projects that are about to bring another significant results in the next period. Some of these activities and projects are presented in this, 17th edition.

The second river basin management planning cycle continued, along with implementation of the projects aimed at establishing the sediment monitoring system on the Sava River, and further integration of sectors (i.e. water-food-energy-ecosystems nexus assessment in the Drina Basin), as well as with planning activities for development of the Sava Basin climate change adaptation strategy. *Program for Development of Flood Risk Management Plan for the Sava River Basin* is to be adopted shortly. The upgrade of the Sava Basin hydrological model is being finalized, development of the flood forecasting and warning system is just starting, while development of *Flood Risk Management Plan* will begin in the coming months. The legal and administrative framework for navigation on the Sava River was further developed in accordance with the European technical, safety and environmental standards, while new activities were initiated to support development of nautical, eco- and recreational tourism in the Sava River Basin. The information exchange platform became functional, loading of Sava GIS and Sava HIS databases is in progress, while upgrade of Sava HIS by developing a component for collection and exchange of sediment transport data on the Sava River has just started.

We are proud of the step made toward further strengthening of public participation and stakeholder involvement in *FASRB* implementation, i.e. establishment of, and launching, Sava Water Council. First meeting of the Council confirmed possibilities of its significant contribution to further ISRBC work, primarily by supporting formulating multisectoral regional projects and creating regional project teams for the future period. There is also a room for the Council's contribution to further linking sustainability and development aspects, combining 'top-down' and 'bottom-up' approaches, and promoting the co-operation coordinated by ISRBC.

A great deal of work was focused on the organization of the events, traditionally linked with the celebration of the Sava River Day, June 1. The main event will be the 6th Meeting of the Parties to *FASRB* (Belgrade, June 1, 2016), when the guidelines for further work of ISRBC will be defined. In celebration of Sava Day 2016, the 5th meeting of Sava Youth Parliament, the 3rd cycling tour along the Sava River, and the 2nd meeting of Sava Water Council, will be organized by ISRBC. In addition, many events will be organized by the countries.

I believe that the outcomes of listed activities, to be presented in the next edition of *Sava NewsFlash*, will confirm the thesis introduced at the beginning of this foreword, that implementation of *FASRB* is becoming an increasingly more efficient process. I wish you a pleasant reading!

Dr. Dejan Komatina,
Secretary of ISRBC

IMPRESSUM

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Sava NewsFlash is the official bulletin of International Sava River Basin Commission (ISRBC), published twice per annum as a bilingual edition – in English and the chosen official language of ISRBC for each edition. It is aimed to present the overview of the most important activities, projects and results achieved in the fields relating to *Framework Agreement on the Sava River Basin*, to provide useful information and enable better communication of stakeholders and the wider public with ISRBC, and thus promote the values and potentials of the Sava River Basin.

Sava NewsFlash is available on ISRBC's web-site at:
www.savacommission.org.

NEWS AND ANNOUNCEMENTS


Sarajevo, January 28, 2016


Belgrade, January 29, 2016

STAKEHOLDERS DISCUSS SAVA NEXUS ASSESSMENT OUTCOMES

In late January 2016, the consultation workshops "Water-Food-Energy-Ecosystems Nexus assessment in the Sava River Basin – Lessons learned and further steps" were held in Sarajevo and Belgrade. The events were jointly organized by UNECE and ISRBC, and hosted by the Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina (Sarajevo workshop), and by the Ministry of Agriculture and Environment Protection of the Republic of Serbia (Belgrade workshop).

The objectives of the events were to:

- present the results of the Sava nexus assessment and other recent achievements in framework of ISRBC;
- get feedback from the authorities on the value of the findings and on what could be done in response to the recommendations;
- inform and discuss with the authorities and civil society about follow-up projects and activities to ensure their relevance for the countries.

More than 60 participants from relevant ministries, research institutes/universities, chambers of commerce, public institutions and NGOs, gathered on both workshops. The events provided inputs for planning and implementation of activities of ISRBC, foreseen by the *Framework Agreement on the Sava River Basin*, especially for setting further integration of water policy with other sectoral policies, as well as further dialogue with key sectoral stakeholders.

Sava GIS and HIS are presented in the countries

ISRBC has organized presentations of Sava GIS and Sava HIS in the member countries, in order to inform stakeholders of the possibilities offered by this newly established platform for the exchange of information in the Sava River Basin.

Through a live demo of SavaGIS Geoportal and SavaHIS web applications, participants were introduced and familiarized with the main functionalities of the system, in a way that they can explore and use these applications individually as end users.

Following the presentation held in Slovenia in December 2015, the new applications were presented in Bosnia and Herzegovina, and Serbia, in January 2016, while the presentation in Croatia will be organized soon, as well.


Ljubljana, February 10-12, 2016

WORKSHOP ON WATER QUALITY MONITORING AND RIVER MORPHOLOGY

Within the project *Towards the Assessment of Ecological Status of Water Bodies in the Sava River Basin* (*STAWA*), the workshop on chemical and biological monitoring of water status and river hydromorphology was held on February 10–12, 2016, at the premises of Jožef Stefan Institute, Ljubljana (SI).

The *STAWA* project has been awarded by the European Union and the City of Vienna by provision of a small scale financial support to eligible projects for the "START Danube Region Project Fund".

The basic aims of the workshop were to:

- Review existing sampling protocols, analytical methods and procedures in regard to chemical and biological monitoring of water status and river hydromophology;
- Provide preliminary recommendations for harmonization of monitoring parameters;
- Define a proposal for subsequent steps to be realized to achieve a satisfactory harmonization of water status/quality monitoring procedures;
- Provide a training course on biological quality elements in ecological status assessment.

In addition, representatives of the EU FP7 *GLOBAQUA* project presented participative valuation of ecosystem services for the implementation of the *Water Framework Directive* in the Sava River Basin. The workshop outcomes contributed to a successful finalization of the *STAWA* project in March 2016.

SAVA DAY 2016 – AN OPPORTUNITY TO FURTHER PROMOTE SUCCESSFUL COOPERATION

This year, ISRBC will make use of the International Sava River Day celebration to further promote successful cooperation of its member countries and strengthen links with stakeholders on both national and local levels. In addition to the 6th Meeting of the Parties – the central event that will take place right on the Sava Day, June 1, in Belgrade – ISRBC will organize:

- The 5th meeting of the Sava Youth Parliament (Nature Park„Lonjsko polje", June 3-4, 2016) – a gathering of students from 8 secondary schools from the four countries, selected based on the best students' interviews with persons of their choice, dealing with floods as the theme of the meeting
- The 3rd international cycling tour from the source of the Sava Dolinka River to the Sava mouth to the Danube, about 900 km long and lasting 9 days (May 27 – June 4, 2016), complemented by events to be organized at 20 locations along the river and regular information on the tour to be provided on ISRBC's web-site
- The 2nd meeting of the Sava Water Council (Sevnica, June 6-7, 2016), the advisory platform of ISRBC involving representatives of the non-governmental, academic and business sectors from the Sava countries.

The celebration will also include numerous events to be organized by the countries themselves, mainly through continuation of the projects marking the Sava Day in the previous years.

Ministers will discuss implementation of the Sava Agreement

The sixth Meeting of the Parties to *Framework Agreement on the Sava River Basin* (*FASRB*) will be held in Belgrade (Serbia), on June 1, 2016. The meeting will provide the riparian countries with an opportunity to assess progress in the implementation of *FASRB* in the past two years, review the work and actions of ISRBC, and determine further steps needed to achieve the agreed goals of cooperation. Special attention at the meeting will be given to a number of current issues in the implementation of *FASRB*, including the information exchange, flood management, and rehabilitation of navigation in the Sava River Basin. The declaration, as the main outcome of the meeting, is expected to provide the key guidance for further implementation of *FASRB* and future work of ISRBC.

UPDATED EDITION OF THE INDICATOR OF RIVER KILOMETERS COME OUT OF PRESS

Since ISRBC produced its first edition of *Indicator of River Kilometers for the Sava River and its Navigable Tributaries* as a result of demand for the update of all changes in the fairway that occurred from the latest edition issued in the sixties, it has recently saw the light of day the second revised edition of *Indicator* for the Sava from its confluence up to the border between Slovenia and Croatia (rkm 711.3), as well as for the Kupa, the only tributary regularly maintained and marked for navigation, from its confluence up to rkm 162.6.

Considering its dependence on the commencement of managed maintenance and marking of navigable tributaries, the Indicator will be updated accordingly. This edition contains all elements for safe navigation, as a result of several years of efforts and periodical checks made by competent experts on waterways and hydrology. It is worthy of noting that from rkm 5 to rkm 80 of the Kupa, river kilometer indicator marks are pitched at every 5th kilometer. It greatly facilitates the orientation of recreational shippers. This edition also contains sketches of all bridges at newly included sections of the Sava and Kupa along with all important facilities.

INTERVIEW MARTA SZIGETI BONIFERT, EXECUTIVE DIRECTOR OF THE REGIONAL ENVIRONMENTAL CENTER FOR CENTRAL AND EASTERN EUROPE

WITHOUT ECONOMIC DEVELOPMENT AND SOCIAL INCLUSION, THERE IS NO CHANCE TO HAVE A BETTER ENVIRONMENT

It's important to stress the need for different actors to arrive at common understanding on emerging issues - locally, nationally and regionally - especially where shared natural resources are concerned. Like rivers, for example

MARTA SZIGETI BONIFERT: *We want to contribute to the achievement of ISRBC's objectives*

One of the most important goals of the REC is to 'build environmental democracy'. What does this really mean?

The REC was set up to promote access to information, public participation and stakeholder engagement in the widest possible context, and in any kind of discipline in which we are involved. This kind of work relates directly of course to the three pillars of the *Aarhus Convention*. More specifically, the REC promotes environmental democracy by bringing stakeholders together on big and small issues and acting as a neutral, impartial facilitator of dialogue.

Good environmental governance is essential for sustainable development. How do you see the role of the public in this matter?

It's important to stress here the need for different actors to arrive at common understanding on emerging issues - locally, nationally and regionally - especially where shared natural resources are concerned. Like rivers, for example. And sustainable development encompasses, besides a good environment, social and economic dimensions. Without economic development and social inclusion, there is no chance to have a better environment. I should mention in this context that any of the up-front costs related to sustainable development are really investments in the future that will bring long-term benefits.

What are, in your opinion, the most important projects that the REC has implemented so far, especially in the water-related areas of work?

I would start with the *Danube Regional Project* and our involvement with public participation and supporting NGOs where the UNDP GEF programme provided financial and technical support to communities and civil society organizations. Another important one is *CarpathCC*, a regional climate change framework project. More recently, we're bringing our experiences and knowledge to the Middle East and North Africa region through the *WaterSUM* project, which currently involves sharing best practices with local communities in Jordan and Tunisia.

The REC covers Central and Eastern Europe. Are you satisfied with the cooperation with the countries of South Eastern Europe? Which projects have been implemented in that region?

Of course, we've been very involved with ISRBC Secretariat – supporting from the very beginning from the setting-up when the REC drafted institutional documents. There's also our ten years of work in the Drina River Basin contributing to resilience and sustainability of communities. And we've assisted with Black Sea water management, as well.

The REC was granted 'observer' status in ISRBC recently. How would you assess your cooperation with ISRBC?

We enjoyed good cooperation in the region even before this, and participated in the first meeting of the Sava Water Council, so this status was just a normal follow-up to this positive

Without having an ongoing face-to-face discussion it is impossible to establish resilient communities, to build up trust, or to discuss politically sensitive issues

SAVA FROM THE AIR: *We've been very involved with ISRBC Secretariat – supporting it from the very beginning*

relationship. The recent status development, however, gives us even more opportunities to be involved and to contribute to ongoing work.

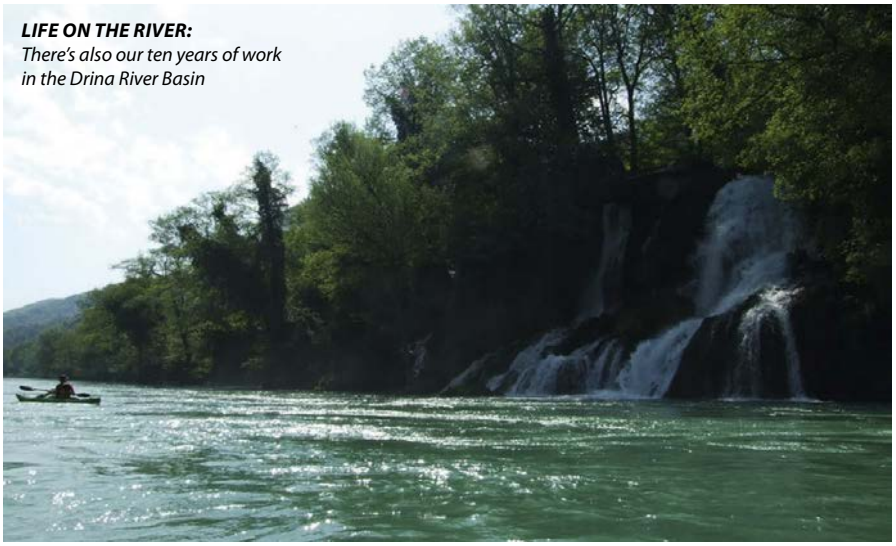
You often speak about the importance of social networks in the struggle for a sustainable future, but also about the associated risks. You said that despite the development of online communication, face-to-face contacts are often necessary to find better solutions to the problems of environment. Can you share with us the experience that the REC has gained in this regard?

Over the course of 25 years, the REC has established and developed personal contacts throughout the entire region, and there is simply no substitute for this kind of involvement. Without having an ongoing face-to-face discussion it is impossible to establish resilient communities, to build up trust, or to discuss politically sensitive issues. Cooperation is the true basis for stability and sustainable future development. The new media, on the other hand, are extremely useful and helpful in helping to spread awareness quickly to different stakeholder groups.

The REC has been active since 1990. What are the organisation's plans for the future, particularly related to the Sava River Basin?

One of our most important tasks in the region now is to promote joint implementation of the UN Sustainable Development Goals (SDGs), and the REC recently hosted a regional discussion and roundtable about SDG implementation. We also want to contribute to the achievement of ISRBC's objectives. We can do this and other work in your region by being involved in various working groups and initiatives like the Regional Cooperation Council, and by providing exchanges with other regions from around the world. (Marko Barišić)

The REC promotes environmental democracy by bringing stakeholders together on big and small issues and acting as a neutral, impartial facilitator of dialogue



LIFE ON THE RIVER: *There's also our ten years of work in the Drina River Basin*

Launching Water, Growth and Stability Initiative

The Water, Growth and Stability conference, which was co-organised on April 26-28, 2016, in Szentendre, Hungary, by the Regional Environmental Center (REC) and the Ministry of Foreign Affairs and Trade of Hungary as a pre-event to the Budapest Water Summit 2016, constitutes a milestone in the REC project *Sustainable Use of Transboundary Water Resources and Water Security Management in the Middle East and North Africa (MENA) region* (*WaterSUM*), which is supported by the Swedish International Development Cooperation Agency (SIDA). The conference gathered a broad spectrum of key stakeholders from throughout the MENA region, including representatives of ministries in charge of water management and water security, local authorities, international organisations, NGOs, academia and the business community.

Based on the main outcomes of the conference, the Water, Growth and Stability Initiative was launched with the main objectives to:

- support the MENA region and its water stakeholders in advancing water management at national and local level while also shoring up regional cooperation and engagement and identifying viable tools and solutions
- stimulate the more sustainable use of the region's water resources, stronger cooperation between pivotal actors, and a strategic approach to climate change adaptation
- promote a comprehensive and integrated approach to water security and ecosystem services and raise awareness of the increasingly interrelated nature of our global resource systems and their impact on water sustainability
- develop a framework programme in line with the priorities of countries in the MENA region, and
- mobilise additional resources and partners to expand the established framework steered by the MENA region, and identify synergies with other on-going programmes and initiatives.

STANCE IMPLEMENTATION OF FRAMEWORK AGREEMENT ON THE SAVA RIVER BASIN: THE VIEW OF BOSNIA AND HERZEGOVINA

ISRBC IS A VERY SUCCESSFUL REGIONAL STORY

Positive climate in the realms of ISRBC contributes to the further development of bilateral cooperation among the countries, which is of exceptional importance. Flood protection is an issue, which got a great deal of attention during the last few years

Framework Agreement on the Sava River Basin (*FASRB*) defined mechanisms of joint cooperation as an example of good practice, not only in the basin but in a much broader context. This form of cooperation is very important for Bosnia and Herzegovina, as it contributes significantly to the socio-economic development and sustainable management of water resources in the basin. Although we are faced with various limitations, the results achieved in the framework of the Sava Commission (ISRBC), including the work of expert groups, show that it has been a very successful regional story so far. Positive climate in the realms of ISRBC contributes to further development of bilateral cooperation among the countries, which is of exceptional importance.

There is a wide range of issues that we deal with within the framework of ISRBC. With regard to water management, the activities related to the second planning cycle in line with the EU *Water Framework Directive* (*WFD*), appear to be the most important ones. The preparation of the second Sava River Basin Analysis and a *Significant Water Management Issues paper* is in progress. These two activities will determine the content of the Programme of Measures for *Sava River Basin Management* (*RBM*) *Plan* in the second planning cycle.

In addition, planning documents must consider issues such as climate change impacts and sediment, as well as key issue of strengthening cooperation with other water-related sectors. The preparation of *Water and Climate Adaptation Plan for the Sava River Basin*, which identified a set of guidelines for the adaptation of several key sub-sectors (hydropower, agriculture, navigation, flood protection) to climate change, was finished. A *Proposal of Establishment of Sediment Monitoring System for the Sava River Basin* was prepared, as well as the nexus assessment in the Sava River Basin, which included water, energy, agriculture and environment sectors. As a follow up, nexus assessment in the Drina River Basin began in April.

Activities on the adoption of RBM plans in accordance with *WFD* and water laws are being intensively performed in all countries. *Sava RBM Plans* have been drafted in the Federation of Bosnia and Herzegovina, Republic of Srpska and the Brčko District of B&H. Public consultation and adoption of final documents are expected to be finalized by the end of 2016. There are also parallel activities on preparation and adoption of the planning documents for the Adriatic Sea watershed and the Trebišnjica River Basin.

Presidency of B&H adopted the Decision on ratification of *Protocol on Sediment Management to the FASRB and Bilateral agreement between the Croatian Government and the Council of Ministers of Bosnia and Herzegovina on the rights and obligations concerning water utilization from public water supply systems, intersected by national borders*, signed at the ministerial meeting in July of 2015 in Brčko.

Flood protection is an issue, which got a great deal of attention during the last few years, both at the level of ISRBC, as well as in individual countries. Strong support for further strengthening of the regional cooperation in this area was clearly indicated at three ministerial meetings held in the previous time period in Belgrade, Zagreb and Brčko. *Protocol on Flood Protection* entered into force at the end of November of 2015. Key activities, provided in this document, relate to the adoption of a joint *Flood Risk Management* (*FRM*) *Plan* and the establishment of a joint flood forecasting and warning system in the Sava River Basin. Funds for the implementation of these activities are provided in cooperation with WBIF and it is expected that the implementation of the project will commence in May of 2016. In addition, upgrading of the Sava Basin hydrological model is in the final phase, as well as preparatory activities for the aerial imaging of the Sava River corridor by means of the so-called LIDAR system for production of topographic maps and improvement of the hydraulic model of the Sava River.

Drawing from experience and consequences of flood events in the past few years, particularly catastrophic May 2014 floods, B&H has undertaken a number of activities for the improvement of the existing flood protection system. *Action Plan for Flood Control and River Management in B&H 2014-2017* was adopted, and it identified a series of measures to be

The Vrbas canyon; Author: Danijel Kovačević

Drawing from experience and consequences of flood events in the past few years, particularly catastrophic floods in May of 2014, Bosnia and Herzegovina has undertaken a number of activities for the improvement of the existing flood protection system

necessarily implemented until 2017. This document specifically emphasized the importance and necessity of close cooperation with neighboring countries and ISRBC. Activities carried out in B&H include the improvement of the legal framework, rehabilitation, reconstruction and construction of facilities for water protection, strengthening of hydro-meteorological monitoring network, improvement of the forecasting capacities in competent authorities, production of hazard maps and flood risk maps and eventually development of appropriate *FRM Plans* in line with the EU *Flood Directive* and national legislation.

There is an important dimension of ISRBC activities with regard to the exchange of data and information in the basin. In this regard, two platforms, the so-called SavaGIS and SavaHIS, were completed and put into action in late 2015.

In accordance with the provisions of *FASRB*, EU legislation and *Aarhus Convention*, ISRBC recognized the need for the improvement of the existing mechanisms for public participation and stakeholder involvement in the implementation of *FASRB*. In that light, ISRBC adopted a decision and established the Sava Water Council. This body has an advisory character, while the key task is to ensure adequate public participation and stakeholder involvement.

Achieved results created a good basis for further activities of ISRBC, which in the future period should focus on the following:

- consideration and harmonization of means for improving the provisions of *FASRB*, as well as finalization and ratification of planned protocols to *FASRB*,
- implementation of the joint *Sava RBM Plan* and its upgrade through the integration of water policy with policies of other sectors (navigation, agriculture, hydropower, climate change),
- development and adoption of the joint *Sava FRM Plan*,
- high-quality information exchange, forecasting, warning and alarming in the Sava Basin,
- coordination of further development of economic activities related to water use (navigation, all aspects of sustainable river tourism),
- further development of a platform for public participation and stakeholders involvement in the implementation of *FASRB*,
- further strengthening of the cooperation with other international organizations and partner institutions, as well as the promotion of activities and results achieved.

Boško Kenjić,
Head of the Water Resources Department,
Ministry of Foreign Trade and
Economic Relations of B&H

ISRBC THE SECOND RBM PLANNING CYCLE

JOINT EFFORTS FOR A GOOD WATER STATUS

Dragon fly; Author: Branislav Stanković

EU WFD requires a revision of the characteristics of the river basin district, review of the environmental impact of human activity, and economic analysis of water use, in the six years cycles

The commitment of the Parties to *Framework Agreement on the Sava River Basin* (*FASRB*) to respecting the EU *Water Framework Directive* (*WFD*), although not all of them are legally bound to do so, as well as a good cooperation of the Parties in implementing *FASRB*, have granted a positive perception of the European Commission, which resulted in the EC's support to the preparation of the first *Sava River Basin Management Plan* (*Sava RBM Plan*). On December 2, 2014, at the 5th Meeting of the Parties to the *FASRB*, the first *Sava RBM Plan* was approved as a milestone for cooperation of the countries on further implementation of the agreement. With this, the first cycle of river basin management planning in accordance with the EU *WFD* was completed. With the approval of *Sava RBM Plan*, the Parties committed to making their best efforts to implement the Programme of Measures that is an integral part of the *Plan*, in order to contribute to meeting the common goal – achieving a good water status. The Parties requested ISRBC to assist them in communication with relevant international institutions, in order to find out more opportunities for funding the implementation of the measures agreed in the first *Plan*, and also encouraged ISRBC to continue the dialogue with relevant stakeholders from the navigation, hydropower, agriculture, nature conservation and flood management sectors in subsequent cycles of river basin management planning in the Sava River Basin.

To discuss participation of stakeholders in the second planning cycle since the very beginning of this cycle, ISRBC organized a consultation workshop (Zagreb, June 18, 2015), where the issue was discussed with representatives of ministries, water directorates, energy sector, NGOs and international organizations (WWF, Euronatur, GWP), building on the lessons learned at the Sava and the Danube basin levels so far.

Initial steps of the second planning cycle are currently in progress. A paper on Significant Water Management Issues (SWMI) has been drafted. This interim overview on key issues affecting the water environment in the Sava River Basin builds on the knowledge gained in the process of preparation of the first *Sava RBM Plan* and additional new information. The SWMI paper will be made available at the official web page of ISRBC, for public consultation, in near future.

EU *WFD* also requires a revision of the characteristics of the river basin district, review of the environmental impact of human activity, and economic analysis of water use, in the six years cycles. For that reason, ISRBC started the second Sava River Basin Analysis, which provides the updates of the characterization report on:

- General characteristics of the Sava River Basin;
- Hydrographic features in the basin;
- Water quality;
- Economic analysis of water use, and
- Integration of water management, flood protection and navigation.

The analysis is planned to be finalized in autumn 2016.

Once the SWMI paper and the Sava River Basin Analysis are finalized, they will provide the basis for preparation of the updated *Sava RBM Plan*. However, preparation of the *Plan* will require support from external sources, so that fund-raising activities are planned to be performed in the coming months, in order to enable smooth continuation and finalization of the activities of the second planning cycle.

Samo Grošelj,
Secretariat of ISRBC

A glimpse on biodiversity, Lonjsko polje; Author: Matea Matoš

A glimpse on biodiversity, Lonjsko polje; Author: Matea Matoš

INTERSECTORAL LINKS DRINA RIVER BASIN

INTENSIFYING COOPERATION WILL HAVE DIVERSE BENEFITS

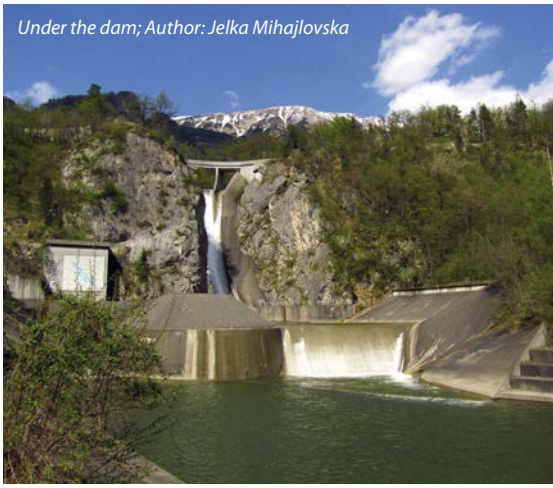
Transboundary cooperation has value for balancing between increasing energy generation, the ambitious regional climate and energy policy targets and maintaining a good status of shared waters

The assessment of the intersectoral links, trade-offs and benefits in the Sava River Basin, summarized in UNECE's publication *Reconciling Different Resource Uses in Transboundary Basins: Assessment of the Water-Food-Energy-Ecosystems Nexus* (2015), carried out under the UNECE *Water Convention*, demonstrates that there are various benefits to the riparian countries from improved coordination in resource management. Among others, transboundary cooperation has value for balancing between increasing energy generation, the ambitious regional climate and energy policy targets and maintaining a good status of shared waters. A more systematic use of policy instruments, reliable data and information gathering as well as coordination of investments into infrastructure and promoting multiple and flexible use of infrastructure were among the key recommendations. Furthermore, using ISRBC as a platform to discuss all the relevant basin resources and for a consultation process to review the impact of national and sectoral development strategies was also recommended.

Responding to the conclusions, a project on the Drina River Basin was launched at a workshop in Podgorica 21-22 April 2016[1], jointly organized by UNECE and ISRBC and co-hosted by the Ministry of Agriculture and Rural Development of Montenegro, with support of the Italian Ministry for Environment, Land and the Sea. Despite the gradual advance of regional integration, the riparian countries are still facing challenges such as limited harmonization of approaches, a need to improve sharing data and information, governance gaps and communication issues. Therefore looking beyond a single sector's and state's boundaries could bring many benefits. For example, the plans to modernize the energy sector, including with regard to the increased deployment of renewable energy and market development, could benefit from identification of synergies with other water users and from reviewing the environmental sustainability.

The conclusions from the workshop suggest that broadening and intensifying transboundary cooperation between the riparian countries would have diverse potential benefits. For example, if the use of flow-regulation infrastructure and related communications were optimized, the damage from high or low water flows could be minimized, while serving also hydropower generation. Introduction of mechanisms for transboundary inter-agency coordination would be helpful to that end. As a further example, tourism, energy generation and use, and agriculture would all benefit from addressing the shortcomings of solid waste management in the basin. Rural development that exploits the synergies of improved agricultural productivity, nature-related tourism and renewable energy appeared as a promising opportunity.

The conclusions will provide the direction for an analysis of selected intersectoral issues in the next steps, followed by detailing some priority measures and their associated benefits of cooperation, informed by reviewing good practices. The process involves consultations of the sectoral authorities of the countries, including a second workshop in the autumn of 2016. By the end of 2016, policy recommendations are to be issued. Preliminary results and recommendations will be discussed during the International Forum on Sustainable Energy and the third session of the Group of Experts on Renewable Energy to be held in Baku, Azerbaijan, on 18-21 October 2016.


Under the dam; Author: Jelka Mihajlovska

Annukka Lipponen
and ***Gianluca Sambucini***,
United Nations Economic Commission for Europe (UNECE)[2]


Canyon of the Drina River

[1] *Provision of photos from the workshop by the Ministry of Agriculture and Rural Development of Montenegro is acknowledged by the authors.*

[2] *The views expressed in this article are those of the authors and do not necessarily represent the views of the United Nations or its Member States.*

COOPERATION ON FLOOD PREVENTION IN THE SAVA RIVER BASIN

FLOOD RISK MANAGEMENT PLAN

The Program for development of the Plan has been prepared at the expert level and it is expected to be adopted by ISRBC by the end of May 2016

In order to reduce harmful consequences of floods in the Sava River Basin, the Parties to *Framework Agreement on the Sava River Basin* (*FASRB*) have agreed to cooperate on implementing the activities stipulated by *Protocol on Flood Protection to the FASRB*, which entered into force on November 27, 2015.

The activities related to flood risk management planning include four steps:

- Preparation of *Program for Development of the Flood Risk Management Plan for the Sava River Basin*
- Undertaking of Preliminary Flood Risk Assessment (PFRA)
- Preparation of flood maps
- Development of *Flood Risk Management Plan for the Sava River Basin* (*Sava FRM Plan*).

The *Program* presents guidelines for activities and actions required for the development of *Sava FRM Plan* in line with the *Protocol* and the EU *Floods Directive* (*EFD*), taking into account the activities already finished or ongoing in the Parties. The *Program* has been prepared at the expert level and, according to the *Protocol*, it is supposed to be adopted by ISRBC within 6 months as of the entry of the *Protocol* into force (by May 27, 2016).

The PFRA, for which the Parties agreed to compile a joint report, even prior to formal entry into force of the *Protocol*, summarizes the information on methodologies and criteria used by the countries for identification and assessment of Areas of Potentially Significant Flood Risk (APSFR), provides an overview of the designated APSFR, addresses the impacts of climate change, etc. Based on different methodologies of the countries, 1825 APSFR have been identified in the Sava River Basin, including 42 in Slovenia, 1688 in Croatia, 68 (in one entity) in Bosnia and Herzegovina, and 27 in Serbia (see Figure). The information exchange and harmonization of APSFR will be completed following the submission of the remaining information from Bosnia and Herzegovina, and Montenegro.

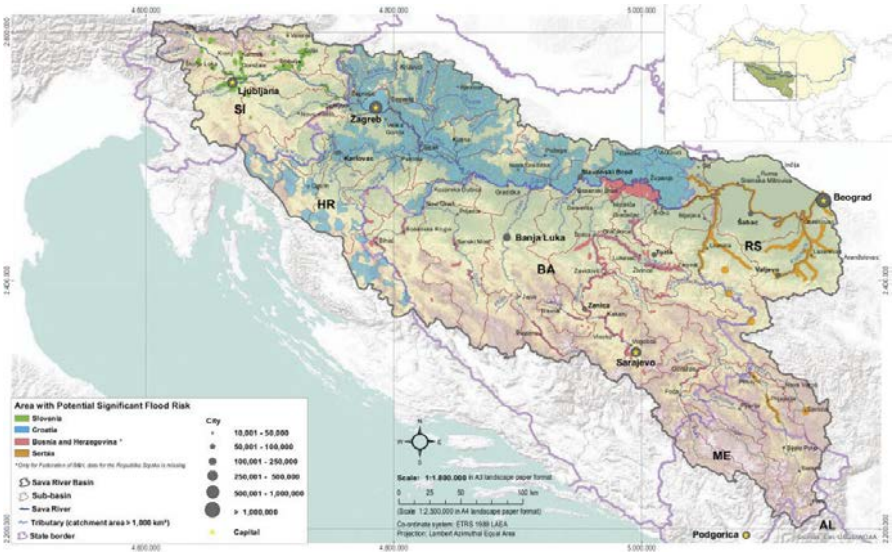


FIGURE: Areas of potentially significant flood risk in the Sava River Basin

The preparation of flood maps and *Sava FRM Plan* itself, based on the designated APSFR, will be jointly implemented through the ongoing project *Improvement of Joint Actions in Flood Management in the Sava River Basin*. According to the *Protocol*, the *Plan* will include all the steps stipulated by the *EFD*, without the obligation of respecting the *EFD* deadlines, given the different commitments of the Parties toward EU. National FRM plans of the EU member states (Slovenia and Croatia) were completed by the deadline – December 2015, while Serbia and Bosnia and Herzegovina plan to finish their plans by 2017 tentatively.

The Parties have agreed that the flood maps at the Sava River Basin level should comprise all maps prepared by the Parties, for all identified APSFR and for two scenarios: floods with a medium probability, and floods with a low probability, or extreme event scenarios, regardless of the return period considered by a Party (see Table).

In order to ensure efficient and effective exchange of data and information, related to the FRM planning, ISRBC and the basin countries established a FRM database, which is associated with the SavaGIS Geoportal and the web application for editing, loading and retrieving data and metadata. The database is designed and structured in accordance with *EFD Reporting Guidance* and *INSPIRE Directive*, and contains spatial and alphanumerical datasets for flood reporting units, PFRA, APSFR, flood maps and flood protection structures. Overall, the FRM database model will ensure sharing and disseminating data and information relevant for development of *Sava FRM Plan*, and it is planned to be expanded during the process to allow for storage of results of the *Plan*.

TABLE: The national definitions of floods with medium and low probability

Country	Medium probability	Low probability
SI	HQ100	HQ500
HR	HQ100	HQ1000 (unprotected areas)
		Infrastructure failure scenario (protected areas)
BA	HQ100	HQ500
RS	HQ100	HQ1000
ME	HQ100	HQ500

Mirza Sarač,
Secretariat of ISRBC

PROJECT USACE – ISRBC PARTNERSHIP

ENHANCEMENT OF THE HYDROLOGICAL MODEL OF THE SAVA RIVER BASIN

The main intention is to provide support to the Sava countries to implement flood risk management planning on a basin wide level, through fully functional calibrated hydrological model

ISRBC, working in partnership with the U.S. Army Corps of Engineers (USACE) within the 1st phase of support of the U.S. Government to the Sava countries, in 2010 prepared the first ever hydrological model of the Sava River Basin, as well as the hydraulic model of the Sava River. The models were developed using the USACE industry standard hydrological & hydraulic modeling tools that are used worldwide (HEC-HMS and HEC-RAS). The development of the models was based on data collected from the Sava countries, primarily through the work of related expert groups of ISRBC. Although preliminary in their nature, the models were of a great importance for further modelling advances in the basin.

The initial hydrological model was a basis for development of a new HEC-HMS model in 2014. The model was adjusted to analyse climate change impacts on specific sectors (navigation, hydropower, flood control, and irrigation) within *WATCAP* project. Hydrological regime was simulated on a 10-day or monthly time scale with computational time step of 12 hours. Basin delineation was made with respect to daily time step (sub-basin sizes approximately 2000-5000 km^2). The complete basin was divided into 14 major sub-basins which were modelled separately as sub-models and linked sequentially for joint simulations.

Using previously described models as a starting point, in the 2nd phase of the U.S. Government support, USACE has been working on further upgrade of the model. The main intention is to provide support to the Sava countries to implement flood risk management planning on a basin wide level, through fully functional calibrated hydrological model. USACE already redeveloped an entirely new basin delineation, for which HEC-GeoHMS (ArcGIS extension) was utilized, using DEM 30 m, which provides a much more detailed and accurate representation of sub-basins. The model has been divided into 19 separate sub-basin models for each tributary sub-basin and mainstream reach (Figure 1).

FIGURE 1. Final delineation and major sub-models in the new HEC-HMS model

Basin parameters for the improved model, such as soil losses, hydrograph transformation, baseflow, routing are derived from GIS layers and through calibration. Meteorological parameters (e.g. snow-water equivalent) are derived from satellite based information. For meteorological model, the inverse distance method has been used. Model determines rainfall amount for each sub-basin by using any station within the search radius to assign an inverse distance weighted rainfall amount to each sub-basin, noting that almost the entire basin is covered within 50 km radius of a station.

The model calibration using hourly time series data for selected flood events occurred in the period 2009-2014 is in the final stage. The calibration of the sub-basin models in Slovenia as well as the Kupa basin has been very successful, due to the dense precipitation gauge network. The Una and Bosna sub-models have proven more difficult due to the lack of precipitation gauge density, however the results are promising (Figure 2). The sub-models along the left bank of the Sava River and the Kolubara are also calibrated, while calibration for Tinja, Ukrina and Bosut is in progress.

The specific problems have arisen in the sub-basins where major hydropower dams exist (Vrbas and Drina), due to unavailability of data and a certain limitations of the software. However, observed inflow-outflow data and the volume curves for the most of these dams are collected, which will enable a reasonable calibration in these sub-models.

Once the remaining tributary sub-models are completed, the whole model setup will be completed by calibrating the Sava River mainstream hydrologic sub-model, which will contain all the local areas along the mainstream. It is expected that the model will be completed by the end of June 2016.

Mirza Sarač and ***Dragan Zeljko***,
Secretariat of ISRBC

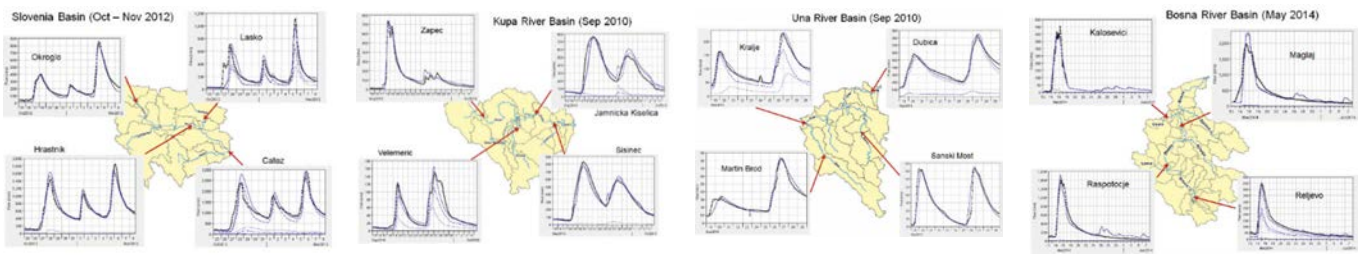


FIGURE 2. Preliminary results of the new HEC-HMS model calibration

NEWS SYSTEM FOR EASIER INSPECTION IN INLAND NAVIGATION

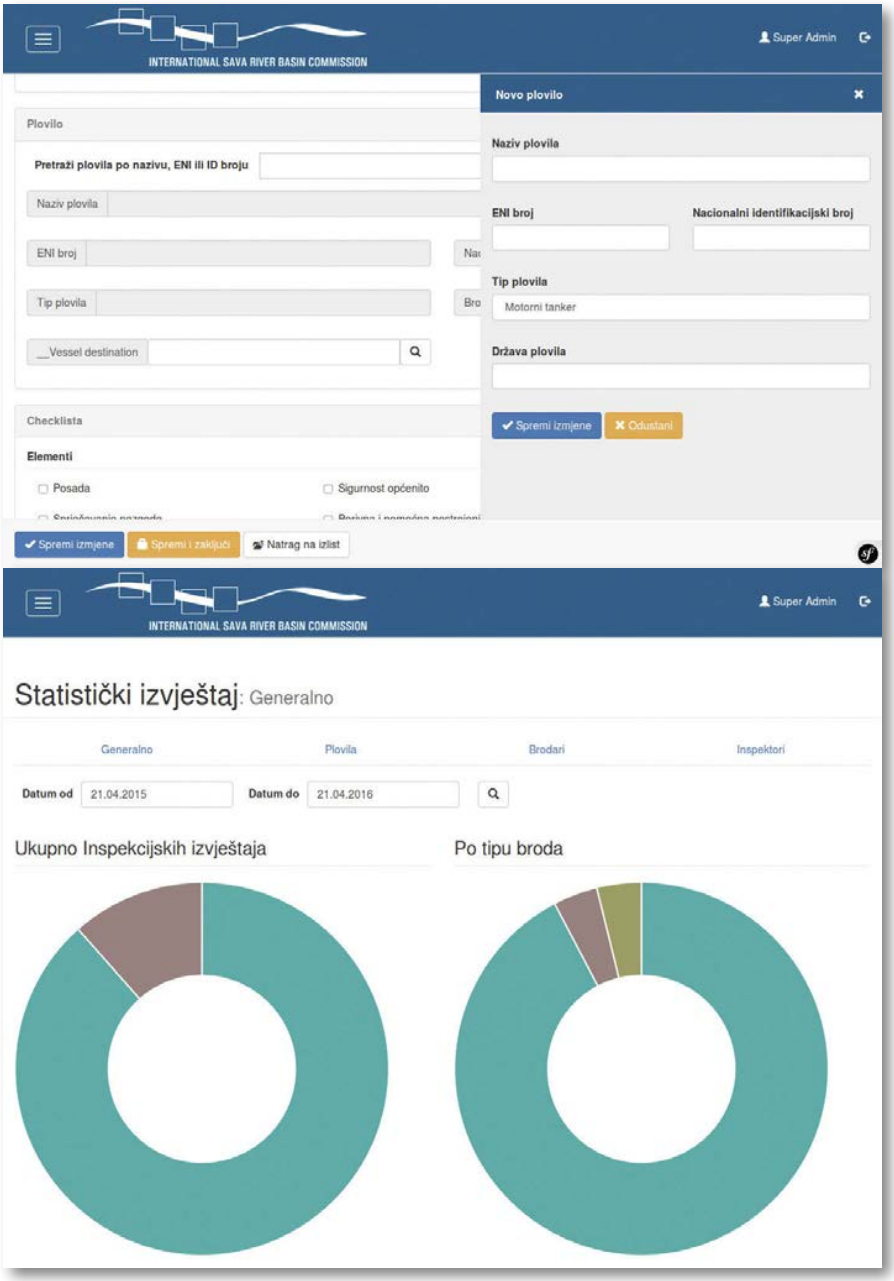
WEB APPLICATION FOR NAVIGATION SAFETY INSPECTION

The main objective of the application, developed by ISRBC, is to increase the navigation safety through collection and exchange of information with regard to the state and technical condition of vessels

It is the fact that inspection authorities from the countries in the Sava River Basin, responsible for inland navigation, are organized on different principles with significant differences with regard to their cadres and technical equipment.

With a wish to harmonize this field and optimize the procedure and manner of vessel inspection, the collection of necessary data along with the analysis of the current situation was performed within the framework of ISRBC. It was concluded that the inspection in inland navigation is currently characterized by:

- insufficient technological equipment of inspectors in the field;
- insufficient information in the planning phase of the inspection control;
- unavailability of cases of good practice during the inspection control;
- lack of long-term statistical analysis and insight in the history of the subjects and objects of inspection;
- impeded exchange of knowledge between (remote) inspectors.



Bearing that in mind, the idea evolved to develop an expert information system which would provide for a minimum of harmonized procedures that would contribute to the information exchange and monitoring of the vessels of interest. After consultations with the captains from the Portmaster Offices and with the members of ISRBC's expert group for navigation, the Commission started with the development of the web application. In order to monitor the implementation, a special Committee, made up of experts from ISRBC's member countries, was set up. Additionally, the Committee made a significant contribution during the development and testing of the application.

The main objective of the application is to increase the navigation safety through collection and exchange of information on the state and technical condition of vessels. All available materials, as well as navigation safety inspection processes, were collected during the planning phase. They were first input data for the analysis of the current situation and development of a model and planned solutions.

The process of the application development was marked with interactive relationship of all participants, so the consultant had permanent contact with future users of the application. They tested all phases in the process of the development and in turn delivered, via ISRBC Secretariat, necessary information to the consultant, thus providing useful experience-based suggestions. All the same, at the workshops attended by the experts from the field of navigation safety inspection, held as a

part of users training, several specific requirements were defined, and then processed into technical and procedural solutions in line with required system configuration. Only through this interactive communication, new ideas and requirements could be further modeled, tested, and finally approved by the Committee for monitoring the development of that application.

Access to the system is restricted to authorized users only, while it supports multiple levels of access rights. Given the access rights, information exchange is very non-restrictive, while remaining available functionalities for the data load and manipulation are determined in accordance with the access right given to the particular user within the application.

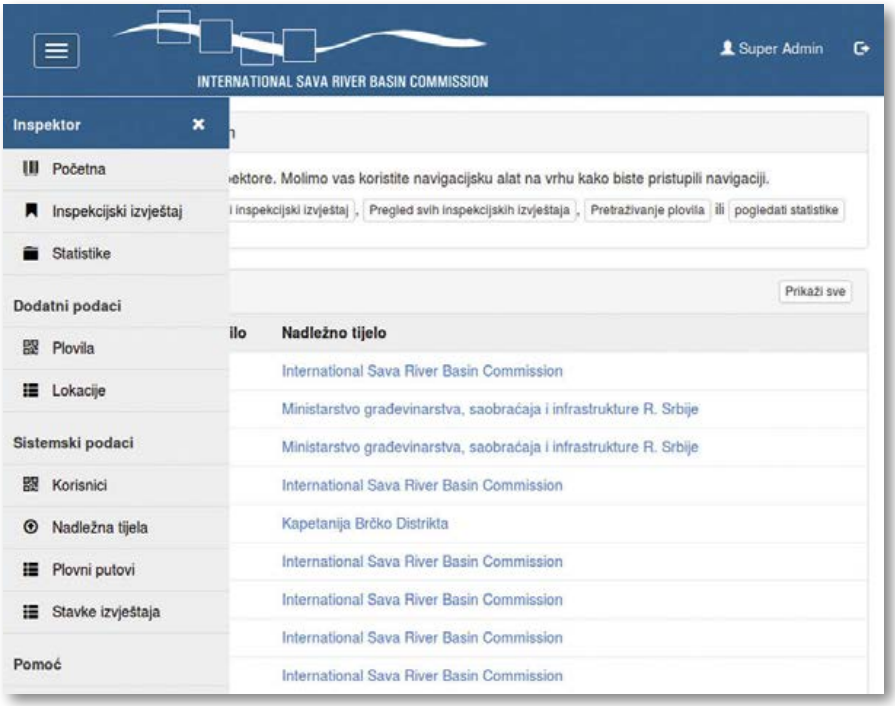
As its main functionality, the web application emphasizes its support in the inspection process by means of inspection form that navigates its users through segments of how to fill it out, all the same allowing filling of all information without leaving the form concerned. In addition to the data on condition of inspected vessel, all information about the vessel concerned is collected through this form, thus enabling the setup of a high quality vessel database.

Another important functionality is the statistical report, through which users can, according to their level of access rights, view statistics of all inspection reports, as well as reports on vessels or some other relevant metrics available from inspection forms, thus making important conclusions about the state of technical condition of the vessel.

Developing the system on a high-quality granulation of access levels and good technological foundation, the basin countries have received a useful product, while ISRBC has access to high level of the system behavior control, thus monitoring the users, access levels, competent authorities and secondary content such as supported waterways, locations and essential items of the inspection form.

The web application also provides the ability to export data to other external information systems via HTTP protocol, as well as data exchange using flexible and descriptive JSON format of the data recording. Since nowadays the information mobility is a must during the development phase of the system, it is defined as one of objects of special interest which could contribute to popularization of such systems and their better acceptance.

When finding the technology for the solution concerned, it was chosen the solution that offers defined functionalities toward modern standards. The criterion in focus is interface easy to use and transparent as well, all the same supporting all complex actions that are needed in the inspection process. In order to ensure the interoperability of several different platforms, visual design and interface behavior are designed to adapt to the screen size (*responsive design*).



Development of the application took four months upon the date the contract was signed, while the countries were provided with a very useful tool

The solution is based on *open source* technologies that provide better support with trend toward expanding and improvement, while ISRBC as the ordering party is not obliged to the third party solution, which is closed and equity bound. This provides great support for future upgrade and further development of the system, so it could be accepted in the practice. The system is built on Symphony development framework and available *open source* libraries. As a result, there is a system that delivers outstanding performance, stability and scalability.

Main results of this project are:

- Elaborated and implemented expert system
- Quick start guide/description for each application segment
- Training for users of the application equipment
- Presentation of the application at the stakeholders workshop
- Full-back -up database posted on the web server of ISRBC

Development of the application took four months upon the date the contract was signed, while project supervision and acceptance of all documents was carried out by the mentioned Committee.

During the development of the system, ISRBC Secretariat provided all necessary support to the consultant with all information and documents in the proper format, as well as with contacts with relevant institutions of interest.

Goran Šukalo,
Secretariat of ISRBC

WATER TRANSPORT BASICS FOR THE STATISTICAL ANALYSIS

CARGO TRANSPORT DATA IN THE SAVA RIVER BASIN

Period 2010-2013 was the most complete, and as a result, all countries and ports were in the representative sample, which is a minimum requirement from the point of usability of statistical results

Soon upon its foundation, ISRBC started collecting data on cargo transshipment and passenger traffic for the purpose of reviewing the statistical data on ports on the Sava River. The collection process was burdened by the lack of certain data for the last 10 years, as well as with the problem of non-harmonized methodology and the manner the countries obliged the legal and natural persons to deliver data to competent authorities. In addition to the data collected for this period, in order to assess water transport needs, all available data from other sources were used, including data from previous analyzes, studies and projects.

Development of waterways and the accompanying infrastructure on the Sava River and its navigable tributaries is harmonized with the EU transport policy, defined by the EC documents such as *White Paper on Transport* (2011), *Sustainable Future for Transport* (2009), *Green paper - Towards a new Culture of Urban Mobility* (2007), and other related directives and documents.

At this moment, passenger transport is not statistically analyzed in particular, due to lack of updated records, i.e. non-harmonized methodology and the level of elaboration of the collected data, which is the result of locations of the ports (proximity to the confluence) and regulation of the waterway. The Table 1 lists the number of passengers for the Belgrade port in the last two years and for a passenger cruiser that entered the ports of Sremska Mitrovica, Brčko, Slavonski Brod, with the town of Sisak as its final destination.

It should not be forgotten that the waterway condition is still an obstacle to any serious planning of needs for transport services and has adverse effect on potential investors in the areas gravitating to the ports on the Sava River.

For this analysis, ISRBC made considerable efforts to collect, process and present, as much as possible, representative statistical data, while in the coming period it will provide missing data for each country. Special attention will be paid to collection, analysis and presentation of the data on transport of passengers.

As to the goods/cargo, the observation area was determined by the *Protocol on the Navigation Regime to the Framework Agreement on the Sava River Basin*, i.e. the data were collected from the ports or the port authorities that operate ports in specific areas.

Period 2010-2013 was the most complete, and as a result, all countries and ports were in a representative sample, which is a minimum requirement from the point of usability of statistical results, i.e. the trends that can be inferred.

There were indeed, significant transshipments in the period 2000-2010 but certain ports did not have, or did not record, the accurate bulk of transshipment, so that the use of such information would not be representative, as was already mentioned to be one of major factors in defining the final goal of this analysis. In Table 2, the availability of data by year and the port/country, as well as the total transshipment per port or country, can be seen.

Goran Šukalo,
Secretariat of ISRBC

At this moment, passenger transport is not statistically analyzed in particular, due to lack of updated records

TABLE 1: Overview of passenger traffic in ports on the Sava and Kupa

Port	2013	2014	2015
Beograd	65000	68000	
Sremska Mitrovica	cca 200	cca 200	cca 200
Brčko	cca 200	cca 200	cca 200
Slavonski Brod	cca 200	cca 200	cca 200
Sisak	cca 200	cca 200	cca 200

TABLE 2: Traffic/transshipment on the Sava and Kupa

Year	Brčko	Šamac	BiH	Sl. Brod	Sisak	Hrvatska	Sr. Mitrovica	Overall
2000				169.000	169.000	338.000		338.000
2001				210.000	204.432	414.432		414.432
2002				205.000	218.775	423.775		423.775
2003				201.000	160.000	361.000		361.000
2004				198.000	190.528	388.528		388.528
2005				174.000	174.003	348.003		348.003
2006		51.000	51.000	162.000	156.935	318.935		369.935
2007		168.079	168.079	180.000	139.899	319.899		487.978
2008	55.546	245.389	300.935	137.000	137.210	274.210		575.145
2009	269.585	107.854	377.440	125.800	120.931	246.731		624.171
2010	140.993	179.170	320.163	124.072	118.466	242.538	64.901	627.602
2011	36.177	174.685	210.862	85.033	83.121	168.154	191.216	570.232
2012	71.273	147.481	218.753	38.468	42.355	80.823	427.738	727.314
2013	71.822	82.787	154.609	39.280	42.345	81.625	413.149	649.383
2014		86.624	86.624					86.624


10th meeting with the captains (Sisak, October 29, 2015)

WATER TRANSPORT PROFESSIONAL NETWORKING

COOPERATION OF PORT AUTHORITIES FOR SAFER NAVIGATION

ISRBC's initiative to encourage cooperation of port authorities made the communication among them become a common practice

As a part of its regular activities, ISRBC has, since its foundation, envisaged professional networking of port authorities on the Sava River waterway in order to get directly from the captains insight into the problems that followed the restoration of navigation on the Sava River.

At the first meeting of ISRBC's Permanent expert group for navigation, the suggestion for supporting the mutual cooperation of port authorities was found very beneficial in a way that it can help raising the navigation safety to a higher level. First meeting was held in autumn of 2006 in Belgrade at the proposal of the competent ministry from Republic of Serbia. That part of year proved to be very convenient from the perspective of the overall functioning and activities of all port authorities regardless of their nationality. While defining the concept and the agenda of the first meeting, all issues that captains and port authorities had to deal with during the application of existing regulations in the field of inland navigation were taken into account, as well as problems regarding the information flow and cooperation among relevant port authorities with a view to international or transit navigation, pointed out by shippers and ship agents.

Atmosphere during preparations, during and after meeting, as well as adopted conclusions, confirmed the justification for the organization of such meetings. The manner of mutual communication, both formal and informal, was agreed, so it became a common practice. Meetings are the place for sharing information on developments in the field of navigation between two meetings, as well as indicating the problems that captains face in their daily work. Furthermore, meetings are good opportunity for introduction of news related to organization, public entitlement and fields of activities of the port authorities themselves.

In order to better understand the importance and seriousness of this approach, as well as benefits of such meetings for the Sava countries, it should be noted that many of the initiatives resulting from these meetings turned into tangible projects and results, such as initiatives related to:

- The problem of non-existence of marking system of the fairway at certain sections of the waterway, as well as the need for its maintenance
- The lack of exchange of information reports and of adequate database on inspections carried out in the basin
- Publication of notices to skippers on the web site of ISRBC
- Regulation of excessive and unplanned exploitation of sediment from the waterway
- The establishment of joint monitoring of the waterway on the sections that make up the border.

The model of the meeting organization was kept so that all these meetings have been very visited and comprehensive. Within the scope of meetings, there are also efforts to organize visits to significant infrastructure objects, and if possible, shorter promotional sailings. Moreover, some of the meetings of captains were held on vessels, directly on the Sava River.

ISRBC's initiative for organizing such meetings has become viable, while the countries have organized these meetings on a rotation basis. It was planned that this year Bosnia and Herzegovina host the eleventh meeting of the captains.

Goran Šukalo,
Secretariat of ISRBC

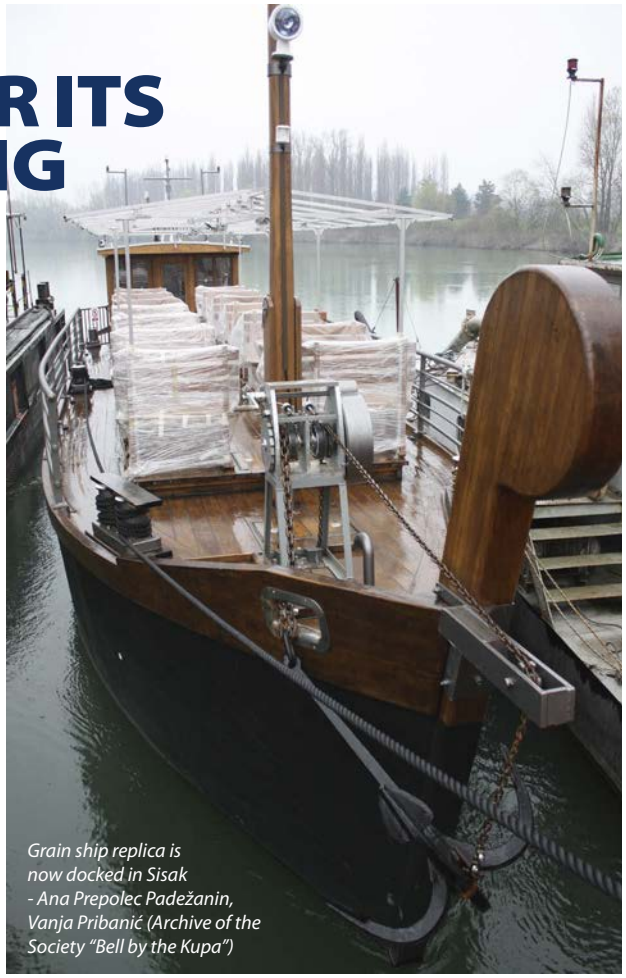

Visit to the shipyard in Sisak (October 29, 2015)

Some of the meetings of captains were held on vessels, directly on the Sava River

AURORA COLAPIS HISTORICAL ATTRACTION ON THE KUPA RIVER

GRAIN SHIP WAITING FOR ITS FIRST SAILING

'Aurora Colapis' ship is 25 meters long and it will be able to accommodate 50 passengers. The construction is made of Slavonian oak and pine, the propulsion consists of two diesel engines with total power of 88 kW, while the draft of the fully loaded ship is 0.80 m.



Grain ship replica is now docked in Sisak - Ana Prepolec Padežanin, Vanja Pribanić (Archive of the Society "Bell by the Kupa")

While the last "makeover services" along with all necessary checks and test runs are being performed, a 25-meter-long replica of a grain ship built of Slavonian oak and pine, now docked in Sisak, is waiting for her first sailing. This ship called 'Aurora Colapis' was built as a part of the project *Grain road, Kupa-Sava*. Money for her construction was raised from EU funds through the Programme of cross-border cooperation between Croatia and Bosnia and Herzegovina 2007-2013, and from the counties of Zagreb, Sisak-Moslavina and Karlovac, as well as from tourist boards, municipalities and cities in that area, and partners from Bosnia and Herzegovina. The total project value is about 5 million HRK, out of which 3 million were spent on the activities in Croatia.

This unique project was launched in 2013. Coordinator of the project is the municipality of Pokupsko with participation of the Association for promotion of culture of living "Zvono uz Kupu" ("Bell by river Kupa") from Zamršje and the city of Karlovac with partners. For the last ten years the municipality Pokupsko has worked intensively on the declaration of navigability of the Kupa River (Colapis is the Latin name for the river). This river, as the most valuable resource, is in the focus of the work of the local society "Kupa, the lifeline", which aims at gathering all cities and municipalities in its basin. Cooperation on the grain road and the construction of the vessel, was born directly through the work of the association. 'Aurora Colapis' itself, is a sort of a pinnacle of the cooperation between regional and local governments with civil society organizations. "We have connected four counties and numerous civil societies around this great joint idea", said Božidar Škrinjarić, Mayor of Pokupsko.

President of the Association for promotion of culture of living "Zvono uz Kupu", which has initiated the whole "grain story", Jasmina Cvetković Braim, says: "So far, we have stressed on many occasions that the idea of launching the Association "Zvono uz Kupu" was to encourage young families not to leave rural areas. Through the project *Grain road, Kupa-Sava* we have connected agriculture with small family farms and tourism, thus reviving the spirit of history and tradition. Given this unique tourist product, i.e. the historical attraction of this part of Europe, we hope to attract visitors not only from Croatia, but also beyond the boundaries. We can certainly count on new investments in the regions through which the ship will sail".

Once, when Karlovac was an important trading center, the grain road was relating to the navigation on the Kupa River for the trade of goods and transport of people from Karlovac to Sisak and further down the Sava. The grain road of today aims to encourage the development of family farms and to revive the tourism in the region.

The grain ship will accommodate up to 50 people on her deck. A three and half hours long voyage to Pokupsko and possibly even downstream if the water levels are favorable, will provide the opportunity for visits to the old town of Karlovac, museum in Turanj, many archaeological sites along the Kupa River in the areas Kamensko and Rečica, as well as local religious buildings, traditional Kupa homes and ethnographic exhibits, natural beauty of flora and fauna, etc. In the area of Pokupsko, future visitors will be offered visits to indigenous wooden chapels, while little bit downstream they could pay visits to the town Sisak and Lonjsko Polje Nature Park.

Many awards received in recent months illustrate how worthwhile this project is. Last year in December, the association "Zvono uz Kupu" received recognition from the Ministry of Maritime Affairs, Transport and Infrastructure for the promotion of inland navigation culture, while the story about "Aurora Colapis" was listed as one of 11 finalists of the enterprise incubator "Impact Hub" Zagreb.

Antonija Vučić,
Leader of the project *Kupa Natura*

This project is still getting numerous awards, so the association "Zvono uz Kupu" ("Bell by river Kupa") received the award for the promotion of inland navigation culture.

PLATFORM SAVA WATER COUNCIL

NEW MECHANISM FOR ACTIVE INVOLVEMENT OF STAKEHOLDERS

1st SWC meeting (Belgrade, February 18-19, 2016)

ISRBC has become the first international water commission in Europe creating such a standing advisory platform of stakeholders

Given that *Framework Agreement on the Sava River Basin* (*FASRB*) integrates all aspects of water resources management, International Sava River Basin Commission (ISRBC) has the broadest scope of work among international river / lake commissions in Europe. It is the only commission that deals with the issues of both sustainability and development of water-related economic activities, thus experiencing diversity of relevant sectors (e.g. water, environment, navigation, hydropower use, agriculture, river tourism, spatial planning) and a wide range of stakeholders.

Believing that stakeholder involvement may contribute to improvement of the *FASRB* implementation, ISRBC has developed a number of mechanisms for public participation at three levels – provision of information, consultation and active involvement. In order to further strengthen involvement of stakeholders at the levels of consultation and active involvement, in fall of 2015, ISRBC established a new mechanism – Sava Water Council (SWC). ISRBC founded SWC as its advisory platform, bringing together representatives of 50 institutions and organizations from non-governmental, academic and business sectors from all five countries of the Sava River Basin, thus being the first international water commission in Europe creating such a standing advisory platform of stakeholders.

The main objective of SWC is to provide stakeholders with the opportunity to express their opinions and propose solutions and innovations regarding the issues important for the *FASRB* implementation. It is expected that awareness of the stakeholders' opinions and needs, as well as the possibility to transfer their knowledge, tools and innovations into ISRBC decisions and recommendations, will contribute to the quality of ISRBC work and the cooperation process itself.

At the first SWC meeting, some main challenges of the *FASRB* implementation were discussed, such as integration of water management and spatial planning, integration of economic development and environment protection, and integration of water policy and water science. The discussions confirmed high potential in terms of the scope, knowledge and experience of SWC, as well as the possibility of their contribution to ISRBC's work. On the other hand, it became clear that non-governmental, academic and business sectors perceive ISRBC as an important and efficient mechanism of transboundary cooperation for sustainable development of the region, while they see SWC as an excellent opportunity for proposing innovative solutions in the field of water, providing advice on the integration of sectors, as well as ensuring the flow of relevant information.

At the meeting, special attention was paid to the future work of SWC, and the manner of its functioning that would enable the highest efficiency. SWC members supported a flexible approach, based on optional organization of well-focused meetings on particular themes with attendance of prominent subject matter experts, while the plenary meetings of all SWC members will be organized annually, in line with the adopted methodology of its work. In addition, efforts will be made to provide permanent communication among SWC members, e.g. through ISRBC's web site.

Establishment of SWC was financially supported by the U.S. Government through their support to the project *Strengthening of Public Participation and Stakeholder Involvement in the Sava River Basin*, within which the first meeting of SWC was held, while the second one will be organized soon (Sevnica, June 6-7, 2016).

Dr. Dejan Komatina,
Secretary of ISRBC

It became clear that non-governmental, academic and business sectors perceive ISRBC as an important and efficient mechanism of transboundary cooperation for sustainable development of the region

SAVA WATER COUNCIL

INTERNATIONAL SAVA RIVER BASIN COMMISSION

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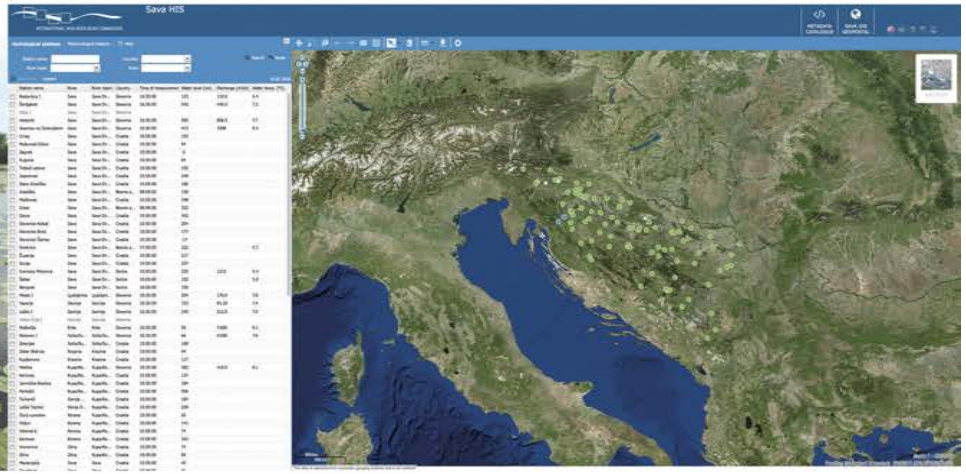

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SLUŽBENI BILTEN SAVSKE KOMISIJE
BR. 17, MAJ 2016.

SAVSKI VJESNIK

INTERVJU – MARTA SZIGETI BONIFERT:
Bez privrednog razvoja i uključenja svih vidova društva, nema ni unaprijeđenja zaštite okoliša

- Implementacija Okvirnog sporazuma, pogled BiH: *Savska komisija je veoma uspješna regionalna priča*
- Poboljšanje hidrološkog modela sliva rijeke Save
- Internet aplikacija za podršku inspekcijskim tijelima

INTERNATIONAL SAVA RIVER BASIN COMMISSION

SADRŽAJ

Vrelo rijeke Bosne

POŠTOVANI ČITAOCI,

u uvodniku prethodnog broja *Savskog vjesnika* dat je kratak osvrt na prvih deset godina rada Savske komisije. Tom prilikom je napomenuto da dostignuća iz prethodnog perioda, iako značajna, predstavljaju samo početak i dobru osnovu za dalje unaprijeđenje saradnje država i još brži napredak prema ostvarenju ciljeva *Okvirnog sporazuma*.

Kao potvrda toga, period od izlaska prethodnog broja obilježili su, ne samo nastavak aktivnosti u svim oblastima rada Savske komisije, već i priprema ili početak realizacije projekata koji će u narednom periodu donijeti nove značajne rezultate. Neke od tih aktivnosti i projekata prikazani su u ovom, 17. izdanju.

Nastavljen je drugi ciklus planiranja upravljanja slivom Save, uz realizaciju pratećih projekata sa ciljem uspostavljanja sistema za monitoring riječnog nanosa na Savi i daljeg povezivanja sektora voda sa drugim relevantnim sektorima (projekat ocjene 'neksusa' voda-hrana-energija-ekosistem na slivu Drine), te uz planiranu izradu strategije adaptacije na klimatske promjene za sliv Save. *Program za izradu Plana upravljanja rizikom od poplava za sliv rijeke Save* nalazi se pred usvajanjem. Završava se nadgradnja hidrološkog modela sliva Save, započinju aktivnosti na razvoju sistema prognoze i upozoravanja na pojavu poplava, a izrada *Plana upravljanja rizikom od poplava* počeće tokom narednih mjeseci. Nastavljene su aktivnosti na jačanju pravnog i administrativnog okvira za plovidbu Savom u skladu sa evropskim tehničkim, sigurnosnim i ekološkim standardima, a pokrenute su nove aktivnosti u cilju razvoja nautičkog, rekreativnog i ekološkog turizma u slivu Save. Platforma za razmjenu informacija u slivu postala je funkcionalna i započeto je popunjavanje baza podataka Sava GIS-a i Sava HIS-a, kao i nadgradnja Sava HIS-a komponentom za prikupljanje i razmjenu podataka o pronosu nanosa na Savi.

Ponosni smo na iskorak u daljem jačanju učešća javnosti i uključenja interesnih grupa u proces implementacije *Okvirnog sporazuma* – osnivanje i početak rada Savskog vijeća za vode. Prvi sastanak Vijeća potvrdio je mogućnost značajnog doprinosa Vijeća daljem radu Savske komisije, prije svega kroz podršku formulisanju višesektorskih regionalnih projekata i formiranju regionalnih projektnih timova za naredni period. Očekuje se da rad Vijeća doprinese i daljem povezivanju aspekata održivosti i razvoja, kombiniranju 'top-down' i 'bottom-up' pristupa, kao i promociji saradnje koju koordinira Savska komisija.

Prethodni period obilježile su i aktivnosti na pripremi i organizaciji događaja koji se tradicionalno održavaju u vrijeme obilježavanja Dana Save, 1. juna. Centralni događaj je Šesti sastanak Strana *Okvirnog sporazuma* (Beograd, 1.6.2016.), na kome će biti određeni glavni pravci daljeg rada Komisije. U okviru obilježavanja Dana Save 2016, Savska komisija organizuje peti sastanak Parlamenta mladih, treću biciklističku turu od izvora do ušća Save i drugi sastanak Savskog vijeća za vode. Pored ovih, veliki broj događaja organiziraće same države.

Vjerujem da će prikaz rezultata nabrojanih aktivnosti u sljedećem izdanju *Savskog vjesnika* potvrditi tezu sa početka uvodnika, da implementacija *Okvirnog sporazuma* postaje sve efikasniji proces. Želim Vam prijatno čitanje!

Dr Dejan Komatina,
Sekretar Savske komisije

IMPRESUM

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Dizajn i štampa: Optimum dizajn d.o.o.
Fotografija na naslovnoj strani: Naplavina; Autor: Vladimir Đinić

Savski vjesnik je službeni bilten Međunarodne komisije za sliv rijeke Save (Savske komisije) koji se objavljuje dvaput godišnje u formi dvojezičnog izdanja – na engleskom jeziku i jednom od službenih jezika Savske komisije, za svako izdanje. Njegova svrha je prikaz najznačajnijih aktivnosti, projekata i rezultata postignutih u oblastima obuhvaćenim *Okvirnim sporazumom o slivu rijeke Save*, pružanje korisnih informacija i mogućnosti za bolju komunikaciju zainteresiranih strana i šire javnosti sa Savskom komisijom i, na taj način, promocija izuzetnih vrijednosti i potencijala sliva rijeke Save.

Savski vjesnik je dostupan i na internet stranici Savske komisije, **www.savacommission.org.**

VIJESTI I NAJAVE


Sarajevo, 28. januar 2016.


Beograd, 29. januar 2016.

RAZMOTRENI REZULTATI OCJENE 'NEKSUSA' U SLIVU RIJEKE SAVE

Krajem januara 2016. godine, u Sarajevu i Beogradu su održane savjetodavne radionice „Ocjena povezanosti sektora vode, proizvodnje hrane, energetike i životne sredine u slivu rijeke Save - Naučene lekcije i daljnji koraci". Organizatori skupova bili su UNECE i Savska komisija, a domaćini, Ministarstvo vanjske trgovine i ekonomskih odnosa Bosne i Hercegovine (radionica u Sarajevu) i Ministarstvo poljoprivrede i zaštite životne sredine Republike Srbije (radionica u Beogradu). Skupovi su organizovani sa ciljem da se:

- predstave rezultati ocjene Sava 'neksusa' i novija dostignuća u okviru Savske komisije;
- dobiju povratne informacije od nacionalnih institucija o vrijednosti nalaza ocjene 'neksusa', te o tome što se može učiniti kao odgovor na preporuke;
- obavi razgovor s predstavnicima vladinog sektora i civilnog društva o budućim projektima i aktivnostima kako bi se osigurala korist za zemlje.

Na obje radionice se okupilo više od 60 učesnika iz resornih ministarstava, istraživačkih instituta / univerziteta, privrednih komora, javnih ustanova i NVO. Radionice su pružile informacije potrebne za planiranje i provođenje aktivnosti Savske komisije, predviđenih *Okvirnim sporazumom o slivu rijeke Save*, posebno u pogledu daljnje integracije politike voda s drugim sektorskim politikama, kao i daljnjeg dijaloga s ključnim sektorskim interesnim grupama.

Predstavljanje Sava GIS-a i HIS-a u savskim državama

Savska komisija započela je sa organizacijom prezentacija Sava GIS-a i Sava HIS-a u državama članicama, sa ciljem da se zainteresovane strane iz savskih država upoznaju sa mogućnostima koje nudi ova, nedavno uspostavljena platforma za razmjenu informacija u slivu rijeke Save.

Kroz demonstraciju uživo SavaGIS Geoportala i SavaHIS aplikacije, učesnici su upoznati sa glavnim funkcionalnostima sistema, na način da kao krajnji korisnici mogu samostalno istraživati i upotrebljavati ove aplikacije.

Nakon početne prezentacije u Sloveniji, održane u decembru 2015. godine, nove aplikacije su predstavljene i u Bosni i Hercegovini i Srbiji u januaru 2016. godine, a planira se da slična prezentacija uskoro bude organizovana i u Hrvatskoj.

RADIONICA O PRAĆENJU KVALITETA VODA I RIJEČNOJ MORFOLOGIJI

U okviru projekta *Prema procjeni ekološkog stanja vodnih tijela u slivu rijeke Save* (*STAWA*), 10.-12. februara 2016. u prostorijama Instituta Jožef Stefan, u Ljubljani, održana je Radionica o hemijskom i biološkom praćenju stanja voda i riječne hidromorfologije.

Projekat je finansiran iz sredstava Evropske unije i Grada Beča u okviru „START" programa podrške malim pojektima koji se odnose na dunavski region.

Osnovni cilj Radionice bio je:

- razmotriti postojeće protokole uzorkovanja, analitičkih metoda i postupaka u vezi s hemijskim i biološkim praćenjem stanja voda i riječne hidromorfologije;
- dati preliminarne preporuke za usklađivanje parametara praćenja;
- definisati prijedloge za naredne korake koje treba realizovati kako bi se postigla zadovoljavajuća usklađenost stanja voda / postupaka praćenja kvaliteta;
- održati obuku o biološkim elementima kvaliteta u procjeni ekološkog stanja.

Osim toga, predstavnici projekta EU FP7 *GLOBAQUA* predstavili su procjenu vrijednosti usluga ekosistema za implementaciju Okvirne direktive o vodama u slivu rijeke Save. Rezultati Radionice doprinjeli su uspješnoj finalizaciji *STAWA* projekta u martu 2016. godine.


Ljubljana, 10-12. februar 2016.

DAN SAVE 2016. – DALJA PROMOCIJA USPJEŠNE SARADNJE

Ovogodišnje obilježavanje Međunarodnog dana rijeke Save, Savska komisija će iskoristiti za daljnju promociju uspješne saradnje država članica i dodatno jačanje veza sa zainteresovanim stranama na nacionalnom i lokalnom nivou. Uz Šesti sastanak Strana *Okvirnog sporazuma*, kao centralni događaj koji će biti održan na sam Dan Save, 1.6.2016. u Beogradu, ove godine Savska komisija organizuje:

- Peti sastanak Parlamenta mladih sa sliva Save (Park prirode „Lonjsko polje", 3-4.6.2016.), skup učenika 8 srednjih škola iz četiri države, izabranih na bazi najboljih intervjua koje su učenici obavili sa ličnostima po izboru, na temu poplava - centralnu temu ovogodišnjeg sastanka
- Treću međunarodnu biciklističku turu duž Save (od izvora Save Dolinke do ušća Save u Dunav), u dužini od oko 900 km i trajanju od 9 dana (27.5. – 4.6.2016.), praćenu prigodnim događajima na približno 20 lokacija duž Save i stalnim informacijama o Turi na internet strani Savske komisije
- Drugi sastanak Savskog vijeća za vode (Sevnica, 6-7.6.2016.), savjetodavne platforme Savske komisije koja okuplja predstavnike nevladinog, akademskog i poslovnog sektora savskih država.

Program će obuhvatiti i brojne događaje koje organizuju same savske države, većinom kroz nastavak realizacije projekata, uspostavljenih tokom ranijih godina.

SAVA YOUTH
INTERNATIONAL SAVA RIVER BASIN COMMISSION

SAVA TOUR
INTERNATIONAL SAVA RIVER BASIN COMMISSION

SAVA WATER COUNCIL
INTERNATIONAL SAVA RIVER BASIN COMMISSION

Ministri će razgovarati o provođenju Okvirnog sporazuma

Šesti sastanak strana *Okvirnog sporazuma o slivu rijeke Save* (*Okvirni sporazum*) održat će se u Beogradu, 1. juna 2016. godine. Sastanak će savskim državama pružiti mogućnost da procijene napredak u provođenju *Okvirnog sporazuma* u protekle dvije godine, komentarišu rad i djelovanje Savske komisije i utvrde daljnje korake potrebne za postizanje dogovorenih ciljeva saradnje. Posebna pažnja na sastanku biće posvećena aktualnim pitanjima u provođenju *Okvirnog sporazuma*, kao što su razmjena informacija, upravljanje poplavama i obnova plovidbe u slivu rijeke Save. Očekuje se da će Deklaracija, kao glavni ishod sastanka, pružiti ključne smjernice za daljnje provođenje *Okvirnog sporazuma* i budući rad Savske komisije.

DRUGO, DOPUNJENO IZDANJE DALJINARA IZLAZI IZ ŠTAMPE

Imajući u vidu da je Savska komisija svoje prvo izdanje *Daljinara rijeke Save i njenih plovnih pritoka* izradila kao rezultat potrebe da se ažuriraju sve promjene nastale na plovnom putu od vremena posljednjeg izdanja šezdesetih godina prošlog stoljeća, nedavno je svjetlo dana ugledalo i njegovo drugo, dopunjeno izdanje. *Daljinar* u ovom izdanju tretira rijeku Savu, od ušća u Dunav do granice Slovenije i Hrvatske (rkm 711,3) i rijeku Kupu, za sada jedinu održavanu i označenu pritoku, od ušća u Savu do rkm 162,6. Ovisno o početku planskog uređenja i obilježavanja plovnih pritoka za plovidbu, i daljinar će biti dopunjavan i slijediće sve novonastale promjene. Ovo izdanje sadrži sve potrebne elemente za sigurnu plovidbu i rezultat je višegodišnjeg rada i povremenih provjera od strane kompetentnih poznavalaca plovnog puta i hidroloških prilika koje na njemu vladaju. Treba napomenuti da su na rijeci Kupi, od rkm 5 do rkm 80, table sa kilometarskim oznakama postavljene na svakih 5 kilometara, što višestruko olakšava orijentaciju i snalaženje rekreativnih nautičara. Za ovo izdanje su, također, priređene i skice svih mostova koji se nalaze na novoobrađenim dijelovima rijeka Save i Kupe, te su uneseni svi važniji objekti.

INTERVJU MARTA SZIGETI BONIFERT,
IZVRŠNI DIREKTOR REGIONALNOG CENTRA
ZA OKOLIŠ ZA CENTRALNU I ISTOČNU EVROPU

BEZ PRIVREDNOG RAZVOJA I UKLJUČENJA SVIH VIDOVA DRUŠTVA NEMA NI UNAPRIJEĐENJA OKOLIŠA

Važno je istaći neophodnost postizanja konsenzusa raznih interesnih grupa – na lokalnom, nacionalnom i regionalnom nivou – posebno u slučajevima kada prirodni resurs dijeli više država. Kao rijeke, na primjer

MARTA SZIGETI BONIFERT: *Želimo doprinijeti lakšem ostvarenju ciljeva Savske komisije*

Jedan od najvažnijih ciljeva REC-a je razvoj demokratičnosti u oblasti okoliša. Šta to, u stvari, znači?

REC je osnovan da bi promovisao pristup informacijama, učešće javnosti i uključenje interesnih grupa u najširem mogućem kontekstu i u svakoj oblasti rada u koju smo uključeni. Naravno, naše djelovanje je direktno povezano sa tri stuba *Arhuške konvencije*. Konkretno, REC promoviše demokratičnost u oblasti okoliša tako što povezuje interesnih grupa radi razmatranja relevantnih pitanja i posreduje u tom procesu na nepristrasan način.

Dobro upravljanje u oblasti okoliša predstavlja ključni činilac održivog razvoja. Kako vidite ulogu javnosti u tom procesu?

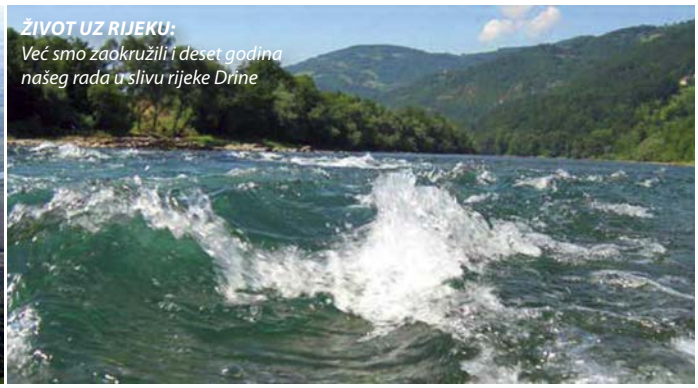
Ovdje je važno istaći neophodnost postizanja konsenzusa raznih interesnih grupa – na lokalnom, nacionalnom i regionalnom nivou – po svim značajnim pitanjima, posebno u slučajevima kada prirodni resurs dijeli više država. Kao rijeke, na primjer. A održivi razvoj, osim težnje za postizanjem kvalitetnog okoliša, obuhvata i društvenu i ekonomsku dimenziju. Bez privrednog razvoja i društvene inkluzije nema ni unaprijeđenja okoliša. U tom kontekstu želim da napomenem da svi troškovi, unaprijed uloženi u održivi razvoj, predstavljaju investicije u budućnost koje će društvu donijeti dugoročne koristi.

Koji su, po Vašem mišljenju, najvažniji projekti koje je REC do sada realizovao, posebno u oblasti voda?

Na početku bih navela *Dunavski regionalni projekat*, u koji smo bili uključeni u dijelu vezanom za učešće javnosti i podršku nevladinom sektoru, a u okviru koga je UNDP GEF osigurao finansijsku i tehničku pomoć zajednicama i organizacijama civilnog društva. Sljedeći važan projekat je *CarpathCC*, koji je poslužio za razmatranje pitanja klimatskih promjena na regionalnom nivou. U novije vrijeme, bavimo se prenošenjem iskustava

Bez stalne, neposredne komunikacije nemoguće je uspostaviti otpornost zajednica, ojačati međusobno poverenje ili razmatrati politički osjetljiva pitanja

SAVA IZ VAZDUHA: *Od samog početka smo bili veoma povezani sa sekretarijatom Savske komisije i pružali mu podršku*



ŽIVOT UZ RIJEKU: *Već smo zaokružili i deset godina našeg rada u slivu rijeke Drine*

REC promovira demokratičnost u oblasti okoliša kroz povezivanje interesnih grupa radi razmatranja relevantnih pitanja i posredovanje u tom procesu na nepristrasan način

i znanja u region Bliskog istoka i Sjeverne Afrike, u okviru projekta *WaterSUM*. Trenutno, ovaj projekat je usmjeren na prenošenje slučajeva dobre prakse lokalnim zajednicama u Jordanu i Tunisu.

U geografskom smislu, REC obuhvata centralnu i istočnu Evropu. Da li ste zadovoljni saradnjom sa državama jugoistočne Evrope? Koje projekte ste realizovali u tom regionu?

Naravno, od samog početka smo bili veoma povezani sa sekretarijatom Savske komisije i pružali mu podršku, kroz izradu nacrta pojedinih institucionalnih dokumenata. Takođe, već je deset godina od kako smo aktivni u slivu rijeke Drine, doprinoseći otpornosti i održivosti zajednica. Pored toga, aktivni smo i u području Crnog mora, po pitanju upravljanja vodama.

Nedavno, REC je dobio status posmatrača u Savskoj komisiji. Kako ocjenjujete saradnju sa Savskom komisijom?

Mi smo imali dobru saradnju i prije dobijanja statusa posmatrača, sudjelovali smo na prvom sastanku Savskog vijeća za vode. Imajući to u vidu, status posmatrača je došao kao normalan sljedeći korak u dobrom odnosu dvije organizacije. Međutim, tekuće aktivnosti nam pružaju još više mogućnosti za uključenje i doprinos radu Savske komisije.

Često govorite o važnosti društvenih mreža u naporima de se osigura održiva budućnost, ali isto tako i o pratećim rizicima. Rekli ste da su, uprkos razvoju komunikacije putem interneta, često neophodni neposredni kontakti kako bi se našla kvalitetnija rješenja u vezi sa okolišom. Da li nam možete nešto reći o iskustvima REC-a u tom smislu?

Tokom 25 godina postojanja, REC je uspostavio i razvio kontakte širom cijelog regiona i zamjena za ovaj vid uključenja interesnih grupa jednostavno ne postoji. Bez stalne, neposredne komunikacije, nemoguće je uspostaviti otpornost zajednica, ojačati međusobno povjerenje ili razmatrati politički osjetljiva pitanja. Saradnja je jedina prava osnova stabilnosti i održivog razvoja. Novi mediji, sa druge strane, izuzetno su korisni za brzo širenje informacija različitih interesnih grupa i za jačanje njihove svijesti.

REC je aktivan od 1990. godine. Koji su planovi REC-a za budućnost, posebno u vezi sa slivom rijeke Save?

Jedan od naših najvažnijih zadataka u regionu je promocija zajedničkog rada na ostvarivanju UN-ovih ciljeva održivog razvoja i REC je nedavno bio domaćin jedne regionalne diskusije i okruglog stola o implementaciji ovih ciljeva. Mi, takođe, želimo doprinijeti lakšem ostvarenju ciljeva Savske komisije. U vašem regionu, to možemo postići kroz sudjelovanje u radu različitih tijela i inicijativa, kao što je Vijeće za regionalnu saradnju, kao i kroz omogućavanje razmjene iskustava i znanja sa drugim regionima u svijetu.

(Marko Barišić)

Pokrenuta inicijativa „Voda, rast i stabilnost“

Konferencija o vodi, rastu i stabilnosti, održana 26-28. aprila 2016. godine u Sent Andreji (Mađarska), u organizaciji REC-a i mađarskog Ministarstva spoljnih poslova i trgovine, kao uvodni događaj u Budimpeštanski vodni samit 2016, predstavlja prekretnicu u implementaciji REC-ovog projekta *Održivo korištenje prekograničnih vodnih resursa i upravljanje vodnom sigurnosti u regionu Bliskog istoka i Sjeverne Afrike* (*WaterSUM*), koji se realizuje uz podršku Švedske agencije za međunarodnu saradnju i razvoj (SIDA). Na konferenciji se okupio široki spektar interesnih grupa iz cijelog regiona Bliskog istoka i Sjeverne Afrike, uključujući predstavnike ministarstava nadležnih za upravljanje vodama i vodnu sigurnost, lokalnih vlasti, međunarodnih organizacija, nevladinih organizacija, kao i akademskog i poslovnog sektora.

Na osnovu rezultata skupa, pokrenuta je inicijativa „Voda, rast i stabilnost“, čiji su osnovni ciljevi da:

- pruži podršku regionu Bliskog istoka i Sjeverne Afrike i interesnim grupama iz sektora voda tog regiona u unapređenju upravljanja vodama na nacionalnom i lokalnom nivou, kao i podršku regionalnoj saradnji i upotrebi praktičnih alata i rješenja
- stimuliše održivo korištenje vodnih resursa u regionu, jaču saradnju ključnih aktera i primjenu strateškog pristupa prilagođavanju klimatskim promjenama
- promoviše integralni pristup vodnoj sigurnosti i servisima ekosistema, te ojača svijest o sve izraženijoj povezanosti globalnih resursnih sistema i njihovom uticaju na održivost sektora voda
- razvije okvirni program u skladu sa prioritetima država regiona i
- mobiliše dodatne resurse i partnere u cilju daljnjeg širenja mreže uspostavljene u regionu i identifikuje sinergije sa drugim tekućim programima i inicijativama.

STAJALIŠTE IMPLEMENTACIJA OKVIRNOG SPORAZUMA: POGLED BOSNE I HERCEGOVINE

SAVSKA KOMISIJA JE VEOMA USPJEŠNA REGIONALNA PRIČA

Pozitivna klima u okviru Savske komisije doprinosi daljem razvijanju bilateralne saradnje između zemalja, što je od izuzetne važnosti. Zaštita od poplava je pitanje kojem se u posljednih nekoliko godina posvećuje veoma velika pažnja

Okvirnim sporazumom za sliv rijeke Save uspostavljeni su mehanizmi zajedničke saradnje koji predstavljaju primjer dobre prakse ne samo u slivu već u puno širem okviru. Ovaj vid saradnje za Bosnu i Hercegovinu je vrlo važan, jer značajno doprinosi društveno-ekonomskom razvoju i održivom upravljanju vodnim resursima u slivu. Iako smo suočeni sa različitim ograničenjima, rezultati koji su do sada ostvareni u okviru Međunarodne komisije za sliv rijeke Save, uključujući i rad stručnih grupa, pokazuju da je ovo jedna veoma uspješna regionalna priča. Pozitivna klima u okviru Savske komisije doprinosi daljem razvijanju bilateralne saradnje između zemalja, što je od izuzetne važnosti.

Širok je spektar pitanja na kojima radimo u okviru Savske komisije. Kada je u pitanju upravljanje slivom najznačajnije su aktivnosti vezane za drugi ciklus planiranja u skladu sa *Okvirnom direktivom EU o vodama*. U toku je priprema druge Analize sliva rijeke Save kao i priprema dokumenta, odnosno identifikacija i usaglašavanje ključnih pitanja upravljanja vodama u slivu rijeke Save. Ove dvije aktivnosti će u stvari determinisati sadržaj Programa mjera za sliv rijeke Save u drugom planskom ciklusu.

Osim navedenih, planskim dokumentima se moraju sagledati pitanja koja se tiču uticaja klimatskih promjena, nanosa, ali i suštinski važnog pitanja jačanja saradnje sa drugim sektorima povezanim sa sektorom voda. Završena je izrada *Plana adaptacije na klimatske promjene za sliv rijeke Save*, kojim je identifikovan set smjernica za prilagođavanje nekoliko ključnih podsektora (hidroenergetika, poljoprivreda, plovidba, zaštita od poplava) klimatskim promjenama. Izrađen je prijedlog sistema za praćenje nanosa za rijeku Savu i završena je ocjena 'neksusa' za sliv rijeke Save koja je uključila sektore voda, proizvodnje hrane, proizvodnje energije i životne sredine. Kao nastavak, u aprilu je počeo projekat ocjene 'neksusa' za sliv rijeke Drine.

U zemaljama se intezivno provode aktivnosti na donošenju *Planova upravljanja* u skladu sa *Okvirnom direktivom EU o vodama i Zakonima o vodama*. U Bosni i Hercegovini su pripremljeni prednacrti *Planova upravljanja slivom rijeke Save* u Federaciji BiH, Republici Srpskoj i Brčko distriktu BiH. Javne konsultacije i usvajanje konačnih dokumenata se očekuje do kraja 2016. godine. Paralelno se provode aktivnosti i na pripremi i usvajanju planskih dokumenata za vodno područje Jadranskog mora i oblasni riječni sliv rijeke Trebišnjice.

Predsjedništvo Bosne i Hercegovine je donijelo Odluke o ratifikaciji *Protokola o upravljanju nanosom uz Okvirni sporazum za sliv rijeke Save i Ugovora između Savjeta ministara BiH i Vlade Republike Hrvatske o pravima i obavezama korištenja voda iz javnih sistema za vodosnabdjevanje presječenih državnom granicom*, potpisanih na ministarskom sastanku u julu 2015. godine, u Brčkom.

Zaštita od poplava je pitanje kojem se u posljednih nekoliko godina posvećuje veoma velika pažnja, kako na nivou Savske komisije, tako i u pojedinim zemljama. Snažna po-

Planina Tara; Autor: Miroslav Jeremić

Martin Brod;
Autor: Miroslav Jeremić

Poučeni iskustvom i posljedicama poplavnih događaja u prethodnih nekoliko godina, a posebno katastrofalnim poplavama iz maja 2014. godine, u Bosni i Hercegovini je preduzet niz aktivnosti koje se odnose na unaprijeđenje sistema za zaštitu od poplava

drška daljem jačanju regionalne saradnje u ovom domenu je jasno iskazana na tri ministarska sastanka održana u prethodnom periodu u Beogradu, Zagrebu i Brčkom. *Protokol o zaštiti od poplava uz Okvirni sporazum* je stupio na snagu krajem novembra 2015. godine. Ključne aktivnosti predviđene ovim dokumentom se odnose na donošenje zajedničkog *Plana upravljanja rizikom od poplava* i uspostavljanje zajedničkog sistema za prognoziranje i upozoravanje na pojavu poplava u slivu rijeke Save. Sredstva za realizaciju ovih aktivnosti su obezbjeđena u saradnji sa WBIF-om, a očekuje se da će implementacija projekta početi u toku maja 2016. godine. Osim navedenog, u završnoj fazi su aktivnosti na nadogradnji hidrološkog modela sliva rijeke Save, kao i pripremne aktivnosti za avionsko snimanje koridora rijeke Save primjenom tzv. LIDAR sistema za izradu topografskih podloga i unaprijeđenje hidrauličkog modela rijeke Save.

Poučeni iskustvom i posljedicama poplavnih događaja u prethodnih nekoliko godina, a posebno katastrofalnim poplavama iz maja 2014. godine, u Bosni i Hercegovini je preduzet niz aktivnosti koje se odnose na unaprijeđenje sistema za zaštitu od poplava. *Akcioni plan za zaštitu od poplava i upravljanje rijekama u BiH 2014-2017* je donešen i njime je identifikovan niz mjera koje je potrebno provesti u vremenskom periodu do 2017. godine. Ovim dokumentom je posebno apostrofirana važnost i potreba uske saradnje sa susjednim zemljama i Savskom komisijom. Aktivnosti koje se provode u Bosni i Hercegovini podrazumjevaju unaprijeđenje pravnog okvira, obnovu, rekonstrukciju i izgradnju objekata za zaštitu od voda, jačanje hidro-meteorološke mreže za monitoring, unaprjeđenje prognostičkih kapaciteta nadležnih institucija, izradu karata opasnosti i karata rizika od poplava i na kraju izradu i donošenje odgovarajućih *Planova upravljanja rizikom od poplava* u skladu sa *Direktivom EU o poplavama* i domaćim zakonodavstvom.

Veoma važna dimenzija aktivnosti Savske komisije se odnosi na razmjenu podataka i informacija u slivu. U tom smislu, krajem 2015. godine, završene su i aktivirane dvije platforme, SavaGIS i SavaHIS.

U skladu sa odredbama *Okvirnog sporazuma*, EU zakonodavstva i *Arhuske konvencije*, Savska komisija je prepoznala potrebu da se postojeći mehanizmi za učešće javnosti i zainteresovanih strana u procesu implementacije *Okvirnog sporazuma* unaprijede. U tom svijetlu, Savska komisija je donijela odluku i uspostavila je Savski savjet za vode. Ovo tijelo ima savjetodavni karakter, a ključni zadatak mu je da obezbijedi odgovarajuće učešće šire javnosti i zainteresovanih strana.

Postignutim rezultatima stvorena je dobra osnova za dalje aktivnosti Savske komisije, koje se u narednom periodu trebaju fokusirati na slijedeće:

- razmatranje i usaglašavanje načina za unaprijeđenje odredaba *Okvirnog sporazuma* i završetak izrade i ratifikaciju planiranih protokola uz *Okvirni sporazum*,
- implementaciju zajedničkog *Plana upravljanja slivom rijeke Save* i njegovo unaprijeđenje kroz integraciju politika u sektoru voda sa politikama u drugim sektorima (plovidba, poljoprivreda, hidroenergetika, klimatske promjene),
- izradu i donošenje zajedničkog *Plana upravljanja rizikom od poplava za sliv rijeke Save*,
- kvalitetnu razmenu informacija, prognoziranje, upozoravanje i alarmiranje u slivu Save,
- koordinaciju daljeg razvoja privrednih aktivnosti vezanih za korišćenje voda (plovidba, svi vidovi održivog riječnog turizma),
- dalji razvoj platforme za učešće javnosti i interesnih grupa u procesu implementacije *Okvirnog sporazuma*,
- dalje jačanje saradnje sa drugim međunarodnim organizacijama i partnerskim institucijama i promociju aktivnosti i ostvarenih rezultata.

Boško Kenjić,
šef Odsjeka za vodne resurse,
Ministarstvo spoljne trgovine
i ekonomskih odnosa BiH

SAVSKA KOMISIJA DRUGI CIKLUS PLANIRANJA UPRAVLJANJA SLIVOM

ZAJEDNIČKI NAPORI U DOSTIZANJU DOBROG STANJA VODA

Okvirna direktiva o vodama EU zahtjeva reviziju karakteristika sliva, provjeru uticaja ljudskih aktivnosti na okoliš i ekonomske analize korištenja voda, u šestogodišnjim ciklusima


Vilin konj; Autor: Branislav Stanković

Posvećenost strana *Okvirnog sporazuma o slivu rijeke Save* (*Okvirni sporazum*) poštivanju *Okvirne direktive o vodama EU*, iako nisu sve među njima zakonski obavezne da to čine, kao i dobra saradnja strana na implementaciji *Okvirnog sporazuma*, naišli su na pozitivne reakcije Europske komisije, što je rezultiralo njihovom podrškom izradi prvog *Plana upravljanja slivom rijeke Save*. Na Petom sastanku strana *Okvirnog sporazuma*, održanom 2. decembra 2014. godine, odobren je prvi *Plan upravljanja slivom rijeke Save*, kao prekretnica u saradnji zemalja na daljnoj implementaciji *Sporazuma*. Time je završen prvi ciklus planiranja upravljanja riječnim slivom u skladu s *Okvirnom direktivom o vodama*. Odobrenjem *Plana upravljanja*, strane *Okvirnog sporazuma* su se složile da poduzmu napore za realizaciju Programa mjera koji čini sastavni dio *Plana*, kako bi se doprinjelo ispunjenju zajedničkog cilja – postizanja dobrog stanja voda. Strane su od Savske komisije zatražile pomoć u komunikaciji sa relevantnim međunarodnim institucijama, kako bi se pronašlo više mogućnosti za finansiranje implementacije mjera dogovorenih prvim *Planom*, a također su ohrabrile Savsku komisiju da nastavi dijalog sa relevantnim zainteresovanim stranama iz sektora plovidbe, hidroenergetike, poljoprivrede, očuvanja prirode i upravljanja poplavama u narednim ciklusima planiranja upravljanja slivom rijeke Save.

Sa ciljem da se pitanje učešća zainteresovanih strana u drugom ciklusu planiranja razmotri već na samom početku ovog ciklusa, Savska komisija je organizovala konsultacijsku radionicu (Zagreb, 18. juni 2015. godine), na kojoj je ova tema razmotrena sa predstavnicima ministarstava, agencija za vode, energetskog sektora, nevladinih organizacija i međunarodnih organizacija (WWF, Euronatur, GWP), oslanjajući se na do sada naučene lekcije na nivoima sliva rijeka Save i Dunava.

Početni koraci drugog ciklusa planiranja su trenutno u toku. Izrađen je dokument o značajnim pitanjima upravljanja vodama (SWMI). Ovaj privremeni pregled ključnih pitanja sa stanovišta vodnog okoliša u slivu rijeke Save, nadovezuje se na znanja stečena u procesu izrade prvog *Plana upravljanja slivom rijeke Save*, kao i dodatne nove informacije. SWMI dokument će, u bliskoj budućnosti, biti postavljen na službenu internet stranicu Savske komisije, radi javne rasprave.

Okvirna direktiva o vodama također zahtijeva reviziju opštih karakteristika vodnog područja, provjeru uticaja ljudskih aktivnosti na okoliš i ekonomskih analiza korištenja voda, u šestogodišnjim ciklusima. Iz tog razloga, Savska komisija je započela izradu druge Analize sliva rijeke Save, koja će obezbjediti ažuriranje karakterizacijskog izvještaja o:

- Opštim karakteristikama sliva rijeke Save;
- Hidrografskim karakteristikama sliva;
- Kvaliteti vode;
- Ekonomskim analizama korištenja voda, i
- Integraciji upravljanja vodama, zaštite od poplava i plovidbe.

Planirano je da Analiza bude završena u jesen 2016. godine.

Nakon što SWMI dokument i Analiza sliva rijeke Save budu finalizirani, isti će pružiti osnovu za izradu ažuriranog *Plana upravljanja slivom rijeke Save*. Obzirom da će izrada *Plana* zahtijevati podršku iz vanjskih izvora finansiranja, za naredni period se planiraju aktivnosti na prikupljanju sredstava za izradu *Plana*, kako bi se omogućio nesmetan nastavak i završetak aktivnosti drugog ciklusa planiranja.

Samo Grošelj,
Sekretarijat Savske komisije


Putovanje bez pasoša; Autor: Milena Dovedan


Pogled na bioraznolikost, Lonjsko polje; Autor: Matea Matoš

Kanjon rijeke Drine

MEĐUSEKTORSKE VEZE SLIV RIJEKE DRINE

DALJE JAČANJE SARADNJE ĆE DONIJETI BROJNE KORISTI

Prekogranična saradnja olakšava pronalaženje ravnoteže između povećane proizvodnje energije, realizacije ambicioznih ciljeva koje nameću klimatske i energetske politike i održavanja dobrog statusa prekograničnih voda

Ocjena međusektorskih veza, kompromisa i koristi u slivu rijeke Save, čiji su rezultati sažeto prikazani u UNECE-ovoj publikaciji *Usklađivanje raznih vidova korištenja resursa u prekograničnim slivovima: Ocjena 'neksusa' voda-hrana-energija-ekosistem (*2015), a koja je izrađena u okviru implementacije UNECE-ove *Konvencije o vodama*, pokazuje da unaprijeđenje koordinacije u upravljanju resursima, državama u slivu može donijeti različite koristi. Konkretno, prekogranična saradnja, između ostalog, olakšava pronalaženje ravnoteže između povećane proizvodnje energije, realizacije ambicioznih ciljeva koje nameću klimatske i energetske politike i održavanja dobrog statusa prekograničnih voda. Kao ključne preporuke navode se dosljedna primjena pravnih instrumenata, prikupljanje pouzdanih podataka i informacija, kao i koordinacija investiranja u infrastrukturu i promocija višenamjenskog i fleksibilnog korištenja infrastrukture. Preporučuje se i korištenje Savske komisije kao platforme za diskusiju u vezi sa svim relevantnim resursima u slivu, te za konsultacije o uticaju nacionalnih i sektorskih razvojnih strategija.

Kao odgovor na nalaze iz pomenute studije, pristupilo se realizaciji novog projekta, za sliv rijeke Drine. Realizacija projekta zvanično je započela radionicom (Podgorica, 21-22.4.2016.), koju su zajednički organizovali UNECE i Savska komisija, uz podršku italijanskog Ministarstva za životnu sredinu, zemljište i more, sa Ministarstvom poljoprivrede i ruralnog razvoja Crne Gore kao domaćinom[1]. Naime, i pored postepenog napretka u pogledu regionalnog povezivanja, države u slivu Drine još uvijek se suočavaju sa izazovima nedovoljne usklađenosti pristupa, potrebe za daljim unaprijeđenjem razmjene podataka, nedostataka u procesu upravljanja, te komunikacije. Stoga, primjena pristupa kojim se prevazilaze sektorske i državne granice može donijeti značajne koristi. Na primer, uočavanje sinergija sa drugim korisnicima voda i provjera ekološke održivosti mogu imati pozitivan uticaj u planiranju modernizacije energetskog sektora, uključujući i povećano korištenje obnovljivih izvora energije i razvoj energetskog tržišta.

Zaključci sa Radionice ukazuju na moguće koristi od daljeg širenja i jačanja prekogranične saradnje u slivu Drine. Na primer, optimizacijom korištenja brana i unaprijeđenjem komunikacije u vezi sa upravljanjem ovim objektima, može se istovremeno smanjiti šteta od velikih ili malih voda i obezbjediti proizvodnja hidroenergije. U tom smislu bi bilo od koristi uvođenje mehanizama za prekograničnu koordinaciju djelovanja nadležnih institucija. Kao drugi primjer, unaprijeđenje upravljanja čvrstim otpadom u slivu Drine može imati pozitivne efekte sa stanovišta turizma, hidroenergetike i poljoprivrede istovremeno. Jedno od perspektivnih rješenja je ruralni razvoj baziran na sinergijama povećane poljoprivredne proizvodnje, razvoja ekološki održivog turizma i korištenja obnovljivih izvora energije.

Na osnovu zaključaka Radionice, a koristeći primjere dobre prakse, u narednoj fazi biće provedena analiza izabranih međusektorskih pitanja, prioritetnih mjera i mogućih koristi od njihove implementacije, praćena konsultacijama sa nadležnim tijelima u državama i organizacijom druge radionice u jesen ove godine. Odgovarajuće preporuke biće izrađene do kraja godine. Preliminarni rezultati i preporuke biće razmotreni na Međunarodnom forumu o održivoj energiji i na trećoj sjednici Grupe stručnjaka za obnovljive izvore energije, 18-21.10.2016. u Bakuu (Azerbejdžan).

Annukka Lipponen
i ***Gianluca Sambucini***,
Ekonomska komisija Ujedinjenih nacija za Evropu (UNECE)[2]

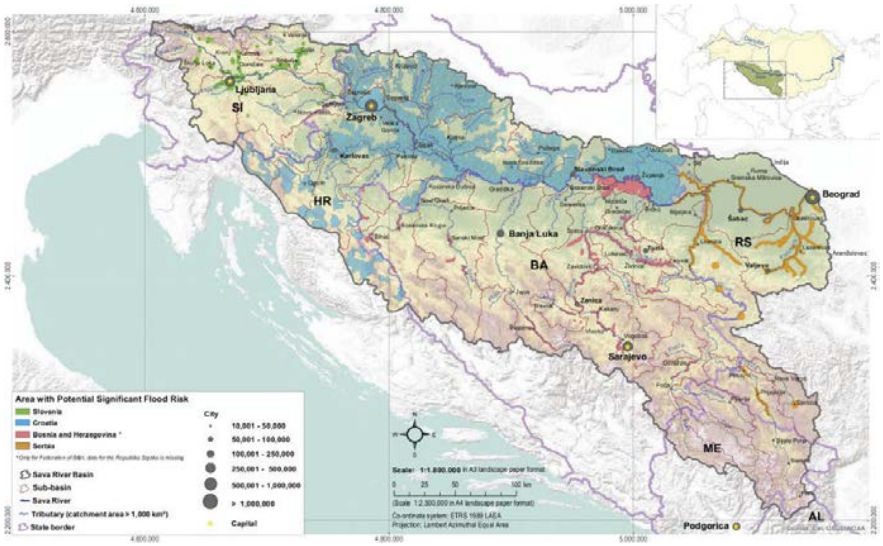
U dubinu; Autor: Jelka Mihajlovska

[1] *Autori se zahvaljuju Ministarstvu poljoprivrede i ruralnog razvoja Crne Gore na ustupanju fotografija sa Radionice.*

[2] *Pogledi iskazani u ovom članku predstavljaju poglede autora i ne odražavaju nužno poglede Ujedinjenih nacija ili njenih država članica.*

SARADNJA NA PREVENCIJI POPLAVA U SLIVU RIJEKE SAVE

PLAN UPRAVLJANJA RIZIKOM OD POPLAVA



SLIKA: Područja s potencijalno značajnim rizikom od poplava u slivu rijeke Save

Program za izradu Plana pripremljen je na ekspertskom nivou, a predviđeno je da bude usvojen od strane Savske komisije do kraja maja 2016. godine

Kako bi doprinijele smanjenju štetnih posljedica od poplava u slivu rijeke Save, Strane *Okvirnog sporazuma* o Savi su dogovorile saradnju u provođenju aktivnosti utvrđenih *Protokolom o zaštiti od poplava uz Okvirni sporazum*, koji je stupio na snagu 27. novembra 2015. godine.

Glavne aktivnosti koje se odnose na planiranje upravljanja rizikom od poplava, podijeljene su u četiri koraka:

- Priprema *Programa za izradu Plana upravljanja rizikom od poplava za sliv rijeke Save*;
- Izrada preliminarne procjene rizika od poplava (PFRA);
- Izrada karata plavljenja;
- Izrada *Plana upravljanja rizikom od poplava za sliv rijeke Save* (*Plan*).

Program predstavlja smjernice za aktivnosti i postupke potrebne za izradu *Plana*, u skladu s *Protokolom* i EU *Direktivom o poplavama* (*EFD*), uzimajući u obzir aktivnosti Strana koje su već završene ili su u toku. *Program* je pripremljen na ekspertskom nivou, a prema *Protokolu* predviđeno je da bude usvojen od strane Savske komisije u roku od 6 mjeseci od dana stupanja *Protokola* na snagu (do 27. maja 2016. godine). Drugi korak u provođenju navedenih aktivnosti je PFRA, za koji su Strane dogovorile da bude sastavljen zajednički izvještaj, čak i prije formalnog stupanja *Protokola* na snagu. Između ostalog, PFRA za sliv Save sumira informacije o metodologijama i kriterijima koje su koristile Strane za identifikaciju i procjenu područja s potencijalno značajnim rizikom od poplava (APSFR), donosi pregled APSFR, bavi se uticajima klimatskih promjena, itd. Na osnovu različitih metodologija zemalja za određivanje APSFR, u slivu rijeke Save je identifikovano 1825 ovakvih područja: 42 u Sloveniji, 1688 u Hrvatskoj, 68 (u jednom entitetu) u Bosni i Hercegovini i 27 u Srbiji (vidi sliku). Proces razmjene informacija i usklađivanje APSFR će biti završen kada budu na raspolaganju preostale informacije iz Bosne i Hercegovine, kao i iz Crne Gore.

Naredni koraci u implementaciji *Protokola* su izrada karata plavljenja i samog *Plana*, a u skladu sa određenim APSFR. Ove aktivnosti će biti zajednički realizovane kroz tekući projekat *Poboljšanje zajedničkih aktivnosti u oblasti upravljanja poplavama u slivu rijeke Save*. Prema *Protokolu*, *Plan* treba da sadrži sve potrebne korake shodno *EFD*, ali bez obaveze poštovanja *EFD* rokova, s obzirom na razlike Strana u pogledu EU integracija i obavezama prema EU. Nacionalni planovi zemalja članica EU (Slovenija i Hrvatska) su završeni u roku - decembar 2015. godine, dok Srbija i Bosna i Hercegovina imaju okvirni plan da svoje planove završe do 2017. godine.

Strane su se složile da karte plavljenja na nivou sliva Save treba da sadrže sve karte pripremljene od Strana, za sve identifikovane APSFR i za dva scenarija: poplave srednje vjerovatnoće, i poplave niske vjerovatnoće ili scenarij ekstremnog događaja, bez obzira na povratni period razmatran od Strane (vidi tabelu).

Da bi se osigurala efikasna i efektivna razmjena podataka i informacija, koji se odnose na planiranje upravljanja rizikom od poplava (FRM), Savska komisija i zemlje u slivu su uspostavili FRM bazu podataka, koja je povezana sa SavaGIS Geoportalom i web aplikacijama za uređivanje, unos i preuzimanje podataka i metapodataka. Ova baza podataka je dizajnirana i strukturirana u skladu s *Smjernicama za izvještavanja po EFD* i *INSPIRE direktivom* i sadrži prostorne i alfanumeričke skupove podataka za izvještajne jedinice o poplavama, PFRA, APSFR, karte plavljenja i građevinske objekte za zaštitu od poplava. Sve u svemu, FRM model baze podataka će osigurati razmjenu i širenje podataka i informacija od značaja za izradu *Plana*, a planirano je da tokom izrade *Plana* baza podataka bude proširena za pohranu rezultata *Plana*.

Mirza Sarač,
Sekretarijat Savske komisije

TABELA: Nacionalne definicije poplava sa srednjim i niskim vjerovatnoćama

Država	Srednja vjerovatnoća pojave	Niska vjerovatnoća pojave
SI	VQ100	VQ500
HR	VQ100	VQ1000 (nezaštićena područja)
		Scenarij sloma infrastrukture (zaštićena područja)
BA	VQ100	VQ500
RS	VQ100	VQ1000
ME	VQ100	VQ500

PROJEKT PARTNERSTVO USACE SA SAVSKOM KOMISIJOM

POBOLJŠANJE HIDROLOŠKOG MODELA SLIVA RIJEKE SAVE

Glavni cilj tog projekta je da se pruži podrška savskim zemljama u planiranju upravljanja rizikom od poplava na nivou sliva, kroz potpuno funkcionalan, kalibrisan hidrološki model

Savska komisija je, u suradnji s Inženjerskim korpusom Vojske SAD (USACE) u okviru prve faze podrške Vlade SAD zemljama u slivu rijeke Save, 2010. godine razvila prvi hidrološki model sliva rijeke Save, kao i hidraulički model rijeke Save. Navedeni modeli su razvijeni korištenjem standardnih USACE alata za hidrološko i hidrauličko modeliranje, koji su u upotrebi širom svijeta (HEC-HMS i HEC-RAS). Razvoj modela se temeljio na podacima prikupljenim od savskih zemalja, prije svega kroz rad relevantnih stručnih grupa Savske komisije. Iako preliminarnog karaktera, modeli su bili od velikog značaja za dalji razvoj modeliranja u slivu.

Početni hidrološki model je bio osnova i za razvoj novog HEC-HMS modela 2014. godine. Model je bio prilagođen analizi uticaja klimatskih promjena na pojedine sektore (plovidba, hidroenergetika, kontrola poplava i navodnjavanje) u okviru projekta *WATCAP*. Hidrološki režim je simuliran na 10-dnevni ili mjesečni vremenski okvir sa računskim korakom od 12 sati. Razgraničenje sliva je napravljeno u odnosu na dnevni vremenski korak (veličine podslivova su približno 2000-5000 km^2). Kompletan sliv je bio podijeljen

SLIKA 1. Konačno razgraničenje i glavni podmodeli novog HEC-HMS modela

cilj je da se pruži podrška savskim zemljama u planiranju upravljanja rizikom od poplava na nivou sliva, kroz potpuno funkcionalan, kalibrisan hidrološki model.

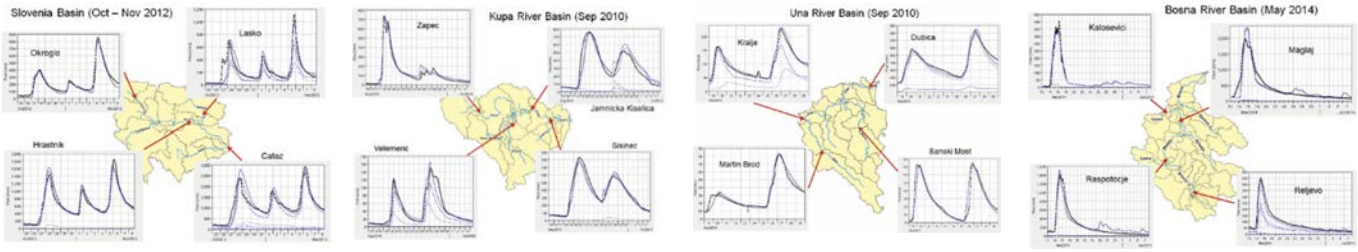
USACE je već izradio potpuno novo razgraničenje sliva, za što je korišten HEC-GeoHMS (dodatak ArcGIS-a), upotrebom DMR-a rezolucije 30 m, čime je omogućen mnogo detaljniji i precizniji prikaz podslivova. Ovaj model je podijeljen na 19 odvojenih modela podsliva za svaku pritoku podsliva i dionicu glavnog toka (Slika 1).

Parametri sliva za poboljšanje modela, kao što su gubici tla, hidrografska transformacija, iznosa ponderisane padavine za neki podsliv na osnovu inverzne udaljenosti od stanice, uz napomenu da je gotovo čitav sliv pokriven unutar 50 km radijusa od stanica.

Kalibracija modela, korištenjem satnih podataka vremenskih serija za odabrane poplavne događaje iz perioda 2009-2014, nalazi se u završnoj fazi. Kalibracija modela podslivova u Sloveniji, kao i sliva Kupe je vrlo uspješna, s obzirom na postojanje guste mreže kišomjernih stanica. Podmodeli Une i Bosne su se pokazali komplikovanijim zbog manje gustoće mreže kišomjera, ali su rezultati ipak obećavajući (Slika 2). Podmodeli uz lijevu obalu rijeke Save i Kolubare su također kalibrisani, dok je kalibracija za Tinju, Ukrinu i Bosut u toku.

Određeni problemi su nastali na podslivovima gdje postoje velike brane (Vrbas i Drina), zbog nedostupnosti podataka i određenih ograničenja softvera. Ipak, osmotreni podaci doticaj-oticaj i zapremiske krive za većinu ovih brana su prikupljeni, što će omogućiti kalibraciju i ovih podmodela.

Nakon što se kompletiraju i preostali podmodeli pritoka, cijelokupno podešavanje



SLIKA 2. Preliminarni rezultati kalibracije novog HEC-HMS modela

na 14 glavnih podslivova koji su modelirani odvojeno kao podmodeli i povezani sekvencijalno za potrebe zajedničke simulacije.

Koristeći prethodno opisane modele kao polaznu osnovu, trenutno u okviru druge faze podrške Vlade SAD, USACE već uveliko radi na daljnjoj nadogradnji modela. Glavni bazni oticaj, usmjeravanje toka, su izvedeni iz GIS slojeva i kroz kalibraciju. Meteorološki parametri (npr. ekvivalent snijega i vode) su izvedeni na osnovu satelitskih informacija. Za meteorološki model je korištena metoda inverzne udaljenosti. Model određuje količinu padavina za svaki podsliv koristeći bilo koju stanicu u okviru zadanog radijusa dodijelom

modela će biti završeno kalibracijom podmodela dionice glavnog toka rijeke Save, koji će sadržavati sva lokalna područja uz glavni tok. Očekuje se da će model biti završen do kraja juna 2016. godine.

Mirza Sarač i ***Dragan Zeljko***,
Sekretarijat Savske komisije

NOVOST SISTEM ZA LAKŠI NADZOR U UNUTRAŠNJOJ PLOVIDBI

INTERNET APLIKACIJA ZA PODRŠKU INSPEKCIJSKIM TIJELIMA

Glavni cilj aplikacije, koju je izradila Savska komisija, jeste podizanje nivoa sigurnosti plovidbe kroz sakupljanje i razmjenu informacija o stanju i tehničkoj ispravnosti plovila

Činjenica je da su danas inspekcijska tijela zemalja savskog sliva nadležna za unutrašnju plovidbu ustrojena na različitim principima, te su nejednako kadrovski osposobljena i tehnički opremljena.

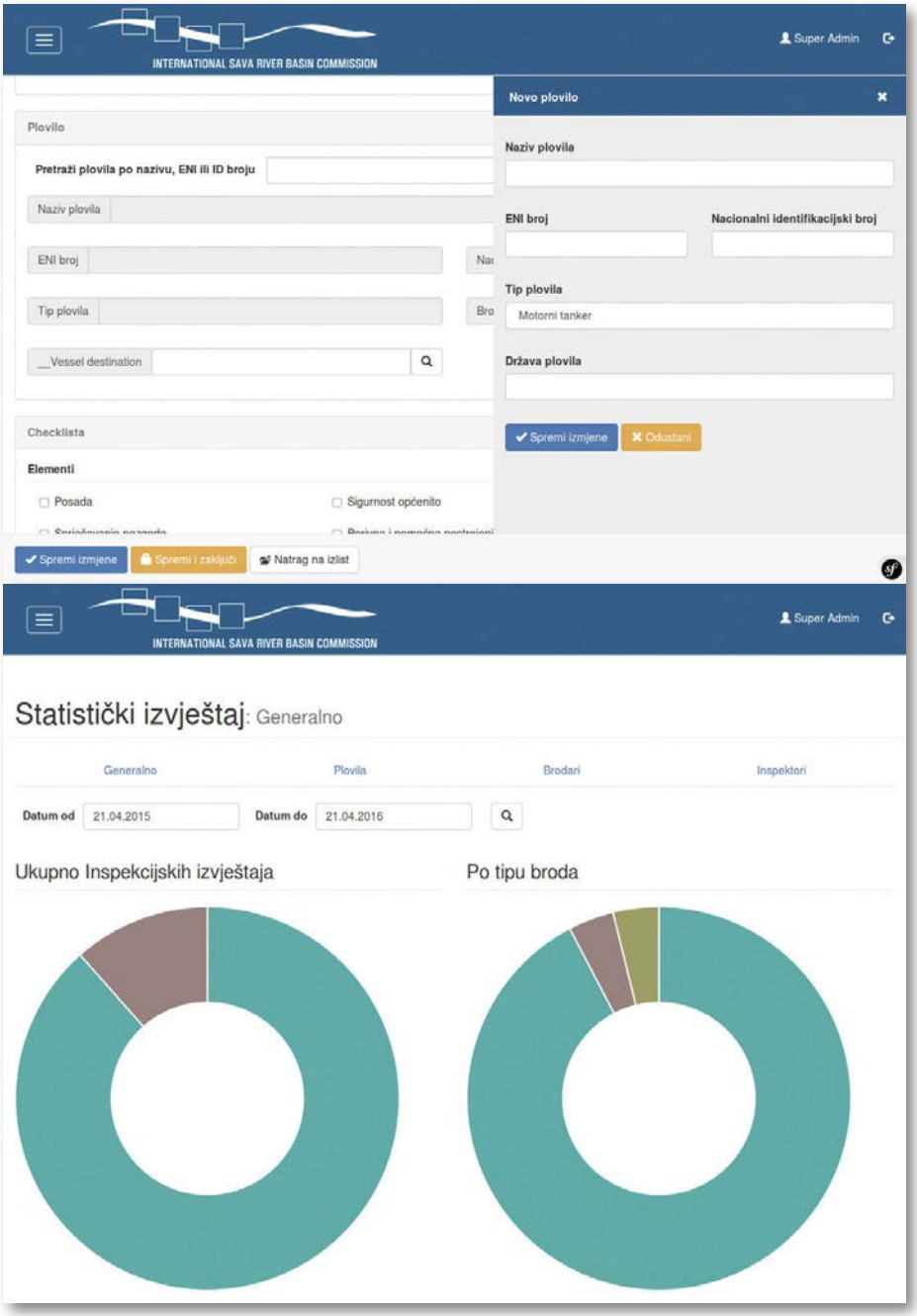
Sa željom da se ova oblast harmonizuje i optimizira postupak i način obavljanja inspekcijskih pregleda plovila, u okviru Savske komisije su prikupljeni neophodni podaci, analizirano je postojeće stanje i zaključeno je da u ovom momentu inspekciju u unutrašnjoj plovidbi karakteriše:

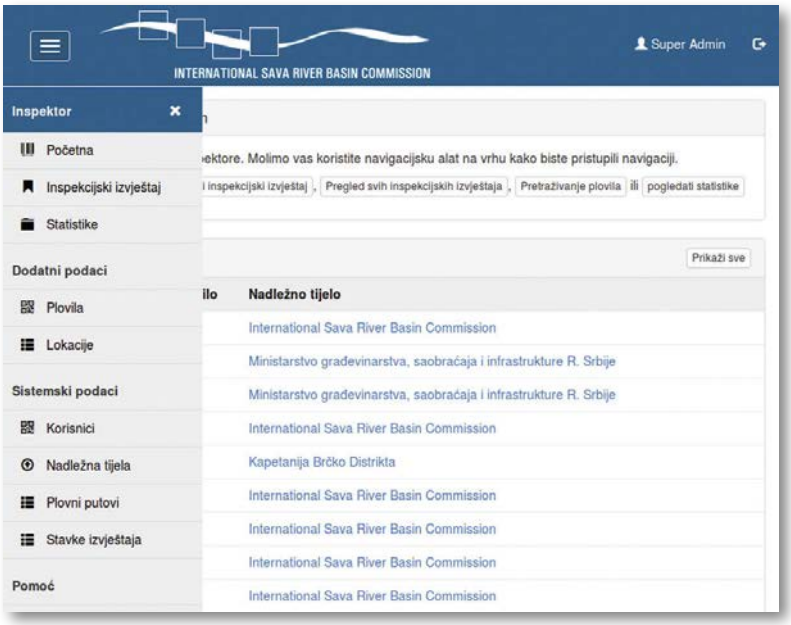
- nedovoljna tehnološka opremljenost inspektora na terenu;
- nedovoljne informacije u fazi planiranja inspekcijskog nadzora;
- nemogućnost uvida u slučajeve dobre prakse tokom nadzora;
- nedovoljno dugotrajna statistička analiza i uvid u historijat subjekata i objekata nadzora;
- otežana razmjena znanja između (dislociranih) inspektora.

Imajući to u vidu, razvila se ideja izrade ekspertskog informacionog sistema koji predviđa minimum usaglašenih postupaka koji bi pomogli da se razmjenjuju informacije i prate plovila interesantna za nadzor. Nakon konsultacija sa kapetanima sa Save kao korisnicima plovnog puta, a potom i sa članovima Stručne grupe Savske komisije za plovidbu, Komisija je započela sa izradom odgovarajuće internet aplikacije. Radi praćenja realizacije formiran je poseban Odbor, sačinjen od eksperata iz država članica Savske komisije koji je, osim praćenja, dao i značajan doprinos tokom izrade i testiranja aplikacije.

Glavni cilj aplikacije, definisan projektim zadatkom, jeste podizanje nivoa sigurnosti plovidbe kroz sakupljanje i razmjenu informacija o stanju i tehničkoj ispravnosti plovila. Tokom faze planiranja sakupljeni su svi dostupni materijali i procesi inspekcije sigurnosti plovidbe te su to bili prvi ulazni podaci za analizu trenutnog stanja i izradu modela i planiranih riješenja.

Sam proces izrade aplikacije obilježen je interaktivnim odnosom svih sudionika, te je





konsultant cijelo vrijeme imao kontakt sa budućim korisnicima aplikacije koji su mu, testirajući sve faze izrade, putem Sekretarijata, dostavljali potrebne informacije i davali korisne sugestije temeljene na iskustvu. Isto tako, na radionicama sa stručnjacima iz područja inspekcije sigurnosti plovidbe, i u sklopu obuke korisnika, definirano je nekoliko specifičnih zahtjeva koji su pretočeni u tehnička i procesna rješenja, a koja su u skladu sa zahtijevanom konfiguracijom sistema. Samo kroz takvu, interaktivnu komunikaciju, nove ideje i zahtjevi mogli su biti dodatno modelirani i testirani te odobreni od strane Odbora za praćenje izrade navedene aplikacije.

Pristup sistemu je ograničen samo na autorizovane korisnike, te podržava više nivoa prava pristupa. Sama razmjena podataka je vrlo nerestriktivna s obzirom na pravo pristupa, dok se preostale dostupne funkcionalnosti unosa i manipulacije podacima određuju upravo prema nivou pristupa koju autorizovani korisnik ima unutar aplikacije.

Glavna funkcionalnost internet aplikacije ogleda se u podršci inspekcijskom procesu kroz inspekcijski obrazac koji, prateći utvrđene prakse struke, vodi svog korisnika kroz segmente ispunjavanja i omogućava da sve potrebne informacije unosi brzo i bez napuštanja obrasca. Uz same podatke pregledanog stanja plovila, pomoću obrasca se prikupljaju i informacije o samom plovilu te time omogućava izgradnju kvalitetne baze podataka plovila.

Sljedeća bitna funkcionalnost jesu statistički izvještaji putem kojih korisnici mogu, prema svom nivou pristupnih prava, pregledavati statistike svih inspekcijskih izvještaja te izvještaje po plovilima ili prema drugim bitnim metrikama dostupnim iz inspekcijskih obrazaca te time doći do bitnih zaključaka o stanju tehničke ispravnosti plovila.

Izrada aplikacije je trajala četiri mjeseca od dana potpisivanja ugovora, a njome su države sliva dobile koristan proizvod

Gradeći sistem na kvalitetno razrađenoj granulaciji pristupnih nivoa i dobrim tehnološkim temeljima, države sliva su dobile koristan proizvod, dok je samoj Savskoj komisiji dostupan visok nivo kontrole ponašanja sistema kroz kontrolu korisnika, nivoa pristupa, nadležnih tijela i sekundarnih sadržaja poput podržanih plovnih puteva, lokacija i bitnih stavki inspekcijskog obrasca.

Internet aplikacija također predviđa i mogućnost izvoza podataka prema drugim vanjskim informacionim sistemima putem programskih HTTP protokola i razmjenu podataka koristeći fleksibilan i deskriptivan JSON format zapisa podataka. Obzirom da se u današnjem vremenu mobilnost u informacionom smislu tokom faze dizajniranja sistema gotovo uvijek podrazumjeva, ista je definisana kao jedan od ciljeva od posebnog interesa koji bi uvelike mogao doprinjeti popularizaciji ovakvih sistema i njihovom boljem prihvatanju.

Kod odabira prijedloga za tehnologije ovakvog rješenja, odabrano je rješenje koje pruža definisane funcionalnosti prema modernim standardima. Tu se kao kriterij nameće interfejs koji je lagan i pregledan za korištenje, a da istovremeno podržava sve kompleksne radnje koje su potrebne u inspekcijskom procesu. Kako bi se osigurala interoperabilnost na više različitih platformi, vizuelni dizajn i ponašanje interfejsa su napravljeni da se prilagođavaju veličini ekrana (engl. *responsive design*).

Rješenje se temelji na *open source* tehnologijama koje pružaju bolju podršku i trend proširivanja i poboljšavanja, a Savsku komisiju kao naručioca ne obvezuje na rješenje treće strane koje je zatvoreno i vlasnički vezano. Time je osigurana velika podrška za buduće nadogranje i dalji razvoj sistema kako isti bude prihvaćen u praksi. Sistem je izgrađen na temelju *Symfony* razvojnog okvira i dostupnih *open source* biblioteka, čime se došlo do sistema koji odlikuju izvrsne performanse, stabilnost i mogućnost proširivanja.

Glavni rezultati ovoga projekta su:

- Izrađen i implementiran ekspertski sistem
- Kratko uputstvo/opis za svaki segment aplikacije
- Obuka korisnika aplikativne opreme
- Prezentacija aplikacije na radionici zainteresovanim stranama
- Redovni back-up baze podataka postavljene na web server Savske komisije.

Izrada aplikacije je trajala četiri mjeseca od dana potpisivanja ugovora, a nadzor nad provođenjem projekta, te prihvatanje svih dokumenata, proveden je od strane ranije pomenutog Odbora.

Sekretarijat Savske komisije je tokom izrade osigurao svu neophodnu podršku konsultantu kroz osiguranje svih neophodnih informacija i dokumenata u odgovarajućem formatu te osiguranje kontakata s relevantnim institucijama od interesa za izradu sistema.

Goran Šukalo,
Sekretarijat Savske komisije

VODNI TRANSPORT OSNOVE ZA STATISTIČKU OBRADU I ANALIZU

PODACI O PROMETU ROBA U SLIVU RIJEKE SAVE

Period 2010-2013. bio je najkompletniji i omogućio je da sve države i luke budu zastupljene u reprezentativnom uzorku, što je minimalan uslov sa stanovišta statističke upotrebljivosti rezultata

Ubrzo nakon osnivanja, Savska komisija je počela s prikupljanjem podataka o pretovaru robe i prometu putnika u svrhu izrade pregleda statističkih podataka za luke i pristaništa na Savi. Proces prikupljanja bio je opterećen nepostojanjem pojedinih podataka za posljednih 10 godina, kao i problemom neusklađene metodologije i načina na koji su države obavezivale pravna i fizička lica da dostavljaju podatake nadležnim tijelima. Osim podataka koji su prikupljeni za navedeni period, za procjene potreba za vodnim transportom koriste se i svi drugi dostupni podaci, uključujući i podatke iz prethodnih analiza, studija i projekata.

Razvoj vodnih puteva i infrastrukture na rijeci Savi i njenim pritokama usklađuje se sa transportnom politikom EU, definisanom dokumentima Evropske komisije kao što su: *Bijela knjiga o prometu*, 2011. (*White Paper on Transport*); *Održiva budućnost prometa*, 2009. (*Sustainable future for transport*); *Zelena knjiga - Ususret novoj kulturi urbane mobilnosti*, 2007. (*Green paper - Towards a new culture of urban mobility*), te ostale direktive i dokumenti s tim u vezi.

Prevoz putnika u ovom momentu nije posebno statistički obrađen zbog nepostojanja ažurnih evidencija odnosno neujednačene metodologije i nivoa detaljnosti prikupljenih podataka što je rezultat prirodnog položaja pristaništa (blizina ušća) kao i uređenosti plovnog puta. U tabeli 1 naveden je broj putnika za beogradsko pristanište za posljednje dvije godine te manji putnički kruzer koji je pristajao u Sremskoj Mitrovici, Brčkom, Slavonskom Brodu, a koji je za odredište imao Sisak.

Ne treba zaboraviti da je stanje plovnog puta još uvijek takvo da predstavlja prepreku za bilo kakvo ozbiljnije planiranje potreba za transportnim uslugama te da nepovoljno utiče na potencijalne investitore u područja koja gravitiraju lukama na Savi.

Za potrebe ove analize Savska komisija je učinila napor da prikupi, obradi i predstavi što je moguće reprezentativnije statističke podatke, te će u narednom periodu osigurati one koji nedostaju za svaku od država. Posebna pažnja biće posvećena prikupljanju, obradi i prezentaciji podataka o prevozu putnika. Što se roba/tereta tiče, područje promatranja određeno je *Protokolom o režimu plovidbe uz Okvirni sporazum o slivu rijeke Save*, tj. uzeti su podaci od luka odnosno lučkih uprava koje egzistiraju i upravljaju lukama na određenim područjima.

Period 2010-2013. bio je najkompletniji i omogućio da sve države i luke budu zastupljene u reprezentativnom uzorku, što je minimalan uslov sa stanovišta statističke upotrebljivosti rezultata, tj. trendova koji se mogu iz svega iščitati.

Bilo je, naravno, značajnih pretovara i u periodu 2000-2010. ali pojedine luke, ili nisu imale značajan obim pretovara, ili nisu vodile preciznu evidenciju, tako da bi korištenje takvih podataka bilo nereprezentativno, što je već pomenuto kao jedan od glavnih činilaca pri definisanju krajnjeg cilja ove analize. U tabeli 2 može se uočiti dostupnost podataka prema godini, odnosno luci/državi, kao i ukupan pretovar po lukama odnosno državama.

Goran Šukalo,
Sekretarijat Savske komisije

Prevoz putnika u ovom momentu nije posebno statistički obrađen zbog nepostojanja ažurnih evidencija

TABELA 1: Pregled prometa putnika u pristaništima na Savi i Kupi

Pristanište	2013	2014	2015
Beograd	65000	68000	
Sremska Mitrovica	cca 200	cca 200	cca 200
Brčko	cca 200	cca 200	cca 200
Slavonski Brod	cca 200	cca 200	cca 200
Sisak	cca 200	cca 200	cca 200

TABELA 2: Pregled prometa/pretovara na Savi i Kupi

God.	Brčko	Šamac	BiH	Sl. Brod	Sisak	Hrvatska	Sr. Mitrovica	Ukupno
2000				169.000	169.000	338.000		338.000
2001				210.000	204.432	414.432		414.432
2002				205.000	218.775	423.775		423.775
2003				201.000	160.000	361.000		361.000
2004				198.000	190.528	388.528		388.528
2005				174.000	174.003	348.003		348.003
2006		51.000	51.000	162.000	156.935	318.935		369.935
2007		168.079	168.079	180.000	139.899	319.899		487.978
2008	55.546	245.389	300.935	137.000	137.210	274.210		575.145
2009	269.585	107.854	377.440	125.800	120.931	246.731		624.171
2010	140.993	179.170	320.163	124.072	118.466	242.538	64.901	627.602
2011	36.177	174.685	210.862	85.033	83.121	168.154	191.216	570.232
2012	71.273	147.481	218.753	38.468	42.355	80.823	427.738	727.314
2013	71.822	82.787	154.609	39.280	42.345	81.625	413.149	649.383
2014		86.624	86.624					86.624

10. sastanak kapetana (Sisak, 29.10.2015.)

VODNI TRANSPORT STRUKOVNO POVEZIVANJE

SARADNJOM LUČKIH KAPETANIJA DO SIGURNIJE PLOVIDBE SAVOM

Inicijativa Savske komisije da se potakne međusobna saradnja kapetanija doprinjela je da komunikacija između njih postane uobičajena praksa

Savska komisija je, od samog osnivanja, u sklopu svojih redovnih planskih aktivnosti predvidjela strukovno povezivanje kapetanija koje egzistiraju na međunarodnom plovnom putu rijeke Save, s ciljem da se od kapetana kapetanija dobije neposredan uvid u problematiku koja prati obnovu plovidbe rijekom Savom.

Na prvom sastanku Stalne stručne grupe Savske komisije za plovidbu, prijedlog da se potakne međusobna saradnja kapetanija prepoznat je kao veoma koristan, te da umnogome može pomoći da se sigurnost plovidbe na rijeci Savi podigne na viši nivo. Na prijedlog resornog ministarstva iz Republike Srbije, prvi sastanak je održan u jesen 2006. godine u Beogradu i to doba godine se pokazalo kao pogodno iz ugla sveukupnog djelovanja i aktivnosti koje vode sve kapetanije, bez obzira na državnu pripadnost. Pri definisanju koncepta i sadržaja prvog sastanka, uzeta je u obzir problematika s kojom su se kapetani i kapetanije godinama susretali prilikom primjene postojećih propisa u području unutrašnje plovidbe, te problemi u protoku informacija i saradnji između nadležnih kapetanija kada je u pitanju međunarodna odnosno tranzitna plovidba, na koje su ukazivali brodari i agenti.

Atmosfera tokom pripreme, za vrijeme i poslije sastanka, kao i usvojeni zaključci, potvrdili su opravdanost organizacije ovakvih susreta. Dogovoren je način međusobne, kako formalne tako i neformalne, komunikacije te je ona postala uobičajena praksa. Na sastancima se razmjenjuju informacije o dešavanjima u području plovidbe između dva sastanka i ukazuje na probleme sa kojima se kapetani suočavaju u svom svakodnevnom radu. Pored toga, sastanci se koriste i kao prilika da se predstave novosti vezano za ustrojstvo, javne ovlasti i područja djelovanja samih kapetanija.

Kako bi se što bolje shvatila važnost, ozbiljnost pristupa i korist od ovakvih sastanaka za savske države, treba napomenuti da su mnoge inicijative proistekle sa tih sastanaka pretočene u konkretne projekte i rezultate, kao na primjer inicijative vezane za:

- Problem nepostojanja sistema obilježavanja plovnog puta na pojedinim dijelovima vodnog puta, kao i potreba održavanja istog,
- Problem nepostojanja razmjene informacija o inspekcijskim pregledima i nepostojanje adekvatne baze podataka o izvršenim pregledima u slivu,
- Objava saopćenja brodarstvu na web stranici Savske komisije,
- Regulisanje prekomjerne i neplanske eksploatacije sedimenta iz vodnog puta,
- Uspostava zajedničkih ophodnji plovnog puta na dijelovima koji čine granicu.

Model organizacije prvog sastanka zadržao se i kasnije tako da su sve do danas ti sastanci veoma posjećeni i sadržajni. Također se čine napori da se, u okviru susreta, organizuju i posjete značajnim infrastrukturnim objektima te, po mogućnosti, upriliči kraća promotivna plovidba. Neki od sastanaka kapetana kapetanija održani su na plovilima, na samoj rijeci Savi.

Inicijativa Savske komisije o održavanju ovakvih susreta je zaživjela, a zemlje organizuju sastanke po principu rotacije, pa je tako ove godine predviđeno da domaćin jedanaestog sastanka kapetana bude Bosna i Hercegovina.

Goran Šukalo,
Sekretarijat Savske komisije

Posjeta brodogradilištu u Sisku (29.10.2015.)

Neki od sastanaka kapetana kapetanija održani su na plovilima, na samoj rijeci Savi

Replika Žitne lađe sada je na vezu u Sisku - Ana Prepolec Padežanin, Vanja Pribanić (arhiva Društva "Zvono uz Kupu")

AURORA COLAPIS HISTORIJSKA ATRAKCIJA NA KUPI

ŽITNA LAĐA ČEKA SVOJU PRVU VOŽNJU

'Aurora Colapis' dužine je 25 metara, moći će primiti 50-ak putnika, izgrađena je od slavonskog hrasta i bora, a pogon čine dva dizelska motora ukupne snage 88 kW, dok je gaz broda s teretom 0,80 m

Dok se obavljaju posljednja „ušminkavanja", svi potrebni pregledi i probne vožnje, čak 25 metara duga replika žitne lađe izgrađene od slavonskog hrasta i bora na vezu u Sisku čeka svoju prvu vožnju. Ta lađa nazvana 'Aurora Colapis' izgrađena je u sklopu projekta *Žitni put, Kupa-Sava*, a novac za njezinu izgradnju obezbjeđen je iz sredstava Evropske unije kroz Program prekogranične saradnje RH-BiH 2007.-2013., te Zagrebačke, Sisačko-moslavačke i Karlovačke županije, turističkih zajednica, općina i gradova s tog područja te partnera iz Bosne i Hercegovine. Ukupna vrijednost projekta je oko 5 miliona kuna, od čega je za aktivnosti u Hrvatskoj utrošeno oko 3 miliona kuna.

Ovaj jedinstveni projekat pokrenut je 2013., nosilac je općina Pokupsko, a u njemu sudjeluju Društvo za promociju kulture življenja „Zvono uz Kupu" iz Zamršja te Grad Karlovac s partnerima. Općina Pokupsko posljednjih desetak godina intenzivno radi na proglašenju plovnosti rijeke Kupe (Colapis je latinski naziv za tu rijeku). Ta rijeka kao najvrjedniji resurs u fokusu je rada lokalnog udruženja „Kupa rijeka života" koje teži okupljanju svih gradova i općina u njenom slivu. Saradnja na žitnom putu i izgradnji lađe rođena je upravo kroz rad tog udruženja. 'Aurora Colapis' svojevrsna je kruna saradnje regionalne i lokalne samouprave s organizacijama civilnog društva. „Povezali smo četiri županije i brojna nevladina udruženja oko ove velike zajedničke ideje", kazao je Božidar Škrinjarić, načelnik Općine Pokupsko.

Predsjednica Društva za promociju kulture življenja „Zvono uz Kupu", idejnog začetnika cijele „žitne priče", Jasmina Cvetković Braim, ističe: „Puno puta do sada isticali smo da je ideja pokretanja samog udruženja „Zvono uz Kupu" bila podstaći mlade porodice da ne odlaze iz ruralnih sredina. Projektom *Žitni put, Kupa-Sava* spojili smo poljoprivredu, male porodične firme, turizam i oživjeli duh historije i tradicije. Nadamo se privući posjetioce ne samo iz Hrvatske već i izvan nje, s obzirom na to da se radi o jedinstvenom turističkom proizvodu, o historijskoj atrakciji, u ovom dijelu Evrope. Zasigurno možemo računati i na nova ulaganja i investicije u krajeve kojima će lađa ploviti".

Za ovaj projekt stižu brojne nagrade, pa je tako društvo „Zvono uz Kupu" primilo priznanje za promociju kulture unutrašnje plovidbe

Nekada davno, kada je Karlovac bio važno trgovačko središte, žitni put odnosio se na plovidbu Kupom radi trgovine robama i prijevoza ljudi od Karlovca do Siska te dalje Savom. Današnji žitni put ima za cilj podsticati razvoj porodičnih poljoprivrednih firmi te posebno oživjeti turizam u regiji.

Žitna lađa će na svoju palubu moći primiti do 50-ak osoba koji će za 3 i po sata plovidbe, sve do Pokupskog, a možda i nizvodnije ovisno od vodostaja, imati prilike razgledati lokacije stare jezgre Karlovca, Muzejski prostor na Turnju, brojna arheološka nalazišta uz Kupu na području Kamenskog i Rečice, kao i lokalne sakralne objekte, tradicionalne pokupske kuće i etnografske eksponate, prirodne ljepote flore i faune i dr. Na području Pokupskog za buduće posjetioce nudit će se obilasci autohtonih drvenih kapelica, a nizvodnije obilazak Siska i Parka prirode Lonjsko polje.

Da se zaista radi o vrlo vrijednom projektu, govore i priznanja koja pristižu posljednjih mjeseci. Društvo „Zvono uz Kupu" primilo je tako od Ministarstva pomorstva, prometa i infrastrukture u decembru prošle godine priznanje za promociju kulture unutrašnje plovidbe, a priča o 'Aurori Colapis' ušla je među 11 finalista privredničkog inkubatora „Impact Hub" Zagreb.

Antonija Vučić,
voditeljica projekta *Kupa Natura*

PLATFORMA OSNOVANO SAVSKO VIJEĆE ZA VODE

NOVI MEHANIZAM ZA AKTIVNO UČEŠĆE INTERESNIH GRUPA

Prvi sastanak Savskog vijeća za vode (Beograd, 18-19.2.2016.)

Tako je Savska komisija postala prva međunarodna riječna komisija u Evropi koja je formirala stalnu savjetodavnu platformu

Obzirom da *Okvirni sporazum o slivu rijeke Save* obuhvata sve aspekte upravljanja vodnim resursima, Savska komisija ima najširi djelokrug u grupi međunarodnih riječnih ili jezerskih komisija u Europi. To je jedina komisija koja se, istovremeno, bavi i pitanjima održivosti i pitanjima privrednog razvoja vezanog za korištenje voda, što podrazumjeva veliki broj relevantnih sektora (npr. vode, životna sredina, plovidba, hidroenergetika, poljoprivreda, riječni turizam, prostorno planiranje) i široki krug interesnih grupa.

Vjerujući da učešće zainteresovane javnosti može unaprijediti proces implementacije *Okvirnog sporazuma*, Savska komisija je, tokom 10 godina rada, razvila niz mehanizama za učešće javnosti na tri nivoa – pružanja informacija, konsultacija i aktivnog učešća. Kako bi dodatno ojačala uključenje interesnih grupa na nivou konsultacija i aktivnog učešća, Komisija je krajem 2015. godine uspostavila novi mehanizam – Savsko vijeće za vode. Vijeće je osnovano kao savjetodavna platforma Komisije, koja okuplja predstavnike 50 institucija i organizacija iz nevladinog, akademskog i poslovnog sektora iz svih pet država u slivu Save, čime je Savska komisija postala prva međunarodna riječna komisija u Europi koja je formirala stalnu savjetodavnu platformu tog tipa.

Osnovni cilj postojanja Vijeća je da se interesnim grupama omogući da iskažu svoje mišljenje i predlažu rješenja i inovacije po pitanjima značajnim za implementaciju *Okvirnog sporazuma*. Očekuje se da će informisanost Savske komisije o stavovima i potrebama interesnih grupa po ovim pitanjima, kao i mogućnost ugrađivanja njihovih znanja, alata i inovacija u odluke i preporuke Komisije, doprinjeti kvalitetu rada Savske komisije i implementacije *Okvirnog sporazuma* u cjelini.

Na prvom sastanku Vijeća razmatrani su neki od glavnih izazova u implementaciji *Okvirnog sporazuma*, kao što su integracija upravljanja vodama i prostornog planiranja, integracija ekonomskog razvoja i zaštite životne sredine ili integracija politika i nauke u oblasti voda. Diskusija je potvrdila izuzetan potencijal u pogledu širine, znanja i iskustva Vijeća i mogućnosti njegovog doprinosa radu Savske komisije. Sa druge strane, pokazalo se da nevladin, akademski i poslovni sektor Savsku komisiju vide kao važan i efikasan mehanizam prekogranične saradnje na stvaranju uslova za održivi razvoj regiona, a uspostavljanje Vijeća prepoznaju kao dobru priliku za predlaganje inovativnih rješenja i pružanje podrške Komisiji u povezivanju sektora i obezbeđivanju nesmetanog toka relevantnih informacija u slivu.

Posebna pažnja na sastanku bila je posvećena pitanju vizije Vijeća i načinu njegovog funkcionisanja koji bi omogućio postizanje najvećeg efekta. Podržan je fleksibilan pristup, zasnovan na organizaciji tematskih sastanaka prema potrebi, najčešće uz prisustvo dijela članova Vijeća – stručnjaka na izabranu temu, dok će plenarni sastanci svih članova Vijeća biti organizovani jednom godišnje, u skladu sa usvojenom metodologijom rada. Pored toga, biće uložen napor da se omogući stalna komunikacija članova Vijeća, na primjer putem internet stranice Savske komisije.

Osnivanje Vijeća finansijski je podržala Vlada SAD kroz podršku projektu *Jačanje učešća javnosti i uključenja interesnih grupa u slivu rijeke Save*, u okviru koga je organizovan prvi sastanak Vijeća i uskoro će biti održan drugi sastanak (Sevnica, 6-7.6.2016.).

Dr Dejan Komatina,
Sekretar Savske komisije

Pokazalo se da nevladin, akademski i poslovni sektor Savsku komisiju vide kao važan i efikasan mehanizam prekogranične saradnje na stvaranju uslova za održivi razvoj regiona