
Stakeholder Forum for the Development of Environmental Impact Assessment Study and Design for the Action: Improvement of the Navigability Conditions of the Sava River from rkm 300 to rkm 329 (Project Jaruge - Novi Grad)

REPORT OF THE 2nd MEETING OF THE Stakeholder Forum for the Development of Environmental Impact Assessment Study and Design for the Action: Improvement of the Navigability Conditions of the Sava River from rkm 300 to rkm 329

ZAGREB, november 12, 2019.

I. ATTEDANCE

List of participants is annexed to this report.

II. CHAIRMANSHIP

Mr. Dragan Zeljko, Secretary of ISRBC chaired the meeting.

III. ADOPTED. AGENDA

1. Opening of the meeting

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| 1.1 Welcome and opening remarks | Sava Commission
Ministry of the Sea,
Transport and
Infrastructure |
| 1.2 Adoption of the agenda | |

2. Status of the Project Jaruge-Novigrad development

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| 2.1 General info on the Project development after 1 st meeting of the Forum | Ministry of the Sea,
Transport and
Infrastructure |
| 2.2 Presentation of the variant solutions of the fairway design | Consultant |
| 2.3 Presentation of the status of the EIA study development | Consultant |
| 2.4 Environmental and nature protection needs in the project area | Representative of
the non-governmental
organizations |

3. Conclusions and recommendations

IV. REPORT BY AGENDA ITEMS

Ad. 1. Opening of the meeting

1.1 Welcome and opening remarks

Mr. Dragan Zeljko welcomed the participants and thanked for their attendance.

Mr. Miroslav Ištuk welcomed the gathering on behalf of the contracting authority the Ministry of the Sea, Transport and Infrastructure of the Republic of Croatia

1.2 Adoption of the agenda

The proposed agenda was adopted without any remark.

Ad. 2. Status of the development of the Project Jaruge – Novi Grad

2.1 General overview of Project development following the 1st meeting of the Forum

Mr Tomislav Štrus made a brief review on the progress of the realization of two signed contracts related to the preparation of environmental impact assessment study and project documentation, including conceptual design, preliminary design and final design, emphasizing that so far all activities were carried out within the stipulated deadlines and he suggested that consultants start with their presentations of the documents concerned.

2.2 Presentation of the fairway technical solutions

In his introduction, Mr. Babić reminded the attendees of the conceptual solutions presented in detail at the 1st meeting of the Forum and briefly repeated the results of hydrological analyses, 1D hydraulic model and variant conceptual solutions analysis.

Subsequently, Mr. Miletić and Mr. Ivezić presented detailed elaboration and environmental optimization of the conceptual solution, which included a combination of bottom deepening and construction of groynes along the section through:

- analysis of subvariant solutions for the two-way navigation scenario
- additional scenario analysis - one-way navigation

Further elaboration of subvariant solutions for the purpose of ecological optimization related to the technical solutions of the groynes was presented as well, which included among others, the choice of the groyne crest level, geometry of the groyne slope, material for the construction of the groynes, fish paths and the engineering of the groyne fields.

At the request of the investor, it was particularly emphasized that the analysis of the additional scenario - one-way navigation was made, although in this case the width of the fairway did not correspond to the required elements for the given fairway class IV.

The above detailed analyses were performed by means of 2D hydraulic model using HEC-RAS 5.07.

Over the discussion it was stressed as follows:

- Mr. Zeljko expressed his impression that a lot of substantial work was done between the two meetings of the Forum, pointing out particular value in the flexibility of proposed solutions, which can be adjusted during further elaboration, in order to obtain the optimal final solution.

- Mr. Kupusovic received further clarification on how to address the issue of increased sedimentation between the groynes.
- Mr Mikuška received further clarification regarding the reasons for the designed groynes height of 1m above the 95% duration water and the problems that may arise with the upstream orientation of inclining groynes (sediment trapping).

2.3 Presentation of the stage of development of study documentation for EIA

In his introduction, Mr. Vuckovic expressed his satisfaction with the cooperation with the competent institutions in B&H, which duly provided all requested information on time. He also stressed that this project implemented positive European practice of developing technical solutions in parallel with the preparation of environmental impact assessment (EIA) study. Over 600 hydraulic analyses were carried out through technical solutions, while ichthyologic study, investigations on benthic invertebrates, habitats and flora, as well as hydromorphological studies of the Sava River section along with the preliminary assessment of the two-way and one-way navigation on the environmental components were elaborated during the preparation of the EIA study.

Possible environmental impacts of technical interventions may include: permanent occupation of a part of the Sava River bed at the site of groynes construction, impact on the water and biological quality elements in the water at the location of sediment removal and construction of groynes, impact on the hydromorphology of the Sava River, impact on riverine areas (natural habitats along the Sava) and change in the landscape with visual impact. For each of the possible impact, environmental measures were developed to eliminate or mitigate them to the acceptable level, as well as a monitoring program, after which the most appropriate technical variant would be selected.

He referred to the variants of technical solution for the establishment of two-way navigation and expressed the opinion that two-way navigation with its structures significantly affected the existing state of water bodies and welcomed the request of the investor to draw up and develop solutions for one-way navigation, in order to reduce the number of groynes, with a combination of inclining and declining groynes with a fish path.

Over the discussion it was stressed as follows:

- Mr. Zeljko stressed that the list of documents, according to the guidelines of which the EIA study should be developed, did not contain Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin (Joint Statement), jointly created and adopted by the Sava Commission, Danube Commission and the International Commission for the Protection of the Danube River, and that this should also be taken into account.
- Mr Mikuška expressed his wish to have the ichthyologic survey delivered to him, noting that the research period was wrong since it did not include the spawning period, to which Mr Vučković replied that the data used were issued by the Ministry of Agriculture of the Republic of Croatia, which also had the data for spawning periods, and that information on ichthyologic survey could be made available to all interested parties.

2.4 Environmental and nature protection needs in the project area

As a part of his presentation “Environmental and nature protection needs in the project area of the Sava River from rkm 300 to rkm 329“ Mr. Mikuška recalled the basic principles of integrated waterway planning from the Joint Statement and the Manual on Good Practices in Sustainable Waterway Planning

(Platina Manual), the main objectives of the EU Water Framework Directive, Birds and Habitats Directive, Sava Parks Guiding Principles, as well as the Sava White Book.

In accordance with the above documents, he outlined the needs of environmental and nature protection as follows:

- Ensurance of navigability conditions in line with the parameters of the waterway class III (1.6 - 2.0 m depth),
- Increase in lateral dynamics and lateral erosion along the river banks,
- Ensurance of the waterway depth by extracting sediment only at the most critical sections (by returning the excavated sediment directly into the river channel),
- Prevention of further erosion of the river bed and embedding of the channel,
- Connection of the lateral retention areas to the river, so as to reduce the risk of harmful flooding,
- Ensurance of the protection of fish spawning and wintering areas along the section,
- Ensurance of increase in populations of NATURA 2000 species and habitats on the section concerned

At the end of his presentation, Mr. Mikuška emphasized that the environmental organizations are not against the development of navigability on the Sava River, but they were seeking the development of navigability consistent with the hydro-morphological conditions on the section concerned, which will not destroy the existing hydrological, biological and socio-economic values.

During the discussion it was stressed that:

- Regarding the waterway class III navigational requirements, Mr. Zeljko pointed out that, already at the first meeting of the Forum, it was clearly explained why the class IV of the Sava River waterway was needed in the context of the Framework agreement on the Sava River Basin, the relevant EU Directives and the international obligations of the countries and that there was no need to get back to what was previously stated, noting that all members of the Forum were on the same side, and that the atmosphere of conflicted interests should be avoided.
- Mr. Vuckovic explained that the project did not envisage the removal of sediment out of the watercourse, especially considering that it was petrified sediment, and that the sediment was expected to be returned upstream into the watercourse or into existing depressions. He also added that they were aware of the content of the Sava White Book and how its principles were taken into account, and that the project itself did not envisage the construction of embankment and reduction of lateral dynamics of the watercourse, and that this project could not provide for the connection of lateral retention areas with the river, because it was not the topic of this project.
- Mr. Zeljko emphasized that we must adhere to the facts and requirements of the project's terms of reference, which were available even before the conclusion of the contract with the consultant and to which no one raised major objections, as well as that that project that addressed the problem of navigability could not be expected to comprehensively address all water management issues such as linking lateral retention areas with the river in order to reduce the risk of harmful flooding.
- Regarding the issue of waterway class, Mr Ištuk stated that, according to the European agreement on main inland waterways of international importance (AGN) and given that Sava was the part of the core TEN T network of the EU, Class IV was the lowest required class of navigability, but taking into account the environmental needs, the investor demanded that the project included the possibility of the one-way navigation, which meant a departure from the minimum requirements

for the waterway class IV. He also recalled the recommendation of the consultants who worked on the Feasibility Study for the rehabilitation and development of transport on the Sava River, to restore the entire Sava River waterway to Class Va, which was abandoned on the section from Brčko to Sisak due to environmental and nature protection needs.

- Mr Boloban referred to the problem of the water construction in Šamac, which served for the construction of the bridge at the location concerned and informed the attendees that the preparation of the a project for its removal is underway, noting that the possibility of endangering the stability of the bridge by removing the mentioned structure was being investigated..
- Mr. Babic stressed that during the preparation of the technical documentation the problem of high waters was not addressed, nor it was foreseen by terms of reference, i.e. the regulation of the riverbank and the solution to the problem of high waters had nothing to do with the project.
- As to the project dynamics, Mr. Ištuk stated that the EIA study was about to be completed and its delivery to the Ministry of Energy and Environmental Protection of the Republic of Croatia for further procedure was expected within the next month.

Ad.3. Conclusions and recommendations

After the discussion, the following conclusions were adopted:

- It was expressed the satisfaction with the development of the project so far, as well as with the analysis of potential solutions.
- The idea of considering a one-way waterway variant is supported, although this is not entirely in line with the dimensions of the waterway class IV.
- The members of the Forum are invited to additionally communicate any potential comments and suggestions to the contracting authority - the Ministry of the Sea, Transport and Infrastructure of the Republic of Croatia and to the Sava Commission.
- An ichthyologic study will be made available to all members of the Forum.
- The next meeting of the Forum will be organized in the first half of February 2020 and it is proposed to be organized in Slavonski Brod.

Mr. Mikuška expressed reservations about first conclusion, noting that much work had been done, but he found that the more could have been done regarding the environmental issues.

Annexes:

- 1. List of participants**
- 2. List of documents and presentation**

Annex 1: List of participants

2nd MEETING OF THE STAKEHOLDER FORUM FOR THE DEVELOPMENT OF ENVIRONMENTAL IMPACT ASSESSMENT STUDY AND DESIGN FOR THE ACTION: IMPROVEMENT OF THE NAVIGABILITY CONDITIONS OF THE SAVA RIVER FROM RKM 300 TO RKM 329 ZAGREB, NOVEMBER 12, 2019.			
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2nd MEETING OF THE STAKEHOLDER FORUM FOR THE DEVELOPMENT OF ENVIRONMENTAL IMPACT ASSESSMENT STUDY AND DESIGN FOR THE ACTION: IMPROVEMENT OF THE NAVIGABILITY CONDITIONS OF THE SAVA RIVER FROM RKM 300 TO RKM 329

ZAGREB, NOVEMBER 12, 2019.

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Annex 2: List of documents (D) and presentations (P)

2nd MEETING OF THE STAKEHOLDER FORUM FOR THE DEVELOPMENT OF ENVIRONMENTAL IMPACT ASSESSMENT STUDY AND DESIGN FOR THE ACTION: IMPROVEMENT OF THE NAVIGABILITY CONDITIONS OF THE SAVA RIVER FROM RKM 300 TO RKM 329			
<i>ZAGREB, NOVEMBER 12, 2019.</i>			
<i>LIST OF DOCUMENTS AND PRESENTATIONS</i>			
Agenda item	Title	Language	Type
1	AD.1.1_Agenda	hrv	D
2	AD.2.2_Project documentation for improvement of the navigability conditions of the Sava River from rkm 300 to rkm 329 - Technical solution - Basic design data for the preparation of EIA Study	hrv	D
	AD.2.2_Status of the development of the project documentation for rehabilitation of the Sava River waterway from rkm 300 to rkm 329	hrv	P
	AD.2.3_Presentation of the status of Study documentation for Environmental Impact Assesment (EIA)	hrv	P
	AD.2.4_ Environmental and nature protection needs in the project area of the Sava River from rkm 300 to rkm 329	hrv	P

All documents and presentation are available on the web site of the Sava Commission:
http://www.savacommission.org/index.php?filterId=1&idevent=427&l=en&page=event_detail&subFilterId=32