

### **Solutions acceptable for everybody – utopia or reality?**

An old African proverb says: „*If you want to go fast, walk alone. If you want to go far, walk together (with somebody)*“. I have heard this proverb once from a dear colleague from the International Commission for the Protection of the Danube River (ICPDR). I don't know if griffon vultures from the Uvac River also follow this proverb when they fly to the Middle East from time to time, but the scene of these birds in flight above the Uvac meanders stays in mind for a long time. I am not an expert for birds. I deal with project management of in the area of inland waterways. Yet, it was not an hindrance for me to enjoy in the Danube Delta, when I watched from the boat a several pelicans, at point blank range, how they slowly took a running start and flew up, probably shrinking from the boat (or the people in the boat) which approached too close. Nothing less I enjoyed when I saw a black stork in Kopacki Rit and one white-tailed eagle in Gornje Podunavlje Region (a friend from the National Park Donauauen in Austria envies me for that, he says that it is not so easy to see such a bird, I guess because there are not many of them there). Nevertheless, the most interesting bird I have seen was one mute swan, a true giant one, who was strutting about and showing off on his island amidst the smaller one of the two Susek sidearms. What the man who is dealing with navigation is doing in the small Susek sidearm? Good question.

As I have said, I am not an expert on birds. I became familiar with the real significance of these creatures for ecosystem of the Danube River in the Directorate for Inland Waterways (Plovput) being the manager of the project “Preparation of Documentation for River Training and Dredging Works on Selected Locations along the Danube River”. It is the project funded by the European Union within the program IPA 2010, with an aim to improve navigation conditions on the Danube River in low water periods. The project team is made of experts of various profiles, also including the experts on birds. In addition to the members of the project team, through the project stakeholders' Forum an intensive cooperation was established with relevant institutions and NGOs in the field of nature protection. This Forum is an advisory body and the frame where all stakeholders can present their views on the given project. All views of the project stakeholders (not only those in connection with birds but also those in connection with other protected species and protected areas, navigation, underwater archeology, economy, with support of the consulting team consisting of the representatives of the companies Witteveen+Bos from Holland, Danish Hydraulic Institute and Energoprojekt) are respected and become a part of recommendation for further operations. As a result of such an approach, during preparation of documentation within this project, solution which will improve the navigation conditions was found and at the same time it will be in accordance with the interests of nature protection. Those solutions combine structural and non-structural measures, and their implementation will ensure establishment of minimal depths and widths of fairway required for safe inland navigation, while respecting the interests of environmental protection, such as preservation of connectivity of

water bodies, preferred usages of undetached structures, preservation of sediment transport balance and ensuring the mitigation measures.

How does it look like on a concrete example? A curve and an island in the middle of the river – a habitat of strictly protected species (widens). Insufficient width of waterway on the left side of the island, tendency of intensive sedimentation on the right side, which makes realignment of fairway impossible, sedimentation of such intensity that can connect the island with the right bank, history of a dynamic sector observed and analyzed by the data in the previous 25 years. A situation that is not preferable for navigation, as well as nature protection, and the aim is to preserve the existing island and its ecological state. Having analyzed detailed hydraulic and morphological models and having inspected the terrain mutually, at the seventh meeting of the Stakeholders' Forum the most preferable solution was adopted. It implies the usage of two innovative detached structures which would prevent widening of the island in the fairway direction, prevent tendency of sedimentation in the direction of the only physically possible position of the waterway, preserve connection of water bodies on both sides of the island and enable formation of sand bars (and their natural disappearance, depending on hydrological conditions) at the place of the river where these sand bars will not be an obstacle for inland navigation. Maybe in the future some of these sand bars will become the habitat of little ringed plover (*Charadrius dubius*). At this moment nobody can know for sure. The program of monitoring which will be carried out during and after the works on this part of the river will give the answer to this as well as to many other questions. On the basis of the monitoring results it will be known whether this solution is applicable even to other parts of the Danube River which are critical regarding safety of navigation.

Presentation of depths in the river bed around Belegiš river island, June 2012 (source: Plovput). In the legend the value „0“ means low navigation level (ENR).

The real significance of the Stakeholders' Forum of this project maybe lies in the previously stated African proverb. Cross-sectorial cooperation is the basis for creation of long-term sustainable solutions. Those are solutions which define clear relation between identified benefits and costs, with presumptions and parameters on which all stakeholders agree. Work of this Forum and generated solutions which are acceptable for all stakeholders are maybe a guideline of possible work in the future. At the end, the Danube River is still large enough for all, if all included have the opportunity and if they want to define and represent their interests clearly, as it is the case in the Stakeholders' Forum in this project.

Relationship between the Danube River and a man has probably been described in the best way by the poet Miroslav Mika Antic, in his words „I look like the Danube so much that sometimes I wonder myself who mirrors at whom. To flow in full life means to flow downstream with the same passion as to flow against yourself: form lagoons and whirlpools, have crystal slopes and stale sidearms, destroy banks and bring floods, raising and falling, and always sip oceans into yourself“. Maybe sometimes we all look like the Danube. And maybe today the Danube is not the same as Mika Antic has seen it. Regardless of everything what man does on the Danube and

with the Danube, it will always be the Danube, mysterious, unreachable, dominant, inspiring, almost perfect.

More information on the project and the work of the Forum of stakeholders you can find on: <http://www.plovput.gov.rs/forum-zainteresovanih-strana>

Small vocabulary of waterways

- Inland navigation – navigation on inland waterways
- Fairway – a part of river course with previously defined dimensions for safe navigation
- River training structures – structures in river course by which morphology of the river bottom is changed in order to provide the required dimensions of the waterway
- Balance of sediment transport – maintenance of input and output equilibrium of sediment

The Directorate for Inland Waterways (the institution known under the name Plovput) is a body within the Ministry of Transport, Responsible for maintenance and development of international and interstate inland waterways in the Republic of Serbia (the Danube, Sava and Tisa rivers). It was established in 1963.

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