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**New river regulation projects along Croatia's major rivers
(Danube, Drava, Mura, Sava, Neretva)
contravene EU environmental law
and threaten proposed Natura 2000 sites and protected areas**

According to official information from the Croatian government and statements from different European officials, Croatia has reached the final stage of negotiations on accession to the European Union. As part of this process, Chapter 27 – Environment – has been provisionally closed during the last pre-accession conference in December 2010.

Despite this progress, we, the undersigned NGOs, still see a considerable lack of political will and interest of Croatian Water Management Authorities to implement sustainable river management in practice, which is in line with Croatian and EU environmental law and according to international standards.

We are very much concerned that new planned river regulation projects along all major rivers in Croatia (see case studies below) are threatening unique natural areas and counteracting efforts of the EU to bring water management in line with EU policy and law. Specifically, we are concerned about the large-scale planned river regulation schemes, sediment extraction and irrigation projects along the Danube, Drava, Mura, Sava and Neretva Rivers.

Given the ongoing resistance of the water management sector of Croatia to find an appropriate strategy for the development of the rivers in compliance with the EU environmental *acquis* and harmonised and sustainable river basin management planning, we therefore, urge the European Commission to immediately urge Croatia, respectively the Water Management Authorities to:

- **Desist from taking any further decisions or steps in the implementation of these projects and to impose a moratorium on these river regulation, sediment extraction and irrigation projects.**
- **Initiate a round table between all relevant stakeholders to discuss and review current projects and practices and find sustainable alternatives in line with Croatian and EU law.**

Implementation of these projects would prevent the achievement of EU priorities related to river basin management and the maintenance of valuable ecosystem goods and services, including flood management, sustainable forestry and provision of drinking water.

Current river management practice of Croatian Waters, the Agency for Inland Waterways and the Ministry of Regional Development, Forestry and Water Management:

- dates back to the socialist times of former Yugoslavia and is in clear contradiction with the principles of sustainable development and environmental protection of the EU.
- contravenes EU environmental legislation (including the Water Framework Directive, the Habitats and Bird Directives) and Croatian environmental law (Nature Protection Act).
- threatens European endangered habitats and species within proposed Natura 2000 sites and leads to the deterioration of the „ecological status“ of river ecosystems.
- endangers well preserved river ecosystems, wetland areas and alluvial forests, including protected areas and wetland areas of international importance (Ramsar sites) in Croatia.

The fact that current river management practice in Croatia is outdated, environmentally and economically unsustainable and not in line with the legal requirements of the Water Framework Directive is well known from the results of the EU Twinning project „Implementation of Water Framework Directive in Croatia“, which was carried out between 2007 and 2009 in Croatia. The key findings¹ of this project are as follows:

- *„In regard to flood management, Croatia’s water administration is still focusing on traditional, technical oriented measures and is not really aware of the paradigm shift that took place in Member states. Intensive technical oriented flood protection and maintenance activities, especially in the Pannonian region, have caused already significant ecological damages and will put the rivers at risk to fail the Water Framework Directive objectives (see 2.1 and 4.3). In the field of renaturation of rivers enormous efforts are made in Member State countries showing that ecology and flood protection can go hand in hand. In addition these integrated flood management concepts proved to be more cost-effective than traditional technical solutions”.*
- *“Morphological alterations turned out to play an important role, especially in the Pannonian part of the country. Results compiled by the Twinning Project clearly indicate that a large number of rivers are strongly degraded and are at high risk of failing the objectives (see Activity 2.1). Nevertheless Croatia’s water administration still focuses on technical river regulation (canalization, diking). Thus, the current maintenance of rivers contradicts Croatia’s efforts to harmonize its environmental legislation with the EU water acquis”.*
- *“In terms of hydromorphology Hrvatske Vode should reduce maintenance of rivers (e.g. no removal of all bank vegetation), apply soft engineering techniques and follow the “give space to the rivers”- approach (see also 1.7). For flood protection an approach that focused on strengthening dikes should be substituted by an approach that develops flood storage areas and provides ecological and recreational benefits”.*
- *“River regulation measures are frequently deteriorating the status of rivers. Those investments should be reduced significantly. The resources could be used more efficiently for investments in the urban wastewater sector”.*
- *The current approach of river maintenance focusing on flood protection does not comply with objectives of the WFD, especially considering its ecological dimension. Therefore budget reallocations between different water management activities need to be efficiently coordinated in order to increase effectiveness before considering exemptions. Linked to this, further interference with natural river morphology that is transforming natural river courses into uniform canals, leads to significant degradation of the ecological status, which is against WFD objectives (see 4.3). The present way of maintenance and morphological alterations is not only cost intensive, but will also result in considerable costs for river renaturation in order to achieve the good ecological status/potential. Reduced river maintenance however, would lead to an improvement of the ecological status and would also enable the use of remaining funds for other restoration measures”.*

¹ http://www.wfd-croatia.eu/userfiles/file/Activity%20reports%20final/Project_results_engl.pdf

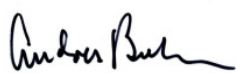
The five case studies and the planned new river regulation projects included in the attachment to this letter highlight the fact that ongoing river management practice along major rivers in Croatia is based on this outdated approach of technical river engineering, which contravenes ecological and sustainable river management in line with EU law and which threatens the main European river ecosystems and biodiversity hotspots in this part of Europe.

Due to the ongoing resistance of the water management sector in Croatia to find an appropriate strategy for the development of the rivers in compliance with EU environmental *acquis* and harmonised and sustainable river basin management planning, we therefore, urge the European Commission to immediately pressure Croatia that meeting EU environmental obligations is a condition for its further integration into the EU – and ultimately for EU accession and not tolerate such river regulation, gravel/sand excavation or irrigation projects along the major Croatian rivers.

The EU expert report from 2009 on the investigation of water management impacts along the Drava River and the recommendations from the EC Twinning project on the implementation of the EU Water Framework Directive in Croatia should be considered as a unique basis and opportunity to promote river management in line with EU legislation.

We are prepared to provide further and more detailed information if required and would be happy to support and discuss alternative options with all relevant stakeholders that can ensure the future sustainable development of the Rivers as a treasure of Croatian and European natural heritage.

Yours sincerely,



Andreas Beckmann
WWF/DCPO



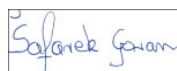
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ATTACHMENT: Case studies of water management projects on major rivers of Croatia

The following five case studies demonstrate that the Water Management Authorities of Croatia are trying to maintain the outdated system of river management practices and to gain approval of further major regulation plans before Croatia joins the EU and EU legal provisions, including the EU Water Framework Directive, EU Habitats and Bird Directives, come into force.

Case study 1 – Drava and Mura Rivers

Description of natural values

The transboundary Drava and Mura Rivers and adjacent floodplain areas count to Europe's largest and ecologically most important and well preserved riverine areas. They are a hot spot of natural habitats such as large floodplain forests, river islands, gravel and sand banks and oxbows, as well as home for endangered species such as Little Tern, Kingfisher, Black Stork, White-tailed Eagle, Beaver and Otter. They are an important stepping stone for more than 250,000 migratory waterfowls every year². The area in Croatia is part of the National Ecological Network ((HR1000014 Gornji tok Drave and HR1000016 Podunavlje I Donje Podravlje) and a proposed Natura 2000 site³ as well as planned to be protected as the Regional Park "Drava-Mura"⁴. In 2009 the governments of Croatia and Hungary have also agreed to protect the transboundary area as a joint Biosphere Reserve⁵.

Planned projects and threats

The natural values of the area and protected areas are threatened by old fashioned and unsustainable river management practices⁶. The overall goal of water management is to create and maintain a regulated river corridor, which was designed already in former Yugoslavia. As a consequence, a series of single projects have been developed and partly implemented in the past 10-15 years. In the past six years NGOs have regularly informed the European Commission about these projects⁷ and have asked the Croatian government to change the approach to water management. In 2009, the EU Commission engaged two EU experts to investigate water management impacts along the Drava and Mura in Croatia. Despite these interventions, further river regulation and sediment extraction projects are planned:

- Regulation of the Drava-Mura confluence (232-242 rkm)⁸
- Regulation of the Drava river at Libanovec (233,3 rkm), Komatnica (216,5 rkm) and Novačka (215 rkm)⁹
- Regulation of the Drava river at Jelkuš/Đuretina, including extraction of 93.000 m³ of gravel (176-177 rkm)¹⁰
- Illegal gravel extraction at Pitomača (175 rkm)¹¹ and sand extraction at Petrijevci (31 rkm)¹²
- Regulation plan for the Lower Drava from Belišće to the mouth (0-56 rkm)
- Furthermore, the hydropower lobby is pushing for new hydropower dams along the Drava (Molve 1 & Molve 2 HPP, Osijek HPP)¹³.

² <http://www.sterna-albifrons.net/xoops/files/Danube-Drava-Mura-Brochure.pdf>

³ <http://www.natura2000.hr>

⁴ <http://www.min-kulture.hr/default.aspx?id=5324>

⁵ <http://www.min-kulture.hr/default.aspx?ID=5164>

⁶ As a result, negative impacts on the ecosystem health and functions of the Drava-Mura are present, as it is proved e.g. by long-term monitoring of indicator species such as Sand Martin and Little Tern. In the last five years the breeding population of Sand Martin along the Drava has decreased from over 12,000 to only 3,000 pairs, and the Little Tern population, already at the verge of extinction, is also showing negative population trend. Moreover, from 2005-2007 three pairs of White-tailed Eagle ceased to breed between 166-176 rkm due to continuous disturbance and loss of feeding habitats due to gravel extraction.

⁷ This letter is a follow up of the ongoing information - since 2004 - of the signed NGOs to the European Commission on inappropriate river management practices along the Drava and Mura Rivers in Croatia and Hungary (letters to the EC dated: 10 March 2004, 29 March 2005, 4 September 2006, 28 June/18 September/1 October 2007, 5 March 2008, 24 June 2009, 17 March 2010, 2 December 2010)

⁸ see recent NGO complaint to the EC dated 2 December 2010

⁹ <http://www.kckzz.hr/prostorno-uređenje-i-zastita-okolisa/odsjek-za-zastitu-okolisa/glavna-ocjena-za-ekolosku-mrežu-zahvati-hrvatskih-voda>

¹⁰ <http://www.voda.hr/Default.aspx?art=870&sec=2> and <http://www.kckzz.hr/prostorno-uređenje-i-zastita-okolisa/pododsjek-za-zastitu-okolisa/informacija-o-zahtjevu-za-provođenje-glavne-ocjene-prihvatljivosti-za-ekolosku-mrežu-vadenja-sljunka-iz-korita-rijeka-drave-lokacija-đuretina-opcina-podravske-sesvete>

¹¹ <http://www.voda.hr/Default.aspx?art=870&sec=2>

¹² <http://www.min-kulture.hr/userdocsimages/pdf/Bokros.PDF>

¹³ http://www.vlada.hr/hr/naslovnica/sjednice_i_odluke_vlade_rh/2010/80_sjednica_vlade_republike_hrvatske - Agenda no. 1.1

Conclusions

The EU Fact Finding Mission of 2009 on the investigation of water management impacts along the Drava River has resulted in an expert report which clearly recommends to overcome outdated water management practices and to apply modern “state of the art” projects in line with EU law along the Drava. The experts further recommend to stop gravel and sand extraction from the riverbed. The projects mentioned above clearly contradict these expert conclusions and prove the resistance of the water management sector towards sustainable river management along the Drava and Mura Rivers.

Case study 2 – Sava River and its alluvial wetlands incl. Lonjsko polje Ramsar Site

Description of natural values

“The Sava River is considered by nature conservationists and scientists to be one of the ‘crown jewels’ of European nature and has been selected as a focal region in the Pan European Biological and Landscape Diversity Strategy (PEBLDS) of the Council of Europe” – the IUCN web page financed by the EU LIFE Programme and the Swiss Agency for Development and Cooperation¹⁴. Its extensive floodplains host the largest alluvial oak forests in Europe¹⁵, which are part of the National Ecological Network (HR100004 Donja Posavina, HR1000005 Jelas polje and HR2001116 Sava) and will be part of the Natura 2000 network. The river itself with its natural river banks is still in a near-natural state.

Projects and threats

The Croatian Agency for Inland Waterways is planning to regulate the 386 km free-flowing natural meandering river stretch of the Sava between the border of Serbia at Račinovci upstream to Sisak. An Environmental Impact Assessment (EIA) has been carried out and a public hearing process was undertaken in July 2010¹⁶. Similar to the Drava River, the natural river should be transformed into a regulated river canal, the so-called regulation corridor by implementing about 133 river training structures (embankments, groins) are extracting of 1.7 mil m³ of sediments from the natural riverbed.

Despite the criticism and comprehensive complaints provided by NGOs during public hearings, the EIA was accepted and the project was declared as acceptable also from nature conservation point of view¹⁷, though it considerably lacks an appropriate assessment of the impacts on habitats and species listed in the Habitats and Birds Directives. No transboundary impact assessment has been carried out though the project also impacts on valuable natural sites in Bosnia and Herzegovina.

This project would further lead to a stoppage of the lateral erosion, river bed incision, sediment flow change and disbalance, interruption of the connection between the river and its floodplains, groundwater decrease and overall degradation of hydrological and ecological state.

Conclusions

If the Sava regulation corridor will be accepted before Croatia enters the EU, Europe would lose one of the most important natural riverine corridors in a middle course of a large river. It is not acceptable, that the EU is providing financial support for the preparation of the Management Plan for the Sava River Basin and supporting the work of the Sava Commission, while at the same time the key ecological values of the Natura 2000 network hosted by Croatia are impacted by outdated river regulation works by Croatian Water Management Authorities.

¹⁴ <http://www.savariver.com/>

¹⁵ compare Croatia's World Heritage Nomination for the Central Sava Basin and the Nature Park Lonjsko Polje

¹⁶ <http://puo.mzopu.hr/default.aspx?id=4692>

¹⁷ http://puo.mzopu.hr/UserDocsImages/Rjesenje_15_11_2010_1.pdf

Case study 3 – Danube River and its alluvial wetlands incl. Kopacki rit Ramsar site

Description of natural values

The Danube stretch and its floodplains between Hungary, Croatia and Serbia - from the mouth of Sio River in Hungary downstream Ilok in Croatia - is the best preserved and most natural river section in the whole Pannonian basin. The floodplain area extends over 100.000 hectares and includes the wetlands of Kopacki rit in Croatia¹⁸. This site holds the highest density of breeding birds of White-tailed Eagles in such a small area in continental Europe (up to 15 pairs per 100 km²) and regularly supports over 20.000 waterbirds. The whole area in Croatia is a Ramsar site and part of National Ecological Network (HR1000016 Podunavlje and Donje Podravlje incl. several sub-sites), a future NATURA 2000 site. The most valuable parts are already protected as Nature Park Kopacki rit (IUCN category V) and Special Zoological Reserve (IUCN category Ib).

Projects and threats

In 2010, the Agency for Inland Waterways started the Environmental Impact Assessment (EIA) procedure for the regulation of 53 km of the Danube River – from the Croatian-Hungarian border (at 1433 rkm) downstream to the mouth of Drava river (at 1380 rkm)¹⁹. This project, similar to the cases on the Sava and Drava rivers, aims to regulate the last pristine Danube stretches by building of a series of river training structures (T-groins, embankments etc.) and by extracting of sediments from the riverbed. The EIA is still in process. Parts of this project (e.g. from 1405-1406 rkm) had been approved by the relevant ministries and implemented already during 2008-2009 without any previous EIA or SEA.

During 2010, the Agency for Inland Waterways had announced a second project for the regulation of a 4-km long Danube stretch (from 1321-1325 rkm). On 08th September 2010, the Ministry of Environmental Protection, Physical Planning and Construction had issued a permit without any EIA or SEA²⁰.

Conclusions

The both projects and the procedure of their developments are clearly not in line with the Danube River Basin District Management Plan conclusions²¹ as well as so called “Platina manual” (Manual on good practices in sustainable waterway planning)²² whose development was funded by the European Commission. The projects envisage the maintenance of shipping corridor through disconnection of the river from its floodplain completely neglecting the ecosystem functions, services and benefits provided by wetlands to the humans.

¹⁸ www.ramsar.org

¹⁹ http://puo.mzopu.hr/UserDocsImages/Uputa_06_07_2010_1.pdf

²⁰ http://puo.mzopu.hr/UserDocsImages/Rjesenje_08_09_2010_2.pdf

²¹ www.icpdr.org

Case study 4 – Neretva River and Delta of Neretva Ramsar Site

Description of natural values

Along the whole Adriatic coast the Neretva forms the largest wetland complex in the Croatian Mediterranean region. Together with the upstream Hutovo Blato Nature Park (Bosnia and Herzegovina), this wetland covers over 20,000 ha hectares. As a biodiversity hotspot the area is of vital importance for the central European migratory bird population as a stop-over feeding and resting site²³. The Neretva delta is one of the four Croatian Ramsar site, it is designated as the Croatian National Ecological Network (HR1000031 and HR5000031 Delta Neretva), it will be part of the NATURA 2000 and it is proposed for the protection in the category of Nature Park (IUCN category V), including already established several Special reserves (IUCN category I).

Projects and threats

During 2009 a new Dubrovnik-Neretva county space plan has been adopted with contradictory goals for the site²⁴: On the one hand, full protection in the category of the Nature Park has been proposed. On the other hand, further development of intensive agricultural production with accompanied melioration has been planned. Despite the wide-ranging comments and criticism from the public and NGOs during the public hearing process, the NGO remarks were not considered, nor have these obvious discrepancies in the spatial planning and resource management been resolved.

As a follow up, Croatian Waters has initiated the plan for the further melioration and irrigation of the existing and future agricultural fields, including intensification of the agricultural production. During July 2010, the Ministry of Environmental Protection, Physical Planning and Construction has initiated the procedure for the acceptance of these irrigation projects²⁵. These projects foresee the building of a dam across the Neretva River at Komin village (in order to stop the salt-water intrusion problem), construction of pumping stations for freshwater extraction from living watercourses, construction of the reservoir on the top of the hill (to store freshwater during droughts) and diversion of the water from Neretva River to its side-channels (e.g. Mala Neretva). The ultimate goal for these projects is the intensification of the agricultural production and the cultivation of reed beds and wetland habitats, including Calcareous fens with *Cladium mariscus* (NATURA 2000 habitat 7210*). Numerous illegally built plots of land inside the protected and state-owned water estate of the Ramsar site are planned to be irrigated. Public hearing process for the adoption of the EIA has been initiated during November, and again many objections were made by NGOs. Furthermore, Hrvatske Vode plans to canalize the stretch of the Mala Neretva side arm²⁶, including the building of 4-5 km long embankments along both sides of river.

Conclusions

These irrigation projects would destroy the most important and remaining natural localities in the site (e.g. Parila – largest brackish area important for feeding Spoonbills and Pygmy Cormorants, Luke – the most important remaining pastures with important Lesser Shrike population, Kuti – the only large remaining reedbed area important for Bitterns and Ferruginous Ducks etc.). They would further impact on the ecological character of the internationally important wetland site and deteriorate the biodiversity status and future Natura 2000 site.

²³ Schneider-Jacoby M. & Stumberger B. 2010. Transboundary zonation concept for the Neretva Delta including Hutovo Blato. EuroNatur.

²⁴ http://edubrovnik.org/Nprostorni_plan.php

²⁵ <http://puo.mzopu.hr/default.aspx?id=4877> and <http://puo.mzopu.hr/default.aspx?id=4876>

²⁶ http://www.edubrovnik.org/data/1292333272_221_mala_Rjesenje-uredjenje%20obala%20Male%20Neretve.PDF

Case study 5 – Legislative changes that can not ensure the proper application of EU Directives

The new Water Act has been adopted during December 2009 (Official Gazette 153/2009) and it is so far the closest approach to implement the obligations of the EU Water Framework Directive and other EU Directives into Croatian Water Management Legislation. However, important exceptions are made that provide legislative loopholes and violate the principles of the EU Directives:

- While Article 4, para. 4 clearly states that “*one of the goal of the water management is to reach and maintain of the good status of waters for the protection of human health and lives, their properties as well as protection of water and water dependent ecosystems*”, the needs of water dependent ecosystems and related biodiversity is completely neglected in the subsequent articles, incl. Art. 9 – “Purpose of water estate” (*namjena vodnog dobra*)
- Water protection (*zaštita voda*) under Article 40 refers exclusively to protection against water pollution and excludes the protection of hydro-morphological features of rivers and streams as well as biodiversity protection.
- While Article 97 prohibits the exploitation of sand and gravel from living watercourses and their floodplains, exceptions provided by Art. 101 and 102 permit extracted sediment to be used for the construction of water management technical structures or to be sold to third parties. Clearly, the aim of protection of sediment from exploitation as a measure for counteracting sediment deficit in rivers is bypassed and with these exceptions extracted sediment would no longer be available for the required hydro-morphological processes and for the maintenance of ecological features and processes.
- Article 106 para. 2 states that “*when the maintenance works on water bodies are performed in the areas that are declared as ecologically important or protected areas, ... public interest of protection of human lives and health and their properties from floods, torrents and ice, as well as water pollution is overriding public interest over the biodiversity and landscape diversity protection and protection of natural values.*” This Article clearly violates EU law and the EU Habitat Directive, which regulates the procedure regarding how overriding public interest may be defined during the implementation of the project. Overriding public interest can not be *a priori* legally defined for certain projects without appropriate assessment and procedures.