



## Life along the Sava

March 2008 No. 1

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Obedska bara in winter - Vladimir Dobretić

### Dear readers,

The first issue of a new magazine always brings with it dual excitement. Firstly, it brings the satisfaction of providing new reading material to the public (in this case, a specialized and thematic edition intended for a certain geographical region). The second reason is the simple anticipation of whether the new issue will be positively welcomed by the public, whether it will succeed in satisfying the diverse needs of its readers, and whether it will be successful in achieving its mission. In your hands you hold the first edition of the bulletin Life along the Sava. The bulletin was conceived with the idea of covering a broad range of topics related to the conservation of the natural and cultural values of the Sava River floodplain. This bulletin is not only intended for experts on the Sava River, but also for all those interested in the wise management of wetland habitats that are so typical of the Sava River floodplain. This first edition is dedicated to the formation of the ecological networks, which represent a significant contribution to the modern comprehension of space and the relations between humans and nature. This topic is imperative for the conservation of all the diversity associated with the Sava River. Of course, the bulletin also offers a

series of other articles directly and indirectly related to the conservation of the values of Life along the Sava.

This bulletin was made possible within the framework of the project entitled Protection of Biodiversity of the Sava River Basin Floodplains, and supported by the LIFE III financial instruments and the Swiss Agency for Development and Cooperation (SDC). The overall objective of the project is to protect and preserve the unique areas and the diversity of flora and fauna along the Sava River, in line with the criteria of the EU Birds and Habitats Directives. This will be achieved through the creation of unified cross-border ecological networks along the entire course of the Sava River, and which will consist not only of protected areas, but also of all those existing transitional areas that the Sava River floodplain abounds in. Like this bulletin, the project is focused not only on the protection of biodiversity and the landscapes of the floodplain, but also addresses a number of other issues that are significant for the conservation of the unique Posavina landscape. This primarily refers to the various forms of land use that have developed into the specific conditions of the floodplain, the cultural heritage

and the tradition of living in Posavina, in addition to the complex issues of resource management. Together, these create the guidelines for balanced development of the area. Indeed, all this cannot be achieved without reviewing the issues of conserving biodiversity of the Sava in the broadest possible context, all the while considering the significance of its water management, the existing system of regulating high water levels and flood protection. Only an integral approach to the current state and needs can lead to a lasting and satisfactory solution in terms of conserving the natural and cultural values and creating balanced development plans.

In that sense, this bulletin is aimed not only at exchanging experiences and familiarizing those interested with the current happenings along the river, but also at offering possible solutions for a balanced future of the Sava River floodplain. This ultimately is aimed at the satisfaction of those living there. Those whose activities have left their mark on this region, making it one of the most influential natural and cultural entities in Central Europe.

Boris Erg, IUCN SEE

## The concept of ecological

networks

European biodiversity is largely tied to ecosystems that are under direct or indirect anthropogenic influence. Though certain human activities can lead to increased biological diversity, in recent periods the use of natural resources has been strongly intensified, which has had negative impacts on species and habitat diversity. As a result of human activities, habitats have become increasingly fragmented, thereby reducing the number of species and their distribution, as well as the value of goods and services that these natural resources provide.

For the purpose of halting biodiversity loss and preserving ecosystems, it would be ideal to protect vast areas and halt the continued exploitation of resources. On the other hand, the demands for economic development in Europe are so high that even in the final remaining areas of wilderness, this is impossible. The concept of an ecological network offers the possibility to reconcile these two opposing demands, by harmonizing the need to protect biodiversity with the need for natural resources. This can be achieved through balanced planning and tying together areas that are significant for preserving ecological processes and the vitality of populations in the broader context of semi-natural habitats and intensively managed areas.

The concept of ecological networks can be defined as a system of areas between which there is not only an ecological but also a physical connection. It is typical that such a system consists of core areas, corridors, buffer zones and, in some cases, areas to be revitalized.

Generally speaking, the ecological network serves to achieve the following

- to mitigate the negative impacts of habitat fragmentation;
- to enable species movements;
- to establish a functional connection



between protected goods, thereby achieving a satisfactory state of species and habitats in line with the EU Birds Directive and Habitats Directive.

The concept of ecological networks in Europe was first formally applied in 1992 with the formation of the European ecological network entitled Natura 2000, as part of the EU Habitats Directive. The idea of developing ecological networks received an important stimulus in 1995, when 53 European countries decided to establish the Pan-European Ecological Network (PEEN) as one of the basic activities within the framework of the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). The novelties introduced by the PEEN was the idea of physically connecting central areas, most commonly protected goods at the national or international level, by virtue of wise management or protected corridors to connect them or to revitalize individual areas.

There are four basic integral elements of the ecological networks (Figure 1):

1. Core areas: These are areas where the primary function is biodiversity conservation. They are usually legally protected under national or European legislation (e.g. Natura 2000 sites). These areas should provide a substantial representation of key natural or semi-natural ecosystems and contain viable populations of important or threatened species. Land use within these areas is managed to give priority to biodiversity conservation.

- 2. Corridors: These are areas of suitable habitat that provide functional linkages between core areas. For example, they may stimulate or allow species migration between areas. Corridors can be continuous strips of land or 'stepping stones' that are patches of suitable habitat. Using corridors to improve ecological coherence is one of the most important tools in combating the fragmentation that is threatening so many of Europe's habitats. Generally speaking corridors can be associated with higher levels of land use, as long as their function is maintained.
- 3. Buffer zones: Protected areas should not be considered as islands that are safe from negative external effects. The resource use that occurs outside them can have serious impacts on species and habitats within, for example air/water pollution







from industrial activities around a protected area can have serious effects on species within. Buffer zones allow a smoother transition between core areas and surrounding land use. The size and utilisation of buffer zones depends heavily on the particular needs of the specific ecosystem and its local population.

4. Sustainable use areas: These are remaining areas that can come under more intensive land use. But they should still take full account of the successful provision of ecosystem goods and services.

The European ecological network represents the backbone of nature conservation in Europe, by connecting ecosystems and populations of threatened species in the all-encompassing habitat fragmentation. These connections allow species to move freely throughout the fragmented environment and facilitates the exchange of genetic material between populations or parts of the metapopulation, thereby creating the guidelines for the survival of threatened species and ecosystems. The Sava River represents an exceptionally significant ecological corridor and, as such, can be considered one of the backbones of the Pan-European ecological network.

In order to establish a functional ecological network in Europe, the following must first be achieved:

• better understanding of the fundamental natural processes, including the effects of climate change;

- better links and communication among all sectors having an impact on ecological connectivity, including transport, tourism, agriculture, water management, physical planning, etc;
- more intensive involvement of the private sector and financial institutions in investments in environmental protection;
- development of concrete programmes at the European, national and regional level, in order to allow for better ecological connection of habitats;
- sound management of core areas of ecological networks in Europe.

Perhaps the most comprehensive explanation of the principle of the ecological networks in Europe is contained within Article 10 of the Habitats Directive:

Member States shall endeavour, where they consider it necessary, in their landuse planning and development policies and, in particular, with a view to improving the ecological coherence of the Natura 2000 network, to encourage the management of features of the landscape which are of major importance for wild fauna and flora.

Such features are those which, by virtue of their linear and continuous structure (such as rivers with their banks or the traditional systems for marking field boundaries) or their function as stepping stones (such as ponds or small woods), are essential for the migration, dispersal and genetic exchange of wild species.

Figure 1. Diagram of the ecological network

### **Useful links:**

**European Centre for Nature** Conservation (ECNC):

www.ecnc.nl/EuropeanEcologicalNe/ Index 6.html

#### Countdown 2010:

www.countdown2010.net/archive/ paneuropean.html

Joint Secretariat of the Pan-**European Biological and Landscape Diversity Strategy:** 

www.peblds.org/



### The Ecological Network in Croatia

The ecological network is a system of ecologically important areas of national and/or international significance for the conservation and survival of threatened species and habitat types. Pursuant to the Environmental Protection Act, the State Institute for Nature Protection has drafted the expert framework for the ecological network in Croatia, and the Regulation on proclamation of the Ecological Network was proclaimed by the Croatian Government in October 2007. In the process of EU accession, ecological network areas of international significance will be proposed for inclusion into the EU ecological network NATURA 2000. Areas of the National Ecological Network, in line with the NATURA 2000 network, have been divided into important bird areas (IBA) and areas important for other species (except birds) and habitat types.

The areas comprising the ecological network are connected by natural or artificial ecological corridors. An ecological corridor is an ecological components or a series of such components that allow for the movement of populations from one location to another.

In line with the mechanisms of the EU Habitats Directive, the Act prescribes that parts of the ecological network may be protected as specially protected areas, through the implementation of management plans or through a procedure of assessing the acceptability for each potentially threatening intervention. Negatively assessed interventions may only be approved in the event of prevailing public interest, and with the compensation terms listed in the Act. An important mechanism is the possibility of entering into contracts with rights owners in areas of the ecological network, to ensure incentives for those activities that contribute to biodiversity conservation.

In Croatia, the ecological network covers 47% of the landmass and 39% of the sea area, consisting of 1510 areas that are important for species and habitat types. Of these, 40 areas are internationally important bird areas and 2 are corridors.

Along the course of the Sava River flowing through Croatia, 17 areas have been earmarked for the ecological network. These areas represent the largest complex of wetland habitats in Croatia. The conservation objectives in these areas include various types of flooded alder, poplar, ash and common oak forests, flooded meadows and pastures, amphibian communities, aquatic and wetland habitats with their accompanying vegetation,

and numerous species

threatened at the national and/or international level. These include beaver, otter, wetland birds, birds of prey (i.e. white-tailed eagle, lesser spotted eagle, Montagu's harrier), corncrake, little and common term, collared flycatcher, ferruginous duck and others.

Several of these seventeen populations fall in whole or in part within the boundaries of protected areas pursuant to the Nature Protection Act. The Lonjsko Polje Nature Park, which was included among the Ramsar Wetlands in 1993, contains two ornithological reserves within its boundaries: Krapje đol and Rakita. This nature park has been included in the ecological network in its entirety as an area important for the conservation of species and habitats, while the broader park area represents the Donja Posavina internationally important bird area. The areas of the Sava ecological network—Podsused, Savica, Sunjsko polje, Dvorina and the Jelas fishpond—also fall under the ornithological reserves, in whole or in part. Gajna and Jelas polje, the locations of the fishponds of the same name, are protected as important landscapes, as are Turopoljski lug and Odransko polje, which are included under the Turopolje ecological network. Spačvanski bazen also includes two important landscapes, Virovi and Spačva, while the protection of Sunjsko polje in the same category is currently underway. The Prašnik forest has

been proclaimed a special forest vegetation reserve, as have the Lože and Radiševo forests, which lie within the Spačvanski bazen area of the ecological network.

For further information about the ecological network in Croatia, please visit

www.dzzp.hr







### Development of the Emerald Network in Serbia



The Emerald project is aimed at the establishment of ecological networks made up of Areas of Special Conservation Interest (ASCI), which are spatial entities and habitats of particular national and international importance for biodiversity conservation. This project was launched by the Council of Europe as part of activities stemming from application of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). This Convention, adopted in 1979, was ratified by Serbia in November 2007.

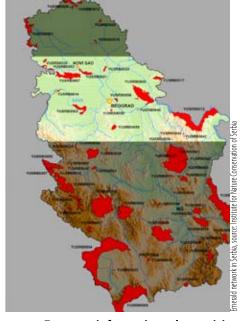
The Emerald Network is based on the same principles as the Natura 2000 network, and is formally considered to be preparation for the implementation of the Habitats Directive. All new EU Member States, and all those yet to become Member States, are obliged to submit a list of proposed areas for the Natura 2000 ecological network and the accompanying database. Thus, the implementation of the Emerald Project constitutes a direct contribution to the achievement of this goal.

All in all, a total of 61 areas, which are particularly important for the protection and conservation of flora, fauna and their habitats, have been selected for the Emerald Project and the envisaged ecological network in Serbia. The most important criteria to point out is that each area contains important habitats and species listed under the Bern Convention as those priority species and habitats for conservation at the European level. The majority of the selected areas have some form of protection status at the national level (50 areas have been proclaimed protected natural goods or are under protection revision). Some areas are of particular importance at the international level, i.e. MAB Biosphere Reserves (1 site), Ramsar Wetland Areas (6), Internationally Important Plant Areas (IPA; 33), Internationally Important Bird Areas (IBA; 33), Prime Butterfly Areas (PBA; 7). Several areas are in

the process of receiving protection, while others are currently the site of preliminary investigations. The data received here will form a sound foundation for their future protection at the national level.

Within the Sava River valley, two Emerald areas have been selected, the Obedska Bara and Zasavica Special Nature Reserves. Both reserves are included as IPA and IBA areas. while the Obedska Bara Special Nature Reserve was included in the Ramsar List of Wetlands of International Importance in 1977.

The project is coordinated by the Council of Europe, with the financial support of the European Environment Agency. Other countries participating in this project are Albania, Azerbaijan, Bosnia and Herzegovina, Montenegro, Croatia and Macedonia, each of which is aiming to establish its own ecological networks.



For more information, please visit www.natureprotection.org.yu or contact Nenad Sekulić at: nenad-sekulic@natureprotection.org.yu

Code	Name of the natural good	Status	RAMSAR	MAB	IPA	IBA	PBA
YUSRB0003	Obedska bara	SNR	Х		Х	Х	
YUSRB0014	Zasavica	SNR			Х	Х	

SNR - Special Nature Reserve



## Lonjsko Polje

an example of preserving a floodplain area and the traditional way of life

The Lonjsko Polje Nature Park is situated on the left bank of the Sava River, in the middle reaches of the river's course. The park stretches over 506 km, from Sisak to Nova Gradiška, and represents a unique landscape and ecological system of flooded river areas, which are the result of the impacts of natural flooding cycles and human cultural activities.

The area was proclaimed a nature park in 1990 and was included on the Ramsar List of Wetlands of International Importance in 1993. The nature park was included on the list of internationally Important Bird Areas in 1989 and has also been proposed for inclusion in the NATURA 2000 ecological network.

Today, the Lonjsko Polje Nature Park is a preserved authentic area from the period



of the historical Military Border between the Hapsburg Monarchy and the Ottoman Empire, with a complete medieval system of fortification. The park offers an exceptional example of a population adapted to the flood cycle, which is best seen in the traditional architecture, the spatial organization and formation of the landscape, as well as in the traditional use of space, i.e. as in the breeding of native breeds (Croatian Posavina horse, Turopolje swine, Slavonian Syrmian podolian cattle).

The Lonjsko Polje Nature Park Administration has been managing the area since 1998. The sensible use of resources in Lonjsko Polje, according to the recommendations of the Ramsar Convention,



represent centuries of tradition and the foundation for management. The park administration invests great efforts to direct all resource users towards more rational use. The park is forested over 66% of its area, and these areas are managed according to the FSC certificate. Activities to revitalize the flooded pastures since overgrown with neophitic shrub species (Amorpha fruticosa) are a daily obligation for staff and the local population. Projects of the line ministries and the European Union are helping to develop sustainable tourism which, in addition to the development of tourism infrastructure and the restoration of the traditional wooden architecture. presents this area as a desirable place to live and generates extra revenue for the local population.

The park authority is carrying out a series of activities within the framework of the European Commission project LIFE05 TCY/CRO/000111 "Central Posavina – Wading Towards Integrated Basin Management". These activities are aimed at directing all parties involved towards the integrated management of Central Posavina, the drafting of a management plan for the Lonjsko Polje Nature Park, the establish-

ment of a visitation system, restoration of pastures and educating staff and the local population.

For more information, please visit www.pp-lonjsko-polje.hr or contact the park manager, Goran









1. As an expert who has long been involved in studying and conserving the biodiversity of the Sava River floodplain, particularly the area of Obedska bara, how do you assess the current state of the biodiversity in the lower courses of the Sava River and its level of protection, in terms of the efficiency of the existing protection models?

Despite the evident changes, Posavina is still one of the major centres of biodiversity in Serbia and in central Europe. This is the site of the largest floodplain area in the country (i.e. Obedska bara, 12,000 ha) and the largest complex of natural oak forests and ponds. This is also site of the Debela gora forest, which many experts believe to be a unique common oak forest in international terms. Bear in mind the Bosut forest complex of 20,000 ha in Gornji Srem, the unique areas of Zasavica, the confluence of the Drina River at Mačva and the exceptional flora and fauna, we can get an overall idea of the value of Posavina in Serbia.

Unfortunately, adequate care is still not given to the natural values and potential of Posavina. Obedska bara is formally under management that does not support its protection, the Bosut forest is only of marginal interest, as is the sec-

tion of the Sava River from Mačvanska Mitrovica to Šabac and from Progar to Ada Ciganlija. The unique mouth of the Drina River at the Sava, which represents a pearl of international importance due to its natural values and landscape properties, has been completely neglected. The same is true for the mouth of the Kolubara River. The only positive steps have been taken at Zasavica, thanks primarily to an adventurous manager who had a "vision" of conservation and development.

One of the key problems is the inadequate management of protected and other areas in the Sava River valley, in addition to the lack of funds and lack of concrete projects. There are numerous disagreements between interest groups, and a pronounced monopoly in the fields of forestry, water management and agriculture.

2. What would you consider to be the most important existing mechanisms in the protection and conservation of biological and landscape diversity along the Sava, and which mechanisms are lacking? How can intersector cooperation of experts of various profiles serve the conservation of natural values?

Complying with national and international legislation represents a key mechanism. Other important mechanisms are physical planning, the abolition of monopolies, the inclusion of the local community and NGOs, and proper control and penal policies for violators. In practice though, this does not always function at a satisfactory level. The work of inspection bodies and the judiciary are of particular importance, as are education and promotion programmes. Cooperation between experts and institutions is imperative, particularly since there are a series of questions that can only be answered by taking a multidisciplinary approach.

Conflicting interests and ideas exist in Posavina, such as the construction of dams, cutting off the meanders of Kupinska kut, modifying rivers to ensure their navigability, expanding the network of water wells, increasing poplar plantations and more. The adoption of the Physical Plan for the Obedska bara Special Nature Reserve to 2022 created the framework to initiate positive steps forward in the village of Donji Srem. The drafting of a similar physically planning document is expected for Zasavica. This will define all the significant sectoral issues, align interests and offer solutions for numerous issues.





### 3. How do you assess the level of involvement of the local community in the protection of the natural and traditional cultural values of Posavina. What do you consider their role to be in that process?

There is an exceptional discord between the wants and needs and the true involvement of the local population in protection and managing the natural values of Posavina. For decades, the local population was completely marginalized, which only contributed to its inactivity and inability to envision the perspectives of the area. For many years, certain interest groups dominated, and the local population with their traditional customs could not speak out and satisfy their needs. Over time, they were completely forced out of the floodplain areas. The area lost a significant driving component, which was most felt through the impoverishment of biological and landscape diversity. Things began to change slowly, the local governments began to see the exceptional potential of Posavina, both in terms of ecology and the socioeconomic aspect. Now they are increasingly seeking their

#### the ever increasing trends of development with the conservation of nature and tradition of life in Posavina and why is this important?

Culture, tradition and land use in Posavina have very strong ties to the conservation of biodiversity and landscapes. In Posavina, man and nature have created recognizable landscapes. Man was once an important factor in the creating the complexity of the landscapes and the formation of its entities, only to later withdraw under the pressures of other interest groups. The age old acorn grazing by pigs in the forests of Srem, the grazing of cattle, mowing of meadows, fishing and construction in the traditional style have all since died out. The result was the impoverishment of the landscape diversity. Pastures became overgrown, as did the humid meadows and ponds, which led to the disappearance of numerous rare and threatened species of plants and animals. For years, this negative process was accompanied by the massive appearance of poplar clone plantations, which only further contributed to the monotony of the Posavina landscape. However, it is possible to again nur-



place and role in the management of natural values. Further steps have been taken in the Zasavica Special Nature Reserve.

4. What is the relationship between the traditional forms of land use, such as the cultivation of native agricultural crops and the like in preserving the values of the Sava River floodplain? How is it possible to harmonize

ture the culture and traditional activities of the population in Posavina, to contribute to the development of ecological and ethnological tourism and to produce recognizable local products. This is certainly the best defence from unsustainable projects.

5. Today, the Sava is an international river. What is the significance of cross-bor-



### der cooperation and the establishment of an ecological network along the Sava?

The values of Posavina can much better be comprehended and assessed in the cross-border context that at the national or local levels. For this reason, cross-border cooperation is the key to conservation and the promotion of the existing natural values, not to mention a great development opportunity for local communities. The establishment of an ecological network in Posavina would mean strengthening management capacities, exchanging information and improving cooperation and, most important, strengthening the possibilities for development of joint projects and the use of EU funds.

### 6. Considering your many decades of experience in conservation, how do you view the future of the Sava River and its floodplains?

Posavina will certainly continue to experience transformations, particularly given the fact that it lies in the plains, it is easily accessible and close to large cities and transport routes. For all these reasons, the Sava River floodplains need to be wisely managed and protected, first and foremost from habitat fragmentations, the drying out of existing floodplain areas, pollution and biodiversity loss. Certain parts of Posavina are sure to suffer changes to the river's course and complete changes in zoning, but with wise management and policies in the field of conservation and a little strategic planning, it is possible to preserve the basic natural and landscape entities such as Obedska bara, Zasavica, the mouth of the Drina River and the Bosut forests. With the support of the local population, the traditions and customs will be preserved. This will provide a real opportunity to preserve the recognizable and distinctive floodplains of the Sava River, and its unique natural and cultural heritage.

### International Sava River Basin Commission



#### From a cross-border approach to sustainable water management

In recent years, awareness that water is essential for life has increased - water has become a critical and precious resource. These facts have raised global awareness of the fact that water should be managed in a systematic, sustainable and cross-border manner. Many directives and agreements have been adopted by countries, aimed at laying the foundation for sustainable water management. Slovenia, Croatia, Bosnia and Herzegovina and Serbia have recognised the importance of the Sava River Basin as a crossborder issue regulated under the Framework Agreement on the Sava River Basin.

#### Framework Agreement on the Sava River Basin

The Framework Agreement on the Sava River Basin is the basic and most fundamental document stressing the importance of cross-border cooperation of governments, institutions and individuals for the sustainable development of the Sava River Basin. The Agreement was signed on 3 December 2002 and ratified by the four signatory states on 29 December 2004: Slovenia, Croatia, Bosnia and Herzegovina and the former Federal Republic of Yugoslavia.

According to the Agreement, the following are the set objectives for cross-border cooperation:

· establishment of an international navigation regime;

- · establishment of sustainable water management;
- · undertaking measures to prevent or limit hazards, such as floods, ice, droughts, or accidents, as well as to eliminate or reduce their consequences.

#### International Sava River Basin Commission

The International Sava River Basin Commission (Sava Commission) was established pursuant to the Framework Agreement on the Sava River Basin. The Commission has been entrusted with decision-making in the areas of navigation and giving opinions on other issues.

The Sava Commission is made up of state representatives who are appointed by the Government of each state.

The activities of the Sava Commission revolve around six main tasks: a) coordination:

- in preparation of an integrated Sava River Basin Management Plan in accordance with the EU Water Framework Directive;
- in establishment of an integrated GIS information system, RIS river information system and monitoring and early warning systems;
- in preparation of studies and projects;
- in the development of protocol;
- · in the majority of activities in the field of navigation and water management;
- b) proposing the Sava River Management Plan and priority projects;
- c) decision making and aligning state legislation in the field of navigation;
- d) cooperation with international and national organizations;
- e) issuing documents and publications, and
- f) enabling public participation.

The executive and administrative body of the Sava Commission is the Secretariat, seated in Zagreb.

> For more information, please visit: www.savacommission.org

### Posavina Horse Breeders Association of Croatia

The Posavina Horse Breeders Association of Croatia was established in 1993 to bring together breeders of the only native horse breed in Croatian - the Posavina Horse. Since 2004, the unified Association has been operating through the work of ten breeding associations. The Association has been authorized by the Ministry of Agriculture, Forestry and Water Management to implement breeding and selection programmes for this horse breed. The Posavina Horse Breeders Association of Croatia is run by volunteers and own revenues are used to pay experts in the implementation of horse breeding.

The Posavina horse has always been known for its fondness of humans, intelligence, modesty, stamina and strength. As such, it represents the peak of harmony between man and his environment, in which traditional breeding has been preserved and nurtured. The horse is suitable both for riding and for drawing carts. Due to its personality, the horse is perfect for therapeutic and recreational riding for adults and children of all ages.

It is important to note that the entire system of defence from floods of the City of Zagreb rests on the flooding of breeding areas and pastures where these horses are kept. This area is also a significant reserve of drinking water and the site of two protected areas, the Lonjsko Polje Nature Park and the Odransko Polje significant landscape.

The Association aims to raise interest in the breeding and keeping of horses by revitalizing the old and forgotten traditional customs. In this way, the Association directly assists breeders to save the only native Croatian horse breed from extinction.

> For more information, please contact Branko Borković, chairman of the Association at: sshp@sk.t-com.hr



### **Brod Ecological Society**

The Brod Ecological Society (BES) is a non-governmental organization from Slavonski Brod that was established in 1989. Its most evident results have been achieved in the protection of natural and biological diversity. Today, the Society



has 160 registered members and some 40 activists. Among the Society's some 30 projects related to the Sava River, one of the most noteworthy is the international river bank clean-up action, organized at Gajna (a typical flooded Sava pasture near the village of Oprisavci) in 1995, 1997 and 1999, and along the banks of the Sava River at Slavonski Brod in 1996 and 2000. Financial support received from the Regional Environment Centre (REC) allowed for the implementation of several educational projects and the implementation of the project entitled "Protection of the Danube Basin from Pollution" as part of the Regional Project to Protect the Danube Basin. In 2005, the BES launched the project "Protection of Biodiversity in the Sava River Floodplains", financed by Croatian Waters in cooperation with the State Institute for Nature Protection.

The Brod Ecological Society launched an initiative to proclaim Gajna as a protected area, which became a reality in 1990. The Gajna area is predominantly used as a pasture. In addition to having the area specially proclaimed for that purpose, the Society also ensured that Gajna is a natural spawning ground for the fish communities of the Sava River, and a wealthy feeding ground for many wetland species of birds and migratory birds. As part of the programme to preserve native species, BES constructed a traditional well (called "đeram") at Gajna,

reconstructed the traditional watchtowers (called "čardak") from the period of the Slavonian Military Border, and built a traditional stable from Slavonian oak in the middle of the plateau at Gajna. A protected sand depot has been created near the Sava River to serve as a nesting area for the sand martin. Currently, the Brod Ecological Society is carrying out the project "Protection, conservation and improvement of biodiversity and developing ecological awareness through the breeding of native Croatian species and stimulating organic farming", financed by the EU through the CARDS 2004 programme.

### Cards 2004 Project

The BES is currently involved in a project to protect, conserve and improve biodiversity and develop ecological awareness through the breeding of native Croatian species and stimulating organic farming. The project is financed with EU funds through the CARDS 2004 programme for a duration of 18 months.

The project is focused on the significant Gajna landscape in the floodplains of the Sava River in eastern Brod-Posavina County. The project gives incentives and ensures the conditions for economic activity, and ensures sustainable development in line with ecological principles in rural areas in Croatia. The project focuses on the villages in the Oprisavci municipality. Further project objectives include activating other groups to assist in the creation and maintenance of conditions for traditional grazing methods which are so critically needed in order to conserve these disappearing native species and landscapes.

The fundamental idea of the project was to combine economically feasible ecological breeding of Slavonian Podolian cattle, the Posavina horse and the Black Slavonian pig on the Gajna pastures in order to create the necessary conditions for the functioning of ecological cooperatives. This would further stimulate sustainable development in this area of special state concern. Through free grazing, native plant

species would also be protected, thereby stimulating the production of healthy food, while the desiltification of ponds and the creation of plateaus would created the appropriate conditions for controlled ecological tourism.

The target group for the project is the rural local community, supported by the partners of the Municipality of Oprisavci and the Brod-Posavina County Tourist Board and the cooperation of institutions (Institute for the Management of Protected Natural Values in Brod-Posavina County and the Oprisavci Tourist Board). Through the results of the project, the local communities will accept ecological production as one of the conditions for sustainable development. The project also aims to raise ecological awareness and lay the foundations for eco-tourism through accompanying projects (creating bicycle and horseback riding trials through protected areas of the county).

For more information, please contact Šimo Beneš of the Brod Ecological Society at: brodsko.ekolosko.drustvo@sb.t-com.hr

### Zasavica - 10 years of love and protection

Pokret gorana, a nature conservation movement from Sremska Mitrovica that manages the Zasavica Special Nature Reserve, is one of the few that in a decade of management of protected natural areas have succeeded not only in conserving threatened species, but also in returning species that had previously disappeared. A great deal has also been accomplished in bringing together the non-governmental sector with state institutions. The Zasavica Special Nature Reserve celebrated its tenth anniversary in 2007. The main event was held on 9 June when the Reserve received the Olive Branch from Radio Belgrade for its concept of sustainable development in protected natural areas. The Reserve launched a promotional campaign to raise awareness of the natural values in the Reserve, through numerous guest appearances on radio and





television. Special reports were filmed at the Reserve and broadcast on TV Avala, TV Fox, TV BS, RTV M, TV Srem, TV B92 and others, while numerous articles were published in daily newspapers and magazines. Two short films on the natural rarities of the Reserve. Umbra krameri and Zasavica, were edited at the Sirmiumfilm Production studio, and these films were made available in original wooden packaging. This year, Zasavica representatives attended three scientific conferences and several seminars. During October, the Reserve presented its tourism program and research results at the International Hunting, Fishing, Ecology and Tourism Fair in Novi Sad and at the International Book Fair in Belgrade, at which it also presented the new Zasavica geographical tourism map.

The final event of the jubilee was a scientific expert conference dedicated to ten years of researching the biodiversity of the Zasavica Special Nature Reserve. The conference was held on 1 December 2007 at Sremska Mitrovica, and was organized by the Reserve management in cooperation with the Department for Biology and Ecology, Faculty of Science, University of Novi Sad and the Institute for Nature Conservation of Serbia. The conference programme included an independent art exhibit of about 20 photographs of the Reserve by Katarina Pavlović from Belgrade.

For more information, please visit www.zasavica.org.yu or contact Mihajlo Stanković at: zasavica@zasavica.org.yu

### Activities of the Municipality of Srbac

The Municipality of Srbac, situated some 50 kilometres northeast of Banja Luka, is bounded by the right bank of the Sava River to the north for a distance of 40 kilometres.

This also marks the border with the Republic of Croatia.

Due to the natural "leaning" of the Municipality of Srbac on the Sava River, and the position of the town of Srbac at the very mouth of the Vrbas River, one of the largest tributaries to the Sava River, the entire northern part of the municipality represents a typical floodplain area of the Sava River Valley. The local population has taken on numerous activities on the river. In recent years, the Sava, as a navigable route, has given rise to many "bargemen", though in fewer numbers than in the neighbouring village of Davor on the other bank of the Sava River in Croatia,



known far and wide for its "bargemen" and river captains.

Today's activities on the river are primarily directed at the exploitation of river sand and gravel, and the cross-border raft transport between Srbac and Davor. Today, there are only a handful of fishermen who cast their nets to catch the fish. The question must be posed as to whether these forms of river use are sustainable, and whether the times when the Sava abundantly fed Posavina, provided water for cattle and milled the wheat for bread have been lost for good?

For more information, please contact Aleksandar Milanović of the Agency for the Development of Small and Medium Enterprises Srbac – APIS at: alexmil@blic.net

### The white storks of Bosanska Posavina

The white stork, *Ciconia ciconia* (Linnaeus, 1758), belongs to a group of bird species whose life is closely tied to that of humans. Some estimates state that from 180,000 to 220,000 pairs of birds nest in Europe, marking a stable to slight increase in the popula-

tion in certain European countries. However, unlike in Serbia where there are 1100 – 1250 nesting pairs, and Croatia where there are 1000 – 1500 nesting pairs, the populations of this species in Bosnia and Herzegovina is very small and highly threatened. In 2006 and 2007, members of the 'Naše Ptice' Ornithological Society worked to develop a monitoring programme for the white stork population in Bosnia and Herzegovina. According to data collected in 2007, it is estimated that about 50 pairs of the white stork nest in Bosnia and Herzegovina, with Posavina as the main nesting area in the country. In addition to mapping nests, a series of other important



data were collected (i.e. the number of young hatched and surviving young, nesting place, factors influencing survival, etc.) that will allow for a better approach to protecting these magnificent birds. One of the planned tasks is to build nesting platforms, which would reduce the pressure on the rooftops where the storks most frequently build their nests, and reducing the dangers of electrocution of birds building their nests on electric poles. In order for this campaign to succeed, it is necessary to include the general population to ensure the future survival of the white stork population in Bosanska Posavina.

For more information, please contact Dražen Kotrošan kotrosan@bih.net.ba National Museum of Bosnia and Herzegovina

### Revitalization of the Veliki Galijaš Channel on Great War Island

At its session held on 8 April 2005, the Belgrade City Assembly adopted a decision to protect the natural area Great War Island as an exceptional landscape. The manage-





ment of the protected area has been entrusted to the Zelenilo Municipal Services Beograd. The island is bounded by the Danube to the north, the Sava River to the east and the Danube-Danubec backwater to the south and west, with a total area of 210.80 ha. The island is comprised of two river is-

lands - Great and Little War Islands.

Great War Island was proclaimed a natural fish spawning ground in 2002, within the Danube III fishing area. The natural good is situated on the border of two fishing regions, the Danube III and Sava II, and its fish fund is a direct reflection of the state of the fisheries in the waters of these two regions. The interior aquatic areas on the island are the former channels of Veliki and Mali Galijaš that previously had direct links to the river, thereby allowing for fish spawning. Prior to the start of works, the channels were filled in and were overgrown with vegetation, with little water to be seen.

In October 2007, the revitalization and cleaning of the Veliki Galijaš channel was completed. The silt was removed and the channel restored to its original state. The objective of the revitalization is to create the conditions for natural spawning and the preservation of the fish fund in the channel during fluctuations in the water levels on the Danube and Sava Rivers in the characteristic time of year. There is no better was to ensure an equally comprehensive and thorough stimulus to native fish reproduction and conservation of the native fish species.

For more information, please visit www.zelenilo.co.yu or contact Snežana Antonijević at: s.antonijevic@EUnet.yu Fund for the Development of the Non-profit Sector in the Autonomous Province of Vojvodina



The Fund for the Development of the Non-profit Sector in the Autonomous Province of Vojvodina was established to offer support to non-governmental civil organizations in Vojvodina. The Development Fund was established by the Assembly of the Autonomous Province of Vojvodina. In its work, the Development Fund is focused on supporting initiatives for social change aimed at strengthening the civil society. The Development Fund organizes expert and educational meetings and various fund-raising activities, issues publications to promote significant issues, acts and develops the non-profit sector in Vojvodina, supports and establishes volunteer centres and cooperates with these, and supports and promotes significant research and scientific programmes.

> For more information, please visit: http://www.fondrnps.org.yu/



First Stakeholder meeting at Bardača

The first Stakeholder meeting in the project "Protection of Biodiversity of the Sava River Basin Floodplains" was held on 24 September at Bardača, which was recently recog-

nized as an internationally important wetland area according to the Ramsar Convention. Bardača is situated in the Municipality of Srbac, near the confluence of the Vrbas River into the Sava, and represents one of the most preserved wetland areas in the entire Sava River Valley floodplain. The meeting brought together more than 50 participants from all four countries through which the Sava flows – Slovenia, Croatia, Bosnia and Herzegovina and Serbia. Participants included all partners in the project, representatives of numerous organizations, institutions, protected area managers, associations and non-govern-



mental organizations active in the Sava River region. The meeting brought together a wide range of experts in the field of nature conservation, forestry, water management, agriculture, tourism, development activities and others. The full-day meeting was conceived to allow participants to exchange information about current events in the Sava region, ongoing or recently completed projects and to present individual state strategies in the development of ecological networks along the Sava River. The working part of the meeting was structured to actively analyse public participation and the possibility of including interested parties in the protection and sustainable development of the Sava River Valley. Given that this project is unfolding in the context of cross-border cooperation, these meetings are exceptionally important, not only in terms of strengthening cooperation, becoming better acquainted with current events and exchanging information, but are also aimed at defining a harmonized joint strategy for the protection and conservation of biodiversity and the authentic landscapes along the Sava River.

> For more information, please contact Boris Erg at: boris.erg@iucn.org



### Initial project year rounded up with the Steering Committee meeting

The first year of the project "Protection of Biodiversity of the Sava River Basin Floodplains" was rounded up with the second regular meeting of the project's Steering Committee, held on 29 November in Zagreb under the auspices of the Croatian Ministry of Culture - Nature Protection Directorate. The meeting brought together representatives of the line ministries of the countries through which the Sava River flows, representatives of the project management working group coordinators, NGOs and representatives of partner organizations. In addition to presenting the progress achieved since the initial meeting of the Steering Committee held in April 2007 in Sarajevo, the overall project results for 2007 and the activities conducted within the framework of each of the existing four working groups—biodiversity, land use, GIS and public awareness—were presented. The meeting offered the members of the Steering Committee to become acquainted with how the project is unfolding, and to give their comments and suggestions as to the future course for planning activities, in order to ensure their compliance with

existing strategies and programmes at the national and regional levels. A discussion was held on how to best align project activities with the objectives and activities of the Sava Commission, in order to ensure wise management of the resources of the Sava River and its floodplains. Finally, plans for 2008 were presented. The coming year will bring intensive work on collecting and organizing field data, and will continue to present the heritage of the Sava River Valley.

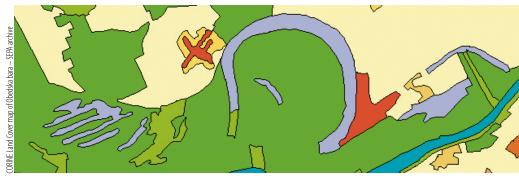
For more information, please contact Boris Erg at: boris.erg@iucn.org

### Wetland habitats along the Sava

mal species. Many such areas can be found along the Sava River in Serbia, mostly along left bank. Obedska bara is certainly the best known.

According to the CORINE Land Cover classification, inland marshes include all low-lying lands that are flooded in winter and heavily water saturated during the rest of the year. These are unforested areas with specific ligneous, semi-ligneous and herbaceous vegetation, with the exception of humid meadows with water logging of 10–30 cm in depth.

On the left bank of the Sava River in Serbia, more precisely from the mouth of the Drina River into the Sava and from the mouth of the Sava River into the Danube, a total of 10 inland marshes have been recorded (ac-



Numerous humid, flooded and marsh areas are found in the plains that lie along large rivers. These areas are very important for conserving the diversity of plant and ani-

cording to CORINE Land Cover) at distances of 700-3500 m from the Sava River, and two at distances from 8-13 km. The total surface of the inland marshes on the left bank is 14,181,028.05 m<sup>2</sup>, of which 8,368,211.23 m<sup>2</sup> lies within the Obedska bara Special Nature Reserve. Potkovica itself covers an area of 5,559,073.16 m<sup>2</sup>. These areas are usually elongated and winding in shape, while the surface of the area is either flat or concave with microstructures in the forms of "humps" or "clumps". The mosaic nature of the ecosystem and the specific microrelief, and the seasonal flooding cycle create habitats for numerous species of plants and animals. Within the reserve, a total of 222 bird species, 50 mammal species, 16 fish species, 13 amphibian species, 11 reptile species, more than 300 insect species and some 500 plant species have been recorded to date.

> Contact: Slaviša Popović, Serbian Environmental Protection Agency http://www.sepa.sr.gov.yu/

# Threatened Natural Heritage of the Lower Course of the Drina River



The Drina, the largest tributary of the Sava River, is formed with the merging of the Piva and Tara Rivers, and flows over 346 km. However, its valley is only 175 km in length, thus illustrating the meandering nature of this river. This is a cross-border river system that spans the territories of Serbia, Bosnia and Herzegovina and Montenegro. Despite the intensive use of the river's hydrological potential, the river connects the diverse and preserved landscapes of the central Balkans, from the highest peaks of the Dinarid mountains, over the gentle slopes of the Valjevi Mountains to the Pannonian lowlands. Hydrologically speaking, the course of the Drina River is divided into three sections: the upper, middle and lower sections (from Zvornik to the confluence of the Drina with the Sava, length 91 km).

Throughout its course, the river is very dynamic and strongly meanders, particularly from Loznica to its mouth, thus creating numerous meanders on the banks, gravel and sand islands and long gravel beaches. Alluvial forests line the banks, created by the dynamics of the river: the water erodes the banks and deposits material downstream, and in places where this

deposit settles, the alluvial forest communities develop spontaneously.

Recently, ornithologists from the Bird Study and Protection Society of Vojvodina, working under the auspices of the EURONATUR European Natural Heritage Fund and the Institute for Nature Conservation of Serbia, have confirmed that the significance of the lower section of the Drina River for nesting birds far exceeds national bounds. Their research has confirmed that little terns, goosanders, numerous sand martins and European bee-eaters, pairs of common kingfishers, little ringed plovers and common sandpipers use this area as a nesting site. The crown of this research was the discovery of nesting sites of little terns. These are all indicator species that require calm gravel islands not overgrown with vegetation and which are not connected to the river banks for nesting. Sand martins, bee-eaters and kingfishers nest in holes in the vertical walls that are created when the river "breaks off" a part of the bank during flood waves, while the other species mentioned nest on the gravel islands. According to the research conducted by ornithologists, the significance of the lower Drina is must greater with respect to the little

tern. In Europe, this species usually nests on sea coasts, islands and lagoons and only exceptionally in inland Europe, usually in small numbers and only at a handful of sites. The closest such nesting sites are found only in the best preserved sections of the Drava River. In Serbia, these nesting sites are found only on the lower course of the Drina River.

Both ornithologists and the local population have warned that the natural heritage of the lower Drina River is very threatened. In recent years, the entire ecosystem has been in danger of complete degradation or destruction due to intensive gravel excavation. During the summer months, private companies illegally excavate and haul off gravel with heavy machinery in the riverbed. It is precisely this period that



is most critical for the nesting birds, which are easily disturbed. In the process, the gravel islands are destroyed or are joined to the banks, making them accessible to fishermen and bathers.

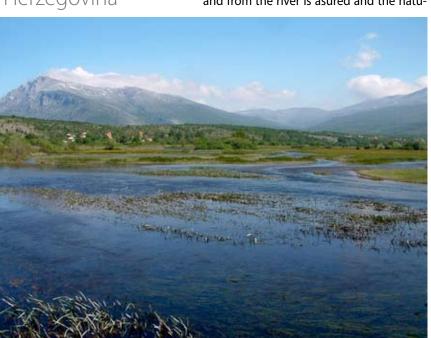
Given the great importance of this area, ornithologists are planning to launch an initiative to legally protect the area as a natural good. The area already meets all criteria to be proclaimed an internationally significant wetland area under the Ramsar Convention.

Marko Tucakov Bird Study and Protection Society of Vojvodina: mtucakov@eunet.yu



### River conservation in Croatia through close cooperation with neighbouring Bosnia and Herzegovina

eration and dyalogue between authorities, NGOs and public in Croatia and BiH on the water protection and sustainable management of rivers; so the life along and from the river is asured and the natu-



In July 2007 the two-year project for protection and sustainable use of natural resources in bordering area of Croatia and Bosnia and Herzegovina was launched, as a basis for good crossborder relations and sustainable development of both countries.

Project goal is raising of awareness, knowledge and cooperation on environment protection, through promotion of conservation of river's biodiversity and sustainable usage of natural resources in wider border area of Croatia and BiH. Project is conducted by Green Action/FoE Croatia in cooperation with Brod Ecological Organization "Earth" from Slavonski Brod and NGO "Lijepa naša" from Ploče; and BiH NGOs - Eko Neretva from Jablanica and Center for environment from Banja Luka.

Rivers don't know boundaries - water quality and habitats downstream are under influence of upstream state of rivers and its tributaries. No matter from which side of the boundary the pollutions comes to the river, the condition is spread all through the riverflow - which was the main starting point for this project. It is dealing mainly with establishing and deepening of coopral ecosystems conserved. There are going to be organized a set of multi-stakeholder workshops on 5 different rivers that will be recognized as hot spots of river biodiversity. By the end of the project in 2009 the promotional poster and brochure will be printed and disseminated around the project area. For the inventarization of selected rivers and identification of river hot spots Croatian experts were hired from Croatian Biological Society and Association of biology students BIUS.

Except promotional and educational campaign on river ecosystems and its conservation, the project activities are focused also on practical "Do it yourself" workshops on small solar system installation, as an example of usage of renewable energy sources on local level. Added value of this activity is that the participants from these workshops will be able to use gained knowledge and possibly self-employ themselves in their region. The first solar workshop was organized in Hrvatska Kostajnica on Una river in November 2007. The solar system was installed on High school Ivan Trnski as a part of the system

for heating the water for the school's gym.

Project name is "PROMOTING conservation of border river ecosystems and sustainable use of resources in border area of Croatia and Bosnia and Herzegovina" and is financed by EU funds, CARDS 2004 program grant sheme Cross border cooperation.

For more information Irma Popovic, Freshwater Program Coordinator, Green Action/FoE Croatia Frankopanska 1, Box.O. 952, 10 000 Zagreb, Croatia tel: +385 1 4818 480, fax: +385 1 4813 096, GSM: + 385 99 3149 625.

www.zelena-akcija.hr

Danube Water Transport Can Be Green - Government, Industry and Conservationists Agree



The first-ever 'Joint Statement on Guiding Principles for the Development of Inland Navigation and Environmental Protection in the Danube River Basin' was launched on 11 March 2008

The interdisciplinary process to create the Joint Statement was led by the Vienna-based International Commission for the Protection of the Danube River (ICPDR), the Budapestbased Danube Commission on Navigation and the Zagreb-based International Commission for the Sava River Basin (a Danube sub-basin). Over 50 stakeholders including 12 basin governments and 22 industry and environmental interest groups also participated in the year-long process.

Participants generated a common understanding about the protection of the riverine environment and the necessary conditions for developing sustainable inland navigation in an intact riverine landscape. This includes how to maintain the existing infrastructure such as the navigation channel, sluices and ports and how to improve navigation without causing conflicts.



"One major result is that all participants – from developers to conservationists – agreed that inland navigation, if done properly, can be a sustainable mode of transport," said Milovan Božinović, President of the Danube Commission. "Another is that the Statement provides a set of principles, again agreed by all, that guide how the development of navigation projects can and should be done properly," added Dejan Komatina, Secretary of the Sava Commission.

One key principle is the need for an interdisciplinary planning process from the beginning of a project that includes: environment, water management and transport ministries; scientists in river engineering, navigation, ecology, spatial planning, tourism and economics; and other stakeholders such as environmental NGOs and the private sector. Other principles include minimizing the impacts of engineering interventions, using non-structural measures (e.g. improved fleets, technologies and information systems) and applying environmental impact assessments with public input.

The initiation of the Joint Statement was driven by concerns that some planned Danube navigation projects could conflict with the EU Water Framework Directive -- water protection legislation that obliges EU Member States to reach a `good´ status for all European waters by 2015 – and the desire to improve the navigation conditions on the Danube. In 2004, the ICPDR's `Danube River Basin Analysis´ had identified past alterations

caused by navigation as one of the factors behind overall ecological status degradation in the basin.

There was further concern about EU plans to make the Danube a major transport corridor under EU Trans-European Transport (TEN-T) guidelines. The plans were intended to provide a sustainable solution to commercial transport, especially road transit, along the Danube corridor which had increased by over 100 per cent in nearly all Danube countries in the last decade. The plans, however, also drove a wave of proposals for investments in new waterway infrastructure in the Danube Basin, and increasing concern over their potential impact on the river ecology.

In response, the Joint Statement further recognizes the need to abide by the Water Framework Directive, in particular the `river basin management plans´ for the Danube and Sava basins to be prepared by 2009. These plans will include measures to protect and restore aquatic ecological systems and to reduce the negative past and potential impacts from navigation development.

"Once a decision-maker or a water manager in the Danube Basin reads this guide before starting a new navigation project, then he or she will realize that having a multi-use river system that benefits ships, people and ecology is both possible and obligatory," said ICPDR Executive Secretary Philip Weller "And while this Joint Statement was created for Danube users, we believe that its comprehensiveness, scope and prin-

ciples are applicable and valuable anywhere in the world."

#### Note:

The Joint Statement and its Annexes can be downloaded at http://www.icpdr.org/icpdr-pages/navigation and ecology process.htm

The International Commission for the Protection of the Danube River (ICPDR) is an international organization consisting of 13 cooperating states and the European Union. Since its establishment in 1998, it has grown into one of the largest and most active international bodies engaged in river basin management in Europe. Its activities relate not only to the Danube River, but also the tributaries and ground water resources of the entire Danube River Basin.

The ultimate goal of the ICPDR is to implement the Danube River Protection Convention by promoting and coordinating sustainable and equitable water management, including conservation, and improvement and rational use of waters for the benefit of the Danube River Basin countries and their people.

For further information, please contact Jasmine Bachmann, ICPDR Secretariat at: jasmine.bachmann@unvienna.org, or visit the website: http://www.icpdr.org

The Danube Commission (DC) was founded in 1954 in Budapest with an aim of implementing "The Convention regarding the Regime of Navigation on the Danube" adopted in Belgrade in 1948 (The Belgrade Convention). The DC has 11 member states (all riparian States plus Russia) and six observers. France, Turkey and the European Commission have applied for full membership. The member states established the Preparatory Committee for the revision (modernization) of the Belgrade Convention. The role of the DC Secretariat, as its executive body, is to monitor and review all aspects of the Danube navigation, to make proposals in a form of recommendation for its development, as well as for harmonizing it with international standards of inland navigation.



For further information, please contact Ivana Tomic, Danube Commission at: ivana.tomic@danubecom-intern.org, or visit the website: www.danubecom-intern.org

#### **Contributor contributions**

The editors wish to thank all those who have given their contribution to this first issue of the Bulletin. We invite all those interested to send interesting articles on the organizations and institutions that are active along the Sava River, news relating to your activities, research, projects, events and other activities of importance for the protection and conservation of the natural and traditional heritage and the sustainable development of the Sava River and its floodplains. Articles should not be longer than 1500-2000 characters with spaces (about 250 words) and should include photographs and illustrations (resolution 150 dpi, size 10x15 cm). Please send your contributions to the following addresses:

- strakic@email.com (articles in Bosnian)
- vida.posavec@dzzp.hr (articles in Croatian)
- miljkovicstojanka@yahoo.com (articles in Serbian/BiH)
- srdjan-marincic@natureprotection.org.yu (articles in Serbian)
- boris.erg@iucn.org (articles in Slovenian and other languages)

The Life along the Sava Bulletin contains contributor contributions and news. The designation of geographical entities in this publication, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries. The views expressed in this publication do not necessarily reflect those of IUCN.

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#### What is IUCN?

IUCN, the International Union for Conservation of Nature, helps the world find pragmatic solutions to our most pressing environment and development challenges. IUCN supports scientific research; manages field projects all over the world; and brings governments, non-government organizations, United Nations agencies, companies and local communities together to develop and implement policy, laws and best practice. IUCN is the world's oldest and largest global environmental network. IUCN is a democratic membership union with more than 1,000 government and NGO member organizations, and some 10,000 volunteer scientists in more than 160 countries. IUCN's work is supported by 1,100 professional staff in 62 offices and hundreds of partners in public, NGO and private sectors around the world. IUCN's headquarters are located in Gland, near Geneva, in Switzerland.

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