

Save the Danube as a lifeline! – steps towards sustainable navigation

**Common NGO position on navigation in the Danube basin
15 October 2009**

1 Purpose of this paper and short overview

We, the undersigned NGOs, want to advocate for the conservation of the extraordinary ecological, historical, aesthetic and socio-economic values of the Danube. Our vision of the Danube River is a lifeline where ecology and river users/uses (including navigation) thrive hand-in-hand to provide life and ecosystem services, as well as to continue supporting the livelihoods of the people who live in the Danube basin.

The purpose of this paper is to present a set of key recommendations that we believe should be followed if navigation on the Danube (hereafter meaning the main stem, navigable tributaries and accompanying floodplains) is to become environmentally sustainable. The paper aims to guide relevant planners, developers and policy makers towards wise, forward-looking decisions.

We appreciate the role inland navigation plays as a contribution to the European transport sector and recognize that it satisfies specific social and economic needs of Danube states. However, river engineering projects for improving the conditions of inland navigation should only be implemented or continued if they:

- a) Guarantee and regain functioning ecosystem processes (amount, quality and timing of water and sediment flows required by ecoregion specific freshwater and estuarine ecosystems and human livelihoods to sustain themselves)
- b) Respect socio-economic needs of regional and local economies
- c) Prove that they meet all legal requirements, in particular compliance with the non-deterioration clause of the European Union's Water Framework Directive (hereafter WFD) as well as achievement of the environmental objectives of the Danube River Basin Management Plan and Natura 2000 sites
- d) Do not require new dams or barrages on waterways so as to prevent further disruption of the river continuum.

2 Our vision of a living Danube

The Danube basin is the world's most international river basin, its territory being shared between 19 states. It is also Europe's second largest river system. The ecosystems along the Danube, from its source in south-west Germany to the Danube Delta – Europe's largest coherent wetland area – are extremely rich in biodiversity.

The Danube supports about 300 breeding bird species and 100 fish species¹ – including six native sturgeon species and the endemic Danube salmon (*Hucho hucho*). It is home to globally threatened birds like the Dalmatian pelican (*Pelecanus crispus*) and Ferruginous duck (*Aythya nyroca*). A chain of protected Natura 2000

sites are nestled along the river's floodplains, including two UNESCO Biosphere Reserves in the delta.

The Danube river system has always provided numerous important benefits and services for people living along the river: provision of drinking water, natural resources (e.g. fish, reeds, timber from floodplains, water for agriculture), natural filtering capacity of pollutants, provision of habitats and places of recreation, and natural flood protection through retention of floodwaters in floodplains additionally helping with "climate buffering", to name a few.

These services will only be delivered if the following ecological objectives and conditions are met:

- Sufficient amounts of water and space are left for the river to function
- Natural fluctuations in water flows and levels, including high (flood) and low (drought) levels
- Up- and downstream connectivity so water, sediment and organisms (e.g. fish) can travel freely
- Unobstructed connection of the river to sidearms, floodplains and wetlands so water, sediment and organisms can travel freely
- "Good quality" riverbank and riverbed substrate as provision of habitat, i.e. natural materials that can be formed and shaped by water flows and natural erosion and sedimentation processes
- Viable populations of all native Danube flora and fauna species for the different Danube stretches are secured, covering the full richness of biodiversity and indicating intact and adequate habitats in the river and adjacent wetland ecosystems
- No water and sediment pollution exceeding natural carrying capacity and/or at least legal limits regarding also the needs of the Danube and Black Sea
- Respect of the hydromorphological² integrity of the river
- High diversity of river, banks, wetlands and natural landscapes along the Danube, serving both people and nature.

We appreciate that the Joint Statement on Inland Navigation issued by the International Commission for Protection of the Danube River and the Danube Commission contains some of these holistic views and can be regarded as the first step towards increased sustainability of the sector. Also the manual developed under the European PLATINA project promises to contribute to a better planning process. However, since the adoption of the Joint Statement, the "business-as-usual" approach to the development of the inland navigation projects in the Danube seems to prevail. We believe our recommendations can help ensure that development of inland waterway transport on the Danube meets legal requirements, is environmentally sustainable, and respects socio-economic needs of the local communities.

3 Threats to a living river stemming from inland navigation

A number of EU directives and international conventions have been adopted and aim to safeguard ecosystem services and achieve conditions for a living Danube. For example, the environmental objectives of the EU's WFD are based on several of the above-mentioned conditions, which are included as quality elements defining good ecological and good chemical status that all EU water bodies are to reach by 2015. In

addition, defining and achieving Favourable Conservation Status of all Natura 2000 sites on the Danube in line with the EU Nature Directives should help achieve conditions for a living Danube.

Common river regulation techniques and practices aimed at improving navigability tend to negatively impact the hydromorphology, and consequently the ecology of the river system. This often results in the impediment of other uses of the river and jeopardises the achievement of the objectives of the EU's Nature and Water Directives. It furthermore reduces resilience of the ecological and socio-economic system to the impacts of climate change.

The lack of integrated planning and linked decision making appears to be one root cause of these conflicts. Development of the inland navigation on the Lower Danube is a clear example of that.

On the one hand, the 2005 Danube characterisation analysis prepared under the WFD has identified hydromorphological alterations caused by navigation, hydropower generation and flood defence as one of the main factors affecting the ecological integrity of the Danube River and jeopardising the achievement of the WFD objectives. In addition, a study coordinated by Birdlife International in 2008 highlighted that the navigation projects on the Danube corridor are likely to have high impacts on over 80 sites which are, or should be, protected as Natura 2000 sites under the Nature Directives³.

On the other hand, the EU's Trans-European Transport Networks (TEN-T) programme and NAIADES Action Plan aimed at promoting inland navigation, including on the Danube, have led to a significant push for more river regulation and hydromorphological alterations through additional infrastructure, in several cases without proper assessment of their environmental impacts and only rhetorically acknowledging full compliance with the environmental legislation.

Specifically, the inappropriately planned and executed navigation projects can result in:

- **Negative impact to river health**

From a purely transport point of view, the "best" inland waterways for navigation tend to be canals with rather static morphological conditions, i.e. deep and straight, with strong banks to reduce erosion, therefore requiring hydraulic measures and dredging on a regular basis for maintenance. But, this type of navigation canal is almost opposite to the living conditions described above in Chapter 2. For example, reinforcement of the riverbank for the navigation project along the common Romanian-Bulgarian border on the Lower Danube ("ISPA 2") between river-km 572 and river-km 565 will destroy natural river banks causing the complete loss of pioneer habitats of typical plant and animal species being strictly bound to such conditions. At least nine Natura 2000 sites will be impacted by the ISPA 2 project. Moreover, the so-called Bystroye project along the Kylaia branch in the Danube Delta threatens to severely impact the Romanian and Ukrainian Delta Biosphere Reserves and endangered bird and fish species.

- **Sediment imbalance**

River infrastructure can artificially disrupt sediment transport by altering, and sometimes blocking, water flow and the natural movement of the sediments along the riverbed. One example is the chains of barrages on the upper Danube, and the three large dams on the middle and lower stretches, that trap sediments and aggravate riverbed incision downstream. Besides these infrastructural measures it should be mentioned that dredging can have severe impact on sediment imbalance. Effects of this treatment can appear also in upstream sections (backwards erosion). Another example is that embankments or training walls can prevent sideways erosion, and thus sediments are not taken from the floodplains with additional fine sediments accumulate there raising the terrain level. The river itself sinks as water takes sediments from the riverbed (incision). As the river sinks, groundwater levels are lowered in the riverbanks and floodplains, causing sidearms to fall dry, worsening or even disrupting the connection between the main river and tributaries and reducing water flow to the river wetlands. Both processes have a cumulative effect. In the adjacent floodplains, the hardwood forests first spread at the expense of the softwood floodplain forests, but later all the riparian forests often suffer from decrease of the groundwater levels. Habitats typical for the wetlands, whose biogenesis depends on the periodical change between dry and wet periods, may disappear. Species typical for the wetlands could therefore become rare or extinct.

- **Negative impacts on resources that people rely on**

Problems arise when river modifications are done in the name of a single use, i.e. navigation, without considering ecosystem services. For example, lower groundwater levels due to an incised riverbed lead to a reduction of drinking water resources in communities, such as Budapest and several villages in Hungary, which depend on drinking water from bank-filtered wells along the Danube. This is an impact that may further deteriorate from the TEN-T navigation project planned along the entire Hungarian stretch of the Danube (see factsheets on Danube navigation projects in the annex). Another negative impact caused by alterations is clogging (colmation) that is associated with dam building, embankments and some approaches to riverbed stabilization. This can also affect groundwater levels and/or quality, in addition to the habitats of interstitial organisms and macrozoobenthos.

- **Reduced flood protection**

The improvement of the navigation fairway in the past on the upper Danube has reduced flood areas and consequently led to higher currents and water levels downstream of the impounded stretches; in addition, flood waves have accelerated, causing new risks when flood peaks cumulate with those from major tributaries. On the lower Danube, natural flood retention areas were diked off to transform land use for agriculture. Similar effects may result e.g. from the widening and deepening of the fairways and the loss of roughness and diversity of the riverbed. Other infrastructure measures such as flood protection dykes can add to these effects. The aim should therefore be to keep the riverbed and banks as natural as possible, and avoid any measures that reduce contact between the river and its side arms, as well as the contact to groundwater.

- **Blocked migration routes**

Certain types of infrastructure measures used to regulate water flows and depths, such as bottom sills and dams, block and prevent upstream and downstream

movement for migrating aquatic species. This can result in serious declines in populations when individuals cannot reach natural habitats for spawning or breeding. For example, five out of six Danube sturgeon species are endangered in part to loss of habitats and blocked migration routes in the Danube due to building of dams and anthropogenic impacts to floodplains and riverbed substrates. Bottom sills planned to be constructed in the Romanian navigation project between Calarasi and Braila (“ISPA 1”) could block some of the last remaining migration paths of Danube sturgeons, pushing species to the brink of extinction. Dams on the upper Danube have similar, or even worse, effects which threaten the populations of wandering or endemic fish species like Nase (*Chondrostoma nasus*), Zingel (*Zingel zingel*), Danube Streber (*Zingel streber*), Schraetser (*Gymnocephalus schraetser*) and Donaukaulbarsch (*Gymnocephalus baloni*), which was discovered in 1974 by Holcák & Hensel.

- **Risk of accidents**

Inland navigation is used for the transport of hazardous goods or water pollutants such as oil, chemical products and fertilizers constituting a high environmental risk in case of accidents. Because rivers are “open” and fluid ecosystems, impacts of accidents in river systems can affect much larger areas as compared to terrestrial systems.

- **Wave wash**

Waves from passing ships harm on fish spawn and fry. Young fish require the refuge of flat sand and gravel bank habitats and shallow bays for their development into adulthood. The wave wash from vessels force young fish from their refuge and draw them out into the main current or push them onto the banks, often leading to injury or death. In the upper and middle Danube, only few near natural habitat and refuge zones remain, including sites in the Austrian Wachau region, near national parks and Natura 2000 sites. Waves in these zones should be avoided through proper ship design or speed limits.

4 Misconceptions

We believe that it is possible to improve inland navigation on the Danube while maintaining and enhancing ecological and socio-economic values the living river provides. However, we believe that several issues related to navigation are misunderstood or falsely communicated, and in order to make informed decisions, inland navigation has to be looked at in the wider context with all the implications it may entail.

- **“Inland navigation is more environmentally friendly in terms of pollution than other modes of transport”**

It is true that inland navigation emits less climate-relevant emissions per tonne-km transported than road transport and in some cases possibly rail transport, but often nitrogen oxide and sulphur oxide emissions are higher for ships⁴. Also, transport of goods by ship may travel longer routes due to the natural courses of the river systems, although cargos usually require onward rail or road transport when one considers door-to-door service. Total trips and their corresponding emissions should be considered carefully. There is potential to cut air pollutant emissions and improve

fuel efficiency of vessels substantially, which should be achieved via new legislation. No matter how well navigation performs regarding greenhouse gas emissions, its share of the modal-split (only 6% EU-wide) and future potential is just not large enough to be of crucial importance for bringing total transport-related emissions down – transport emissions have gone out of control due to massive growth of road transport⁵.

- **“Efficient transport of goods requires a minimum and constant water depth along the entire river for most of the year”**

Because rivers are highly dynamic systems, reliable and accurate prognoses of parameters are difficult. Climate change potentially increases uncertainty of water level parameters. Nevertheless, navigation and river engineering frequently bases discussions, plans and section evaluations on the assumption of minimum Low Navigation and Regulation Levels (LNRL), although actual flows and water levels cannot be predicted on the long term. For example, on the Rhine River (often regarded as the model navigation system in Europe) no constant water levels exist, i.e. there are also critical low water periods like those, or even worse than, those on the Danube⁶. “Minimum” levels in this case are often misunderstood as referring to a guaranteed bottom-line that cannot be crossed, whereas in fact it means the highest point of the river bed in a given cross-section of the fairway. On the other hand despite some claims of navigation authorities, business is flexible enough to make use of additional depths if available and applying the pushed-barge concept used on the Danube indeed shows advantages in modularity and flexibility compared to the motor cargo vessels that dominate the Rhine River, a concept that can be further improved. Dredging sediment from the riverbed in order to maintain a certain water depth exacerbates the problem of the already existing manmade sediment deficit, has negative impacts on the river system, and is no permanent solution, whereas applying shallow draught ships for both bulk and container goods are technically feasible and a good option for fleet upgrade or replacement – “fit the ships to the river, not the river to the ships”.

- **“There is a great potential to improve and increase transport of goods on the Danube”**

The Danube river basin navigation situation is not as ideal as that of e.g. the Rhine with its large number and high density of harboured industrial sites. Many of the large economic centres on the Danube are not located on the main stem, e.g. Bucharest and Sofia. The overall and broader economic and infrastructure context is not on the planning table, which makes it very difficult to justify claims of improved emissions, increased revenue and benefits to local and regional economies. Furthermore, the current primate of mobility is risking long-term sustainability. Hence, how many goods are to be transported across Europe irrespective of transport modes (ships, trains, trucks) has to be reviewed critically.

- **“Promoting inland navigation will move the transport of goods from road to river”**

Plans to improve conditions for inland navigation will most likely affect the transportation of bulk goods, while container goods in the Danube region are mainly being transported by road or rail. This means better conditions for inland navigation on the Danube are unlikely to reduce traffic and thereby emissions from road transportation. It might, however, reduce transportation by rail⁷, which has equal or

better environmental performance as transport on rivers. Prognoses in Austria show, that this is a problem of scale as well. The impact is not big enough for absolute modal shift; inland navigation can at best take minor parts of the growth, and should not be seen as a solution for a strong shift in modal split.⁸

- **“River engineering is worth the infrastructure investment and will bring economic boom to the region”**

Even if a maximum of fairway depth and reliability of water levels is provided, this is no guarantee for high handling of goods in the harbours and for the prosperity of a region. This has been the lesson learnt from the Main River. The statistics for harbours along the (completely impounded and regulated) Main River show that the mass of handled goods nearly halved in value between 1990 and 2007⁹. Furthermore, cost-benefit analysis for navigation projects do not yet take environmental costs into the equation such as lower revenues from ecosystem services or higher risk of flooding as a consequence of navigation-related river regulation measures.

- **“Development of the waterway is needed to improve transport between the North and Black Seas”**

The transport of goods on the seaway is much faster and therefore cheaper than transports between North and Black Sea via inland waterways. Data especially for the Rhine show, that rivers primarily provide transports from the seaports to the hinterland¹⁰. Prediction of transport volumes may be fuzzy especially considering the recent and deep economic crisis likely to bring a significant reduction in transport of goods, including containers.

- **“Bottlenecks need to be removed”**

Plans to improve navigability of the Danube currently focus on the removal of so-called bottlenecks, while at a closer look some of them are less of a hindrance than claimed. For example, the Austrian section east of Vienna is listed as one of the “bottlenecks” despite the fact that the EUDET study¹¹ performed in 1999 specifies this section as the one with the highest transport capacity between Kelheim (DE) and Budapest (HU). This section is navigable throughout most of the year, has shown good performance under extreme conditions (the extreme dry year 2003 brought the second highest annual transport rate that had ever happened on the Austrian Danube until then), has approx. 90% of free capacity, ships transport goods under low water conditions, and the skippers seem to deal with the current situation quite flexibly.

5 Recommendations to achieve a balance between navigation and ecological needs

In order to maintain and improve a living and healthy Danube, policy makers, programme and project developers and beneficiaries need to consider ecosystem needs and prove during the technical design phase that navigation infrastructure programmes and projects will not stop or significantly hamper fundamental hydromorphological and ecological processes that are basis for the development and evolution of riparian ecosystems. For this not only technical planning, but also surveys of the abiotic and biotic parameters that could be impacted by the technical measures are required to have sufficient data for reliable forecasts. Also the application of

modern and best practice computer models and (if necessary) laboratory model tests may be helpful.

In order to conserve and achieve a living Danube, the NGO community recommends the following:

5.1 Policy level: Meet legal requirements safeguarding ecosystems and their services (WFD, EIA, SEA, Espoo, Natura 2000)

According to the **Water Framework Directive (WFD)**, neither navigation projects nor navigation channel maintenance may cause negative impacts on the hydrological system unless the strict conditions granting an exemption from this requirement are met. These conditions include (but are not limited to) consideration of better environmental alternatives, comparison of benefits of the new modification versus benefits to the environment, or assessment if the environmental protection set out in other EU legislation can be achieved. This analysis needs to be explained in the River Basin Management Plan and the public concerned is given the opportunity to express an opinion before the project is initiated.

The **Danube River Basin Management Plan** and associated programme of measures have been developed in order to meet another aim of the Directive – to reach “good status” by 2015. The WFD requires Member States to prevent deterioration of the status of ALL water bodies and achieve the Good Ecological Potential and Good Chemical Status in case of Heavily Modified Water Bodies, which must be designated following strict criteria supported by proper analysis and data¹². The implementation of river infrastructure for improving navigation conditions is likely to negatively impact at least the biological and hydromorphological quality elements. Therefore, non-deterioration must be proven as part of the infrastructure planning by supporting data, although this obligation is currently often neglected. As agreed by the Water Directors, heavily modified water bodies do not constitute a conventional exemption from the WFD objectives. They are a specific water body category - with its own classification scheme and objectives – and certain socio-economic conditions must be met before the exemption comes to play. Navigation projects should be planned so as to provide ecological improvements, both basin-wide and locally, with an overall positive net gain at each project site and for the river system as a whole (e.g. working with nature in each project).

The **economic instruments provided** in the WFD should help for the incorporation of the external costs and benefits of navigation. This would require defining the infrastructures supporting inland navigation (e.g. for impoundment, regulation, etc.) as “water services” and navigation per se as a “water use”. The Member States need to ensure that different “water uses” make an adequate contribution to recovering the costs of water services. This would have to go beyond the (very poor) purely financial cost recovery that is currently the case.

As the TEN-T programme was developed without taking ecology into account, a strategic environmental assessment (**SEA**) and **strategic Appropriate Assessment** of impacts on Natura 2000 sites (as required by Art 6.3 of the Habitats Directive) for the whole Danube needs to be undertaken and coordinated. National governments need to assure that high quality assessment – SEAs and strategic Appropriate

Assessments are undertaken for national sections of the corridor, as well as robust **EIAs** and **project level Appropriate Assessments** – for individual projects.

Stronger enforcement of EU environmental legislation in relation to navigation projects on the Danube is needed from the European Commission, supported by additional resources.

The European Commission should **not fund unsustainable projects**, such as those damaging Natura 2000 sites, thereby impeding EU legislation. The Commission and its DGs should make a strong statement to this effect and establish a fully operational system to scrutinise transport spending.

5.2 Planning and programming level: Give priority to non-structural measures that work with nature

Non-structural and “soft” infrastructure measures should be explored and given priority over structural river engineering measures to meet the needs of inland navigation.

Before plans or programmes are elaborated, an integrated river basin or “**catchment**” **approach** should be applied to identify areas where substantial hydromorphological alterations are not permitted. No permission should be given to new dams on the main stem of the river especially on the free flowing stretches. Existing dams and infrastructure must be updated/operated to improve transport of sediment and improve hydromorphological conditions along the river course and restore connectivity. Dams disrupting fish migration must be equipped with functional fish by-passes to ensure a natural life-cycle. In large rivers two fish-passes are necessary since most fish migrate along the river banks. Cumulative impacts should be assessed, including climate change and invasive species impacts.

For the Danube and its navigable tributaries as a whole, and possibly for each stretch currently marked as “bottleneck”, a **hierarchy of measures** should be established, this could be e.g. first, survey the real and expected amounts and types of goods to be transported. Second, define the adequate role of the waterway within an overall transport-concept. Third, modernise ports and fleets. Fourth, improve water level forecasting (River Information Systems), modernisation of logistics and intermodal connections and so on. Hard river infrastructure measures (accompanied by ecological compensation measures) should be a measure of last resort and wherever possible be based on solutions that maintain dynamics and work with nature. Traditional engineering solutions need to be especially evaluated by the aims of these projects and their justification.

5.3 Planning and programming level: Apply solutions best adapted to the local environment

No new depth requirements to those above and beyond already existing depth recommendations, e.g. the 1988 recommendations of the Danube Commission¹³, should be implemented. Additionally, existing depth recommendations can only be used as project design criteria if they are based both on economical and ecological

assessments and proven to not have a negative impact on the ecosystem locally and across the whole river basin. Artificially created and maintained greater riverbed depth usually means more aggressive intervention in the ecosystem and less room for ecological improvement.

Existing depth recommendations have to be assessed in terms of economics and **local ecological needs and conditions**¹⁴. The cumulative impacts of implementing such depths on ecology have hardly been discussed until now. WFD objectives are likely to fail and significantly impact other river uses (e.g. groundwater and drinking water resources) if these depth levels are aimed at throughout the river.

Upgrading and further adapting the existing Danube fleet and gradually replacing them **by shallow draught ships** designed for the Danube system is a feasible solution and needs to be promoted.

5.4 Project implementation level: Securing monitoring and adaptive and integrated management

Recognising that some decisions will need to be made on uncertain data and taking into consideration the impact of a changing climate, flexibility of the decision making process and the principles of adaptive management should be incorporated in project design and implementation from initial stages.

Before project implementation, a detailed survey and assessment of the **ecological status and system functions** of the river should be undertaken; this survey and assessment must be carried out during and after the project.

The impact of the implementation of measures needs to be monitored step-by-step; data must be provided to justify adaptation, and adapting the project based on the most recent monitoring results must be possible.

5.5 Transparency and public involvement in decision making

Transparent dialogue with civil society organisations (CSOs) and local communities should follow recommendations of the integrated planning principles of the Joint Statement (interdisciplinary teams, active and transparent participation of all stakeholders since the onset of project planning etc).

Efficient **communication and sharing of information** between CSOs and authorities is essential, starting before a project or programme is implemented and maintained throughout the implementation and monitoring process.

5.6 Improve the policy and legal context and knowledge base

The transport sector is distorted by subsidies and the fact that external costs are not charged to the users. This affects all modes whether it be road, rail or waterway transport. Therefore **changing this policy framework** can have a significantly higher impact on shifting the modal-split towards less road transport than current plans of making navigation more competitive through new, harmful infrastructure.

A “**climate check**” of navigation projects should become mandatory, i.e. whether a planned navigation project will maintain the needed flexibility and resilience of the natural and socio-economic system to adjust to the effects of climate change.

The planned **Danube Strategy** of DG Regio and other similar initiatives need to be developed in the context of the ecological needs of the Danube and fully integrate ecological objectives. This could be in the form of a programme similar to PLATINA¹⁵ for Danube biodiversity, i.e. an integrated and comprehensive Danube biodiversity “handbook” and master plan specific for species, regions and countries that can be a complementary pillar to planning for the Danube corridor. What exists now is a list of protected areas, regional infrastructure projects and regional nature conservation projects. Even Natura 2000 sites do not have a transboundary strategy for habitat connection. Therefore, such a “handbook” with a perspective beyond the scope of single projects can help to better plan throughout the entire Danube basin.

The **Lower Danube Green Corridor Agreement**¹⁶ signed in 2005 by the four states of the sub-region and the **Sturgeon Action Plan**¹⁷ adopted by the Standing Committee of the Bern Convention in the frame of the Council of Europe need to be fully implemented.

Based on the **polluter pays principle**, user charging should internalise the full costs of inland navigation. New **regulations** are needed to improve shipping fuel quality, vessel fuel efficiency, safe ship engines (to prevent spills) and air pollutant emissions (e.g. similar to EURO standards and CO₂ standards for cars).

A better and more **coordinated knowledge base** to underpin decision making is needed, e.g. an eco-hydrological model for the entire Danube with funds earmarked for necessary data collection.

6 Call for action from the NGO community

The NGO community calls upon decision makers to ensure that:

1) at the international, EU and basin level

A **Master Plan for Sustainability of the Danube** basin is developed and agreed to improve spatial planning for conserving and improving the biodiversity, and keeping the Danube River as one of the most important “blue” and “green” axes for Europe. It should recognize the importance of ecosystem maintenance and restoration as the fundamental basis for economic development and human well-being. This would ideally be drafted under the auspices of the ICPDR and could be linked to existing initiatives (e.g. the European Danube Strategy). The NGO community should be invited to give advice on the Terms of Reference and guiding principles of such a document. The identification of specifically sensitive areas, such as existing protected areas and the identification of possible or necessary improvements for nature (e.g. measures to reconnect river sections as far as possible or even the removal of existing dams or barrages) needs to become an important part of it. Once this first step is taken, a sustainable transport plan fitting the umbrella of this Master Plan has to be developed as a follow-up to the TEN-T Programme.

More resources are allocated for a) this Master Plan and nested regional and sectoral plans, b) planning and implementing river restoration measures to reverse old-fashioned and inappropriate practices of river regulation works, and c) bottom-up and genuine public participation processes.

Robust SEAs based on the principles of the SEA Directive should be carried out for all Danube basin navigation plans and programmes, together with **strategic Appropriate Assessment** of impacts on Natura 2000 sites, making best use of the Rail Baltica¹⁸ example. The SEA Directive should be amended to ensure that it applies to all Member State and multi-Member State level navigation (and other sectoral and land use) plans which may affect the Danube.

Recommendations of the Danube Commission are revised in order to enable solutions best adapted to the local environment and are not used as project goals because the Danube Commission is biased towards the navigation sector. Their recommendations should be discussed by all the relevant stakeholders. Along the same line, the **UNECE AGN¹⁹ is revised** (as well as the underlying UNECE waterway class system) and only serves as a guideline and not a project goal.

The **Joint Statement process** delivers on a new sustainability model that puts ecosystem health first.

The European Commission establishes and applies a fully operational system to **scrutinise spending** on inland navigation transport measures and rejects projects that are likely to damage Natura 2000 sites or work against WFD objectives.

2) the national level of Danube countries and Sava countries

More **resources** are allocated for fostering bottom-up and genuine **public participation** processes.

The **SEA and Habitats Directives are applied properly** to national navigation plans and programmes ensuring that high quality SEAs and strategic Appropriate Assessments are undertaken for national sections of the corridor, as well as robust EIAs and project level Appropriate Assessments for individual projects.

EU and national water legislation is properly implemented and is at the centre of the efforts to tackle challenges and threats from transport, climate change and invasive species.

Agreed by:



Birdlife International (<http://www.birdlife.org/>)



Bund Naturschutz Bayern (<http://www.bund-naturschutz.de/>)



Croatian Society for Bird and Nature Protection



Danube Environmental Forum (<http://www.def.org/>)



European Anglers Alliance (<http://www.eaa-europe.org/>)



European Environmental Bureau (<http://www.eeb.org/>)



Green Action (<http://www.zelena-akcija.hr/>)



Grünes Herz Europas (<http://www.gruenesherz.de>)



International Association for Danube Research (<http://www.iad.gs/>)



Österreichisches Kuratorium für Fischerei und Gewässerschutz

(www.oekf.at)



Ribiska Zveza Slovenije (<http://www.ribiska-zveza.si/rzs/>)



Transport & Environment (<http://www.transportenvironment.org/>)



VDSF Verband Deutscher Sport-Fischer (<http://www.vdsf.de/>)



Umweltbureau | WUK

VIRUS (<http://www.wuk.at/virus/>)



World Wide Fund for Nature (<http://www.panda.org/>)

Endnotes:

- ¹ “Ecological status and problems of the Danube and its fish fauna”, Prof. Fritz Schiemer.
- ² “Hydromorphology” is the physical characteristics of the riverine structures such as river bottom, river banks, the river’s connection with the adjacent landscapes and its longitudinal as well as habitat continuity. Anthropogenic structural measures can modify a river system’s natural background conditions and therefore influence its ecological status.
- ³ http://www.birdlife.org/eu/EU_policy/Ten_T/index.html
- ⁴ Read more in the fully-cited Literature Review on Inland Navigation and Air Emissions, http://assets.panda.org/downloads/wwf_iwt_emissions_lit_review.pdf
- ⁵ Read more on latest transport trends in the European Union in the EEA Report “Transport at a crossroads”- TERM 2008: indicators tracking transport and environment in the European Union: http://www.eea.europa.eu/publications/transport-at-a-crossroads/at_download/file
- ⁶ See Figures 27 and 28 for comparisons of low draught conditions on the Rhine and Danube from the publication “Inland Navigation in Europe: Market Observation” published in February 2009 by the Secretariat of the Central Commission for Navigation on the Rhine, http://www.ccr-zkr.org/Files/om/om081_en.pdf
- ⁷ Inland navigation has won a share of transport of solid fuels from rail in the steel and iron industry in Germany since 1996 – see “Inland Navigation in Europe: Market Observation” published in February 2009 by the Secretariat of the Central Commission for Navigation on the Rhine, http://www.ccr-zkr.org/Files/om/om081_en.pdf, page 33.
- ⁸ ÖIR 2006, „Verkehrsprognose Bericht“ in bmvit/via donau, „Flussbauliches Gesamtprojekt Donau östlich von Wien“- Umweltverträglichkeitserklärung“, Einlage U.1.3
- ⁹ http://www.statistik.bayern.de/pressemitteilungen/archiv/2008/LfStad/95_2008.php (see graph at bottom)
- ¹⁰ <http://www.wsv.de/service/karten/bundeseinheitlich/pdf/w172b.pdf>
- ¹¹ <http://www.transport-research.info/Upload/Documents/200310/eudet.pdf>
- ¹² This condition is not met in the case of the Lower Danube, which was designated as a heavily modified water body in the Draft Danube River Basin Management Plan of 2009 disrespecting the rules of the WFD and the ICPDR.
- ¹³ Empfehlungen über die Festlegung der Abmessungen der Fahrrinne und der Wasser- und sonstiger Bauwerke an der Donau, ersch. 1988 (<http://www.danubecom-intern.org>)
- ¹⁴ The amendment to the AGN treaty of 2006 asks for a statistically guaranteed draught even for a 300-day period instead of the 240 days generally used. In our point of view, this is not acceptable and puts upstream sections carrying less water at a disadvantage.
- ¹⁵ <http://naiades.info/platina/page.php?id=1>
- ¹⁶ Declaration on the Cooperation for the Creation of a Lower Danube Green Corridor, signed 5 June 2000, Bucharest, Romania (http://www.wwf.de/fileadmin/fm-wwf/pdf_neu/DanubeDeclaration2000.pdf)
- ¹⁷ Action Plan for the conservation of sturgeons (Acipenseridae) in the Danube River Basin (Nature and environment, No. 144) (2006)
- ¹⁸ See http://ec.europa.eu/regional_policy/sources/docgener/evaluation/railbaltica/concl_en.PDF and http://ec.europa.eu/regional_policy/sources/docgener/evaluation/railbaltica/annex.PDF
- ¹⁹ <http://www.unece.org/trans/conventn/agn.pdf>

Factsheets and project related information:

http://www.panda.org/what_we_do/where_we_work/black_sea_basin/danube_carpathian/our_solutions/freshwater/sustainable_navigation/

Annex 1: Map



WWF for a living planet™



- Areas of high ecological value
- priority sections for inland navigation (EU TEN-T funds)
- other navigation projects (supported e.g. by EU EAR, ISPA, Ukrainian government)