



**“NETWORK OF DANUBE WATERWAY ADMINISTRATIONS”**  
South-East European Transnational Cooperation Programme

**NATIONAL PLAN FOR IWW MAINTENANCE  
IN THE REPUBLIC OF SERBIA  
FOR THE PERIOD 2011-2020**

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## 1 LIST OF ABBREVIATIONS

AGN	European Agreement on Inland Waterways of International Importance
BoD	Board of directors
CCNR	Central Commission for Navigation on the Rhine
CRO	Croatia
DC	Danube Commission
DG REGIO	Directorate General for Regional Policy
DIS	Decentralized implementation system
EIA	Environmental Impact Assessment
EU	European Union
EUR	Euro
HENS	Hydroelectric and Navigation System
IPA	Instruments for pre-accession assistance
ISRBC	International Sava River Basin Commission
IWT	Inland waterway transportation
IWW	Inland Waterway
km	Kilometre
NEWADA	Network of Danube Waterway Administrations
OP ED	Operational Programme for Economic Development
ROM	Romania
SEE (Programme)	South East Europe Transnational Cooperation Programme
SRB	Serbia
WP	Work Package

## 2 SCOPE OF DOCUMENT

This paper is planning document for inland waterway maintenance activities on the Danube River in the Republic of Serbia. It covers the time span of 10 years, from 2011 to 2020, taking into consideration current bottlenecks on the Danube River, different solutions for their regulation, and maintenance dredging interventions. It covers technical, as well as financial aspects of this subject. The document is in line with the existing strategic documents, including the EU Strategy for the Danube Region (2010), General Master Plan for Transport in Serbia (2009), National Strategy for Transport Development (2007), and Master Plan for IWW Transport in Serbia (2006). Even though it is a national plan, it has its international aspect. This is related to coordinated approach for interventions needed on the common sections of the Danube River, as well as to internationally shaped evaluation bodies.

### 3 BACKGROUND INFORMATION

This part of the plan contains the basic information on the NEWADA project and its WP4, national IWW info, as well as the national and international legal framework related to IWW.

#### 3.1. NEWADA and WP4 info

The NEWADA (Network of Danube Waterway Administrations) project is co-financed under the South East Europe Transnational Cooperation Programme (SEE Programme) of the European Union. It is a three years project (2009-2012), which objective is to improve international cooperation (in the fields of hydrography, hydrology, waterway maintenance, as well as information and communication technologies on IWWs) between institutions which are dealing with inland navigation on the Danube River, as important international inland waterway. Institutions from eight countries are participating in this project: Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Bulgaria, and Ukraine (Figure 1). Directorate for Inland Waterways is one of twelve partners on this project, and its involvement is co-financed from EU IPA funds. It is the only institution from Serbia included in the project.

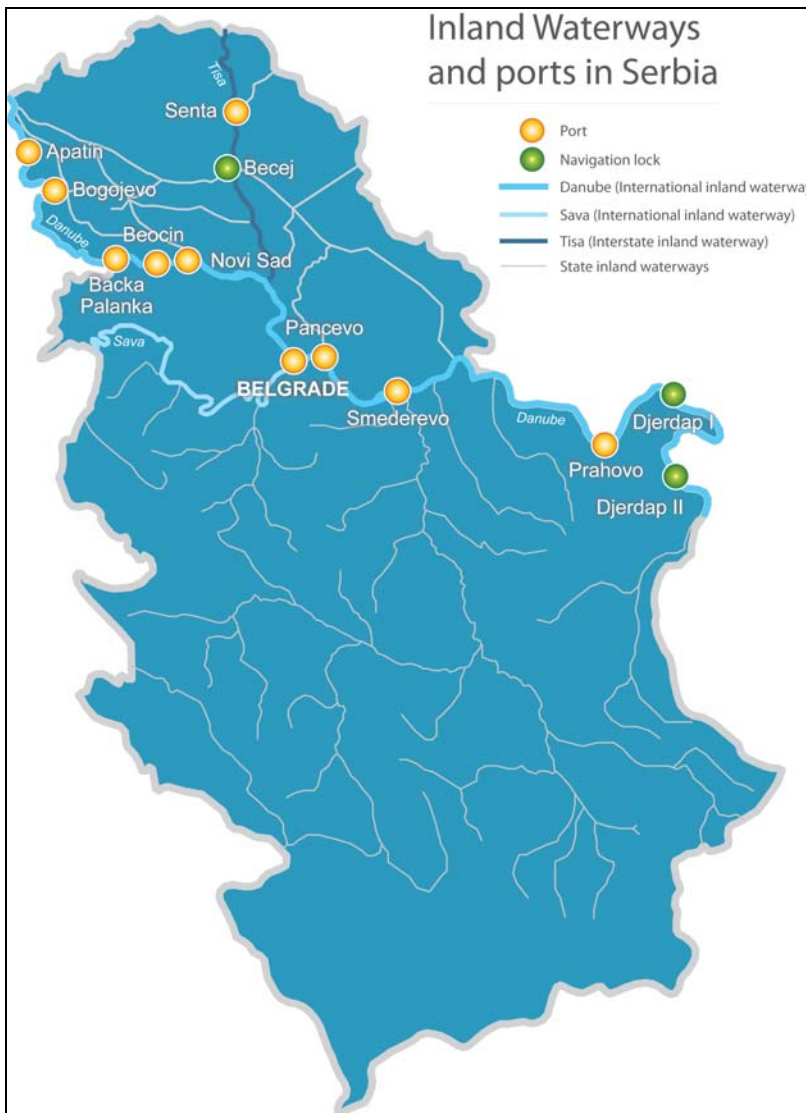


Figure 1: Countries participating in the NEWADA project

The project is based on work packages, six of them in total. The subject of the Work Package 4 is waterway maintenance, and the National plan for waterway maintenance is prepared under this work package.

### 3.2. National IWWs info

The Republic of Serbia has a dense IWW network (Figure 2). The most important inland waterway is the **Danube River**, a Pan-European Corridor VII. The length of the Danube River in Serbia is 588 km, out of which 137 is a joint section with Croatia, and 229 km is a joint section with Romania. There are 9 international ports on this stretch (Apatin, Bogojevo, Backa Palanka, Beocin, Novi Sad, Belgrade, Pancevo, Smederevo, and Prahovo), as well as two navigation locks (Iron Gate I and Iron Gate II).



**Figure 2: Inland Waterways in the Republic of Serbia**

The second important IWW in Serbia is the **Sava River**. The Serbian stretch of the Sava River is 211 km long. The Sava River is defined as the international inland waterway since 2004, when the International Sava River Basin Commission was founded. Members of this Commission are Slovenia, Croatia, Bosnia and Herzegovina, and Serbia.

The third important inland waterway in Serbia is the **Tisza River**, which connects Serbia and Hungary. The length of the Tisza River in Serbia is 164 km. The interstate regime of navigation is applied on this waterway.

Besides these rivers, there is a dense network of navigable **canals** in Serbia (the Danube-Tisza-Danube canal), as well as other national inland waterways. The Directorate for Inland Waterways is not responsible for the maintenance on these canals and national inland waterways, but only for the Danube, Sava, and Tisza rivers.

(Current status of infrastructure)

For the past twenty years, there had been no major public investments in the IWW infrastructure in the Republic of Serbia. This practice resulted in the number of bottlenecks which occurred on the Danube River, located between Bezdan and Preliv. Depending on hydrology conditions, these bottlenecks are jeopardising safe navigation. Regulation of these sections requires substantial financial resources, as well as expertise needed for preparation of proper designs. Half of them are located at the Serbian-Croatian joint section of the Danube River, so coordinated approach is required.

### 3.3. Legal framework

Legal framework for inland waterways is defined on three levels: international, bilateral and national. The overview of the relevant institutions and authorities in Serbia is presented at the end.

#### 3.3.1. *International legal framework*

International legal framework consists of strategic documents and multilateral agreements. The **EU Strategy for the Danube Region** was adopted by the European Commission on 08<sup>th</sup> of December 2010. This is the first EU strategy in which preparation countries outside of EU were included, Serbia among them. The strategy is based on three pillars: establishment of the system for safe navigation and development of transport infrastructure, environmental protection and sustainable use of natural resources, and economic development and strengthening of the regional cooperation and partnership in the Danube region. All activities contained in this plan must be in line with this strategy.

With a view to ensuring the development of internal water transport as an important factor of the European market and eliminate or mitigate the disadvantages and maximize the constraints on the development and operation of this form of transportation, on 19 January 1996 in Geneva The European Agreement on Main Inland Waterways of International Importance (**AGN** Agreement) has been made and accepted. AGN agreement sets out uniform technical and operational parameters that need to be provided on the European waterways and ports of international importance. To achieve the parameters of the fairway on the Danube in Serbia, according to the requirements of this agreement, in some sections is necessary to carry out large-scale hydro-technical works. The signing and ratification of this Agreement by the Republic of Serbia is one of State priorities, and the process was initiated in 2010.

The **Danube Commission** is an international organization with which the Republic of Serbia and former Yugoslavia mostly cooperated, both in the past and nowadays. It was established in 1948 by seven countries bordering the river. The official languages are German, French and Russian. Each country has one representative on the commission, between which a term of three years elected president, vice president and secretary. The aim of the organization is to free navigation on the Danube and the protection of the interests of riparian countries, as well as creating better and more uniform conditions of navigation in all navigable parts of the Danube by

- Supervising the implementation of the international convention that set it up in 1948.
- Unifying the regulations governing river, customs and sanitary inspection.
- Harmonizing regulations on inland navigation with the European Union and with the Central Commission for the Navigation on the Rhine.
- Collecting statistical data on aspects of navigation on the Danube within the commission's competence.
- Publishing reference works, sailing directions, nautical charts and atlases for purposes of navigation.

As the most influential step of the Danube Commission towards unification parameters of navigability on the Danube is considered the recommendations adopted to ensure the minimum dimensions of the fairway as a part of the waterway (Recommendations Relatives A L'Établissement Des Gabarits Du Chenal, Des Ouvrages Hydrotechniques Et Autres Sur Le Danube). As such, it is defined through its depth  $H$ , width  $B$  and radius of curvature  $R$ . Values and variations of these parameters directly reflect the conditions in the fairway. Their required values are determined criteria for the analysis of the waterway parameters.

### 3.3.2. Bilateral agreements

Serbia has two joint sections of the Danube River, one with Croatia and one with Romania (Figure 3). Serbia and Croatia have signed the bilateral Agreement on navigation on IWWs and their technical maintenance, on October 13<sup>th</sup>, 2009, in Belgrade. The Interstate SRB-CRO Commission for the implementation of the Bilateral Agreement was founded in 2010. Two countries share the section of the Pan-European Corridor VII (the Danube River) in the length of 137 km.



**Figure 3: Joint sections of the Danube River in the Republic of Serbia**

Agreement Between the Government of SFRY and the Government of Romania from 1976 on demarcation and control of application of the rules of navigation, maintenance and improvement of navigation conditions in the sector where Danube forms the border between the two countries is still in force. At this sector, from km 845.5 to km 1075, navigation is done in accordance with national regulations of contracting parties, while in a narrow band around the locks of Iron Gate I and Iron Gate II, navigation is carried out according to special rules agreed by the two countries as well. Although the navigation conditions are favorable and shippers have no great problem in this sector, the authorities contracting parties meet regularly for mutual exchange of data and technical information (river marking systems, hydrography, RIS, ETC, etc.).

### **3.3.3. National legal framework**

National legal framework consists of strategic documents, master plans, as well as laws. Important strategic document is the **Serbian Transport Development Strategy** for period 2008-2015, adopted in 2007. One of goals proclaimed in this document is the full integration of the transport network in Serbia into the trans-European transport network. Among other activities, a construction, rehabilitation and reconstruction of Pan-European Corridors is needed, including Corridor VII (the Danube River). A need for reducing the negative impact of transport to the environment is emphasized, as well.

**Master Plan for IWW Transport in Serbia** (2006) and **General Master Plan for Transport in Serbia** (2009) are important planning documents. It is clearly stated that significant investments in IWW are needed, especially on the Danube River. All critical sections on the Danube River in Serbia are defined in these documents.

There are several national laws relevant for this document. **Law on Navigation and Ports on Inland Waterways** (Official Gazette 73/10) was adopted in October 2010. This law, which is completely in line with EU legislation, regulates inland waterways and inland navigation issues.

### **3.3.4. Relevant institutions and authorities**

Several ministries are relevant for the implementation of this plan. **Ministry of Infrastructure** is responsible for strategy development and enforcement concerning transportation and traffic infrastructure, including IWW transportation. **Port Authorities – Kapetanije** – are regional offices of the Ministry of Infrastructure. Port Authorities perform administrative and other professional tasks in the field of inland waterway traffic ensuring the safety of navigation along the respective river sector within their responsibility. There are 9 Port Authority Offices along the Danube, located in Bezdan, Apatin, Novi Sad, Beograd, Pancevo, Smederevo, Veliko Gradiste, Kladovo and Prahovo. **Ministry of Agriculture, Forestry and Water Management** is responsible for strategy and policy development and enforcement concerning, among other things, protection of water resources.<sup>1</sup> **Ministry of Environment and Spatial Planning** is responsible for strategy and policy development and enforcement concerning, among other things, construction, protection of nature, protection of natural resources, approving EIAs, control and supervision, etc. **Directorate for Inland Waterways** is a special organization of the Government of the Republic of Serbia responsible for maintenance and development of the international and interstate inland waterways in Serbia (the Danube, Sava, and Tisza rivers). **HENS (Hydroelectric and Navigation System) Djerdap (Iron Gate)** is a public body responsible for two navigation locks on the Danube River (Iron Gate I and Iron Gate II).

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<sup>1</sup> Law on Ministries (2008), Official Gazette of the Republic of Serbia 65/08

According to the Law on navigation and ports on inland waterways (2010), several new institutions are to be established: Office for Navigation Safety, Lucka uprava???

#### 4 THE SUBJECT OF THE PLAN

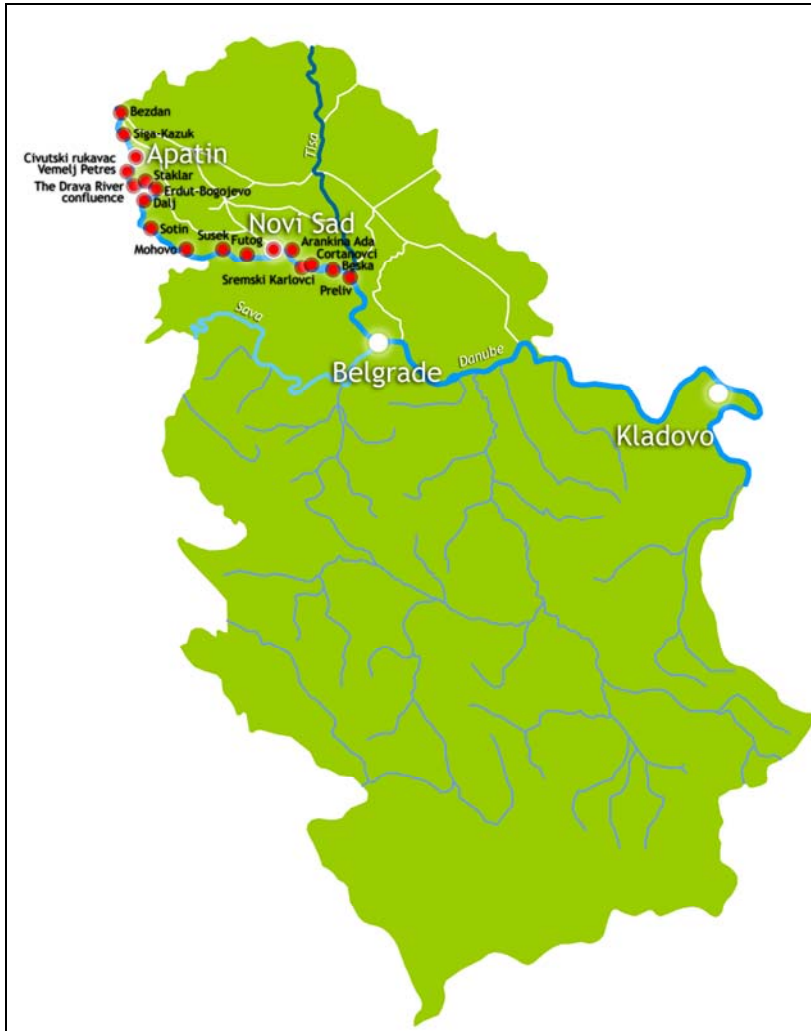
The subjects of this plan are inland waterway maintenance activities, mainly river training works. These activities include construction of new river training structures and maintenance and reconstruction of the existing structures, as well as dredging activities, in order to achieve certain dimensions of the fairway which are needed to ensure safe navigation.

Most of the river training structures on the Danube River in Serbia had been built between 1970 and 1990. In the last 20 years, only few new structures were built. The reason is lack of finances. Annual budget of the Directorate for Inland Waterways is EUR 2 Million, and is insufficient to perform these activities (Table 1).

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
€ Mill	1.5	3.4	2.4	1.9	1.8	1.7	1.7	2.4	2.4	2.0	2.1

**Table 1: Annual budget of the Directorate for Inland Waterways in the last decade**

Twenty years without proper investment in inland waterways created a number of critical sectors, a stretches along the Danube River which do not fulfil required dimensions of the fairway, jeopardizing safety of navigation. These critical sections has been analyzed and specified in the Master Plan for IWW Transport in Serbia (2006), and confirmed in the General Master Plan for Transport in Serbia (2009). In total, there are 18 critical sections on the Danube River in Serbia (Figure 5).



**Figure 5: Critical sections on the Danube River in Serbia**

Half of these critical sections are located at the joint section of the Danube River with Croatia. In order to eliminate these bottlenecks, a coordinated approach regarding planning and execution of works is necessary. The other half are located on the Serbian stretch of the Danube River, between Futog and Preliv.

Annual budget of Directorate for Inland Waterways in the last decade was insufficient for performing regular maintenance dredging activities. Planned budget for the next decade, which would make these activities possible, is presented in the Table 2.

Year	2011	2012	2013	2014	2015-2020	2021-2030
€ Mill	1.8	2.4	2.6	1.7	17.0	36.0

**Table 2: Planned budget of the Directorate for Inland Waterways for the next decade**

## 5 OBJECTIVE AND GOALS

Objectives and goals are arranged according to proposed timeframe in three groups: long term, mid term and short term.

**Long term overall objective** is contribution to improvement of the navigation conditions on the Danube River in Serbia. This will be achieved by elimination of the critical sections and navigation bottlenecks on the Danube River, and reaching the fairway parameters according to DC Recommendations and/or AGN. This is quite a big task, having in mind the number and the complexity of the critical sections on the Danube River, on one hand, and the lack of finances, on the other. It is not realistic for all critical sections to be eliminated until 2020. However, it is realistic to (at least) cut the number of critical sections by half, from 18 to 9.

**Mid term objectives** (until the end of 2016) are:

1. To perform river training works and to eliminate at least 5 critical sections on the Danube River in Serbia. This project is part of the Draft Operational Programme for Economic Development (IPA component III), and should be implemented in 2014-2016 period.<sup>2</sup>
2. To establish a procedure and to acquire resources for performing regular annual maintenance dredging interventions on the Danube River. These activities must be in line with the Serbian and EU legislation regarding environmental protection.

**Short term objectives** (until the end of 2012) are:

1. To prepare the necessary project documentation for the river training works on the critical sections on the Danube River in Serbia. This project will be financed by the European Union under the IPA 2010 programme for Serbia.
2. Ratification of AGN by the Serbian Government (Parliament).<sup>3</sup>

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<sup>2</sup> The precondition to implement the OP is that Serbia acquire the status of the EU candidate country, as well as to establish the Decentralized Implementation System (DIS) for the management of EU funds.

<sup>3</sup> Directorate for Inland Waterways prepared the translation of this document in Serbian language in 2008, and is lobbying for it to be ratified since

## 6 ACTIVITIES

Activities proposed in this document are divided in four sections: preparation of project documentations execution of major river training works projects, maintenance dredging interventions in the fairway, as well as international knowledge and experience exchange among the Danube waterway administrations.

### 6.1. Preparation of project documentation

At this moment, project documentation for river training works on the critical sections on the Danube River in Serbia does not exist. Under the EU IPA 2010 Programme (Financial agreement between EU and Serbia for this programme was signed in May 2010), a project “Preparation of design and tender documentation for river training works on the critical sections on the Danube River in Serbia” was approved. Kick-off is foreseen for the April 2011, and duration will be 20 months. Under this project, prefeasibility and feasibility studies for the whole stretch of the Danube River in Serbia between Bezdán and Belgrade will be prepared (According to Serbian legislation, as well as according to DG REGIO requirements). This is a stretch of the Danube River in Serbia where all of the 18 critical sections are located. The main designs will be prepared for the five selected critical sections, as a part of the same IPA 2010 project.

The main designs for the rest of critical sections will be prepared step by step, in the following period, depending on the availability of financial resources for performing river training works based on those designs. Rest of the main designs are foreseen to be financed under the Operational Programmes for Economic Development 2012-2013 and 2014-2020 (IPA component III). The precondition for using these funds is achieving the status of the candidate country for EU membership, as well as to receive the EU accreditation for the decentralized implementation system for the management of EU funds (DIS). It is expected for both of these preconditions to be achieved until the end of 2012.

### 6.2. Execution of major river training work projects

Critical sections on the Danube River in Serbia are specified in strategic documents: Master Plan for IWW Transport in Serbia (2006) and General Master Plan for Transport in Serbia (2009). The list of the critical sections is shown in Table 3.

	Location	Chainage (km)	Description of encountered bottleneck	Description of works	Capital investment (EUR) <sup>4</sup>	Annual maintenance (EUR)
1	Bezdan	1428-1425.2	Narrow fairway	Dredging	224,441	31,950
2	Siga Kazuk	1417.9-1414.7	Narrow fairway	Dredging and groynes	3,688,234	42,323
3	Apatin	1405.6-1401.7	Narrow fairway	Dredging, groynes, protection	10,432,455	40,695
4	Civutski Rukavac	1396.8-1392.1	Narrow fairway	Dredging	413,149	48,150
5	Vemelj Petres	1391-1389.6	Radius of curve enlarged	Excavation of bank	2,998,050	182,250
6	Staklar	1375-1372.3	Radius of curve enlarged	Dredging, excavation, bank protection works	8,876,315	103,290
7	Erdut - Bogojevo	1365.8-1363.5	Narrow fairway	Dredging, closure bund	1,245,266	66,608
8	Dalj	1355-1354.1	Radius of curve enlarged	Dredging	328,774	44,100
9	Sotin	1323.3-1320.7	Narrow fairway	Dredging and groynes	5,067,590	22,845
10	Mohovo	1309.9-1309.1	Narrow fairway (rocky section)	Removing of rocky materials	537,625	-
11	Susek	1285.5-1284.1	Narrow fairway	Dredging and groynes	1,682,766	8,246
12	Futog	1264.3-1262	Narrow fairway	Bank protection works and closure bund	4,883,533	28,954
13	Novi Sad	1253.3-1252.9	Radius of curve enlarged	Removal of existing bank protection and bank protection works	266,915	825
14	Arankina Ada	1248-1246	Narrow fairway	Dredging	844,388	76,500
15	Sremski Karlovci	1245-1240	Dynamic stretch, not a bottleneck for navigation at this moment, but this might be in the near future	Dredging	56,925	22,500
16	Cortanovci	1236.5-1236.2	Narrow fairway	Dredging	31,499	12,150
17	Beska	1229.7-1227.9	Narrow fairway	Dredging	257,807	16,200
18	Preliv	1199-1197.7	Narrow fairway	Dredging	201,451	24,750

Source: Master Plan for IWW Transport in Serbia, 2006, Rehabilitation and Improvement of the Serbian IWW Network, Volume 1 – Main Report, p. 5-13, 6-8

**Table 3: Critical sections on the Danube River in Serbia**

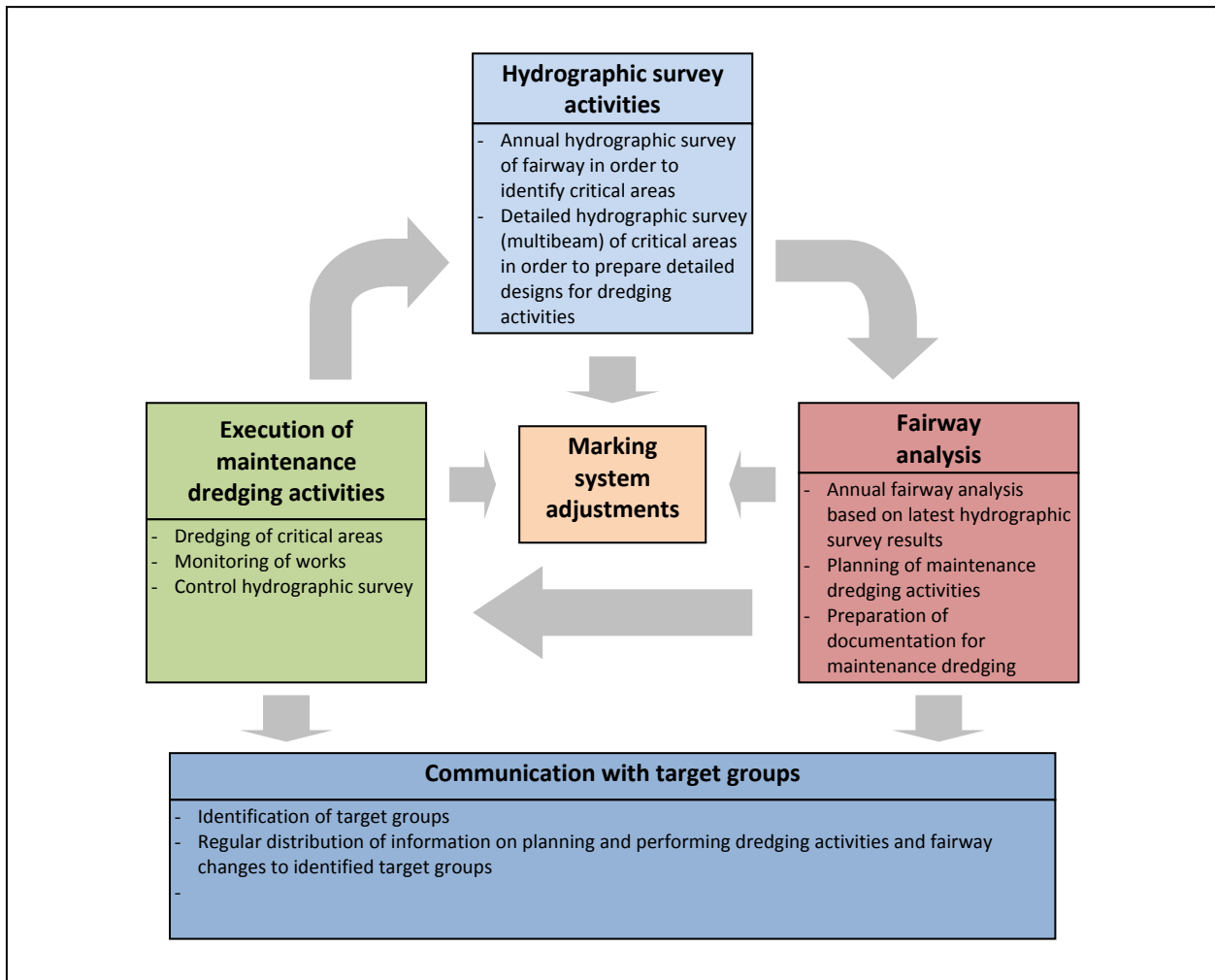
This list has been specified in 2005, during preparation of the Master Plan for IWW Transport in Serbia. Having in mind dynamics of the river bed that could create substantial differences over the period of five years, a new analysis is desirable. In line with this, a prefeasibility and feasibility studies for the stretch of the Danube River in Serbia between Bezdan and Belgrade will be performed under the IPA 2010 project “Preparation of design and tender documentation for river training works on the critical sections on the Danube River in Serbia”. Fresh

<sup>4</sup> Capital investment includes construction costs, contingencies and project management costs

hydrographic survey data from 2011 will be used for these analyses. Feasibility study should be finalized until mid of 2012, after which the list of critical sections together with proposed solutions will be updated.

### 6.3. Maintenance dredging

Maintenance dredging activities are different in comparison to major river training works. These differences are related to time span, frequency of interventions, scale of works, financial requirements, and cost-benefit ratio. Some bottlenecks require constant annual interventions of smaller scale. The need for these interventions occurs much often then for the major river training works. At the end, these interventions require less financial resources.



**Figure 6: Annual fairway maintenance cycle**

Maintenance dredging and major river training works are compatible activities, as they usually do not exclude one another. The need for maintenance dredging activities usually appears in regular time intervals, forming the cycle called fairway maintenance cycle. The usual duration of this cycle is one year, so it can be addressed as the annual fairway maintenance cycle (Figure 6). However, the duration of this cycle can be shorter than one year, depending on the complexity of certain section of the river and the density of bottlenecks.

#### **6.4. IWWs maintenance knowledge exchange**

Inland waterway maintenance activities are very complex. Type of solution proposed for regulation depends on the type of bottleneck. Different countries and different experts tend to propose and to perform different river training works. Knowledge exchange is very important in this field, having in mind that the financial value of this works can be substantial.

Regular knowledge sharing could be ensured by organizing the annual IWW maintenance expert meetings. On such meetings, river training works experts would present the latest solutions and projects implemented in their countries. This kind of knowledge and experience exchange would guarantee the selection of best solutions for specific bottlenecks and critical sections. In addition, selection of financially not feasible or technically not appropriate solutions would be avoided. This practice would contribute to improved effectiveness of public investments in IWW infrastructure in the whole Danube region.

IWW maintenance expert meetings will be organized once a year or once in two years. The exact dynamics of meetings will depend on intensity of river training works performing on the Danube River. Specific issues that will be addressed on these meetings will be:

- Categorization of bottlenecks
- Potential solutions for regulation
- Positive and negative aspects of different solutions
- Common approach in treating bottlenecks on the joint sections
- Possible fields for joint research activities.

Experts from the Directorate for Inland Waterways will continue to attend the expert meetings within the international institutions and organizations, namely the Danube Commission (DC), International Commission for the Sava River Basin (ISRBC), CCNR.

## 7 IMPLEMENTATION TIMELINE

This plan contains the specification of activities which are foreseen to be performed in the next 10 years. Implementation of these activities requires both time and financial resources. The following table contains timeframe information regarding finances (budgeting periods), implementation of foreseen projects, regular annual maintenance activities, as well as IWW maintenance expert meetings (Table 4).

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>BUDGETING TIMELINE</b>										
EU Budget period up to 2013										
EU Budget period 2014-2020										
Achieving status of EU candidate for Serbia										
IPA III (OP for ED 2012-2013) - eligible period										
IPA III (OP for ED 2014-2020) - eligible period										
<b>IMPLEMENTATION OF PROJECTS</b>										
Preparation of project documentation for firstly selected five critical sections (IPA 2010 project)										
Submission and approval of application form for major projects (IPA III) and tender procedure										
Execution of river training works at firstly selected five critical sections (IPA III – OP ED 2014-2020)										
Preparation of project documentation for additional five critical sections (IPA III – OP ED 2014-2020)										
Submission and approval of application form for major projects (IPA III) and tender procedure										
Execution of river training works at additional five critical sections (IPA III – OP ED 2014-2020)										
<b>ANNUAL MAINTENANCE ACTIVITIES</b>										
Maintenance dredging activities										
<b>INTERNATIONAL KNOWLEDGE EXCHANGE</b>										
IWW maintenance expert meetings										

**Table 4: Implementation timeline**

This timeframe is susceptible to adjustments, depending on the efficiency of the execution of proposed activities. In particular, very important risk is related to the availability of EU IPA III component funds, which is connected to acquiring EU candidacy status, as well as receiving accreditation for DIS.

Regular revision of the document is foreseen to be performed every two years. The proposal for the revision is to be prepared by the implementing body, and to be authorised by the monitoring bodies.

## 8 MEASURES AND INDICATORS

Measures and indicators are defined at the level of objective, goals, as well as activities elaborated in this document. These measures and indicators are presented in Table 5.

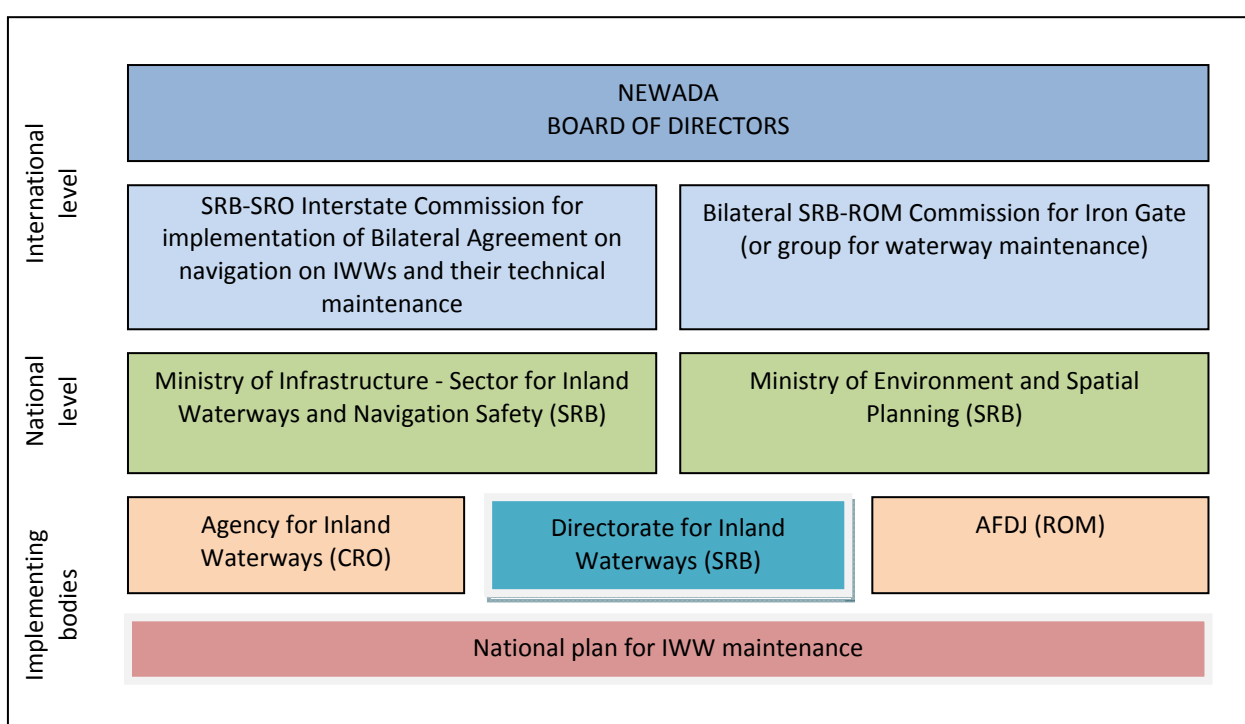
	Measure	Timeframe	Indicator	Number
Long term objective	Elimination of the critical sections and navigation bottlenecks on the Danube River in Serbia	2020	Number of critical sections and bottlenecks on the Danube River in Serbia which are eliminated	10
Goal 2	Necessary project documentation for the river training works on the critical sections of the Danube River in Serbia	2011-2012	Number of critical sections and bottlenecks on the Danube River in Serbia for which project documentation is prepared	5
Goal 2	River training works on the critical sections of the Danube River in Serbia performed at five critical sections	2013-2016	Number of critical sections and bottlenecks on the Danube River in Serbia which are eliminated	5
Goal 3	Established procedure and funding plan to perform regular maintenance dredging on the Danube River	2013	Number of planning documents prepared	2
Activity3	Dredging activities performed, according to plan	2013-2020	Number of dredging interventions performed  (km <sup>2</sup> of the dredged material)	2
	Ratification of AGN by the Serbian Government	2012	Number of multilateral agreements ratified by the Serbian Government	1
Activity 4	Organization or attendance to IWW maintenance expert meetings on international and bilateral level	2012-2020	Number of IWW maintenance expert meetings organized or attended per year	1 (4)

**Table 5: Measures and indicators**

## 9 MONITORING AND EVALUATION

Monitoring and evaluation are very important management tools. Their purpose is to follow the progress of the implementation of this plan.

Monitoring of the implementation of this plan would be performed at two levels. The first level would be the national, and the second level would be an international. Proposed monitoring bodies are shown on Figure 7.



**Figure 7: Monitoring bodies**

Monitoring at the **national level** would be performed by the Ministry of Infrastructure - Sector for Inland Waterways and Navigation Safety and the Ministry of Environment and Spatial Planning. Ministry of Infrastructure is responsible for strategic issues and policy regarding inland navigation. Ministry of Environment and Spatial Planning is responsible for environmental protection. Actions proposed in this plan include river training works on the Danube River. Execution of these projects will depend on the results on performed EIAs (Environmental Impact Assessments), which are being authorized and approved by the Ministry of Environment and Spatial Planning. That is why it would be an advantage to include this Ministry in the monitoring process from the start. A report regarding implementation of the plan, prepared by the implementing body (Directorate for Inland Waterways), should be sent to ministries at least once, and preferably twice a year, depending on the number of activities performed in the reporting period.

Monitoring at the **international level** would be performed by the relevant bilateral expert groups (for the joint sections of the Danube River), and by the Board of Directors of the NEWADA project. Most of the critical sections on the Danube River in Serbia are located at the joint section with Croatia. Actions proposed in order to eliminate these bottlenecks need to be executed in tight coordination between Serbian and Croatian side. The Interstate SRB-CRO commission for the implementation of the Bilateral Agreement on navigation on IWWs and their technical maintenance was founded in 2010. Within this Commission, an Expert Group for technical maintenance and monitoring of IWWs will be established, comprising experts from both Serbia and Croatia. It is expected that meetings of this expert group, as well as the Commission it self, will occur twice a year.

There are no critical sectors on the joint section of the Danube River between Serbia and Romania. However, in order to preserve the symmetrical structure of the document, we are proposing the same monitoring body as in the case of the joint section between Serbia and Croatia.

The final level of the international monitoring would be the Board of Directors (BoD) of the NEWADA project. It is planned that this body will continue to exist after the project NEWADA itself, in order to perform follow-up activities. It is foreseen that meetings of this body will take place every six months, which is a perfect timeframe for the monitoring process.

Evaluation templates should be prepared by the implementing body (Directorate for Inland Waterways) and presented to the monitoring and evaluation bodies. These templates can be upgraded during the period of implementation of the plan.

## **10 OTHER ISSUES/ASPECTS**

N/A

## **11 APPENDIX**

N/A

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