

# PROJECT DOCUMENT

PROJECT TITLE:

**MAKING SPACE FOR WATER IN THE BODROG RIVER BASIN  
(SK-UA-HU)**

**30 January 2009**

Name of applicant:

**GLOBAL WATER PARTNERSHIP SLOVAKIA**



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## **ACRONYMS**

DRPC	Danube River Protection Convention
EA	Executing Agency
EKOVIKIZIG	North-Hungarian Environmental and Water Directorate
EU	European Union
GEF	Global Environmental Facility
GEF IAs	Implementing Agencies
GWP	Global Water Partnership
IA	Implementing Agency
HU	Hungary
ICPDR	International Committee on Protection of Danube River
IEM	Integrated Ecosystem Management
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoU	Memorandum of Understanding
MSP	Medium-Size Project
NGOs	Non Governmental Organisations
PM	Project Manager
PSC	Project Steering Committee
RBEC-CST	UNDP Regional Bureau for European Countries - Country Support
SAPARD	Special Accession Programme for Agriculture and Rural Development
SBAA	Standard Basic Agreement
SK	Slovakia
SNC	State Nature Conservancy
SVP	Slovak Water Management Enterprise
UA	Ukraine
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNDP	United Nations Development Programme
USD	United States Dollar
VITUKI	Environmental Protection and Water Management Research Institute
WFD	Water Framework Directive

## **EXECUTIVE SUMMARY**

### **1 Applicant and project partners**

The project is proposed by **Global Water Partnership Slovensko - GWP Slovensko**.

There are following project partners in:

#### **Slovakia:**

*The Slovak Water Management Enterprise (SVP)* - Involvement in the preparation of the strategy, cooperation in implementation of restoration activities

*Slovak Hydrometeorological Institute (SHMU)*- Provision of data for drafting the Strategy.

*Municipalities in the Bodrog River Basin* - Beneficiaries of the project activities and participants/active involvement when the strategy will be prepared

*Daphne* - Proposals for measures of integrated landscape management, discussions with local stakeholders, especially farmers.

#### **Hungary:**

*North-Hungarian Environmental and Water Directorate (EKOVIZIG)* - Involvement in the preparation of the strategy, cooperation in implementation of restoration activities

*Environmental Protection and Water Management Research Institute (VITUKI)*- Coordination of the Hungarian project activities and Provision of data for drafting the Strategy.

*GWP Hungary* - Activities related to public participation and dissemination of information.

#### **Ukraine:**

*Hydrometeorological Centre* - Provision of data for drafting the Strategy and monitoring of restoration activities

*Village council of Baranintsi* - organisation of meetings with local stakeholders

*City council of Uzhgorod* – organisation of meetings with local stakeholders

*Zakarpattia Oblast Organization of All-Ukrainian Ecological League* - Activities related to negotiations with local communes, public involvement and dissemination of information.

*Uzhgorod city branch of All-Ukrainian Ecological League* - Activities related to negotiations with local communes, public involvement and dissemination of information.

*EcoCentre “Tisa”* - Activities related to public involvement and dissemination of information.

*Transcarpathian Administration of Melioration and Water Management (Vodhoz)* - Involvement in the preparation of the strategy, cooperation in implementation of restoration activities

### **2. Problem definition and strategy**

The Bodrog River Sub Basin, which creates part of Tisza catchment area, is frequently affected in past decade by major flood events in all countries, which are sharing this territory (Slovakia, Hungary and Ukraine). Therefore each country (SK-HU-UA) within the Tisza catchment has developed its own mitigation strategy and plan focused on flood management and flood prevention. However, there is missing harmonization of national strategies within Bodrog River Basin and common

understanding of proposed measures and activities on the cross-border scale and unsatisfactory involvement of local stakeholders (municipalities as well as NGOs).

The flood mitigation and flood protection approaches based on restoration of floodplain habitats could result in lower investment costs in some cases and win-win situations with objectives set by implementation of Water Framework Directive. This approach must be however tested. Therefore, the project intends to implement the pilot investments in order to showcase the reduced financial requirements of flood protection in Bodrog catchment.

### **3. Project objectives and outputs**

The main project objective is to mitigate consequences of floods through achieving consistent and holistic management of flood risk in Bodrog river basin countries (SK-HU-UA) by creating partnerships between national and local levels through the development of corporate “Strategy for mitigation of floods for Bodrog River Basin countries” and implementation of practical and sustainable solutions for flood prevention.

Project activities should consider where possible the maintenance and/or restoration of floodplains by creating “space” for water during flood events, as well as measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity. The involvement of municipalities, river basin organizations, NGOs, farmers, spatial and urban planning authorities is crucial. Therefore project activities will focus on establishment of the close cooperation with these stakeholders.

Project will build on three pillars of joint cooperation among the participating countries that facilitate partnerships. Those will be cooperation on the joint “Strategy” based on common understanding, presentations and meetings with local stakeholders and dissemination of project outcomes, i.e. preparation of joint booklet.

The main outputs are:

- 1. Formulation of the “Strategy for mitigation of floods for Bodrog River Basin countries”.**
- 2. Improvement of conditions of original floodplains and wetlands affected by current land uses and environmentally inappropriate flood protection measures**
- 3. Dissemination of project results to achieve replication on national levels and to other basins.**

### Simplified workplan and budget

Outputs and activities	WORKPLAN						BUDGET (USD)
	1-3	4-6	7-9	10-12	13-15	16-18	
<b>Output 1 Preparation of the strategy</b>							
Activity 1.1 Preparatory meeting with local stakeholders and national authorities to find common approaches in flood protection	x	x					5000
Activity 1.2 Brief review and comparison of national plans and strategies in flood protection	x	x					10000
Activity 1.3 Formulation of the “Strategy”		x	x				10000
Activity 1.4 Joint conferences to present and discuss the strategy with local stakeholders and national authorities			x	x			8500
<b>Subtotal 1</b>							<b>33500</b>
<b>Output 2 Improvement of conditions of the original floodplains</b>							
Activity 2.1 Final selection of pilot demonstration site in Ukraine during Inception phase	x						500
Activity 2.2 Technical preparation of interventions and agreements on new management approaches	x	x	x				0
Activity 2.3 Discussions with local stakeholders and Local Management boards established		x	x				7000
Activity 2.4 Implementation of interventions*			x	x	x		51500
Activity 2.5 Official "opening" of interventions						x	500
<b>Subtotal 2</b>							<b>595000</b>
<b>Output 3 Dissemination of project results</b>							
Activity 3.1 Meeting to inform local stakeholders on the project activities	x	x	x	x			3000
Activity 3.2 Writing articles into the national newspapers	x	x	x	x	x	x	3000
Activity 3.3 Preparation of a joint booklet and its presentation to the stakeholders				x	x		9500
Activity 3.4 Meetings with state authorities	x	x	x	x	x	x	3000
<b>Subtotal 4</b>							<b>18500</b>
<b>Project management, monitoring and reporting</b>							
Inception Period	X						
Establishment of project team	X						
Project management and coordination	X	X	X	X	X	X	10000
Project supervision	X		X			X	
Reporting**	X	X	X	X	X	X	4000
External implementation review			X			X	
Financial Audit						X	1500
Miscellaneous							1000
<b>Subtotal PM</b>							<b>16500</b>
<b>TOTAL</b>							<b>128000</b>

Expenditure accounts		Amount (USD)
Project Staff	Project staff and experts (external or those of partners) contracted on project substance	26500
Travel & workshops	Local, international travel tickets, fuel, DSA, meeting rooms etc.	10000
Service contracts	Contracts with companies on different types of services (contracts with partners)	78500
Materials / equipment	Purchase of equipment required to undertake demonstration project	
Communication	Mobile and land telephone charges, postage and courier	500
Office supplies	Paper, cartridge	500
Hospitality	Refreshment to participants on the meetings, workshops (if DSA not charged)	5500
Audit costs	Financial audit costs	1500
Printing costs	Printing, copying, translation	5000
<b>TOTAL</b>		<b>128000</b>

\* Covers real investments on demonstration sites in Slovakia and Hungary. This will be cofinanced by SVP and EKOVIKIZIG to ensure full technical realization.

\*\* Includes Participation on the regular meetings of ICPDR (Tisza group and stakeholder meetings)

#### Distribution between the countries

	Length in months	1 <sup>st</sup> six months	2 <sup>nd</sup> six months	3 <sup>rd</sup> six months	SK	HU	UA	Totals
Preparation of the strategy	12 months	x	x		12 500	17 000	4000	<b>33500</b>
Restoration of the original floodplains	12 months	x	x	x	27 500	29 500	2500	<b>59 500</b>
Dissemination of project results	12 months	x	x	x	6 500	8 500	3 500	<b>18 500</b>
Project management				x	16 500			<b>16 500</b>
				<b>Totals</b>	<b>63 000</b>	<b>55 000</b>	<b>10 000</b>	<b>128 000</b>

Input based budget description

<b>Output 1:</b>	<b>SK</b>	<b>HU</b>	<b>UA</b>	<b>Totals</b>
expert work for revision and strategy formulation	9000	10000	1000	20000
Fees to develop supporting documents for the meetings	1000	3000	1000	5000
Expert fee to facilitate meeting with local stakeholders	500	1000	500	2000
Fees for translation	500	1000	500	2000
Travel costs	500	1000	500	2000
Costs for organising the meetings with local stakeholders and cross-border meetings (at least 3 meetings in each country)	1000	1000	500	2500
<b>Subtotal</b>	<b>12500</b>	<b>17000</b>	<b>4000</b>	<b>33500</b>
<b>Output 2</b>				
Investment costs	25000	27000		52000
Expert fee to facilitate meeting with local stakeholders	1000	1000	1000	3000
supporting documents	500	500	500	1500
travel costs	500	500	500	1500
organising the meetings	500	500	500	1500
<b>Subtotal</b>	<b>27500</b>	<b>29500</b>	<b>2500</b>	<b>59500</b>
<b>Output 3</b>				
development of supporting documents for the meetings and articles	2000	3000	500	5500
Writing texts of the booklet	1500	2000	500	4000
Printing costs of the booklet	500	500	500	1500
Translation	500	500	500	1500
Expert fee to facilitate meeting with local stakeholders	500	1000	500	2000
Organisation of the meetings	500	500	500	1500
Travel costs	1000	1000	500	2500
<b>Subtotal</b>	<b>6500</b>	<b>8500</b>	<b>3500</b>	<b>18500</b>
<b>Management</b>				
Project manager	10000			
Financial audit	1500			
Miscellaneous	1000			
Meetings of ICPDR (this is for all partners)	4000			
<b>Subtotal</b>	<b>16500</b>			<b>16500</b>
<b>Total</b>	<b>63000</b>	<b>55000</b>	<b>10000</b>	<b>128000</b>

## 6 Simplified co-financing plan

Source*	Amount in USD	Type **	Purpose***
UNDP/GEF project Laborec-Uh	17 000 USD	Cash	technical solutions for restoration activities – output 2
Municipalities in Slovakia	2 000 USD	In-kind	Organisation of stakeholder meetings – outputs 1,2, 3;
Global Water Partnership Slovakia (GWP)	3 000 USD	In-kind	information dissemination – output 3
Slovak Hydrometeorological institute (SHMU)	25 000 USD	In-kind	Provision of data and monitoring of measures implemented. Elaboration of information materials distributed among key stakeholders to promote idea of effective flood management – output 1 and 3
VITUKI	6 000 USD	In kind	Provision of data and monitoring of measures implemented. Elaboration of information materials distributed among key stakeholders to promote idea of effective flood management – output 1 and 3
SVP	10 000 USD	cash	Construction works; equipment - output 2
EKOVIKIZIG	10 000 USD	cash	Construction works; equipment - output 2
City council of Uzhgorod	500 USD	In kind	Organisation of stakeholder meetings – outputs 1,2, 3
<b>Total estimated co-financing</b>	<b>73 500 USD</b>		

\* project partners or stakeholders

\*\* cash or in-kind (if both types come from one source, please indicate separately)

\*\*\* please also indicate relevant project outcome

## 7 Sustainability

By development of the “Strategy for mitigation of floods for Bodrog River Basin countries”, a framework for effective creation of new temporary “space” for water during flood events will be set up for each country. In addition, the “Committees for transboundary waters” will be the main force to arrange the flood prevention in Bodrog River Basin. Enhancement of their proper functioning on the national level by creating partnership with municipalities and local stakeholders will ensure the implementation and maintenance of the flood prevention measures, including creation of new temporary “space” for water during flood events. Pilot demonstration activities will serve as examples for the implementation of new approaches in other river basins. The flood control together with the natural conservation and floodplain reactivation could be effective only on the basis of a joint, harmonized ecological and land use methodology for the soil-water regime, available for planning sustainable land use strategy in the Slovak-Hungarian trans-border region (EGU, 2008).

The pilot project activities will focus on small scale restoration measures - simple technical solution which will be based on existing water management constructions. Proposed intervention will utilize affordable conditions which should not require big investments and following complicated maintenance of water construction. Therefore

there are no preconditions for further financial demands. Demonstration projects proposed will be in line with WFD objectives, influencing water balance at local and regional scale.

## **8 Replication strategy**

By adoption of the “Strategy for mitigation of floods for Bodrog River Basin countries”, countries will be obliged to implement the measures defined. Global Water Partnership will use its own network to disseminate experiences from this project within the CEE region and its cooperation with Union of Municipalities in Slovakia (ZMOS), Hungary and Ukraine to replicate the principles of integrated water management into the normal Union of Municipalities practice. Moreover, development of cross-border coordinated plans for Bodrog river basins based on integrated ecosystem principles can be good basis to develop the national plans for other catchment areas. Cross-border EU programmes can be used for funding of remaining restoration activities.

Implementation of demonstration projects under PSP Tisza project will showcase concrete advantages of an integrated land and water management at the community – level in the wider context of river basin management actions addressing priority concerns in the Bodrog River Basin by wetlands and floodplain restoration actions.

The results of the demonstration projects will be disseminated widely and lessons learnt incorporated into the integrated management plan for the basin. This approach could serve as a good example for demonstration of effective floodplain management strategies including the adaptation to increased flood risks as a consequence of fluctuating flow regime in other river basins in each country. The crucial issue regarding implementation of proposed measures would be achievement of consensus with the land owners regarding proposed measures – remediation of floodplains. This brings better involvement of local governance institutions with long term responsibility sharing.

## **I. JUSTIFICATION**

### **I.1 Problem definition**

The root causes of floods (rainfall) are natural phenomena and essentially uncontrollable. Floods can have considerable environmental and health consequences, in particular given the very specific vulnerability of potable water supplies and the physical infrastructure necessary for sanitation and contaminated sites in flood-prone areas. Storm resulting in flood damage is very much influenced by human actions such as: clearing of forests in the upper catchment area, straightening of rivers and suppression of natural flood plains, inadequate drainage practices and most importantly, extensive building in high risk, flood areas. In addition, local flood protection measures taken in one place can have a knock-on effect for upstream/downstream areas. Therefore it is imperative that flood protection is dealt with in a concerted and co-ordinated manner along the whole length of the river.

Until now, in the project territory, organised, systematic flood protection started in the mid 19th century. The backbones of these works are the flood protection dikes along the main river, but also include river training works, bank protections, flood retention reservoirs and polders. At this time drainage systems with pumping stations were also built.

However, the Bodrog River Sub Basin, which creates part of Tisza catchment area, is frequently affected in the past decades by major flood events in all countries, which are sharing this territory (Slovakia, Hungary and Ukraine). The negative impacts and damages were recorded within the territory of each country within the Transcarpathian region - Romania, Ukraine, Slovakia and Hungary.

Lessons learnt from the series of extraordinary floods from 1998 to 2001 revealed that the former approach to prevent floods by heightening and strengthening dikes should be reconsidered. Flood prevention and water quality protection are of great social importance as administrative units forming basins of Uh and Latorica at Ukraine-Slovakia border waters are inhabited by over 500 thousand people that is 41% of Transcarpathian Region population.

Therefore each country (SK-HU-UA) within the Tisza catchment has developed its own mitigation strategy and plan focused on flood management and flood prevention. However, these plans are not fully focused on alternative solutions. In addition, the countries plan to update its national plans according to the EU Directive on the assessment and management of flood risks. This will include development of partial plans for particular national catchment areas.

#### Identified gaps and needs

The transboundary cooperation is established based on the bilateral agreements - “Committees for transboundary waters”, acting also in case of flood events, however, with limited involvement of municipalities. However, there is missing harmonization of national strategies on flood management and flood prevention within Bodrog River Basin and common understanding of proposed measures and activities on the cross-border scale. This brings ineffective and unsustainable floods management and management of the water resources. Therefore it is very important to ensure proper common approaches aiming on sustainable flood control by implementing environmental acceptable measures to improve biodiversity and nature protection. In order to reduce the number of flood events, it is important to start the cooperation in the planning stage. As for the local level, the municipalities are not playing an active role in flood management and flood protection. Their involvement is focused on rescue work and measures only. Development of more balanced partnership shall be established, involving local municipalities and NGOs.

### **I.2 Baseline situation**

The Bodrog catchment area is located mainly on the lowlands, which create special habitats with rich wetland flora and fauna (mainly bird) species. Those offer to human settlements conditions for wide range of economic activities such as agricultural use, including pasture, forestry, fishing and tourism activities. However, the area along the river is seriously damaged ecologically. The landscape has lost its former diversity both on a smaller and bigger scale, with ‘landscape homogeneity’ dominant in certain areas. This results also in degradation of agricultural areas, deterioration of soil quality and forest management problems.

Despite the large number of such adverse changes of an anthropogenic nature, the region is still of tremendous natural value. In order for the remaining ecological features of the landscape to survive in the longer term, there should be a change in awareness that meets the demands of modern environment protection. The river can be preserved only if its entire catchment basin is protected, and a related ecological network is established.

The hazard of inland waters has risen significantly. The capacity of the drainage system, due to a marked deterioration in its state of repair, is a mere 10 to 50% of the original amount. Like flood protection, inland water protection is also an issue of safety and economics.

Due to past intensive agricultural practices, the users of the land (farmers, municipalities) are very much accustomed to those traditional practices. Their interest towards the new trend of meandering rivers and functioning floodplains which can hold water on the land, keeping it out of homes in times of flood is limited. This brings to them problems of usage and misunderstanding of the ecosystem function, despite such landscapes can bring to them also monetary benefits apart of increase in wildlife quality. Therefore the innovative processes are required to deliver sustainable solutions by making space for water during flood events, whilst retaining the normal use of the land, or even enhancing and diversifying its use and quality.

Due to the mountainous character of the catchment area in Ukraine and the Slovak Republic as compared to the flat area in Hungary, there is different water management approach used in Ukraine and the Slovak Republic as compared to the method used in Hungary. This leads to a different degree of protection at border sections, but in the frame of the existing bilateral agreements, this problem is relaxed during negotiations. Though as for the usage of integrated flood protection approach, there are only partial experiences of such an approach in those countries.

#### Existing institutional arrangements and local capacities

Flood management-related issues, tasks and responsibilities are allocated differently in the countries of the project area. Tasks related to the prevention, protection and mitigation of floods are in every country shared by several ministries (for example, ministries for environment, agriculture and interior are often in charge of different flood protection-related activities). There are also tasks and responsibilities of centralized and decentralized (regional, county, local) organizations and NGOs should play an important role. In this context, it has to be mentioned that the municipalities are not playing an active role in flood management and flood protection. Their involvement is focused on rescue work and measures only.

In 2004, at a meeting of all riparian ministers, a Memorandum of Understanding (MoU) “*Towards a River Basin Management Plan for the Tisza River supporting sustainable development of the region*” was signed. The MoU initiated the formation of the **Tisza Group** as the institution that is responsible for developing a management plan for the river basin and supervising the implementation of this plan.

The Hungarian - Slovak Joint Committee on Environmental protection and nature conservation had assessed in 2003 cooperation between Slovakia and Hungary as poor in terms of provision of flood protection and environmental protection. There is a special Committee on Transboundary Waters established between Slovakia and Hungary. Following working groups were created: working groups for Danube, Ipeľ and Tisza, working group for water quality protection and working group for hydrology.

Accounting Chamber of Ukraine, 2007 assessed work of Ukrainian-Slovak Commission on Border Waters established according to the intergovernmental Agreement as insufficient with untimely financing of water management. The Commission did not establish relevant working groups, expert candidates were not approved which hampers decision fulfilling and responsibility. In fact, the

Commission did not function in 2006, which led to suspended cooperation. This hinders flood protection of people and lands of the region, namely of border areas with Slovak Republic.

As for the cross border cooperation between Hungary and Ukraine, there was an Agreement signed between the Government of Hungary and Ukraine on water management issues related to frontier waters on November 11, 1997 (valid from August 6, 1999).

#### Economic and administrative situation

Economic and administrative situation and available financial resources are very similar in each partner's country. In general, there is serious lack of financial sources and human capacities. However, planned financial sources are intended to be used mainly for traditional approaches.

Implementation of the flood programs is the focus of permanent control of the Accounting Chambers of each country. Audits undertaken by supreme Auditing Bodies of Hungary, Slovakia, and Ukraine showed that the situation in flood protection in Carpathian and Transcarpathian regions had not been improved. Neither central nor local authorities provided full responding to the conclusions of the Accounting Chambers hoping these issues would be self-regulated. Main problem is insufficient communication and untimely financing of water management.

#### Available financial resources

Implementation of "Program of Flood Protection Measures of the Slovak Republic until 2010" is behind in comparison with the original plan. In 2007 it presented about 9,3 billion Sk (\$ 44,3 M). There is expected that this situation will be improved by using of EU funds for implementation of flood protection measures in total \$ 170 M. Moreover, the Slovak government in 2008 upgraded the state budget for flood protection issues to 1 billion Sk (\$ 50 M). In the Bodrog River Basin during the last five years about 540mil.Sk (\$ 26 M) was invested in construction of flood protection dikes and river training works and only 44mil.Sk (\$ 2.1 M) in construction of polders.

In Hungary, the government has adopted on 15 October 2003 a decision on the new Vásárhelyi Plan (abbreviated in Hungarian as VTT), which covers the period terminating with 2007. Estimated costs of Stage I was HUF 130 billion (558 M USD). The costs of the emergency reservoirs have been estimated at 50 billion HUF (214 M USD), those of clearing the flood bed at 15 billion HUF (64 M USD). For rural development and infrastructure expansion projects HUF 65 billion (279 M USD) have been earmarked. From the 2004 budget HUF 6 billion (26 M USD) have been appropriated for starting work on flood control improvements. The government expects EU support to cover onefourth of the costs. However, it is not clear how much was allocated for integrated flood management.

In Ukraine estimated total costs of the planed project according to 'Scheme on Complex Flood Protection in the Tisza River Basin in Zakarpattia' is \$ 270 M, completion is planned by 2015. The urgent measures should be implemented by 2005 sum up to \$ 80 M. The works phased to be ready by 2010 reach \$ 150 M. However, it is not clear how much was allocated for integrated flood management.

## **I.2.1 National policy context**

### **Slovakia**

#### **General overview**

In Slovakia the “Program of Flood Protection Measures of the Slovak Republic until 2010” was adopted by the Slovak Government in 2000 and updated in 2002. The Programme has declared the restoration of original function of water courses and the improvement of aquatic and terrestrial environment, especially in lowland areas. Long-term flood protection plan is oriented predominantly at water retention measures (mainly construction of polders - dry reservoirs) with the aim to decrease surface runoff and maximum discharges. The proposed measures have focused on integrated water management and were addressed to water management, urban and spatial planning, agriculture, forestry and economic sectors. However, those are not yet fully implemented in practice due to insufficient coordination of activities among involved sectors as well as other obstacles like: failure of accessible financial sources and concentration on solving of particular “hot” problems instead to implement river basin approach.

#### **Current approaches**

By means of previously built flood protection measures the adequate land protection against high floods was provided. However at present, from capacity point of view many of the river regulation works do not secure adequate flood protection. This situation is caused by the following factors:

- natural decrease of rivers discharge capacity due to growing of vegetations and silt sedimentation.
- change of hydrological conditions (increase in maximum discharge values)
- water management measures realized in neighbouring countries (e.g. at Bodrog river in Hungary – with the backwater effect in Slovak territory).

As one of the outputs of the Programme a considerable innovation of the flood warning and forecasting practices is expected within the framework of the POVABSYS project.

In the Slovak part of Tisza river basin many water management measures for limitation of floods are planned. These measures are contained in Development and Investment Program of River Basin Administrators and are mainly focused on reconstruction of dikes, regulation of stretch and construction of polders. However implementation of these measures depends on available financial sources, which were very limited. In case of Slovakia, flood protection measures are financed from the state budget, but mainly from EU funds.

“The Water Management Policy Conception of Slovakia until 2015” has declared that current situation in field of mitigation of floods is influenced by reduced natural ability of water retention in particular river basins and accelerated runoff from the territory. These circumstances create condition for more frequent flood events.

### **Hungary**

#### **General overview**

From the 1990s several major flood events were observed both in the Danube and Tisza River basins, which significantly affected Hungary. Therefore, to start to solve flood control issues through an integrated way together with a rural development

programme in the eastern part of the country, Hungarian government issued in 2003 the “Programme on the increase of flood protection safety in the Tisza-Valley, as well as the regional and territorial development of the related area called “New Vásárhelyi Plan – VTT”), with the revision in 2007.

The program reflects a new government philosophy, taking into consideration as far as possible the interests of environmental protection and nature conservation. Public involvement is considered an important part of this process recognizing that the success depends on the stakeholders participation. VTT is a long-term plan with 30 years’ time horizon. Some of the measures were already implemented, like flood level mitigation reservoirs. But there are several other elements which are under the planning and design stage or have not been implemented yet. This relates also to the alternative approaches in flood protection. Therefore pilot examples of such approaches are necessary.

#### Current approaches

‘The New Vásárhelyi Plan’ is under continuous development. There has been a general shift in focus from the original single aim of flood prevention to now a much broader complex number of aims. The New Vásárhelyi Plan, besides flood safety aims a sustainable regional and rural development in the Tisza Valley. As a result of a controlled system, it will be possible to enrich wetland and to establish new types of farming besides the flood protection function. The envisaged cleaner, healthier environment, improved infrastructure will greatly contribute to the regions’ socio-economic development in the Tisza valley.

Further to controlled diversion of peak flood flows, the retention, novel use and subsequent return of water to the river, further an outline of emergency storage and water transfer to areas in short supply the flood protection concept describes:

- Six emergency reservoirs would be built along the Upstream- and Middle Tisza sections to enhance the level of flood safety in the region.
- the build up of flood protection structures to design level in harmony with the water carrying capacity of the main river bed ensuring the area and land use change in flood plains;
- the flood attenuation emergency reservoirs have to be equipped with engineering structures that ensures controlled inflow and outflow of them.
- the built up of these reservoir and the increase of flood water carrying capacity of the main river bed and flood plain have to decrease the maximum flood level by 1,0 m.
- the monitoring and flood forecast system have to be developed;
- the construction of flood attenuation reservoirs have be harmonized with the development of the connected infrastructure and the land use changes.

Parallel to enhancing flood safety, the development program is oriented at a new type of agro-ecological farming practice in which water will play an essential role in changing to a mosaic landscape structure and novel land use. The improvement over the present state consists of diverting to, and storing on, part(s) of the flood plain the excess flow conveyed by the especially dangerous floods. Appropriate use of this water would open new perspectives of development along the river and provide opportunity to introduce a new type of agro-ecological farming and environment management.

## Ukraine

The catastrophic floods occurred in Zakarpattia (in years 1998 and 2001) and led to significant material and social damage in the region. To avoid such damage in the future, the State Committee for Water Management developed the ‘**Scheme on Complex Flood Protection in the Tisza River Basin in Zakarpattia**’ approved by relevant governmental commission on 29 August 2001.

In order to solve the questions regarding implementation and financing of measures to be recommended by the Scheme, the institute “Ukrvodproekt” worked out the “Program of complex flood protection in the river Tisa basin in Zakarpatska Oblast for 2002-2006 and forecast to 2015” that was approved by the Decree of the Cabinet of Ministers of Ukraine of 24 November 2001, No 1388. This Program lists urgent flood protection measures for the nearest future, instruments of implementation and sources of financing.

The Scheme 2001 recommends a comprehensive approach to:

- control of flood runoff with the help of special flood retention reservoirs, polders
- construct regulating hydrotechnical constructions (weirs and semi-weirs)
- strengthening the system of flood protection dikes
- protect forest with anti-erosive and mudflow protection measures in the mountainous area
- protect local versions of certain settlements or the proposals for their settling out.

The Scheme 2001 estimates construction of 42 unregulated, flow-through type flood retention reservoirs and additional 22 polders with regulated outflow in the flatland to reduce the flood discharge  $Q_{1\%}$  to  $Q_{10\%}$ . Reservoirs represent 288 Mm<sup>3</sup> of flood retention capacity and polders 234 Mm<sup>3</sup> (See Table in Annex 1).

The Scheme provisions for:

- reconstruction of the operating flood protection dikes to withstand the flood of 1% probability and the construction of some new dikes especially those related to the creation of polders and some ring dikes for the protection of communities, in a total length of 957 km (191 km by 2005; 478 km by 2010);
- bank protection in a total length of 55 km to be finished by 2010 (11 km by 2005);
- river training in a length of 155 km (32 km by 2005, 78 km by 2010).

However, as stated by Accounting Chamber of Ukraine in its 2008 report of the flood programs in 2005-2007 and nine months of 2008, the existing system of flood protection is ineffective and the state authorities are unprepared to give adequate response in case of disaster. During the last ten years flood protection system of population and areas of Carpathian region was not strengthened but muted. Floods are becoming uncontrollable reaching disastrous size and causing large-scale losses. One of the key roots is failure of the Government of Ukraine to provide full and sustainable financing of the national flood programs.

### **I.3 Strategy**

The project intends to work both on national and local level in order national policies are transposed into practical solutions and on the contrary, local experiences in ensuring flood protection and increasing value of habitats are mainstreamed into the national policies.

The project provides combined approach from flood management strategy to rehabilitation measures on demonstration sites to capacity and ownership building at local scale, completed with public information campaign. In addition, the project fits with WFD objectives, Habitats directive and has some flood risk reduction potential with higher positive impact on water balance.

As for the cross-border cooperation between SK-HU-UA, Project will build on three pillars of joint cooperation between the countries and thus establishing the partnerships. Those will be cooperation on the joint “Strategy”, presentations and meetings with local stakeholders and dissemination of project outcomes, i.e. preparation of joint booklet. By this, project can start up the coordination processes in the Bodrog catchment countries, including preparation for funding schemes to deliver the best outputs.

The project approaches are based on the appropriate and effective functioning of the flood prevention strategy. This should consist of three steps: retaining, storing and draining. Therefore protection and restoration of infiltration areas in the upper parts of the catchment and conservation and restoration of wetlands are crucial for the water retention. Every cubic metre of water not drained away immediately to the next water body is a gain for the water regime, and this also removes some of the burden in floods.

The storage effect of vegetation, soil, ground and wetlands has an important mitigating effect particularly in minor or medium-scale floods. Each of these storage media is capable of retaining certain quantities of water for a certain length of time. A large natural storage capacity results in slow rises in water levels, thus reducing the flood wave, and enables sustaining or contributing to the restoration of self-purification capacity of water.

Besides of those benefits, project will test whether mitigation of floods and flood protection based on environmental approaches will lead to less financial demand solutions since flood prevention should be based on cost-benefit analyses as well as on the careful balance between precautionary and 'living with floods' principles.

Proposed demonstration project “Making space for water in the Bodrog river Basin is in line with the UNDP/GEF MSP project Component 1, activity 1(ii) – *Development of a flood and drought mitigation strategy* as well as Component 2 *Implementation of IWRM principles through the testing of new approaches on wetland and floodplain management through community-based demonstration*. The outcomes of proposed project will encourage the replication of pilot investments as new approaches on the use of wetlands with their multiple environmental benefits throughout the region and with potential for dissemination at the Tisza River Basin countries as well as at the national level.

Moreover, the cross border approach and integration of water quality and quantity management issues based on the river basin management principles according to requirements of the WFD and the new flood risk directive, will utilize outcomes from previous UNDP/GEF **Danube Regional Project and also current UNDP/GEF MSP Tisza project**.

Without the UNDP/GEF support, the coordination among the Bodrog River Basin countries and the national plans and their implementation on the local level would be very limited and thus the idea of flood prevention through the integrated land and water management would not be implemented.

## **I.4 Project area**

### **I.4.1 General Overview**

The total area of the Bodrog River Basin is 11 552 km<sup>2</sup> shared by four countries. Out of this area, 7 272 km<sup>2</sup> is located in Slovakia, 4 225, 7 km<sup>2</sup> in Ukraine and 54 km<sup>2</sup> in Hungary (only 0,3 km<sup>2</sup> is located in Poland). The River Bodrog is a complicated river system, created from 4 main rivers - Latorica, Laborec, Uh, and Ondava at the Slovak territory (there is not real spring named Bodrog River). Unique hydrologic situation exists in Uh river basin, as diverged water returns byway of the Uh River to Slovakia. The Latorica river basin has very few inhabitants due to its wetland character. The original flood-plain forests have partly been destroyed. They have been sustained only along the main stream of Latorica and form the Protected Landscape Region Latorica. The Uh and Latorica River Basins at Ukraine-Slovakia border waters are inhabited by over 500 thousand people, which represent 41% of Transcarpathian Region population.

This complicated river system of the Bodrog River is conditioned by geological conditions of territory, which led to to creation of a fan-shaped system of rivers with the same length in the upper part the Bodrog river basin (in Slovakia). The upper parts of Laborec, Ondava and Topla are created from flysch – clay sediments. Due to this geological structure, the ground is impermeable and there are bad conditions for infiltration of heavy rainfall. This creates preconditions for floods events. As a consequence, flood peak discharges on rivers of a similar size, regardless of whether caused by rainfall or snowmelt, occur at the same time and the travel time of floods to the confluences of rivers is similar. Under unmodified conditions, this process results in large floods at the confluences of rivers and especially in the lowlands, to where all the rivers flow.

The morphology of catchment area in Hungary has flatland characteristic, the average elevation is about 200,0 m at the foothill areas and under 100,0 m at the lower section of the basin. The eastern part is heavily woven by oxbow-lakes. In Bodrogköz pretty clayey meadow soils features the lowland silt soil and sandy soil can be found only on the higher area.

In the past, stone dikes and vegetation barriers have been constructed in this region for protection against floods. Formation of flood waves along the Bodrog depends on several conditions. Snow melting and raining induced floods usually occurs during spring and winter, while during summer and autumn floods are induced only by rain. The flooding character has been changed significantly when Tiszalök barrage was put in operation in 1954, low water periods are „missing” since then. In spite of the barrage has only slight effect on flooding, there are some conspicuous things to be noticed: it slows down the decrease of the flow, determines the water speed of Bodrog which means only a slight flowing almost a year round.

### **I.4.2 Overview of floods in past decades**

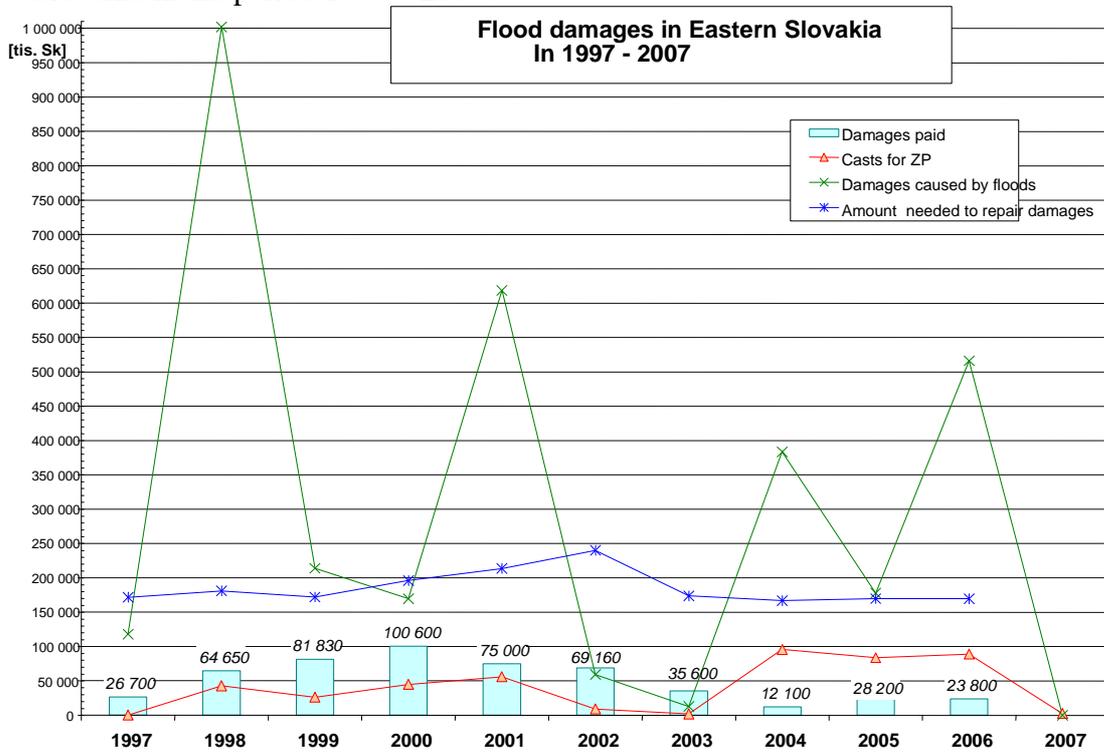
In past decades, flood events occur yearly in the Bodrog catchment area which have negative consequences on habitants.

In Slovakia, the most serious was the one in 2004 when floods affected 75 % of the area in Eastern lowlands, managed by Water Management Enterprise and also habitants had to be evacuated.

In Hungary, the most serious flood occurred in 1999 in Bodrog catchment area when the peak flood level reached 795 cm at Felsőberecki and 738 cm at Sárospatak.

In Ukraine, the most serious flood event occurred in 1998 with landslides and mudflows and with 17 victims claimed and in 2001 with several dike breaches and 9 victims.

As an example, Figure no. 1: describes the situation in Flood damages in Eastern Slovakia in the period 1997 – 2007.



### **I.4.3 Pilot projects**

In order to deliver changes to current policies on wetlands and floodplains in the Bodrog River Basin, the project will undertake pilot demonstration investments (See Annex 2). The aim of the demonstrations is to enhance knowledge of techniques and mechanisms for improved environmental self-governance at the local and community level that can be applied throughout the basin, providing both economic gains and environmental improvements through integrated land and water resource management. Both pilot investments were selected based on the following criteria - investment:

- Will allow creating “room for waters” during the flood events
- Will improve natural wetland habitats
- Is simple technical solution
- Is small scale restoration activity
- Is financially feasible (up to 25,000 USD)
- Can be done in very short period of time (within 12 months)

#### **I.4.3.2 Pilot investment in Slovakia**

##### Objective

Demonstration pilot investment objective is restoration of the original floodplains affected by capital-intensive drainage systems and in the same time establishment of measures focusing on retention of water during flood events in the territory.

##### Problem definition

Demonstration site in Slovakia is located in Senné depression, more or less bisected by the Čierna Voda Channel, a tributary of the Laborec (entering close to the confluence with the Uh) whose catchment is largely within the pilot project area.

In the past, several measures were taken to protect Senné depression from incoming waters and draining inland waters. Those were especially construction of the Záchytný bypass channel which collects water from the Vihorlat Mountains and directs them in to the Uh and construction of the Stretávka pumping station with 16 m<sup>3</sup>/s capacity designed to draw off water from 25,100 ha of agricultural land during a 21-day period. Others are river straightening and flood protection dams, construction of the Vihorlat flood protection reservoir to reduce the floods in the Laborec river and construction of channels between the Vihorlat reservoir and the Laborec and Čierna Voda rivers.

These water management practices have critically impaired floodplain ecosystem functions (e.g. flood attenuation, nutrient reduction, pollution control, groundwater recharge, fish spawning areas) that in turn have reduced the variability and dynamic processes inherent in natural floodplain habitats. Only remains of the original ecosystems and refuge for migrating birds now occur along the fishponds at Iňačovce and Senné located in the middle of Senné depression.

##### Baseline situation

The Senné depression is the most important area for nesting and migrating birds in Slovakia. Within the area, the following protection status were designated: State Nature Reserve without buffer zone (213.51 ha), Special Protection Area (SPA,

covering 1,490 ha) under the EU Bird Directive and two candidate Special Areas of Conservation (SAC) under the EU Habitats Directive.

The area supports 57 breeding species and a further 99 species have been recorded as visitors. For 25 of the breeding species, Senné is the only or the most important breeding place in Slovakia and 22 species using the site are subject to special protection under Annex I of the EU Birds Directive, including *Ardea purpurea*, *Egretta garzetta*, *Egretta alba*, *Platalea leucorodia*, *Nycticorax nycticorax*, *Botaurus stellaris*, *Circus aeruginosus*, *Chlidonias hybridus*, *Recurvirostra avosetta*, *Limosa limosa* and *Tringa totanus*. The protected habitat type is a natural eutrophic lake with *Magnopotamion* or *Hydrocharition* (EUNIS 3150), and three species listed in the EU Habitats Directive: invertebrates *Unio crassus*, *Anisus vorticulus* and amphibian *Bombina orientalis*. More than 300 higher plant species have been recorded in the project site, of which some 15 % are recognized as rare and endangered, including: *Fritillaria meleagris*, *Orchis palustris*, *Allium angulosum*, *Ceratophyllum submersum*, *Gratiola officinalis*, and *Veronica anagalloides*.

The surviving flood meadows serve as valuable seed banks for restoring further areas of wet grasslands. They represent four types of seminatural grasslands with a total area of 1,293 ha. The dominant type (1,082 ha) is a mosaic of two habitat types: continental (*Cnidion* – forming the second largest site in the region) and wet grassland (*Potentillion anserinae*).

#### Outputs of the suggested pilot project

- Reconstruction of existing floodgate (by 2 wooden boards) in confluence of drying bypass channel with Žiarovnický stream (see Annex 3)
- Reconstruction of existing floodgate (by 3 wooden boards) Cibavka channel located south of the Senne fish ponds (see Annex 4)
- Proposed intervention will reduce flood risks by decreasing of water discharge into Stretavka pumping station and simultaneously will allow retention of water into designated floodplain. Thus, the investment will lead to improvement of floodplain conditions.
- Intervention will supply the former floodplains and/or wetlands by water during flood events and thus will improve natural wetland habitats.

#### Current situation regarding communities and landowners involvement

Local farmers will be affected by the project since there will be some areas covered by water. The land temporarily covered by water is either owned or rented by farmers. There are already ongoing activities within the project Laborec – Uh. Those are focused at the technical preparation of investment and its negotiations with the farmers. Technical preparation of the investment covers biotope mapping, hydrological mapping, elaboration of Digital Elevation Model, hydrological modelling and approval process by District Authorities. Landowner negotiations include overview of Rural Development plan (RDP), preparation of the questionnaire for farmers to discuss current problems with the low quality land, application for agroenvironmental subsidies through RDP, willingness and motivation to apply for restoration subsidies. During first half of 2009, Laborec Uh project will undertake public consultations of Water Management Plan developed for Čierna voda river subbasin with local stakeholders. This will be good opportunity to discuss and involve local municipalities also in flood protection issues. It is expected that project will find monetary benefits for farmers to use the land for water flooding.

### Potential risks in project implementation

- Improper explanations to the farmers which can lead to misunderstanding of the effects of the pilot investment
- Willingness of farmers to cooperate is not yet confirmed. However, preliminary agreement of testing of flooding was reached on stakeholder meeting on 28 November, 2008.
- Unclear ownership situation (especially in Slovakia and Ukraine, where there is high no. of small owners).
- Problems with management agreements

### Necessary steps during project implementation

- The crucial issue is to achieve consensus with the land owners regarding proposed measures – remediation of floodplains. The process on reaching the consensus has already started within the Laborec Uh project.

### Discussion with local and national stakeholders

The Demo Project Proposal was discussed with:

- Project partners – the Stakeholders meeting held in Kosice (November, 19 2008);
- National stakeholders: Slovak Water Management Enterprise, Slovak Hydrometeorological Institute, Slovak Technical University, including NGOs - Daphne, SOS/BirdLife Slovensko at the meeting held in Bratislava, on November 13, 2008;
- The local stakeholders – farmers – users of proposed pilot site (Michalovce, November 28, 2008).

### **I.4.3.1 Pilot investment in Hungary**

#### Objective

The objective of the pilot investment in Hungary is to improve the water supply to Tokaj-Bodrog corner Landscape-protection District to improve the living conditions of the protected plants and birds in the region. Site in HU is in the main floodplain area with national protected area in its close vicinity.

#### Problem definition

In the lower Hungarian section of the Bodrog River at the outskirts of Olaszliszka, Viss and Sárzasdány settlements there is a horse-shoe shaped oxbow called Viss-Oxbow on the left-hand side flood plain of the river. This oxbow was created by the river regulation works during the 1860s between 24+300 and 25+600 river kms of the Bodrog River.

The total length of the oxbow is 8,1 km and the area that it covers is 48,6 ha. The average width of the oxbow bed is 60 m and it has an average depth of 3,5 m. The average amount of stored water is about 1,5 million m<sup>3</sup>.

The oxbow used to be filled up with fresh river water during flood events, when flood is higher than the edge of main river bed. Currently, the downstream mouth of the oxbow is not regulated and the flow is blocked. The living conditions of plant groups and other living species of Viss-Oxbow and Tokaj-Bodrogcorner Landscape-protection District significantly deteriorate during rainless summer and Bodrog River low flow periods because of lack of available water for the Viss-Oxbow area.

To ensure better quality of biotopes, there is a need to bring water during the floods into the oxbow and to retain the water there afterwards. This can be arranged by using

the corner trunk main (Bodrogcorner trunk) located at the upper end of the Bodrog, which is connected with the oxbow through an engineering structure in the secondary flood protection levee. This trunk main is not operational and is in bad condition. To allow water into the oxbow, the trunk main needs renovation. To do this a new sluice has to be built at the mouth of the oxbow and renovate the sluice at the Bodrogcorner trunk conjunction. At the 6+000 rkm the Törökér inland excess water pumping station lifts water into the oxbow, as well.

#### Baseline situation

The oxbow area is bordering on the Tokaj-Bodrogcorner Landscape-protection District. At the vicinity of the oxbow willow and poplar gallery of forests and pasture areas can be found. The oxbow and the surroundings remained in natural condition, protected plant groups (*Ceratopteris cornuta*, *Hydrochari-Stratiotetum*, *Nymphaeetum albo-luteae*, *Trapa natans*) and individually protected plants (*Chrysanthemum serotinum*, *Salvinia natans*, *Nymphaea alba*) grow and live there as well as protected birds (*Egretta alba*, *Egretta garzetta*, *Ardea cinerea*, *Ardea purpurea*).

#### Outputs of the suggested pilot project

- It is planned to build a new wooden board sluice at the 0+300 rkm of the oxbow to retain flood water of Bodrog and thus preventing the full emptying of the oxbow (see Annexes 5 and 6 with mark of planned sluice).
- **Conducting water from the main river bed to the oxbow** (while the flood is under second alert level) can ensure sufficient water level reduction of adjacent area during flood events. Thus, by the investment the **flood risk will be reduced**. The other role of this sluice would be **to retain water** in the oxbow after flood period increasing the oxbow water level by around 1 m and thus storing more water in it **for the dry period** to support the Tokaj-Bodrogcorner Landscape-protection area preserving the prestigious flora and fauna there.
- At the 2+500 rkm of the oxbow there is an old lock in the left side levee of Bodrog River. It is planned to renovate the lock and thus it would make possible to replace water through the Bodrogcorner trunk main into the Tokaj-Bodrogcorner Landscape-protection District (see Annexes 5 and 6 with mark of planned sluice).
- The living condition of the protected plant groups, wetland plants, and bird population will be improved and increased significantly at about 42 km<sup>2</sup> area of the Landscape-protection District, which is about 80% of its total territory, as water could be assured for these regions during the rain less and low flow summer period. Annex 7 shows the area that the Bodrogcorner trunk main could supply with water from the Viss-Oxbow depending on its water level.

#### Current situation regarding communities and landowners involvement

The Viss-Oxbow and the Bodrogcorner trunk main are **entirely under the management of ÉKÖVIZIG** (the project partner). The oxbow and the landscape protection area are in the flood plain and during the floods, the oxbow is not protected against the flood. However, during the dry period which has a wetland character sufficient water level is not ensured. The idea is to manage the water during the dry period and to maintain the wetlands. This will reduce the risk of refusal of such investment by local landowners and land users. However, there is still need to negotiate the planned investment with local stakeholders in order to establish the local management board. The main local stakeholders apart of EKO VIZIG are **rural people and municipal self-governments** of Viss, Olaszliszka, Vámosudvar,

Sárazsádány settlements which are partly affected by high flood water level with corresponding risks. Since the investment will reduce the flood risk, it is expected that the stakeholder settlements will be interested in cooperation. In addition, **small and medium size enterprises** (hotel, accommodation and hospitality industry, water-tourism, etc.) would benefit from investment by improved natural habitats and thus attracting more visitors. The region is an economically disadvantageous one and thus needs to improve touristic attractions, such as improved nature conservation areas to boost business. It is expected that the tourist industry actors will utilize the improved water supply opportunity for the nature conservation district and contribute to an extended study trail to introduce precious flora and fauna.

#### Potential risks in project implementation

There are some risks in project implementation, especially related to willingness of farmers to cooperate, which is not fully confirmed. However, the restricted usage of the area structures for the land owners will be compensated by reduced flood risks. Since landowners are aware of the effects of floods on the area, it is expected that this risk will be minimal when negotiating with land owners and establishing the Management board.

#### Discussion with local stakeholders

The North Hungarian Environmental and Water Directorate (EKOVIKIZIG) is in regular contact with stakeholders (such as NGOs, communities, local and national governments) in connection with flood protection issues. During these meetings the **pilot investment was already discussed**. There was an agreement on the need of such actions, but because of other investment and maintenance needs these actions were postponed so far.

#### Necessary steps during project implementation

During the project implementation, the stakeholder meetings will be organised within the project activities to inform about the improving environmental neighbourhood. When the operational guide will be elaborated for the sluices during the licence application procedure land owners will be consulted to comment the operational rules to find the best strategy for water supply into the trunk.

### **I.4.3.3 Ukraine**

Due to cancelation of the participation by Transcarpathian Administration of Melioration and Water Management (Vodhoz) in the project, an alternative solution is proposed, since construction works are impossible due to responsibility reasons.

The project activities will therefore focus on preparatory works towards future investments in line with WFD objectives. This will be done in close cooperation with local stakeholders, in order to get the communal involvement. During the project implementation NGO and communal representatives will be involved in the cross border process, workshops, trainings and information exchange in order to investigate the investment opportunities.

One of possible demonstration site where future investment can be mobilised could be in Ukrainian/Zakarpattia oblast territory where there is a dry polder south of Uzhgorod on the northern edge of Latoriza floodplain which could be used for flood protection purposes. Nowadays, the drainage is secured with a pumping station south of Veliky Gejevtse or Kholmets. The status of the pumping station is unknown. Land use in the dry polder area is partly abandoned, partly cattle grazing, partly arable land.

Inflowing tributary according to the map is called Tsisaki, coming from Yarok and other branch coming from Antolovtsi. Potential restoration activities could focus on change of water management scheme by reducing drainage or even controlled filling with flood waters during higher stages of Latoriza river. Such investment can provide for controlled flooding conditions and could improve flood retention of Latoriza in favour of downstream sections in UA and SK and also water quality, with limited potential for increasing ground water recharge.

Necessary steps during project implementation:

Due to the problem with human resources (having implemented two large-scale projects simultaneously) of the main Ukrainian partner - Transcarpathian Administration of Melioration and Water Management (Vodhoz) - it was agreed that final agreement on the project activities in Ukraine will be made during the inception phase. The other partners in Ukraine confirmed their interest in project implementation. Moreover, there was an interest showed by local municipalities, like Village council of Baranintsi, City council of Uzhgorod and other NGOs - Zakarpattya Oblast Organization of All-Ukrainian Ecological League and Uzhgorod city branch of All-Ukrainian Ecological League.

## **I.5 Stakeholder Analysis**

Stakeholder analysis has been prepared for each country taking into account prospective stakeholders and their interests in project activities.

In Slovakia, the key stakeholders are local farmers and municipalities with which an agreement on the local water management must be made. In Hungary, the key stakeholders are Small and medium size enterprises and municipalities.

Crucial part of project success is high motivation of water management enterprises both in Slovakia and Hungary to test the alternative solutions for flood protection. They are the strong players in local water management with good working relationships between local farmers, entrepreneurs and municipalities. Their involvement can bring the positive change towards attitude of local actors.

On the contrary, in Ukraine, the local communes are very much open towards new approaches since they are highly affected by flood events without hope for improvement by state due to budget shortages and inconsistencies of flood protection measures (Accounting Chamber of Ukraine, 2008).

As for the preparation of the “Strategy” and its approval by state authorities, it is crucial to involve representative of “cross border committees”, which has long experiences in flood protection cross border issues and can see the benefits of the joint flood protection strategy. In addition, by their involvement, the project will reduce overlap of ongoing activities in flood protection.

<b>Slovakia</b>			
<b>Stakeholder and basic characteristics</b>	<b>Interests and how affected by the problem(s)</b>	<b>Capacity and motivation to bring about change</b>	<b>Possible actions to address stakeholder interests</b>
<b>Central government and dependent bodies</b>			
Ministry of Environment	Responsible for nature protection and water policy	High capacity and motivation for implementing EU legislation	Proposal for new water policy and flood protection measures Natura 2000 site designation and Ramsar site management
Hydromelioration Authority	Irrigation and drainage, water supply delivery and monitoring for agriculture	Capacity and motivation is high because new changes can solve their basic problems	Cooperation in project implementation
Slovak Hydrometeorological Institute	Responsible for monitoring and flood events forecast	High capacity and motivation in this pilot project	Manual for monitoring
Slovak Water Management Enterprise	Responsible for river basin management and flood protection	Motivation is high – interested in applying alternative solutions	Cooperation in project implementation
<b>Local authorities and dependent bodies</b>			
Micro-region Združenie obcí Čierna Voda – Uh (Chair: Peter Saboslai, Mayor of Senné)	Interested solving conflict between fish farmers and bird protection	Skilled, very active manager with good ideas and contacts in region	Public meetings with local people, frequent contacts with stakeholders through his function
Micro-region Dobrá voda (Chair: Jana Dzuriová, Mayor of Bunkovce)	Initiating process of preparation of the Programme of Socio-economic Development of the Micro-region	Self motivated person, interested in development of Micro-region	Public meetings with local people, frequent contacts with stakeholders through her function
Villages / Municipalities	Self – governance functions , responsibilities in field of flood protection measures	Motivation is low: lack of knowledge and passiveness	Cooperation in project implementation
<b>Non-government civic organisations</b>			
Slovak Bird Protection Society - SOVS	Establishing and restoring wetlands as bird habitats	Very strongly motivated by interests of bird protection	Organising summer camps, brigades and other similar activities
<b>Private sector</b>			
Farmers and Farmer Associations (Dona, s.r.o, PD Vysoká nad Uhom, AGRONOVA)	Affected by changes in farm policy; difficult competitive situation, land owners of pilot site Protection of farmers interests	Capacity and motivation is low Probably ready for some changes in case of profit.	Negotiations, definition of mutual profits

<b>Hungary</b>			
<b>Stakeholder and basic characteristics</b>	<b>Interests and how affected by the problem(s)</b>	<b>Capacity and motivation to bring about change</b>	<b>Possible actions to address stakeholder interests</b>
Inhabitants of Viss, Olaszliszka, Vámosudvar, Sáradsadány settlements	These settlements are partly affected by high flood water level and corresponding risks	It is accepted that the stakeholder settlements will be interested in the renewal of old sluice and building the new one which would help the water circulation in the Bodrog corner trunk main.	Stakeholder meetings will be organised to inform the population of the stakeholder settlements about the improving environmental neighbourhood.
Small and medium size enterprises (hotel, accommodation and hospitality industry, water-tourism, etc.)	Small and medium enterprises operation in the tourist industry need and improved nature conservation district to attract more visitors.	The region is an economically disadvantageous one and thus needs to improve touristic attractions, such as improved nature conservation areas to boost business.	It is expected that the tourist industry actors will utilize the improved water supply opportunity for the nature conservation district and contribute to an extended study trail to introduce precious flora and fauna.
Municipal Self-Governments (Viss, Olaszliszka, Vámosudvar, Sáradsadány)	These settlements are partly effected by high flood water level and corresponding risks	It is accepted that the stakeholder settlements will be interested in the renewal of old sluice and building the new one which would help the water circulation in the Bodrog corner trunk main.	Stakeholder meetings will be organised to inform the population of the stakeholder settlements about the improving environmental neighbourhood.
North-Hungarian Environmental and Water Directorate, related NGOs	The regional water management has been facing with the shortage of resources for a while and was not able to reconstruct old sluice or built a new one to control water flow in and out from Viss-Oxbow.	Regional water management would contribute with significant in kind sources to have these structures renovated and built.	Regional water management will be participating in the project and play a key role to implement the objectives. NGOs will be involved in the stakeholder information process and monitoring of the effects of the project.

<b>Stakeholder and basic characteristics</b>	<b>Interests and how affected by the problem(s)</b>	<b>Capacity and motivation to bring about change</b>	<b>Possible actions to address stakeholder interests</b>
<b>Ukraine</b>			
Farming families: low income farmers, small scale family businesses, organised into informal cooperatives, women actively involved in processing and marketing	Maintain and improve their means of livelihood Pollution is affecting volume and quality of produce	Positive attitude is toward the idea of development of green tourism Limited political influence given weak organizational structure	Support capacity and initiatives to development of green tourism Possible optimization of the proper legislation
Water Management organizations	Organize flood protection of settlements and lands Provide water management measures	Interest to improve river flood capacity Interest to improve water management approaches	Support of basin-scale strategy development Improvement of water and flood management
Enterprises of forestry: good regulated, influential lobby group	Interest to promote the level of knowledge of local population on protection and rational use of the forests, in particular as an important water regulative natural resource	Potential capacity to create skansen on traditional using of natural resources	Support capacity and initiatives to create skansen on traditional using of natural resources
Households: c.610,000 people discharge waste and waste water into river, also source for some drinking water and eat fish from the river	Decision of problem of utilization of waste Increase of knowledge on transboundary transfer of pollution agents	participation is in the process of making a decision in relation to utilization of waste Possibility of the use of local mass-media, NGO and environmental agencies and by the purpose of informing of public in relation to transboundary transfer of pollution agents	Support participation is in the process of making a decision in relation to utilization of waste An improvement of the system of informing of society is in relation to transboundary transfer of pollution agents
Environmental NGOs	An increase of knowledge is in relation to ecological problems and in particular flood aspects	The practical participating is in nature protection measures Distribution of information is among a population	Support distribution of information is among a population

## **II. PROJECT DESIGN**

### **II.1 Project objective**

The main project objective is to mitigate consequences of floods through achieving consistent and holistic management of flood risk in Bodrog river basin countries (SK-HU-UA) by creating partnerships between national and local levels through the development of corporate “Strategy for mitigation of floods for Bodrog River Basin countries” and implementation of practical and sustainable solutions for flood prevention.

### **II.2 Project outputs and activities including logical framework matrix**

Project activities should consider where possible the maintenance and/or restoration of floodplains by creating “space” for water during flood events, as well as measures to prevent and reduce damage to human health, the environment, cultural heritage and economic activity. The involvement of municipalities, river basin organizations, NGOs, farmers, spatial and urban planning authorities is crucial. Therefore project activities will focus on establishment of the close cooperation with these subjects.

Project will build on three pillars of joint cooperation between the countries and thus establishing the partnerships. Those will be cooperation on the joint “Strategy”, presentations and meetings with local stakeholders and dissemination of project outcomes, i.e. preparation of joint booklet. Though, there are some risks in project implementation, especially related to approval of the “Strategy” by national authorities and acceptance of local stakeholders with the investment, the project activities are taking those into account and should mitigate them (please see section II.7 on risks and management response).

The main outputs and activities of the project proposed are:

#### **1. Formulation of the “Strategy for mitigation of floods for Bodrog River Basin countries”.**

Since the project has transboundary dimension the solidarity principle is very important. Therefore an encouragement to seek a fair sharing of responsibilities among involved neighbouring countries is crucial. The Strategy will contain an analysis of relevant documents aiming at comparison of approaches in riparian countries from point of view flood mitigation measures. These results will lead to formulation of the core part of Strategy: objectives and activities. The objectives of Strategy will be proposed based upon the relevant EU directives (the WFD, the Directive on Assessment and Management of flood risks (2007/60/EC) taking into account specific conditions and needs in the Bodrog River Basin. A special attention will be focused on communication with relevant stakeholders in each country during Strategy development.

#### **Activities**

Activity 1.1 Preparatory meeting with local stakeholders and national authorities to find common approaches in flood protection

Activity 1.2 Brief reviews and comparison

Activity 1.3 Formulation of the strategy

Activity 1.4 Joint conferences to present and discuss the strategy with national authorities

### Activity 1.1 Preparatory meeting with local stakeholders and national authorities to find common approaches in flood protection

For the purposes of preparation of the “Strategy for mitigation of floods for Bodrog River Basin countries“ it is important to determine the competent authorities from each country which are responsible for the internal coordination within the country and for the preparation and implementation of the Strategy. The “Committees for transboundary waters” should be the main force to arrange the flood prevention in Bodrog River Basin. Enhancement of their proper functioning on the national level by creating partnership with municipalities and local stakeholders will ensure the implementation and maintenance of the flood prevention measures, including creation of new temporary “space” for water during flood events. The Committees were already contacted and showed preliminary interest in cooperation. Decision on the framework of implementation of the Strategy should be the task and responsibility of the countries affected, according to their national legislation as well as their bilateral and multilateral agreements.

### Activity 1.2 Brief reviews and comparison

There are already national plans for flood prevention in Slovakia and Hungary elaborated and the new one is on the way as requirement by WFD. However, those are not going into concrete actions as regards to the Bodrog catchment area. Formulation of the “Strategy” is a good testing point for the Tisza catchment, since smaller international catchment areas gives higher possibility to reach concrete cross-border consensus and could more easily emphasize added attention to WFD and EU Directive on Assessment and Management of flood risks (2007/60/EC) in cross-border cooperation.

To prevent duplication of work, the project will use existing preliminary flood risk assessments, flood hazard and risk maps and flood risk management plans, which should be elaborated according to the requirements of EU Directive on Assessment and Management of flood risks (2007/60/EC). Brief review and comparison of appropriateness of national approaches in restoring natural habitats as flood prevention and exchange of information in implementation of national flood prevention programmes will be part of the formulation process. This process will also include review of current monitoring indicators, which are set up on national levels (except for Ukraine) according to requirements of WFD for monitoring programme and whether they fit to the monitoring needs of Bodrog river basin conditions.

### Activity 1.3 Formulation of the strategy

All activities related to formulation of the “Strategy” will be done in cooperation with Tisza Expert Group, which was created as platform for exchange of information between Tisza catchment countries. The Strategy will be based on an integrated land and water management principles, with focus on improving the cross-border cooperation in flood prevention, protection and preparedness with a view to giving “rivers more space”. The strategy will also consider requirements of the WFD regarding achievements of environmental objectives (good status of water bodies).

An effective flood control strategy must include not only natural retention measures but also a number of other actions, namely, prevention, protection, raising preparedness, emergency response, recovery and collection, utilisation and exchange of lessons learned. Measures will also cover proposals to set up the monitoring

network and tailoring the monitoring indicators to the needs of Bodrog river basin. All this should lead to improvement of hydrological situation in the river basin.

A strategy to mitigate floods in ecological manner should be based on improving river basin land-use, preventing rapid runoff both from rural and urban areas, and improving a trans-national effort to restore rivers' natural floodplains. This will reactivate the ability of natural wetlands and floodplains to alleviate negative flood impacts. Besides flood mitigation, this will lead to ecological benefits in the form of maintaining biodiversity, frequent recharging groundwater aquifers and availability of cleaner water for drinking, areas for recreation, opportunities for tourism and so on.

Besides of those benefits, mitigation of floods and flood protection based on environmental approaches will lead to less financial demand solutions. Moreover, flood prevention should be based on cost-benefit analyses as well as on the careful balance between precautionary and 'living with floods' principles.

#### Activity 1.4 Joint conferences to present and discuss the strategy with local and national authorities

As experience from already ongoing activities in Slovakia and Hungary, there is good cooperation set up with state authorities responsible for acceptance of the “Strategy” developed by the project partners. The situation regarding cooperation with state authorities in Ukraine is not really proactive by administration. It depends on local interest - if local stakeholders are interested, OVG is open to discuss relevant problems. The experience shows that formulation of strategies or management plans on small scale are good testing examples for actual implementation of national documents. Therefore, there is high probability, that the “Strategy” formulated will be accepted by state authorities. There is only a limited risk in Ukraine but the project will create good working relations and involvement with state authorities as early as possible in project implementation.

These new strategies will be very much related to site specific conditions to support demonstration activities and then also reviewed and processed for training, replication and information dissemination. In order there is no overlap with other flood strategy actors, in formulation of the strategy, all relevant institutions will be identified and consulted. Work with local stakeholders will be focused on strengthening the abilities of municipalities in field of flood prevention and ensuring that flood-related measures will contribute to the good ecological status of water bodies as well as to improving of natural conditions of ecosystems.

## **2. Improvement of conditions of original floodplains and wetlands affected by current land uses and environmentally inappropriate flood protection measures**

In Slovakia and Hungary, the project will finance restoration activities of already prepared technical proposals for restoration (simple technical and management interventions improving natural wetland habitats by bringing more water during flood events) within ongoing initiatives. More detailed description of pilot projects is in chapter I.4.3. Location of restoration activities are showed on the map (see Annex 2). This will serve as pilot demonstration for the implementation of the “Strategy for mitigation of floods for Bodrog River Basin countries”. The demonstration sites are separate, however, there is a good possibility to test different approaches and thus to find more functional alternative solutions for flood prevention. This activity represents the field work. Desk work to the investment was already done by previous activities of project partners.

**Activities:**

- Activity 2.1 Final selection of pilot demonstration site in Ukraine during Inception phase
- Activity 2.2 Technical preparation of interventions and agreements on new management approaches
- Activity 2.3 Local Management boards established
- Activity 2.4 Implementation of interventions
- Activity 2.5 Official "opening" of the interventions

**Activity 2.1 Final selection of pilot demonstration site in Ukraine during Inception phase**

Due to the problem with human resources (having implemented two large-scale projects simultaneously) of the main Ukrainian partner - Transcarpathian Administration of Melioration and Water Management (Vodhoz) in the project, an alternative solution is proposed, since construction works are impossible due to responsibility reasons.

The project will focus on preparatory works towards future investments in line with WFD objectives. This will be done in close cooperation with local stakeholders, in order to get the communal involvement. It was agreed that final decision on the project activities in Ukraine will be made during the inception phase.

**Activity 2.2 Technical preparation of interventions and agreements on new management approaches**

Demonstration site *in Slovakia* is located in Senne depression (see Annexes 3 and 4), more or less bisected by the Čierna Voda River, a tributary of the Laborec (entering close to the confluence with the Uh) whose catchment is largely within the pilot project area. SVP has already started the preparatory works for the approval procedures. It is expected that the final approval of the investment by District authorities will be issued in summer 2009. Willingness of farmers to cooperate is not yet confirmed. However, preliminary agreement of testing of flooding was reached on stakeholder meeting on 28 November, 2008. The project will continue with close discussions with farmers.

*In Hungary* demonstration site is located in the lower Hungarian section of the Bodrog River at the outskirts of Olaszliszka, Viss and Sárzasadány settlements there is a horse-shoe shaped oxbow called Viss-Oxbow on the left-hand side flood plain of the river (see Annexes 5, 6 and 7). Since EKOVIK is major stakeholder of the water properties, it is expected that the approval procedures will not take long and can be finalised in summer 2009.

**Activity 2.3 Meetings with local stakeholders and Local Management boards established**

In order local stakeholders will understand properly the pilot interventions and will agree on the works, it is crucial that those meetings will be well prepared or even facilitated by a renowned expert in whom they trust. Willingness of farmers to cooperate is not yet confirmed. Thus, in order to avoid refusal from the side of local stakeholders, a good motivation must be presented and they must see the benefits of such intervention. Most probably, to gain understanding and approval of local stakeholders, more meetings will be necessary. Therefore project will hire technical experts who will prepare these meetings.

There should be monetary benefits from the raised awareness since when people are aware of the risk they are likely to be more receptive to flood warnings and be “more inclined to protect themselves and their property“. In addition, it is important that local stakeholders will understand benefits arising from minimised risks and reduced damages brought by the investments.

In order the investments are community led measures, at each demonstration site a management board bringing together local stakeholders who are affected by changing of the water system (farmers, communes, and fishermen clubs, hunting clubs) will be established to agree on the management plan for the restored areas. For the local stakeholders it is important to understand and to agree on the management plan and on the rules how to deal with water management issues (to regulate the water table, ensure an appropriate retention of rainfall, disposal of urban wastewater, etc.).

#### Activity 2.4 Implementation of interventions

Implementation of proposed demonstration projects under PSP Tisza project will showcase concrete advantages of an integrated land and water management at the community – level in the wider context of river basin management actions addressing priority concerns in the Bodrog River Basin by wetlands and floodplain restoration actions.

These demonstration projects will help to answer questions regarding effective implementation; challenges faced scaling problems, setting of environmental protection limits and monitoring evaluation methodologies, etc. for the implementation of the Basin – wide Plan according to the WFD. The results of the demonstration projects will be disseminated widely and lessons learnt incorporated into the formulated “Strategy” for the Bodrog basin.

The investments in Slovakia and Hungary were selected especially due to its low investment needs. However, in order to avoid budget shortages for the pilot investments, each partner who is responsible for implementation of investments - SVP in Slovakia and EKOVIK in Hungary- will contribute their share to arrange for the real scope of works at the project sites.

#### Activity 2.5 Official "opening" of the interventions

To gain interest of national authorities and media on the results of pilot projects, there will be organised official “opening” of the interventions with explanation of its linkages and effects towards the formulated “Strategy”.

### **3. Dissemination of project results to achieve replication on the basin and national levels.**

#### **Activities:**

- Activity 3.1 Meeting to inform local stakeholders on the project activities
- Activity 3.2 Writing articles into the national newspapers
- Activity 3.3 Preparation of a joint booklet and its presentation to the stakeholders
- Activity 3.4 Meetings with state authorities

#### Activity 3.1 Meeting to inform local stakeholders on the project activities

Involvement of municipalities, river basin organizations, NGOs, farmers, and urban planning authorities is crucial. Therefore project activities will focus on establishment of the close cooperation with these subjects. The public will be better informed about flood risks, resulting in increased public awareness.

### Activity 3.2 Writing articles into the national newspapers

To gain interest of local stakeholders as well as national authorities in project activities, there will be published series of articles in national newspapers about the pilot project, investment process and expected results and benefits of such investments.

### Activity 3.3 Preparation of a joint booklet and its presentation to the stakeholders

As part of dissemination activities, the project will develop a joint booklet focused on presentation of alternative approaches in flood protection and development of common understanding for nature protection amongst the local stakeholders in each of three project countries. The booklet will be three lingual in A3 format.

### Activity 3.4 Meetings with the state authorities

The booklet will be presented on a joint event to promote the public participation and interest of national institutions. The aim would be to strengthen cross border cooperation and understanding of each country of the new measures and to discuss further partnership activities, including agreement on restoration of at least 2 other sites agreed on the national levels.

## LOGICAL FRAMEWORK MATRIX

<b>Goal:</b>	<b>Integrating multiple benefits of wetlands and floodplains into improved trans-boundary management for the Tisza River Basin</b>				
<b>Project Objective</b>	<b>Indicator (description)</b>	<b>Baseline (value at the start of the project)</b>	<b>Target (value to be achieved)</b>	<b>Sources of verification</b>	<b>Risks and Assumptions</b>
To mitigate consequences of floods through achieving consistent and holistic management of flood risk in Bodrog river basin countries (SK-HU-UA) by creating partnerships between national and local levels.	“Strategy for mitigation of floods for Bodrog River Basin countries” included into the national flood protection systems	Tisza group is the platform for coordination of the RBMP development. Strategy to mitigate floods formulated on the Tisza River Basin, lack of implementation in riparian countries. Bilateral agreements between the countries are mainly focused on cooperation in case of crisis, not on preventive measures.	Agreement on Programme of measures	National legislation ICPDR reports	<ul style="list-style-type: none"> <li>- National, regional and local authorities maintain good liaison and coordination to formulate the strategy</li> <li>- There is no commitment from national authorities in each country that the cross-border “Strategy” will be approved</li> </ul>

<b>Goal:</b>	<b>Integrating multiple benefits of wetlands and floodplains into improved trans-boundary management for the Tisza River Basin</b>				
<b>Project Objective</b>	<b>Indicator (description)</b>	<b>Baseline (value at the start of the project)</b>	<b>Target (value to be achieved)</b>	<b>Sources of verification</b>	<b>Risks and Assumptions</b>
	Change of land use, areas put under water during the floods	Current land use is mainly focused on draining the aquatic habitats	Improved aquatic habitats in oxbow by use of flooding	Hydro-meteorological Institute (water quality reports) Project reports	Willingness of farmers to cooperate is not yet confirmed Unclear ownership situation (especially in Slovakia and Ukraine, where there is high no. of small owners). In Hungary, 90% of land in Hungary is in hands of few big owners, with limited number of small owners
	No. Of municipalities cooperating in formulation of flood prevention	0	10	Project reports	Formulation but no real commitment because of lack of means
<b>Project Outputs</b>					
<b>Output 1: Formulation of the “Strategy for mitigation of floods for Bodrog River Basin countries</b>	Measures to increase conditions for flood control formulated, with view to create temporary “space” for water during flood events (using natural depressions)	No measures	Measures elaborated by end of 2009	Project reports ICPDR Reports	Stakeholder participation is not confirmed in order to achieve acceptance of the Strategy

<b>Goal:</b>	<b>Integrating multiple benefits of wetlands and floodplains into improved trans-boundary management for the Tisza River Basin</b>				
<b>Project Objective</b>	<b>Indicator (description)</b>	<b>Baseline (value at the start of the project)</b>	<b>Target (value to be achieved)</b>	<b>Sources of verification</b>	<b>Risks and Assumptions</b>
	Measures elaborated to reduce possible adverse effects of floods on infrastructure necessary for sanitation and contaminated sites located in flood-prone areas, especially in case of contamination by hazardous substances.	No measures	Measures elaborated by end of 2009	Project reports ICPDR reports	- There are no sufficient data (contaminated sites, local landfills) to formulate the measures Stakeholder participation is not confirmed in order to achieve acceptance of the Strategy
	Monitoring needs elaborated to reflect the Bodrog river basin conditions	Monitoring criteria elaborated only on the national level criteria	Criteria elaborated by March 2010	Monitoring authorities reports Reports of Tisza flood forum	State authorities willing to accept the criteria and start using them
	Measures oriented on the public information and consultation elaborated for Sub basin scale (For Tisza basin scale measures are mandatory by WFD)	No measures for Bodrog sub basin	Measures elaborated by end of 2009	Project reports ICPDR reports	- Stakeholder participation is not confirmed in order to achieve acceptance of the Strategy

<b>Goal:</b>	<b>Integrating multiple benefits of wetlands and floodplains into improved trans-boundary management for the Tisza River Basin</b>				
<b>Project Objective</b>	<b>Indicator (description)</b>	<b>Baseline (value at the start of the project)</b>	<b>Target (value to be achieved)</b>	<b>Sources of verification</b>	<b>Risks and Assumptions</b>
<b>Output 2 Improvement of conditions of the original floodplains</b>	No. of functional intervention in place in each country (Slovakia, Ukraine and Hungary)	0	1 in each country	State Water Management authorities annual reports Final Project Report Implementation reports from pilot projects	Farmers and local water companies are willing to undertake pilot projects
	Habitats conditions improved (related to water regime and water quality, and agricultural use, including pasture, forestry, fishing, etc.)	Low amount of area currently temporarily flooded	Increase by 20 % of area temporarily flooded	Project reports Conservancy Administration annual reports	The estimated and /or proposed measures will bring in practice water to natural habitats. An agreement on management must be made.
	Local people are using implemented interventions	Local stakeholders, currently do not use gates to flood the meadows	Investments are operational	Project reports Water management enterprises reports	-Willingness of farmers to use implemented interventions is not yet confirmed -Local management boards are not yet established
<b>Output 3 Dissemination of project results</b>	Agreement on restoration of other sites agreed on the national levels.	0	at least 2 in each country	Project final reports ICPDR reports	State authorities support spreading information to other regions

<b>Goal:</b>	<b>Integrating multiple benefits of wetlands and floodplains into improved trans-boundary management for the Tisza River Basin</b>				
<b>Project Objective</b>	<b>Indicator (description)</b>	<b>Baseline (value at the start of the project)</b>	<b>Target (value to be achieved)</b>	<b>Sources of verification</b>	<b>Risks and Assumptions</b>
	Active participation of municipalities and local stakeholders in flood protection	No participation	At least 10 municipalities start	Project reports	<ul style="list-style-type: none"> <li>- Local stakeholders are willing to discuss and agree on common approaches in flood protection</li> <li>- Municipalities start preparing local water management plans on time</li> </ul>
	Preparation of a joint booklet and its presentation	No such booklet	Booklet elaborated by March 2010	Project final reports Media reports	Stakeholders interested in using experiences from the booklet

## II.3 Implementation arrangements

Project will be implemented by GWP Slovakia. In each country, there are local GWP offices, which will be cooperating in national implementation. Each country will receive national budget. In addition, to arrange for the steering work by Slovakian lead, a relevant management budget was allocated. There will be contracts signed between GWP and each partner on undertaking specific tasks.

During the preparatory phase, the coordination meetings evolved in very good set up of partners and feasible communication amongst them. The project will use the same mechanism to secure interaction and integration of each national activity. Therefore, there will be regular communication between the national coordinators and moreover, regular meetings of all partners to discuss the quarterly workplans, issues raised by local stakeholders and harmonisation of project results. Each national experience and approach used to reach the project results will be reported and used especially for formulation of cross-border flood prevention strategy and for writing the cross-border booklet for local stakeholders.

The project has already developed a joint distribution list of all partners (there was a representative appointed by each partner for the project implementation) and during the project implementation this list will be used to provide regular information on ongoing activities to all partners and to disseminate the project results. Representatives of each partner will be responsible for internal distribution and proper actions in partner organisations.

Implementation of investments will be done by SVP and EKOVIŽIG. However, the preparatory works to start the investments will be consulted amongst all partners.

There is still missing detailed agreement on activities to be implemented in Ukraine. This will be done at the inception workshop. However, in addition to already selected partners, following partners showed interest in cooperation in Ukraine: Village council of Baranintsi, City council of Uzhgorod and other NGOs - Zakarpattya Oblast Organization of All-Ukrainian Ecological League and Uzhgorod city branch of All-Ukrainian Ecological League. Moreover, City council of Uzhgorod confirmed in-kind cofinancing to the project, amounting 500 USD related to organisation of meetings with local stakeholders.

In addition, there will be a regular communication with ICPDR secretariat on the project activities and the project progress in order to mitigate risks and to gain guidance towards tangible project results.

### II.3.a Project team

The project will be implemented and coordinated by GWP Slovakia. For the specific tasks, GWP Slovakia will hire the project team, which will comprise from:

**Project manager** (will also play the role of national coordinator in Slovakia) – Ms. Eleonora Bartkova.

**Technical experts** - Experts will be responsible for review of national plans, formulation of new measures, formulation of monitoring criteria in the Strategy, preparation of the booklet, preparation of documents for work with local stakeholders and presentations to state authorities.

### II.3.b Project supervisory bodies

#### Project will be supervised by Tisza group.

The Tisza expert group will provide supervision of the activities, the planned meetings and the option to take part at our workshops (invitation will be sent) will provide opportunity to comment the process, provide advices and critical remarks as well. The early warning on potential risks and barriers are very important since the duration of the demonstration project is very short.

### II.3.c Roles and responsibilities of partners and stakeholders

The project will collaborate at the top level with the relevant ministries and the “Committees for transboundary waters”, which should be the main force to arrange the flood prevention in Bodrog River Basin. Enhancement of proper functioning of the “Committees for transboundary waters”, on the national level by creating partnership with municipalities and local stakeholders will ensure the implementation and maintenance of the flood prevention measures, including creation of new temporary “space” for water during flood events. The Committees were already contacted and showed preliminary interest in cooperation. At the executing level the project will cooperate with the river basin authorities and other institutions, representatives of municipalities, NGOs, and others stakeholders.

#### **Project partners in Slovakia:**

**The Slovak Water Management Enterprise (SWMA)** will be responsible for implementation of restoration activities and will provide expertise for preparation of the strategy. Some of the works are covered under cofinancing of SVP.

**SHMU** - Provision of data for drafting the Strategy. Works are covered under cofinancing of SHMU.

**Municipalities in the Bodrog River Basin** are beneficiaries of the project activities. They will participate in the process of strategy formulation. Municipalities will cofinance project by in-kind contribution related to organisation of meetings with local stakeholders.

**Daphne** will be responsible for proposals for measures of integrated landscape management and for discussions with local stakeholders, especially farmers. These activities are covered under cofinancing by Laborec Uh project.

#### **Project partners in Hungary:**

**North-Hungarian Environmental and Water Directorate (EKOVIKIZIG)** - will be responsible for implementation of restoration activities and will provide expertise for preparation of the strategy. Some of the works are covered under cofinancing of EKOVIKIZIG.

**Environmental Protection and Water Management Research Institute (VITUKI)** Coordination of the Hungarian project activities and Provision of data for drafting the Strategy. Some of the works are covered under cofinancing of VITUKI.

**GWP Hungary** - Activities related to public participation and dissemination of information.

#### **Project partners in Ukraine:**

*Hydrometeorological Centre* - Provision of data for drafting the Strategy and monitoring of restoration activities

*Village council of Baranintsi* - organisation of meetings with local stakeholders

*City council of Uzhgorod* – organisation of meetings with local stakeholders. City council will provide in-kind cofinancing to the project related to organisation of meetings with local stakeholders.

*Zakarpattia Oblast Organization of All-Ukrainian Ecological League* - Activities related to negotiations with local communes, public involvement and dissemination of information.

*Uzhgorod city branch of All-Ukrainian Ecological League* - Activities related to negotiations with local communes, public involvement and dissemination of information.

*EcoCentre “Tisa”* - Activities related to public involvement and dissemination of information.

*Transcarpathian Administration of Melioration and Water Management (Vodhoz)* - Involvement in the preparation of the strategy, cooperation in implementation of restoration activities



## Budget

Outputs and activities	Expenditure account	Amount / quarter (USD)						TOTAL (USD)
		1-3	4-6	7-9	10-12	13-15	16-18	
<b>Output 1 Preparation of the strategy</b>								<b>0</b>
meeting with local stakeholders and national authorities to find common approaches in flood protection	experts, travel, hospitality, printing costs	2500	2500					<b>5000</b>
Activity 1.2 Brief review and comparison of national plans and strategies in flood	service contracts	5000	5000					<b>10000</b>
Activity 1.3 Formulation of the "Strategy"	service contracts		5000	5000				<b>10000</b>
conferences to present and discuss the strategy with local stakeholders and national authorities	experts, travel, hospitality, printing costs				8500			<b>8500</b>
<b>Subtotal for O1</b>		<b>7500</b>	<b>12500</b>	<b>5000</b>	<b>8500</b>	<b>0</b>	<b>0</b>	<b>33500</b>
<b>Output 2 Improvement of conditions of the original floodplains</b>								<b>0</b>
pilot demonstration site in Ukraine during Inception phase	hospitality, travel	500						<b>500</b>
preparation of interventions and agreements on new management approaches								
local stakeholders and Local Management boards established	service contracts		3500	3500				<b>7000</b>
Activity 2.4 Implementation of interventions*	service contracts			25000	25000	1500		<b>51500</b>
Activity 2.5 Official "opening" of interventions	hospitality						500	<b>500</b>
<b>Subtotal for O2</b>		<b>500</b>	<b>3500</b>	<b>28500</b>	<b>25000</b>	<b>1500</b>	<b>500</b>	<b>59500</b>
<b>Output 3 Dissemination of project results</b>								<b>0</b>
Activity 3.1 Meeting to inform local stakeholders on the project activities	experts, travel, hospitality,	1000	500	1000	500			<b>3000</b>
Activity 3.2 Writing articles into the national newspapers	experts, printing costs	500	500	500	500	500	500	<b>3000</b>
joint booklet and its presentation to the stakeholders	experts, travel, hospitality,				4500	5000		<b>9500</b>
Activity 3.4 Meetings with state authorities	experts, travel, hospitality,	500	500	500	500	500	500	<b>3000</b>
<b>Subtotal for O 3</b>		<b>2000</b>	<b>1500</b>	<b>2000</b>	<b>6000</b>	<b>6000</b>	<b>1000</b>	<b>18500</b>
<b>Project management, monitoring and reporting</b>								<b>0</b>
Project management and coordination		2000	1500	1500	1500	1500	2000	<b>10000</b>
Reporting**		1000		1500		1500		<b>4000</b>
Financial Audit							1500	<b>1500</b>
Miscellaneous		150	150	150	150	200	200	<b>1000</b>
<b>Subtotal PM</b>		<b>3150</b>	<b>1650</b>	<b>3150</b>	<b>1650</b>	<b>3200</b>	<b>3700</b>	<b>16500</b>
<b>TOTAL</b>		<b>13150</b>	<b>19150</b>	<b>38650</b>	<b>41150</b>	<b>10700</b>	<b>5200</b>	<b>128000</b>
								<b>128000</b>
<b>Expenditure accounts</b>								<b>Amount (USD)</b>
Project Staff	Project staff and experts (external or those of partners) contracted on project							26500
Travel & workshops	Local, international travel tickets, fuel, DSA, meeting rooms etc.							10000
Service contracts	Contracts with companies on different types of services							78500
Materials / equipment	Purchase of equipment required to undertake demonstration project							
Communication	Mobile and land telephone charges, postage and courier							500
Office supplies	Paper, cartridge							500
Hospitality	Refreshment to participants on the meetings, workshops (if DSA not charged)							5500
Audit costs	Financial audit costs							1500
Printing costs	Printing, copying, translation							5000
<b>TOTAL</b>								<b>128000</b>

## Cofinancing plan

Outputs and activities	Type of costs *	Partner / Stakeholder							TOTAL	
		UNDP/G EF project Laborec-Uh	Municipalities in Slovakia	GWP Slovakia	SHMU	SVP	VITU KU	EKOV IZIG		City council of Uzhorod
<b>Output 1 Preparation of the strategy</b>										
Activity 1.1 Preparatory meeting with local review and comparison	in-kind		500							500
Formulation of the "Strategy"	in-kind				20000		5000			25000
Activity 1.4 Joint conferences	in-kind		500							500
<b>Subtotal for O1</b>		<b>0</b>	<b>1000</b>	<b>0</b>	<b>25000</b>	<b>0</b>	<b>6000</b>	<b>0</b>	<b>0</b>	<b>32000</b>
<b>Output 2 Improvement of conditions of the original floodplains</b>										
Activity 2.1 Final										0
Activity 2.2	cash	15000				4000		4000		23000
Activity 2.3	in-kind		500						500	1000
Activity 2.4 Implementation of interventions*	cash					6000		6000		12000
Activity 2.5 Official "opening" of interventions										0
<b>Subtotal for O2</b>		<b>15000</b>	<b>500</b>	<b>0</b>	<b>0</b>	<b>10000</b>	<b>0</b>	<b>10000</b>	<b>500</b>	<b>36000</b>
<b>Output 3 Dissemination of project results</b>										
Meeting to inform local stakeholders on the project activities	cash, in-kind	1000	500							1500
articles into the national newspapers	cash			2000						2000
Activity 3.3 Joint booklet	cash			1000						1000
Meetings with state authorities	cash	1000								0
<b>Subtotal for O 3</b>		<b>2000</b>	<b>500</b>	<b>3000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5500</b>
<b>Project management, monitoring and reporting</b>										
Project management and coordination										0
Reporting**										
Financial Audit										
Miscellaneous										0
Activity PM.n										0
<b>Subtotal PM</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL</b>		<b>17000</b>	<b>2000</b>	<b>3000</b>	<b>25000</b>	<b>10000</b>	<b>6000</b>	<b>10000</b>	<b>500</b>	<b>73500</b>
										<b>73500</b>

## II.6 Reporting, monitoring and indicators

Continuous monitoring of the project progress and monitoring the project impacts in order to measure success of the project will be done as part of project management in respect to fulfilling the project workplan and checking, whether activities lead to achieving indicators as set in the project logframe. The project will especially make sure, that functional investments are in place and whether people had used it. At the Inception phase, the project team will finalise the monitoring criteria. During project implementation, representatives of the project team will participate on the regular meetings of ICPDR (Tisza group and stakeholder meetings) and stakeholder meetings as requested by UNDP.

### Baseline

In order UNDP can monitor the success of the project, a baseline situation for each output was identified in the logframe matrix. Achievement of the project results based on set indicators will be regularly checked on the quarterly basis as part of the quarterly progress reports.

The monitoring indicators are elaborated on output base (following the information summarised in the logical framework matrix).

<b>Indicators</b>	<b>Monitoring</b>
1. "Strategy for mitigation of floods for Bodrog River Basin countries" included into the national flood protection systems	Monitored on the quarterly basis, acceptance not later than month 15 in project duration
2. Change of land use, areas put under water during the floods	Monitored on the quarterly basis, partly achieved by end of project, fully achieved by year 1 after end of project
3. No. Of municipalities cooperating in formulation of flood prevention	Monitored on the quarterly basis, at least 15 municipalities should cooperate
4. Measures to increase conditions for flood control formulated, with view to create temporary "space" for water during flood events (using natural depressions)	Monitored on the quarterly basis, not later than month 7 of project duration
5. Measures elaborated to reduce possible adverse effects of floods on infrastructure necessary for sanitation and contaminated sites located in flood-prone areas, especially in case of contamination by hazardous substances.	Monitored on the quarterly basis, not later than month 7 of project duration
6. Monitoring needs elaborated to reflect the Bodrog river basin conditions	Monitored on the quarterly basis, not later than month 7 of project duration
7. Measures oriented on the public information and consultation elaborated for Sub basin scale (For Tisza basin scale measures are mandatory by WFD)	Monitored on the quarterly basis, not later than month 7 of project duration
8. No. of functional intervention in place in each country (Slovakia, Ukraine and Hungary)	Monitored on the quarterly basis, partly achieved by end of project, fully achieved by year 1 after end of project
9. Habitats conditions improved (related to	Monitored on the quarterly basis, partly

water regime and water quality, and agricultural use, including pasture, forestry, fishing, etc.)	achieved by end of project, fully achieved by year 2 after end of project
10. Local people are using implemented interventions	Monitored on the quarterly basis, partly achieved by end of project, fully achieved by year 1 after end of project
11. Active participation of municipalities and local stakeholders in flood protection	Monitored on the quarterly basis, partly achieved by end of project, fully achieved by year 1 after end of project
12. Agreement on restoration of other sites agreed on the national levels.	Monitored on the quarterly basis, achieved by end of project
13. Joint booklet elaborated and presented	Monitored on the quarterly basis, achieved not later than month 15 in project duration

## II.7 [Risks and management response](#)

**During preparation of the project proposal following risks have been identified:**

#	Description	Category	Impact & Probability	Countermeasures / Mngt response
1	There is no commitment from national authorities in each country that the cross-border “Strategy” will be approved; Stakeholder participation is not confirmed in order to achieve acceptance of the Strategy	Political	scale from 1 (lowest) to 3 (highest) P = 2	During the inception phase has to be achieved commitment with the national authorities and stakeholders
2	Due to the problem with human resources (having implemented two large-scale projects simultaneously) of the main Ukrainian partner - Transcarpathian Administration of Melioration and Water Management (Vodhoz) – pilot site in Ukraine is not yet identified	Operational	P = 2	It was agreed that final decision on the demonstration site in Ukraine will be made during the inception phase.
3	Willingness of farmers to cooperate is not yet confirmed Unclear ownership situation (especially in Slovakia and Ukraine, where there is high no. of small owners). In Hungary, 90% of land in Hungary is in hands of few big owners, with limited number of small owners	Strategic	P = 2	Conduct meetings with farmers aiming at pilot project implementation and identification of ownership
4	There are no sufficient data (contaminated sites, local landfills) to formulate the measures	Regulatory	P = 2	An agreement on management must be made. Local stakeholders will be contacted in order to achieve agreement on common approaches in flood protection and proposed interventions
5	Local management boards are not yet established	Organizational	P=2	Project will start close cooperation with local stakeholders on establishment of the boards

## II.8 Coordination with related initiatives

Following activities are relevant to the proposed project:

- Project “MOSES – Improvement of flood management system in Slovakia and Ukraine” focused on contribution to the development, implementation and management of a unified computer-based flood information system in the entire region. The proposed project builds on the existing experiences and networks developed within already implemented initiative.
- Project UNDP/GEF “Integration of Ecosystem Management Principles and Practices into Land and Water Management of Laborec-Uh region (Eastern Slovakian Lowlands)” (PIMS 2261). Among other activities, project selects and develops technical solutions for at least five pilot floodplain habitat restoration sites. The financing of restoration activities will be covered by this proposal.
- Project LIFE “Conservation of Senne and Medzibodrozie SPAs in Slovakia”. Overall objective of the project is to restore favourable conservation status of breeding and migrating birds from Annex I of Birds Directive and regularly migrating bird species in Senné and Medzibodrožie SPAs through securing appropriate habitats in key locations. Project prepares technical projects for water regime restoration (building 6 water gates and 6 sluices, reparation of dyke, water outlet and inlet in Senne NNR, restoring of meadows). The financing of restoration activities will be covered by this proposal.
  - Flood regulation of the Tisza River in the Carpathian Basin ÉKÖVIZIG – partner- 2002-2006
  - NKFP-3A/039/2002
  - Flood and catastrophe prevention policy at the border zone regions ÉKÖVIZIG Partner 2004-2007
  - Interreg III/C FLAPP Cooperation in the field of water management and environmental protection in the spirit of transboundary agreement ÉKÖVIZIG Project leader 2006-2008
  - Interreg III/A HUSKUA/05/02/170 Elaboration of joint land and water management concept based on water retention, investigation of its feasibility and design of some elements of it for the Bodrogcorner. ÉKÖVIZIG Project leader 2006-2008
  - Interreg III/A HUSKUA/05/01/041 Navigation development, nature protection and rural development at the Hungarian-Slovakian-Ukrainian transboundary zones. ÉKÖVIZIG Project leader 2006-2008
  - Interreg III/A. HUSKUA/05/02/169 VIMORE – Monitoring system to support water management decisions ÉKÖVIZIG Consortium member 2005-2007 GVOP-2004-3.1.1.
  - WETwin - Enhancing the role of wetlands in integrated water resources management for twinned river basins in EU, Africa and South-America in support of EU Water Initiatives VITUKI Consortium member 2008-2011
  - EU FP7
  - Flood protection system development for the Bodrogcorner at the Upper-Tisza and Bodrog left bank side ÉKÖVIZIG Project leader 2009-2013 KEOP-2.1.1/1F

### III. SUSTAINABILITY

By development of the “Strategy for mitigation of floods for Bodrog River Basin countries”, a framework for effective creation of new temporary “space” for water during flood events will be set up for each country. In addition, the “Committees for transboundary waters” will be the main force to arrange the flood prevention in Bodrog River Basin. Enhancement of their proper functioning on the national level by creating partnership with municipalities and local stakeholders will ensure the implementation and maintenance of the flood prevention measures, including creation of new temporary “space” for water during flood events. Pilot demonstration activities will serve as examples for the implementation of new approaches in other river basins. The flood control together with the natural conservation and floodplain reactivation could be effective only on the basis of a joint, harmonized ecological and land use methodology for the soil-water regime, available for planning sustainable land use strategy in the Slovak-Hungarian trans-border region (EGU, 2008).

The pilot project activities will focus on small scale restoration measures - simple technical solution which will be based on existing water management constructions. Proposed intervention will utilize affordable conditions which should not require big investments and following complicated maintenance of water construction. Therefore there are no preconditions for further financial demands. Demonstration projects are proposed to be in line with WFD objectives, influencing water balance at regional scale and medium scale.

### IV REPLICATION STRATEGY

By adoption of the “Strategy for mitigation of floods for Bodrog River Basin countries”, countries will be obliged to implement the measures defined. Global Water Partnership will use its own network to disseminate experiences from this project within the CEE region and its cooperation with Union of Municipalities in Slovakia (ZMOS), Hungary and Ukraine to replicate the principles of integrated water management into the normal Union of Municipalities practice. Moreover, development of cross-border coordinated plans for Bodrog river basins based on integrated ecosystem principles can be good basis to develop the national plans for other catchment areas. Cross-border EU programmes can be used for funding of remaining restoration activities.

Implementation of demonstration projects under PSP Tisza project will showcase concrete advantages of an integrated land and water management at the community – level in the wider context of river basin management actions addressing priority concerns in the Bodrog River Basin by wetlands and floodplain restoration actions.

The results of the demonstration projects will be disseminated widely and lessons learnt incorporated into the integrated management plan for the basin. This approach could serve as a good example for demonstrations of effective floodplain management strategies including the adaptation to increased flood events as a consequence of fluctuating flow regime in other river basin in each country. The crucial issue regarding implementation of proposed measures would be achievement of consensus with the land owners regarding proposed measures – remediation of floodplains. This brings better involvement of local governance institutions with long term responsibility sharing.

## Attachment 1 APPLICANT AND PROJECT PARTNERS INFORMATION

<b>Organization name</b>	<b>Global Water Partnership Slovensko - GWP Slovensko</b>
<b>Type of organization</b>	NGO
<b>Organization mission and activities</b>	Main mission of <i>Global Water Partnership Slovakia</i> - GWP Slovakia - (as part of the worldwide network GWP) is to create a platform in solving the problems of sustainable use of water resources and to mediate a dialogue between main interest groups in Slovakia. GWP has a branch organisation in each country of CEE region, including Hungary and Ukraine. GWP in Slovakia had established a partnership with Union of Municipalities in Slovakia (ZMOS) which evolved into organisation of joint activities and events.
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Boris Minárik Jeseniova 17, 833 15 Bratislava, Slovakia +421 2 5941 5224 +421 2 5941 5273 <a href="mailto:Boris.minarik@shmu.sk">Boris.minarik@shmu.sk</a> , <a href="mailto:gwpsr@shmu.sk">gwpsr@shmu.sk</a> <a href="http://www.gwpforum.org/">http://www.gwpforum.org/</a>

### Project partners in Slovakia

<b>Name:</b> Type of organization: Brief description of activities: Role in the project:	<b>The Slovak Water Management Enterprise (SWMA)</b> State enterprise SWMA is responsible by law for river basin management, and flood protection, including development of water management plans. Involvement in the preparation of the strategy, cooperation in implementation of restoration activities
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Stanislav Dobrotka Slovak Water Management Enterprise, the branch of Bodrog and Hornad River Basin , Ďumbierska 14, Košice ++0421 55 6008143 <a href="mailto:stanislav.dobrotka@svp.sk">stanislav.dobrotka@svp.sk</a> <a href="http://www.svp.sk">www.svp.sk</a>
<b>Name:</b> Type of organization: Brief description of activities: Role in the project	<b>Slovak Hydrometeorological Institute</b> State budgetary organisation Monitoring of water quality and quantity, weather forecast including hydrological situation forecast during floods events and involvement in Water Framework Directive implementation. Provision of data for drafting the Strategy
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Lea Mrafková Jeseniova 17, 833 15 Bratislava, Slovakia +421 2 5941 5225 +421 2 5941 5373 <a href="mailto:lea.mrafkova@shmu.sk">lea.mrafkova@shmu.sk</a> <a href="http://www.shmu.sk/">http://www.shmu.sk/</a>
<b>Name:</b> Type of organization: Brief description of activities: Role in the project:	<b>Municipalities in the Bodrog River Basin</b> Local self-administration Elaboration of local Flood protection management plans, mainly in case of flood events Beneficiaries of the project activities and participants/active involvement when the strategy will be prepared

<b>Name:</b>	<b>Daphne</b>
Type of organization:	Non-governmental organisation
Brief description of activities:	Implementing projects focused on the conservation of grassland and wetland ecosystems. Basic findings of scientific research determine optimal restoration and management plans, which are implemented with the close co-operation of local people.
Role in the project:	Will be responsible for proposals for measures of integrated landscape management and for discussions with local stakeholders, especially farmers. These activities are covered under cofinancing by Laborec Uh project.
<b>Contact person</b>	
Name:	Jan Šeffler
Address:	Podunajská 24, Bratislava
Phone:	++4212 455 240 19,
Fax:	++4212 456 402 01
e-mail:	<a href="mailto:jansef@daphne.sk">jansef@daphne.sk</a>
web-site:	<a href="http://www.daphne.sk">www.daphne.sk</a>

#### Project partners in Hungary

<b>Organization name</b>	<b>North-Hungarian Environmental and Water Directorate (ÉKÖVIZIG)</b>
<b>Type of organization</b>	State organisation
<b>Organization mission and activities</b>	River basin management including development of water management plans; flood protection; promoting water supply; hydrological monitoring; hydrographical survey; agricultural water management and melioration.
<b>Contact person</b>	
Name:	Ms Ildikó Dobainé Friedel
Address:	H-3530 Miskolc, Vörösmarty utca 77., Hungary
Phone:	+36-46-516-600
Fax:	+36-46-516-611
e-mail:	<a href="mailto:Dobaine.Friedel.Ildiko@ekovizig.hu">Dobaine.Friedel.Ildiko@ekovizig.hu</a>
web-site:	<a href="http://www.ekovizig.hu">www.ekovizig.hu</a>
<b>Organization name</b>	<b>VITUKI Kht</b>
<b>Type of organization</b>	Non-profit research institute
<b>Organization mission and activities</b>	Research in water resources management issues, including elaboration of flood maps and flood risk maps for flood areas. Hydraulics research and applications; Hydrological measurements, river and lake surveys; groundwater protection research; Leading national and international research projects on water resources management and environmental protection; environmental survey, audit and impact assessment.
<b>Contact person</b>	
Name:	János Fehér
Address:	H-1095 Budapest, Kvassay Jenő út 1.; Hungary
Phone:	+36-1-2158160-2308 OR +36-30-841-1590
Fax:	+36-1-216-1514
e-mail:	feher.janos@vituki.hu OR feher.medve@t-online.hu
web-site:	<a href="http://www.vituki.hu">www.vituki.hu</a>
<b>Organization name</b>	<b>GWP Hungary</b>
<b>Type of organization</b>	NGO
<b>Organization mission and activities</b>	Main mission of Global Water Partnership Hungary - GWP Hungary - (as part of the worldwide network GWP) is to provide platform and facilitate the implementation of integrated water resources management (iwrn) and to mediate a dialogue between main interest groups in Hungary. GWP has a branch organisation in each CEE region country.

<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Gyula Reich H-1119 Budapest, Etele út 59-61. +36-1-371-1333 +36-1-371-1333 gwpmo@gwpmo.hu or rewebt@t-online.hu <a href="http://www.gwpmo@gwpmo.hu">www.gwpmo@gwpmo.hu</a>
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#### Project partners in Ukraine

<b>Organization name</b>	<b>Village council of Baranintsi</b>
<b>Type of organization</b>	Local self-government
<b>Organization mission and activities</b>	To manage all social, economic and environmental activities in the village
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Village head Chuchka Pavlo Pavlovych Branintsi village, Uzhgorod rayon, Zakarpatska Oblast +380 50 372-23-61 +380 31 271-42-87
<b>Organization name</b>	<b>City council of Uzhgorod</b>
<b>Type of organization</b>	Local self-government
<b>Organization mission and activities</b>	To manage all social, economic and environmental activities in Uzhgorod
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Member of city council, executive director of Association of Cities of Ukraine Luksha Oleg Vasylievich Poshtova ploschaa, 3 office 104, Uzhgorod +380 50 611-33-15 +380 31 223-20-83 <a href="mailto:zakarpatty@ukr.net">zakarpatty@ukr.net</a>
<b>Organization name</b>	<b>Zakarpattya Oblast Organization of All-Ukrainian Ecological League</b>
<b>Type of organization</b>	NGO
<b>Organization mission and activities</b>	It is one of the most famous NGOs in Ukraine, established in 1997 with branches, covering all territory of Ukraine. Its main mission is to improve environmental situation in the country and to increase the level of ecological education and culture of Ukrainian citizens. Projects:
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Head of the Organization Lobko Vasyl Yurievich Goydy, 8, Uzhgorod +380 95 353-50-08 +380 31 266-47-40 <a href="mailto:chimlab@gmc.uzhgorod.ua">chimlab@gmc.uzhgorod.ua</a>
<b>Organization name</b>	<b>Uzhgorod city branch of All-Ukrainian Ecological League</b>
<b>Type of organization</b>	NGO
<b>Organization mission and activities</b>	To support the activities of All-Ukrainian Ecological League in city of Uzhgorod
<b>Contact person</b> Name:	Head of Uzhgorod branch Manivchuk Vasyl Mykolayovych

<b>Address:</b>	Slovyanska naberezhna 5 Uzhgorod
<b>Phone:</b>	+380 50 432-70-60
<b>Fax:</b>	+380 31 261-27-14
<b>e-mail:</b>	<a href="mailto:wasko@gmc.uzhgorod.ua">wasko@gmc.uzhgorod.ua</a>
<b>web-site:</b>	

<b>Organization name</b>	<b>Transcarpathian Administration of Melioration and Water Management (Vodhoz)</b>
<b>Type of organization</b>	State administration organization
<b>Organization mission and activities</b>	Water management including flood protection
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Rebryk Svitlana Uzhorod ++80675824933  <a href="mailto:rebyks@vodohosp.uzhgorod.ua">rebyks@vodohosp.uzhgorod.ua</a>
<b>Organization name</b>	<b>Transcarpathian Hydrometeorological Centre</b> Provision of data for drafting the Strategy and monitoring of restoration activities
<b>Type of organization</b>	State administration organization
<b>Organization mission and activities</b>	Water management including monitoring of data related to hydrology, flood events risk management
<b>Contact person</b> Name: Address: Phone: Fax: e-mail: web-site:	Vasil Manivchuk Uzgorod + 3805 432 70 60 Fax: +38031261 2714 <a href="mailto:wasko@gmc.uzhgorod.ua">wasko@gmc.uzhgorod.ua</a>
<b>Organization name</b>	<b>EcoCentre "Tisa"</b> Public participation and involvement
<b>Type of organization</b>	NGO
<b>Organization mission and activities</b>	Activities related to public involvement and dissemination of information
<b>Contact person</b> Name: Address:  Phone: Fax: e-mail: web-site:	Andrij Mihaly Zagorska Str., 126 Uzhgorod 88017 Ukraine +380 312 616 674/615 315 +380 312 231 233 <a href="mailto:mihaly@ua.fm">mihaly@ua.fm</a>

## Attachment 2

UNDP/GEF Tisza MSP

Demonstration Projects

### ICPDR - REPORTING, MONITORING AND EVALUATION REQUIREMENTS

#### Reporting, monitoring and evaluation requirements

The ICPDR (together with UNDP and GEF) place a strong emphasis on project reporting, monitoring of progress and evaluation of the activities. This document sets out the expectations for these requirements by the demonstration projects being undertaken under the ICPDR-led UNDP/GEF Tisza MSP. The timing of the reports will be defined in the implementation contract between the ICPDR and the demonstration project co-ordinator.

**Logical Framework Matrix:** This will be prepared during the proposal stage and provides clear statements of the projects, objectives, outcomes, outputs and activities. The logframe also provides performance and impact indicators together with means for verification of these indicators. The logframe will be an essential document in the reporting, monitoring and evaluation of the demonstration projects activities.

**Inception report:** Each demonstration project will hold an inception workshop to further present, discuss and refine the work programme involving key stakeholders of the project. The results of this workshop, together with any other issues, should be presented to the ICPDR in an 'Inception Report'.

**Quarterly Reports:** Brief progress reports giving details of the work undertaken in the last quarter, planned for the next quarter, problems encountered (and recommended solutions), meetings and a financial summary should be submitted every 3 months. These reports should highlight progress with reference to the project logframe. This document should be less than 5 pages. After 9 month an Interim Financial Report should be delivered.

**Draft and Final Technical and Financial Reports:** The technical reports should present a clear account of the activities undertaken, outputs achieved, outcomes expected, lessons learnt, opportunities for replication etc. The Final Financial Report shall contain eligible expenditures and payments received.

**Workshops and meetings:** A representative of the demonstration project will be expected to participate at the ICPDR's Tisza Group meeting held jointly with the UNDP/GEF Tisza workshops to present progress and to give examples of how the demonstration project can best assist the river basin management process. In addition, two regional stakeholder meetings will be organised by UNDP within the Tisza River Basin and these meetings will serve as important opportunities to present the activities and results of the demonstration projects. These stakeholder workshops will coincide with the mid-point and the end of the demonstration projects work and will provide input to the mid and final evaluation of the projects.

**Independent Mid-term and Final Evaluation:** A review of the progress of the project will be made after 9 months. This will closely examine the activities

undertaken, the achieved (or planned results) and make recommendations for any mid-term corrections needed to the work programme. A final evaluation will be undertaken following completion of the project and will examine the overall impact of the project against the project logical framework. The demonstration project will be responsible for funding of the mid-term and final evaluation including a financial audit and will select experts to undertake this in agreement with the MSP project management team of the ICPDR. All organisations must keep accurate and regular records and accounts of the implementation of the Action and all supporting documentation to justify their eligible cost. Financial transactions and financial statements shall be subject to an internal and/or external Audit.

### **Attachment 3 - Annexes**

- Annex 1 Table on reservoirs and polders in Ukraine
- Annex 2 Overall review of Tisza riverbasin – location of pilot projects in Slovakia and Hungary
- Annex 3 Pilot demonstration site in Slovakia (Čierna voda riverbasin, Senné depression)
- Annex 4 Pilot demonstration site in Slovakia (Čierna voda riverbasin, confluence of drainage channel with Žiarovnica stream)
- Annex 5 Pilot demonstration site in Hungary – Ortho-photo map of Viss-Oxbow area
- Annex 6 Water retention of Viss dead channel
- Annex 7 Pilot demonstration site in Hungary – Map of Viss-Oxbow area and Tokaj-Bodrogcorner Landscape protection district

Annex 1 Table on distribution of the reservoirs and polders in Ukraine

River	Number			Capacity, Mm <sup>3</sup>		
	of flood retention reservoirs					
	Total	till 2005	till 2010	Total	till 2005	till 2010
Uzh	5		3	50		29
Latorytsa	8		2	62		14
Borzhava	7	1	3	25	7	16
Rika	6	1	2	29	15	19
Tereblya	1	1	1	20	20	20
Teresva	4	1	3	37	19	32
Tisza	11	4	6	65	30	42
<b>Total reservoirs</b>	<b>42</b>	<b>8</b>	<b>20</b>	<b>288</b>	<b>91</b>	<b>172</b>
	Polders					
Tisza	16	12		142	4	
Borzhava	6			92	6	92
<b>Total polders</b>	<b>22</b>			<b>234</b>		
<b>Total retention</b>	<b>64</b>			<b>522</b>		

Annex 2 Overall review of Tisza riverbasin – location of pilot projects in Slovakia and Hungary

Map 1: Overall review of Tisa riverbasin - location of pilot projects in Slovakia and Hungary



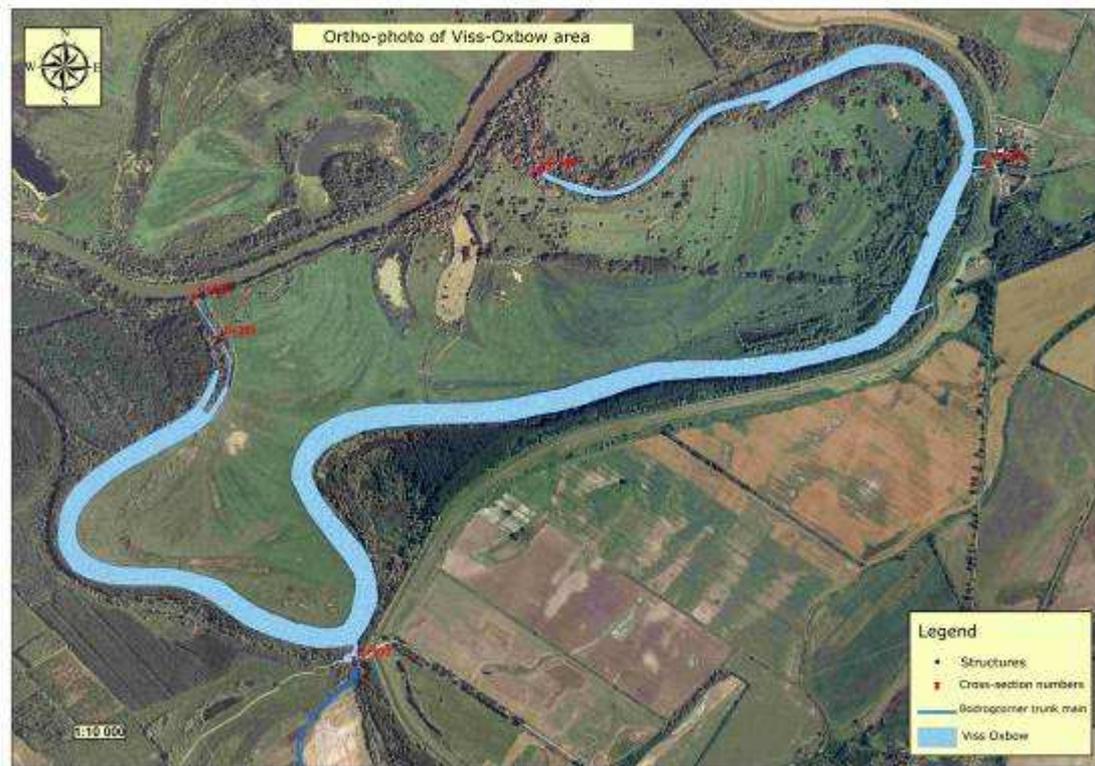
Annex 3 Pilot demonstration site in Slovakia (Čierna voda riverbasin, Senné depression)



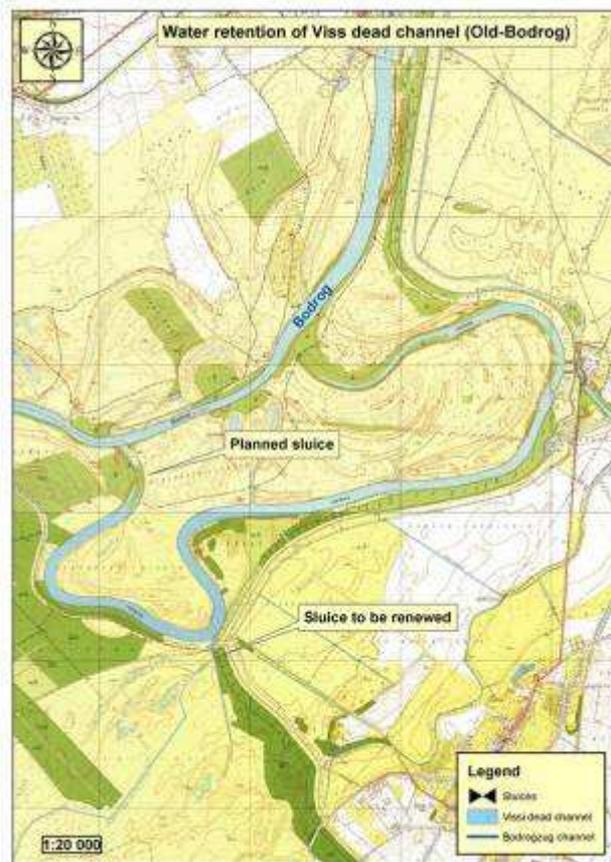
Annex 4 Pilot demonstration site in Slovakia (Čierna voda riverbasin, confluence of drainage channel with Žiarovnica stream)



Annex 5 Pilot demonstration site in Hungary – Ortho-photo map of Viss-Oxbow area



Annex 6 Water retention of Viss dead channel



Annex 7 Pilot demonstration site in Hungary – Map of Viss-Oxbow area and Tokaj-Bodrogcorner Landscape protection district

