GENERAL INFORMATION

PETUS description of tool in use	
Name of the case	**Project for a New Bridge over The Danube (Vidin -Calafat)**
Name of the tool	**Preliminary EIA report**
Country	**Bulgaria**
City / region Total area (km2) Population Density (people/km2)	**Vidin Municipality** 501.3 sq. km 77167 inhabitants (2002) 153.93 inhabitants/sq. km
Tool user's profile **a.** Organisation name (municipality, NGO, national or regional department, company, etc.)	**ERM** (Environmental Resources Management) **Lahmeyer International** – commissioned by Bulgarian Ministry of Transport and Communications to conduct EIA; **subcontractors:** IRIN – Sofia, IPTANA – Bucharest
b. Field of activity	**ERM Lahmeyer International -** "All-Environmental" consultancy: Strategic Advice, Development Impacts and Planning, Managing Liabilities and Risks, Managing Contaminated Sites, Permitting and Technical Work **IRIN – Sofia** – consultancy in EIA
c. Detailed contact/feedback (project website, e-mail, address, tel., fax)	**c.** IRIN – Sofia **Dobrin Denev** Sofia 1046 1,Chr. Smirnenski Blvd., Building B, 3rd floor Tel.: +359 2 865 50 79 e-mail: **dean_fte@uacg.bg**
Reviewer, date	Ina Kovacheva, last updated April 2005

Short description of the case

abstract up to 300 words

The case presents in detail the development of a project for the construction of a new bridge over the Danube. The proposed new transport link would serve local, regional and long-distance traffic between Western and South-Eastern Europe along the route of Pan-European Corridor 4. The construction of a second Danube crossing is of strategic importance and could generate benefits not accessible by traditional projects of national scale.

The case illustrates EIA implementation under peculiar conditions that require trans-border co-operation and coordination between Bulgarian and Romanian governments. As the construction of a new bridge over the Danube is a priority of EU transport corridors development, an effective interaction of EU policy documents with national legislation and regulations of both countries was required. The bridge is expected to significantly influence the urban development of the town of Vidin, so its impact to local processes was also to be evaluated.

To which PETUS key-problem is this case study related?

Transport key problems: Overall impact of a new transport connection or the improvement of the capacity of an existing one

Sector	Waste	Energy	Water	Transport	Green/blue	Building & Land Use
				X		

Scale of project	Component	Building	Neighbourhood	City	Region
				X	**X**

Status of project	Starting up	Ongoing	Finished	Start date	End date (exp.)
	X			2000	

Key words

transport, EIA, urban development, local assessment, indicators

Project	
Object (building, city park, wind farm, etc.)	Transport Bridge over Danube
Type of activity (regeneration, renovation, new development, etc.)	New development
Type of product (plan, scheme, design project, etc.)	Design project
Tool	
a. Character (according to WP3final0704.doc)	**a.** Assessment method
b. Benchmarks (qualitative or quantitative)	**b.** Qualitative and quantitative
c. Availability (paid/ free)	**c.** EIA manual available for free
Decision-making process	
a. Stage of the tool implementation (preliminary, midterm, etc.)	**a.** Preliminary
b. Level (political, technical, etc.)	**b.** Technical
c. Public participation	**c.** Yes (public discussions before and after tool implementation)
Other *(optional, if needed)*	

DETAILED INFORMATION

A. Detailed description of project and tool	
1. Description of context (existing strategies, laws, policy, action plans, etc.): EU, national, regional, municipal	**National Strategy for the transport infrastructure development in the period 2000- 2006.** Three main priorities are outlined in the transport sector in Bulgaria: ▪ Harmonisation of national legislation and transport regulations with those of the European Union Member States; ▪ Development of the transport infrastructure; ▪ Implementation of the Structural Reform and privatisation in the transport sector. According to the Strategy the potential negative environmental effects of the sector development should be foreseen and minimised. Formulating broadly acceptable environmental solutions in connection with traffic growth and undesirable modal split by providing sustainable infrastructure construction are some of the challenges to be met. The **key objectives** in solving the environmental problems caused by the transport sector and concerning the urban development comprise: ▪ Improving the environmental performance of transport infrastructure plans and projects – all transport infrastructure projects should have **an EIA report,** the principles of which have to be applied to all levels of decision-making with the respect to development of the transport infrastructure network; ▪ Limiting the increase of transit inter-urban car traffic; ▪ Improving urban bus transport with respect to environmental aspects; ▪ Promoting the use of rail transport; ▪ Promoting the use of combined transport, etc. In accordance with the National Strategy a **Programme for Transport Infrastructure**

	Development for the period 2001- 2005 (PTID) was elaborated in 2000, incorporating projects of multi-national importance situated along the Pan-European Corridors. The priority infrastructure projects were determined according to adopted selection criteria: ▪ state of transport infrastructure at the beginning of 2001; ▪ forecast for the overall national economic development for the period; ▪ forecast for the increase in traffic flow as a result of the general economic growth and the country's new political and economic links within the region and in Europe; ▪ compliance with national and European priorities in creating a Pan-European transport network. The **main goals** of the PTID comprise: ▪ Development of the country's transport infrastructure as an integral part of the Trans-European Network (European transport corridors N 4, 7, 8, 9 and 10, crossing Bulgaria); ▪ Reconstruction and modernization of the existing transport infrastructure in compliance with EC standards and requirements; ▪ Development of environment friendly transport systems and technologies for freight and passenger transportation, decreasing the negative impact of transport on the environment and human health; ▪ Development of rail infrastructure, modernization and electrification of railway transport; ▪ Increasing the safety of all modes of transport; ▪ Promoting and accelerating the development of combined transport; ▪ Introducing telecommunication and informational technologies into all modes of transport. Priority goals for the development of the national transport infrastructure are the achievement of high-quality local services and the integration with the European transport infrastructure. The development of the national transport infrastructure is expected to contribute for generating conditions to attract transit traffic along the Eurasian transport corridors and to provide rapid and comfortable railways and roads. This goal is to be achieved by strategic projects based on trans-border cooperation.

2. Description of project **a.** Background (What caused the initiation of the project?; What was the problem? Who initiated the project?);	**a. One of the Main Investment Projects (included in PTID) for Infrastructure Development** along **Pan-European Transport Corridor 4** includes the construction of a second Danube bridge between Bulgaria and Romania to cross the river at kilometre 796 in the vicinity of two towns: Vidin in Bulgaria and Calafat in Romania (Fig. 1). The bridge construction was considered essential for the overall improvement and development of Transport Corridor 4 and will affect other major projects in Bulgaria. The proposed bridge was to be a road/rail one with possibly a dual 2-lane carriageway standard and a single electrified railway line (technical parameters still to be determined). Links to the existing road and railway infrastructure were also planned. The location at the Vidin-Calafat bridge brings benefits to the local population, too.  ***Fig.1*** *Locality of Vidin town* Vidin is situated 199 km north-west of Sofia, on the right bank of the Danube. At present it is linked to Calafat by a ferry. The initiative for the project elaboration was undertaken by Bulgarian Government through proposing 10 relevant places (recommended by ERM Lahmaeyer International) for the bridge location. Romanian Government accepted the territory near the towns of Vidin and Calafat as most suitable. **Actors in the project development:** Bulgarian and Romanian governments, strategic donors, financial supporters (Kreditanstalt fur Wiederaufbau (KfW), European Investment Bank (EIB), Phare, Agence Francaise de development (AfD), ISPA), Municipalities of Vidin and Calafat, planning and design companies, local private business.
b. Objectives/aims (sustainability statement – what issues of sustainability were attacked);	**b.** The construction of a second combined road and rail bridge over the Danube is one of the priority projects included in the *Stability Pact* for international assistance. The project **objective** is to provide a second fixed Danube crossing between Bulgaria and Romania, which are at present connected by a single road/rail bridge at Ruse-Giurgiu, some 300 km downstream.

c. Time interval and stages of project realisation;

c. The project life cycle follows five main stages:

- Preliminary studies;
- Project and design management;
- Bridge construction;
- Construction of the adjacent infrastructure;
- Bridge operation.

The first stage comprised a Preliminary Study on the Environmental Impact Assessment, Preliminary study on Economic, Financial and Technical analyses and Updating of the **Territory Settlement Plans (TSP)** of Vidin (approved in 2002) and Calafat in the area of the New Bridge. (Fig. 2)

Currently (2004), a procedure for elaboration of a final bridge design project is going on, which is based on the conclusions and recommendations of the preliminary studies.

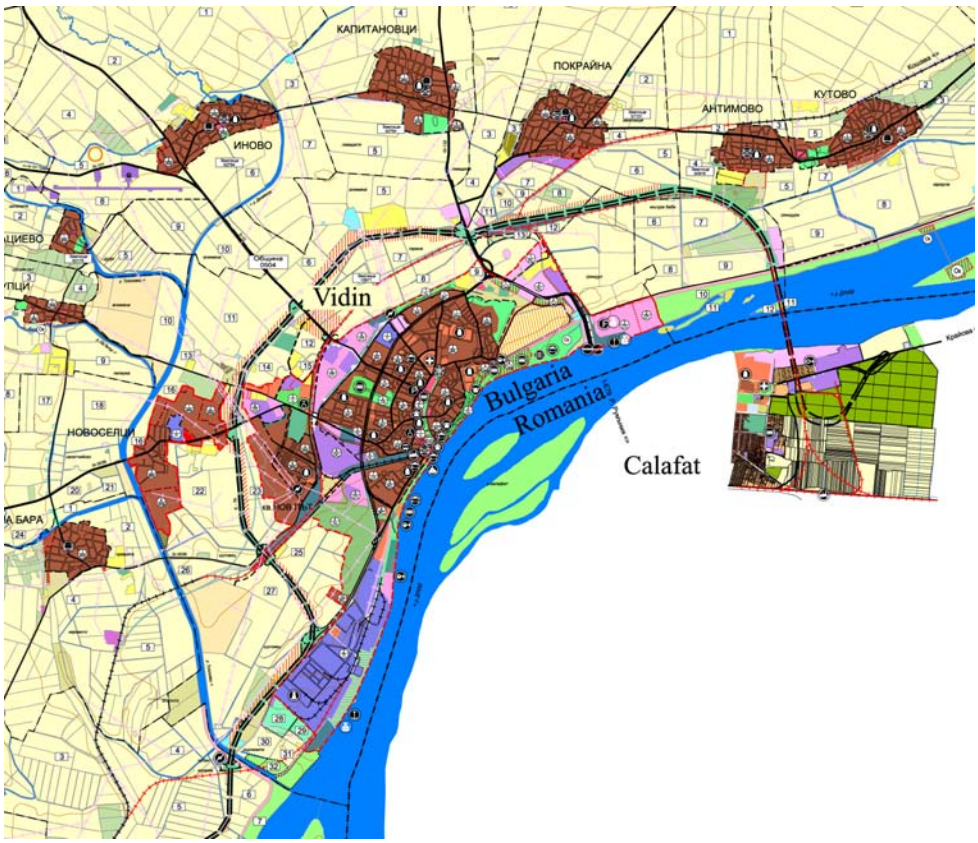
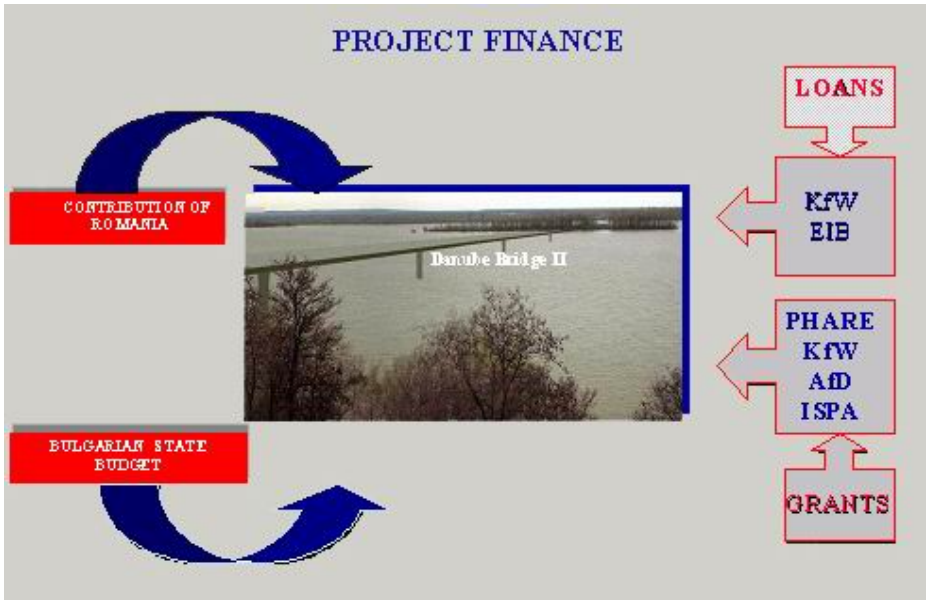
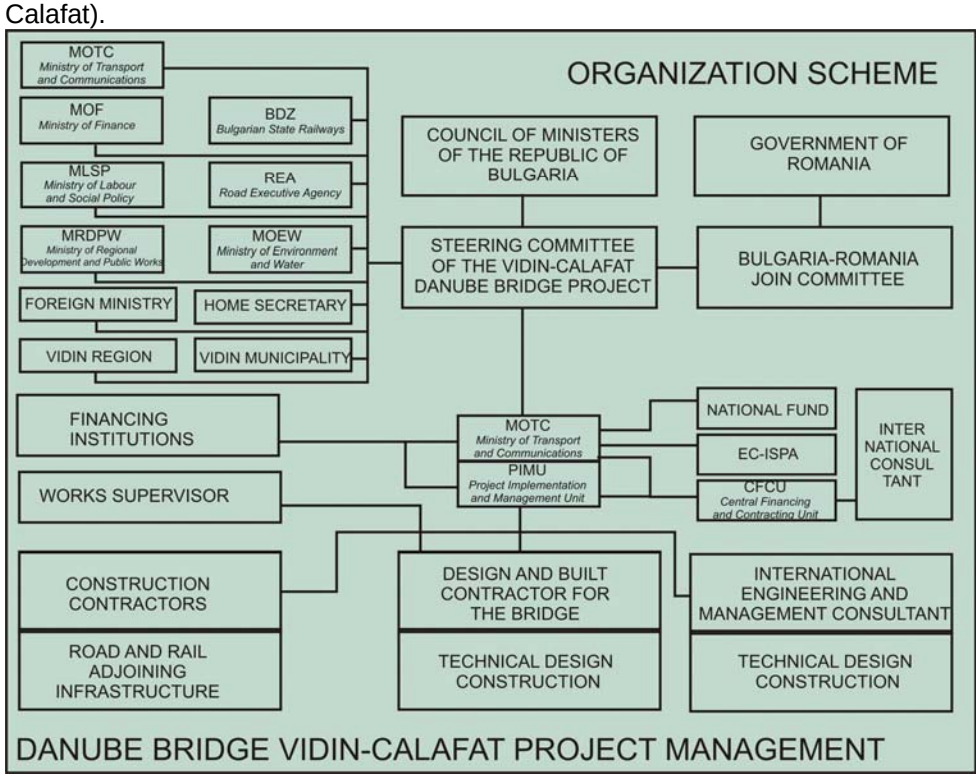


Fig.2 *Final Vidin Territory Settlement Plan*

d. Financing – amount, sources, institutions involved, partnerships, levels.	**d.** An agreement regulating technical, financial, legal and organizational issues was signed between Bulgarian and Romanian Governments in June 2000. Subsequently Bulgarian Government provided the financing of both the preliminary studies and the partially for construction through five agencies –*EIB, Phare, ISPA, AFD, KfW and national Bulgarian budget* (Fig. 3).  ***Fig.3*** *Project finance scheme*
e. Other sectors involved in the particular project/problem (conflicts and/or links)	**e.** A waste management problem was identified by the preliminary studies (EIA and Economic, Financial and Technical analyses.). Thousands of tones of construction waste were foreseen during the bridge construction while the adjacent sites were estimated not to relevant capacity for land filling. It was recommended to build proper landfills before the bridge construction starts.
3. Description of tool **a.** Character (according to WP3final0704.doc) - calculation tools, process tools, assessment methods, generic tools, simulation tools, guidelines, framework tools, schemes, indicators and monitoring, checklists, case-specific tools;	**a**. The tool comprises an assessment method. The ERM Lamayer International was commissioned by Bulgarian Ministry of Transport and Communications to conduct a Preliminary EIA. The study was carried out by ERM Lamayer International, Germany, in cooperation with IRIN, Sofia, assisted by IPTANA, Bucharest, and GeoMarine, Sofia. The Preliminary EIA of the bridge and its adjacent infrastructure was accomplished in July 2001. The tool comprises: (1) Obligatory components according to legislation: ▪ Project background – project description and site conditions; ▪ Legal and administrative framework; ▪ Analysis of the existing environmental conditions; ▪ EIA Report on air quality, surface and ground water, waste, land and soils, riverbank and island erosion, geology and foundation, flora, fauna, landscape, noise, cultural and historical heritage and recreation zones; ▪ Analysis of main project alternatives; ▪ Impacts of accidential situations - risk to human health and environment; and measures to avoid accidents; ▪ Mitigation of environment impacts; ▪ Supervision and monitoring; (2) Additional components according to the peculiar situation – investigation of impact on present and planned recreation zones in the proximity of the bridge. Each of the components was considered for both Bulgarian and Romanian riverbanks. The Preliminary EIA stressed on the impacts of the main project stages – construction of adjoining infrastructure, construction of the bridge and the operation phase. Two traffic scenarios were considered: (1) low growth of traffic (LGT) and (2) high growth of traffic (HGT). The second one considers the possibility of no traffic passing through Serbia (as a result of UN embargo).

b. Availability of the tool (web-based / paper, paid / free, etc.)	**b.** The Tool Implementation Manual is paper-based and downloadable for free in Internet: http://europa.eu.int/comm/environment/eia/home.htm
c. Based on existing tool or newly elaborated;	**c.** The Preliminary EIA was based on EU tool.
d. Adaptation of the tool to the local context (are there local experts involved in tool's development?)	**d.** The tool was adapted to meet the need for cooperation between Bulgaria and Romania; local experts from both countries were involved in the implementation process.
e. Other tools implemented to support the project development	**e.** Preliminary Environment Impact Study (EIS), Public forums, TSPs, etc.
B. Tool implementation	
1. Argumentation for choosing the tool **a.** What were the reasons for the implementation of the tool? (voluntary or requested by what local, national, etc regulation) **b.** Who took the initiative for choosing /elaboration the tool?	**a. & b.** The tool was chosen in accordance with EU legislation and respective national legislation in Bulgaria and Romania where an EIA report for the project is mandatory. The relevant Environmental Legislation to be considered comprises: ▪ EIA Directive (EU legislation) on Environmental Impact Assessment of the effect of projects on the environment as amended in 1997; ▪ Bulgarian regulation No 4 on Environmental Impact Assessment; ▪ Romanian Law on Environmental Protection No 137/1995.
c. What were the criteria for choosing the tool?	**c.** EIA is required by Bulgarian national legislation (*Environmental Protection Act*) for national and regional investment development projects, programmes, regional and urban plans and their changes, and for plans, leading to land-use change for specific activities.
d. Was there knowledge of other tools and were they considered?	**d.** A Preliminary Environment Impact Study (EIS) was accomplished before the preliminary EIA. EIS was a part of an overall investigation program comprising economic, financial and social analysis, geological and hydrotechnical investigations. Apart from the investigation programmes a report was elaborated named "Analysis of the impacts of Danube Bridge 2 on the management of municipal solid waste and construction waste". The different waste generation sources caused by the bridge construction and their impact on the municipal waste collection and disposal system were analyses. Potential areas for waste land filling were identified. The Preliminary EIA Report was based on all these studies.
2. Barriers for the tool implementation What were the main problems in the tool implementation? (Regulation, information available, public awareness, lack of clear SD definitions and benchmarks, communication etc.)	Difficulties in compiling the information were mainly caused by the insufficient data base on flora and fauna. The available topographic maps proved to be outdated.
C. Influence of the tool on the decision-making process	
1. Description of the decision-making process/ procedures	**Actors involved in the decision-making process:** Bulgarian Government (represented by Ministry of Transport and Communications and Ministry of Environment and Waters); Romanian Government; European strategic donors (AfD, ISPA, KfW, Phare), financial supporters (KfW, EIB), EIA report team, local business, citizens of Vidin and Calafat, environmental organizations and NGOs. The decision-making process is outlined by the legislative framework for EIA implementation. Nevertheless the cooperation posed the necessity for a specific decision making scheme concerning the project development. It needed a unit to coordinate, organize and manage all life cycle processes. For that reason the Project

	Implementation and Management Unit (**PIMU**) was created and began functioning in Bulgarian Ministry of Transport and Communication in July 2000. Mainly experts in construction were involved in PIMU – an expert engineer in railway sector (team leader), a bridge engineer, an engineer in construction, a railway engineer). Financial and legislation experts were also included; other experts were contracted for specific research or consultation.
a. Stages **b.** Levels (political, technical, etc.)	**a. & b.** The decision making process follows an organization scheme generally divided into three main levels (Fig.4): ▪ Political – decisions made by both governments, ministries, municipalities and the steering committee concerning the development framework of the project; ▪ Financial – decision about the project budget (Ministries of Finance); ▪ Planning – decisions about the technical design construction, planning of the adjoining infrastructure and updating of the Master Plans of both towns (Vidin and Calafat).  ***Fig.4*** *Organisation scheme of the project implementation*
c. Sources of information used during the dmp;	**c.** No information available
d. Who are the decision-makers?	**d.** Bulgarian Government (represented by Ministry of Transport and Communications and Ministry of Environment and Waters); Romanian government, strategic donors (AfD, ISPA, KfW, Phare) and financial supporters (KfW, EIB).
e. Who made the final decision for the project implementation? Was it political or technical decision?	**e.** The final decision for the project continuation was made by the Minister of Environment and Water of Bulgaria. After the implementation of the Preliminary EIA the Minister endorsed the transition to the next design stage. The political decision (made by the Minister of Environment and Water) was based on the expert conclusions in the EIA report.
2. Tool in decision-making process **a.** At what stage was the tool implemented? By whom? (experts, politicians, etc.)	**a.** The tool was implemented by an international expert team (Bulgaria – 8 experts, Romania – 4 experts and Germany – 4 experts) in the initial stage of the project to outline and argument needed changes in the design and construction process.
b. How did the tool output influence the process (added or skipped levels/stages in the existing decision-making	**b.** The **Preliminary EIA Report** was approved by Bulgarian and Romanian national authorities in February 2002 after public consultations. Key decisions were made in Bulgaria by the Ministry of Environment and Water and the Ministry of Transport and Communications, based of the Preliminary EIA Report and the public consultations:

process, etc.)?	▪ The Minister of Environment and Water of Bulgaria endorsed the transition to the next design stage; ▪ A procedure for development and approval of the Final EIA Report was adopted (relevant to Bulgarian and Romanian legislation systems); ▪ Preparation of an agreement started on the approach and procedures for the approval of the updated Master Plans of Vidin and Calafat regions. The recommendations of the preliminary EIA Report provided the basis criteria for the final choice among elaborated alternative design projects.
c. Qualitative goals or benchmarks defined? (If YES, which – and what were they compared to?)	**c.** The collection of the samples for ambient air quality was carried out in compliance with Bulgarian State Standard (BSS) and Romanian standard norms. A Maximum Allowable Concentration (MAC) was set for every parameter. All methods applied are in conformity with effective BSS and with EU directives concerning the quality of the air, waters, lands etc. The methods applied are described and the benchmarks used are listed in the report (example: *Method for determination of sulphur dioxide*. Benchmark used BSS 17.2.4.17-83 and its equivalent of the method ISO 6767:1990 (EQU), etc.)
d. Was the tool used to support argumentations?	**d.** The EIA report was used to provide argumentation for undertaking the next project implementation stage – the bridge design.
3. Transparency of decision-making process **a.** How was the information of the dmp disseminated? - directly (decision makers – public) or indirectly (decision makers - NGO, PR company, etc. - public); sources of dissemination used (mass media, internet, brochure, etc.)	**a**. The information about the decisions concerning the bridge project in Bulgaria was disseminated by Ministry of Environment and Water, Ministry of Transport and Communications and Vidin Municipality. Mass media and Internet were the main dissemination sources.
b. How was the public involved?	**b.** The public was involved in the decision making process through two public discussions.
c. Was there a public discussion over the project and at what stage of the project development?	**c.** Public hearing is a mandatory step in EIA procedure. **Public consultations/hearings** were conducted by Vidin Municipality after submission of the EIA by the Project Proponent (BG Ministry of Environment and Waters). Two public discussions were organized by 2004: ▪ First - before the preliminary EIA start (September 2000) to fully consider public opinion –a meeting in Vidin was organized where representatives of the public, NGOs (*Eco-sphere, Eco Consciousness – 'Home for everybody', etc.)* and local media journalists attended. Questions concerning the bridge construction (possible alternative locations of the bridge) were raised and recommendations were made. The representative of the *Eco-sphere* organization demanded from the EIA team a comprehensive study on existing flora and fauna and a detailed list of species to be included in the EIA report. The representative of the Historical museum in Vidin warned that in the bridge proximity valuable historical findings could be expected. The recommendations and demands were taken into consideration and an annex with all the existing species was included in the Preliminary EIA report; special attention was paid to historical heritage expected to be found. (see also D1b). ▪ Second - after the preliminary EIA was accomplished in January 2002.

D. Expert assessment/analysis/comment of the tool effectiveness	
1. Assessment by tool users **a.** Were there measurable improvements as a result of the tool implementation? If YES, what? If no: why not?	**a.** The general EIA **conclusion** on the project was that there was *No project alternative concerning the bridge location (the* other one would be a '*zero alternative'* e.g. not to build the bridge and to continue using the existing ferryboat complex). The new bridge was expected to take up some of the traffic passing through the towns of Vidin and Calafat and currently causing air pollution and noise. The deviation of the whole motor-vehicle traffic from the urban territories was considered favourable for both settlements. The expected decrease of traffic jams would result in lower emission of pollutants. It was highly recommended to establish an Environmental Management Plan (EMP) based on the mitigation measures proposed in EIA. EMP should be approved before starting the construction work. It is important to outline that recommendations were made for the design, construction and operation of both the bridge and the adjacent infrastructure as a result of EIA implementation. The final EIA is to focus more explicitly on sustainable development issues concerning the town of Vidin and the forthcoming urban infrastructure reconstruction to support the bridge operation. EIA also recommended a comprehensive social and economic assessment and a detailed flora and fauna mapping to be undertaken at the next project phases.
b. Were there any spun-off's or unintended consequences?	**b**. The collaboration of the project team with Bulgarian and Romanian ministries and municipalities contributed to the successful implementation of the tool. It provided for active public involvement in the discussions (where all the actors involved were present) and contributed to raising public awareness on a national investment project with high impact on the social, environmental and economic development. During the first public discussion (before the elaboration of the Preliminary EIA) the project team gathered needed information for the archaeological situation in proximity to the new bridge site. Thus a detailed investigation was undertaken and an archaeological site of a national importance was identified and developed for further investigation and opening to the public.
c. General view on the tool? Lessons learned?	**c.** The tool implementation in a transboundary co-operation process provided an organization scheme that could be applied in other similar situations. The tool implementation provided the information needed for tailoring the bridge impacts to the municipal policy for sustainable urban development.
d. Potentials for further use of the tool?	**d.** The tool effectiveness has been already proved through its implementation in various Bulgarian project assessments. In the particular case the tool provided framework opportunities for trans-border co-operation (between Romania and Bulgaria) under differing national socio-economic, environmental and legislative conditions.
e. Will the actors recommend it or use it in other cases - why / why not?	**e.** The users consider the tool useful and relevant in a process involving many actors. The structure of the tool provides for tracing mutually related impacts and is also open-ended (enables the users to add peculiar fields for investigation when needed).
2. Reviewer's assessment of the tool (usefulness, sustainability relevance, who are the actors excluded? etc.) Suggestions and needs for further development of the tool	The preliminary EIA identified and assessed the direct and indirect effects of the construction of the bridge over the Danube River. Important advantage was the additional analysis of specific elements concerning recreational zones and the implementation of the tool in the early stages of the project. In that way the risks for the environment, human beings and settlements were identified and relevant measures were recommended before the design of the bridge was decided upon. *Some recommendations:* social, economic and urban planning parameters and criteria should be more comprehensively explored.
E. Additional information on the case study available	
Websites	**Vidin Municipality** http://vidin.iwebland.com/municipalityeng/inform/index_eng.php http://www.bulgaria.domino.bg/vidin/ **Ministry of Transport and Communications** http://www.mtc.government.bg/Transport/Programs&Projects/BridgeDanube_ppt_files/frame.htm

	Stability Pact http://www.stabilitypact.org/pages/press/detail.asp?y=2002&p=21 **ERM Lahmeyer International** http://www.erm.com/erm/main.nsf/pages/homepage?opendocument
References *concerning the case but also the key words or problem* (papers, articles, reports, laws, etc.)	Briefs, Development of Bulgaria-Romania Vidin - Calafat Danube Bridge Project disseminated by Ministry of Transport and Communications Program for transport infrastructure development for the period 2001- 2005 National Strategy for Transport Sector, June 2001 Bulgarian regulation No 4 on Environmental Impact Assessment
Other sources (Interviews, conferences, discussions, etc.)	Interviews with **Dobrin Denev –** team leader of the Preliminary EIA Report (11th June 2004, 6th October 2004)