

## **Project Portfolio**

### ***Ongoing Projects***

- **Technical Assistance for Danube**

In December 2002 the European Commission approved the first ISPA measure to be implemented through the new ISPA Implementing Agency: ISPA 2002/RO/16/P/PA/011 “Technical Assistance for the Improvement of the Navigation Conditions on the Danube”.

**Budget:** 1,640,000 EURO, out of which 1,230,000 EURO represent the ISPA financing.

**Final Beneficiary:** River Administration of the Lower Danube – Galati

**Contractor:** On 31<sup>st</sup> March 2004, the Ministry of Transport, Constructions and Tourism signed the contract with the with the JV Technum N.V. (Belgium), Trapec S.A. (Romania) and Tractebel Development Engineering S.A. (Belgium)

#### **Project Description:**

The project aims to study from technical, environmental and economical points of view the possibilities for the improvements of the navigation conditions on three main sectors of the Danube.

1. Calarasi – Braila Sector (km 375 – km 175), which ensures the connection of the Fluvial Danube with the Navigable Canal Danube – Black sea and with the Maritime Danube. A minimum navigation depth of 2.5 m and a width of the navigation channel of 160-180 m is recommended by the Danube Commission on the Calarasi - Braila sector .

*For this section, the Consultant has to provide the following documents:*

- *the Feasibility Study, including the Cost – Benefit Analysis;*
- *the full Environment Impact Assessment (including the Public Consultations and the obtaining of the Environment Permit);*
- *the Technical Design for the works;*
- *the ISPA Application in order to obtain the financing for the works on this section.*

#### Existing difficulties

In the periods of summer – autumn, the water flows are decreasing considerably on this river section, with deteriorating navigation conditions as a result.

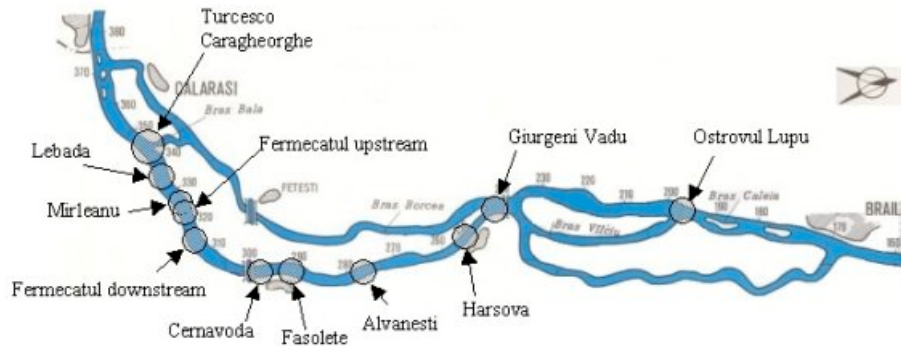
The sand bar at Carageorghe (km 344-345) is the most problematic bottleneck. The available navigable depth is only 14.5 dm with minimum values as low as 7 to 8 dm. A water depth of 25 dm was on average not available for about 90 days per year with maximum periods up to 150 days. As a consequence, vessels sailing to the port of Constanza from upstream locations (or vice versa) have to make a detour via the Lower Borcea and Bala arm, thereby increasing the sailing distance with about 100 km.



At the same time, because of the reduced dimensions of the navigation channel on Bala and Borcea or because of its sinuosity on some portions, the navigation must be carried out in a single direction. In addition, large convoys have to be dismembered and barges have to be passed one by one.

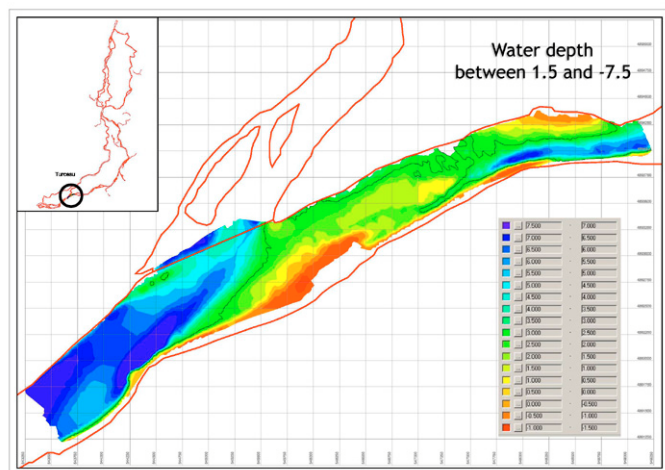
In the period of summer-autumn, with small and medium levels of the Danube waters, the navigation is carried out in difficult conditions in the Danube sector between km 300 and Braila km 175 because of the navigable spans reductions at the thresholds from Cernavoda, downstream km 297, Fasole islet km 292, Alvanesti km 276, Hirsova downstream km 251 and Lupu islet km 196.

For this reason, the ships assuring freight transport between the fluvial maritime harbours (Braila, Galati, Tulcea) as well as the Ukrainian harbours on the Danube and the Danube-Black Sea Canal and Constanza Harbour, can not be loaded to their full capacity for a period of about 5 months a year.



The potential savings of eliminating these bottlenecks are evident. Improving the navigation conditions will avoid the important economical losses which are now generated by the stationed ships at low water level and these ships waiting for the resumption of the navigation.

Furthermore the availability of cooling water for the Power plant near Cernavoda will be increased considerably once the navigation conditions are improved. Taking into account that the existing power plant has to reduce its energy production during very low flow conditions as well as the plans to extend the power plant up to 5 units, the availability of sufficient cooling water is very important.



Preparatory studies have been carried out under the PHARE Multi Country "Study to Improve Navigation on the Danube in Bulgaria and Romania", with a Final Report dated December 1999. This study has identified the main black spots for navigation along the Romanian and Bulgarian sections of the Danube. Technical solutions were proposed, as well as their related costs. The economic feasibility of these solutions has also been assessed. Common actions by Romania & Bulgaria are needed for the implementation of these measures

The above mentioned study will be updated and the necessary works for the improvement of the navigation conditions will be implemented:

- redistribution of the small-medium water flows in the separation zone of Bala branch from Danube (km 346), through the building of groins and a bottom sill and river bed protections downstream, in the Bala branch bed.
- elimination of the water deviation effect to the Bala branch created by the Parjoaia underwater rock. This could entail excavation of the rock and its evacuation from the Danube bed.
- bank consolidation, closing of branches, calibrations works and stabilization of the Danube bed with groins and dams for stream orientations
- deepening works through dredging of the navigable channel portions.



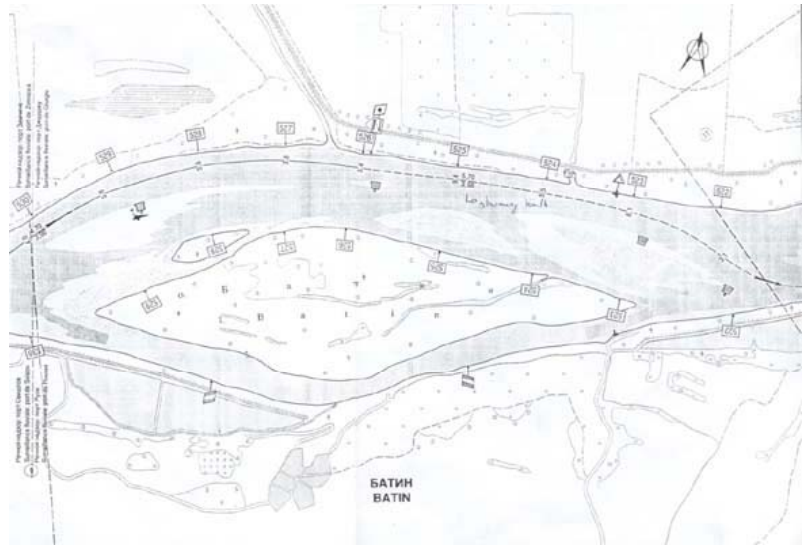
These works will lead to the improvement of the navigation conditions on the Danube sector via Calarasi - Cernavoda - Harsova - Braila through the stabilization of the Danube's fairway and of its parameters, as well as to the increasing of the navigation depth at the critical points. Through these works, a Danube sector of 220 km, will be permanently assured the navigable spans in accordance with the Danube Commission recommendations

It will achieve cost savings for the freight transport through the reduction of the crossing duration of the sector, the reduction of the route distance and the elimination of the dismembering of convoys, avoiding the by-pass route of about 105 km.

In addition, it will ensure sufficient water debits for the equipment cooling at the nuclear electric power station Cernavoda (CNE).

A special attention in defining the possible solutions and execution methods must be given to the environmental protection issues. In this view, the recommendations of the study "Waterway Transport on Europe's Lifeline, The Danube, Impacts, Threats and Opportunities, Vienna, January 2002.", will be used as one of the important guidelines

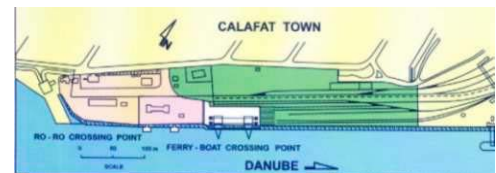
2. Batin Sector (km 531 – km 521), where some advantages concerning the better loading of the ships under all circumstances. However, the impact is smaller compared to the Braila Calarasi stretch as the Batin area is located more upstream and there is no possibility to shorten the transport distance at this location. Because of the more upstream location only the long distance transport will benefit from this measure.



The Consultant has to provide the Feasibility Study for this section and the Environmental Impact Study.

The financing source for the works has not been identified yet.

3. Calafat Port area, which is related to the study of the possibility of establishing of a multi modal node in the Trans European network (the crossing of Corridor VII and Corridor IV). The improvement of the trans-shipment capacities at such critical nodes will induce high potentialities for more efficient transport throughout this area of Europe.



The Consultant has to provide the Feasibility Study for this section and the Environmental Impact Study.

The financing source for the works has not been identified yet.

## Key objectives:

The key objectives of this project are identified as follows:

- Shortening the transport distance from the upstream Danube towards Constanza port.
- Improving the supply of cooling water towards the power plant along the Danube especially for the low levels.
- Creating better and steadier navigation conditions in the critical sections of the river.
- Technical Assistance for the Improvement of the Navigation Conditions on the Danube
- Evaluation of the potentialities to improve the navigability around Batin area.
- Identifying the opportunities to create a multi modal terminal in Calafat.