1CE055P2 - SoNorA

O3.4.5 Feasibility study: Port in Usti nad Labem on the river Labe

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Action	Action 3.4 – Inland Waterways Case Study				
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Index

1 Executive Summary

The main goal of this study is finding a suitable location for building the passenger port facilities in the city of Ústí nad Labem and evaluating the passenger inland waterway transport potential on the river Labe. The river Labe is a natural tourism corridor where many passenger ships is passing. Because there is only one suitable port facility in the regional capital (Usti nad Labem) and this facility is not situated in the city centre, therefore the large ships are not stopping there. That is why Usti region decided together with the city of Usti nad Labem to prepare this study.

From the tourism development point of view, the optimal solution would be to place the port facilities in the city centre, but this location faces the problems of unsuitable shipping conditions in this part of river Labe. The second recommended location, always considering tourism development potential, is the city part Brná where also the cycling route and thermal spa are located. The passenger water transport on lower Labe has high tourism and financial potential. Nowadays it is time to start developing this kind of transport.

Part of this study is also the documentation for spatial process. This documentation defined the technical needs of proposed locations to realize the port facilities and will serve the investor. The documentation is also needed as one of the annexes to the potential project application it the facilities were financed by external (public) sources.

The other important part of this study was a survey among the passenger transport users, potential users, among the tourists and Ústí nad Labem citizens. This survey was focused on tourists and citizens needs, if they know about the ships which sail on the river Labe, about the providers, if they have already used the passenger water transport etc. The results of this survey were used for improving of the services on ships and improving of provided information about the transport.

2 Introduction

The history of the city Ústí nad Labem was always closely connected to the river Labe. This symbiosis even strengthened in 19th century when, with gradual growth of traffic volume come slow change of the city to the largest Czech port came. During 60 years, a complex was built that had no competition in whole Austrian monarchy and the city of Ústí nad Labem became the largest river port and also even the absolutely largest port in Austria-Hungary by volume of annual transshipment, even exceeding the port of Trieste. The truth is that the far biggest amount in reloading was the brown coal, but mainly in nineties of 19th century the transshipment of raw materials and completes goods was markedly growing.

The Labe water transport became a phenomenon which dramatically influenced the economic life of the city even though the city was also a very important rail junction at those times. It is well known that the advantages of sailing are from economic view indisputable when the transport involves long distances. The railway was greatly limited by the level of transport tariffs, so the water transport could successfully compete mainly where the shipping for long distances was needed. That is why the water transport has oriented to those goods which could stand long distance shipping like coal, sugar, building materials, raw materials and wood.

The change of the natural Labe waterway to today's look (human regulated) was slow and gradual during 100 years and came out from the principle that the river is an important transport axis and the only one connecting the Czech lands with the sea. All the waterway changes came out from this principle and this headed to the removal of the obstacles limiting the sailing and to the gradual deepening of the riverbed. These efforts culminated with a grandiose plan of canalization of the Vltava and Labe rivers in the segment between Prague and Ústí nad Labem. This project started its realisation in 1896 and was finished in 1936 by building the Masaryk sluice under the Střekov castle.

The Labe waterway was not only used for goods traffic. On the beginning of the steam navigation on the river Labe the steamships were used only for the passenger transport. The passenger transport became the essential part of Labe transportation and still is till today, even if the volume is lower than in the past. Its beginning goes back to forties of 19th century and is wedded to the steam navigation company of John Ruston and J. Andrews, who operated the passenger transport from 1841 in the segment from Obříství by Mělník to Dresden using three steamships: Bohemia, Germania and Constitution. Together with them started the operation the Saxony Company (Sächsische Dampfschiffgesellschaft), whose steamships ended their trips in Ústí nad Labem. Between both companies the strong competition fight was waging. This was ended in 1851 when the Saxony Company bought the Ruston Company and till 1945 became the monopole passenger transport operator between Mělník and Dresden.

The passenger transport on the river Labe was not dramatically touched by the start of the railway transport on both river sides. The number of transported people still grew till the 1st World War and reached its maximum on the break of the centuries. During the times the character of the passenger transport has changed: if the passenger transport served only for passengers as a new faster mean of transport in the first years, it gained more recreational character after the development of railway

transport: sailing through the beautiful Labe valley attracted romantic people, associations and schools served the steamships for common trips, it was used during important exhibitions, markets and festivals. Next to this the sailing retained its transporting function mainly for municipalities on the river shores, whose inhabitants used the steamships for shipping their goods for markets in the cities.

The steamship stops were present practically in all the municipalities but the main flow of passengers led up to large cities and recreational centers. On the Czech Labe waterway the largest number of passengers headed to Ústí nad Labem and it was not an insignificant number. For example in the decade before the 1st World War in average over a quarter of million a year used this transport mean to get to or to leave Ústí nad Labem, which was 40-50 percent of all people transported by steamships on the Czech part of the Labe river.

3 Context and objectives

The Elbe-Vltava waterway ensures that the Czech Republic is connected to the European inland waterway network. The River Elbe ("Labe" in Czech) is part of trans-European corridor IV and international route E20 (according to the AGN - European Agreement on Main Inland Waterways of International Importance) as far as the ports of Chvaletice and Pardubice. The central aim here is to improve the navigation conditions on the River Elbe from Hřensko to the Ústí nad Labem-Střekov shipping level to ensure that the parameters of the Elbe and the parameters in Germany are harmonized. The goal of the submitting parties is to improve the navigable conditions on the lower Elbe. This goal is in accordance with the objectives of the transport policy of the European Union and the Czech Republic[1].

3.1 SoNorA network expected impact

The passenger port facilities in Ústí nad Labem have no straight impact to the SoNorA project, although it is placed on the river Labe (Elbe) which is important part of the S-N axis. The port facilities located in the city of Ústí nad Labem are designed only for passenger water transport which is mainly used by

[1] The national document is the "Spatial development policy for Czech Republic 2008" (Politika územního rozvoje ČR 2008) approved 20th July 2009. The Czech republic commitment with focus on inland waterways is mentioned in a AGN and TEN-T contracts. In all clauses where the Czech inland waterways future is mentioned it is always in relation to D-O-L channel.

local people for trips to the surroundings or by tourist from the region or its neighborhood e.g. Saxony. The amounts of transported people are not so high to bring larger importance to S-N axis. If the study will be realized the impact can only be through completion of passenger water transport infrastructure.

4 Scope of output / Core output

This output has only a local significance. It is dealing with passenger water transport on the river Labe and its surrounding.

5 Importance to the SoNorA Network

5.1 Interlinkages with other outputs

As can be seen from the figures, proposed case study forms an integral part of the SoNorA project. It is based on the general output 3.4.1 “Analysis of inland waterways network in the SoNorA project area “and 3.4.2 "Definition of key inland waterway network in the SoNorA project area", which was aimed on cooperation on common topics and creation of interlinks between different regions which were implemented. It will contribute to the final report 3.4.7. "Joint strategic outline for inland waterways development along S-N axis" summarizing the lessons learned. The core outputs of Action 3.4 "Inland Waterways Case Study" are the guidelines which will result from the priority nodes case studies. This output will be validated by the partners during the discussions organised under WP3 (e-mail discussions, think – tank discussions, discussions during CMs etc).

FIGURE 1: INTERLINKAGES WITH OTHER OUTPUTS

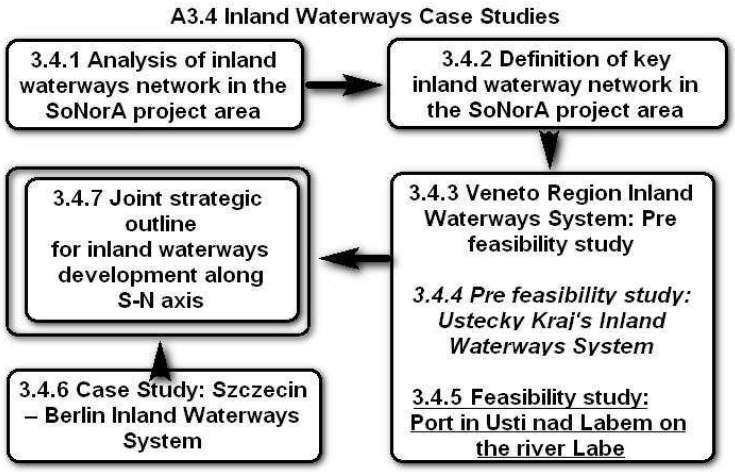
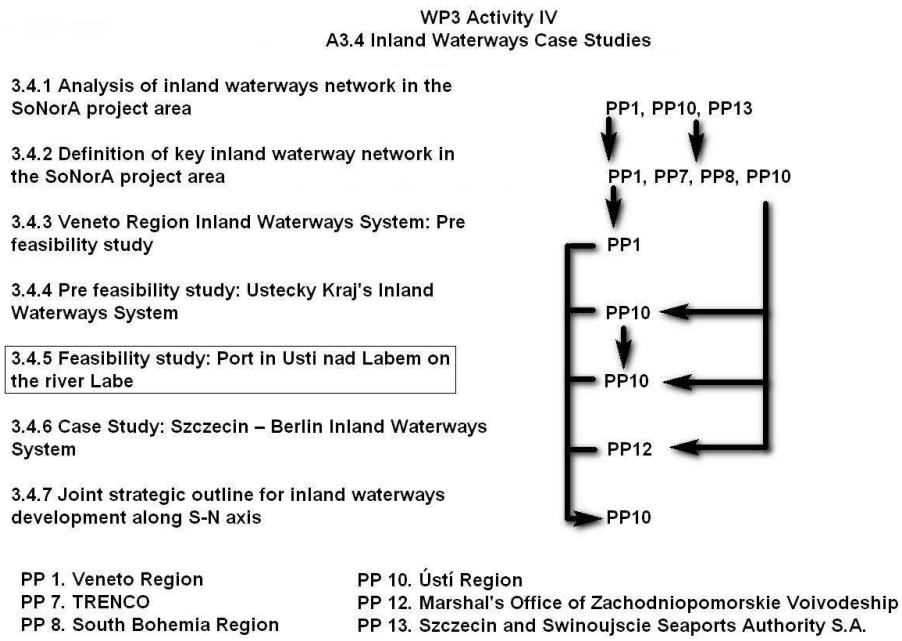


FIGURE 2: INTERLINKAGES WITH OTHER PP



Source: AZ Consult (both figures)

6 Background

The important aspects for passenger water transport development in Ústí nad Labem are as following:

- Building of two earlier planned water works (Děčín navigation level, Malé Březno navigation level) between state boundary and Střekov navigation level for ensuring stable sailing conditions mainly in summer months, when the passenger water transport demand is highest, but the sailing conditions worst.
- Building of stable anchoring with facilities (the possibility for completion of drinkable water, electricity and fuelling)
- Building of anchorage for the location of the city centre

In the frame of this study there were two of these requirements solved. One part of this study is the documentation for spatial decision set for two anchorages in the Ústí nad Labem locality. One is a floating pier in the city centre without facilities and the other one is a constant pier in city part Brná where the requested facilities can be built. The question is a matter of financing both anchorages.

Building of both water navigations is still not a reality. The navigation in Malé Březno was recall by the end of first decade of new millennium. The project for water navigation in Děčín still has its chance for realization, but till now there was not a positive fulfillment of EIA (environmental impact assessment), even though the project designing started in the beginning of nineties of 20th century.

7 Problem being addressed

Unsuitable sailing conditions

The segment of the Labe River between Střekov navigation level and German state boundary is the last problematic section in the navigable part of the river. A high gradient of the river ground in this segment causes low depth of water in the river basin during the low flow times. During the 19th century this part of the river was modified by cross and linear spur dykes designed for so called “middle water” what means that the optimal sailing conditions are only by sufficient water level. These modifications are not enough for summer months when there is an insufficiency of water.

The efforts to the modification of this river segment for the so called “small water”, meaning the low flows (times with low water level), always hit the necessity of large channel dredging in the shipway and concentration of flows to the shipway. This modification markedly boosts the speed of flow which is problematic for steering and safety of ships. And when using the upstream sailing the costs of sailing are much higher.

Missing infrastructure:

In the city of Ústí nad Labem still does not exist any adequate port facility for passenger water transport which could cover all facilities like places for ship waiting, petrol station etc. needed for operating of passenger ships. Nowadays the passenger ships have to start their sailing in other cities or towns where the facilities are available.

8 Methodology and approach

8.1 Data

8.1.1 Source and availability

The feasibility study requires large amounts of data. Inputs necessary for the study are:

- *History of the city Usti nad Labem,* Vl. Kaiser and coll. , 1995.
- *Handling regulations of the Střekov Masaryk barrage on the river Elbe*, Rammy, 2001
- *Anchorages for boat transport on the Lower Elbe,* AZ Consult, 2009
- *Map of the boat transport and tourist ferries in the Czech Republic,* Association of boat transport operators, 2009
- *Basic and calibrated data necessary for the calculation of the efficiency of waterways projects used for inner state water shipping business*, ŘVC (Ředitelství vodních cest / Directorate of Waterways) ČR, 2005.
- *Evaluation of transportation flows on rivers, influenced by the Děčín Navigation Step*, Ing. Ptáček, 2006
- *The improvement of navigation and sailing conditions on the Elbe river in section starting in the city of Ústí nad Labem and ending at the state border between the Czech Republic and Germany - the Děčín Navigation Step*, ŘVC ČR, 2009

8.1.2 Format of the data

Data have been obtained in the form of tables from the Directorate of Waterways (Ředitelství vodních cest) and from Czech Statistical Office. Moreover, data from Ministry of Transport of the CR have been used.

Data from private entrepreneurs and proprietors have been obtained through questionnaires.

8.2 Indicators

Main output indicators of this study area following:

- *Documentation for spatial decision of anchorage Ústí nad Labem – centre and Ústí nad Labem – Brná*
- *Outcomes of survey among passengers and operators of water transport in the Ústí nad Labem surroundings*

- *Localization of suitable places for eventual other anchorages for passenger water transport in the Ústí nad Labem surroundings*

9 Policy and Action Plans

Investing in waterways and passenger water transport in Czech Republic

Large amounts of money have been invested to the Czech waterways for the improvement of both freight and passenger transport. After the start of the financial crisis the projects that hadn't already started were stopped for undetermined time, but they were not cancelled. The most important projects of passenger water transport are as following:

Bata floating channel

The Bata floating channel registered, by the law 114 of 1995, among the most important used waterways. Nowadays it is one of the main tourism attractions in Moravia in the area between Kroměříž and Hodonín. Still growing popularity of water tourism attracts more and more tourists not only from Czech Republic. There have been recently finished the port facilities in Uherské Hradiště and in Napajedla – Pahrbek. The number of new port facilities grew then to 11. The Waterways directorate of Czech Republic prepares further activities for almost 11.5 mio EUR where ideas for navigation prolonging to Hodonín and Kroměříž are also included.

For the prolonging to Kroměříž there is a necessity of building the lock chamber on the Bělov sluice. This chamber will allow the sailing of touristic ships and small passenger boats. When building the chamber, there will be the possibility of Kroměříž city centre connection to an attractive recreational waterway and widening of tourism potential for whole area around the Baťa channel and the Morava River.

In the south end of recreational waterway of Bata channel is a natural tourism destination - the city of Hodonín. For reaching the Hodonín there is necessary to prolong the waterway from Rohatec through watercourse Radějovka to estuary to Morava River. The water level of Morava River is from Radějovka estuary to Hodonín sluice swelled up by existing Hodonín sluice and the river is in this segment navigable. On the existing sluice on the Radějovka watercourse a lock chamber can be built.

Finishing of Vltava waterway in the segment České Budějovice – Týn n/Vlt.

This means a set of 14 individual constructions in the area of South Bohemian Region which are put together to 3 investment projects (České Budějovice – Hluboká nad Vltavou, Hluboká n/Vlt. – Hněvkovice, Hněvkovice – Týn nad Vltavou).

The construction works has been started in 2008 and are planned till 2013. The waterway is modified for proposed vessel of 38.5 m length, 5.05 m width and 1.3 m draught (classification I for vessels with 300 t maximum load) i. e. recreational sailing. In the final status it will be possible to increase the draught to 2.2 m and to use it for goods transport. The channel dredging and equipment of the sluices using new manipulation technology will improve the flood protection and increase the operational safety by higher water levels. Among the most important projects belong mainly these: building the port facilities in České Budějovice, sluice reconstruction and building the lock chambers České Vrbné and Hněvkovice, building the chambers on Hluboká sluice and the Hněvkovice navigation level and the increasing of underpassing height by the road bridge in Týn nad Vltavou.

The whole length of new navigable segments with sequence to reservoir of water work Orlík is 32.7 km. This activity will be partly cofinanced by EU (Operational Program Transport). The costs are approximately 77 mil EUR.

Building the ship elevator Slapy a Orlík

The navigation level elevators in Central Bohemian Region can allow overcoming the Slapy and Orlík dams, which are the biggest obstacles on the Vltava waterway between Prague and České Budějovice. While the Orlík dam is waiting only for some further equipment of the machine part of elevator, the Slapy dam can expect much larger project. In the case of Slapy dam there is counted with building an inclined elevator on the right river shore with architectonic solution. There will be built modern machinery which will allow overcoming 67.5 m of the water level difference. It can be also expected that this building could became a tourist attraction for its uniqueness in Czech Republic and in Central Europe. Together with the recreational sailing it may contribute to increasing of whole region attraction. Both projects should be realized in 2014, but due to ongoing financial crisis this deadline seems unrealistic.

Smaller investments of Waterway directorate (ŘVC ČR)

Rapid development of water transport on the lower Labe will be strengthen by building of several anchorages in municipalities on this part of Labe River between Ústí nad Labem and Roudnice nad Labem. These project were planned for 2010, but were stopped due to lack of funding. The anchorages are proposed in these localities:

Dolní Zálezly – fixed pier

Libochovany – fixed pier

Lovosice – floating pier

Litoměřice – floating pier

Nučnice – fixed pier

Libotenice – fixed pier

The anchorages are planned for proposed vessel of 110 m length.

10 Critical success factors

The main success factor for the passenger water transport in the Ústí nad Labem surrounding is primarily building of necessary facilities for this kind of transport, building of two needed dams for ensuring the stable sailing conditions and overall connection to other kinds of transports or tourism attractions and services around the waterway.

A component part of this feasibility study is the documentation for spatial proceedings for anchorages in city centre and city part Brná. The anchorage in city part Brná is proposed with whole infrastructure needed for operating the passenger water transport. The whole costs of both anchorages are estimated to 600 000 EUR. Direct financial benefit from building of anchorages cannot be awaited. Secondary positive factors will be the benefits from tourism in Ústí region, new job opportunities and increasing of tourism activities offer.

11 Identification of Next Steps

The possible perspective for passenger water transport is its inclusion into the integrated traffic system. The water transport in Ústí nad Labem can be used as a connection between the city parts in remote city locations and placed near the Labe River shores. The connections between these city parts has so far been realized only by the bridge in the city centre.

Ferry Neštěmice – Svádov was used during the floods in August 2002 and after was not refreshed.

In the future the lines sailing under the Labská paroplavební Company [2]will be included into the IDOS system[3] and operated as a regular line transport with the line number 80x. These lines are timely synchronized with other kinds of passenger transport and there is a possibility to use the discounts for holders of REGIONet Elbe – Labe tickets[4].

Integrated transport system with the time linkages and with only one type of transport pass (ticket) has been still not used.

The water transport is included in integrated transport system in many European regions. The following systems operated near the city of Ústí nad Labem can serve as examples.

PID (Pražská integrovaná doprava - Prague integrated transport)

Prague integrated transport (PID) is an integrated transport system including underground, trams, railway, city and suburban bus lines, elevated wireway to Petřín, some ferries and the network of P+R parking places. It operates in the Prague capital area and in some units of Central Bohemian Region (Prague-west, Prague-east, Mělník, Beroun, Příbram, Kladno, Kolín, Kutná Hora, Benešov, Mladá Boleslav a Nymburk).

[2] Labská paroplavební společnost (translated: Labe Steam navigation Company) – company providing the passenger water transport on the segment of river Labe in Ústí Region.

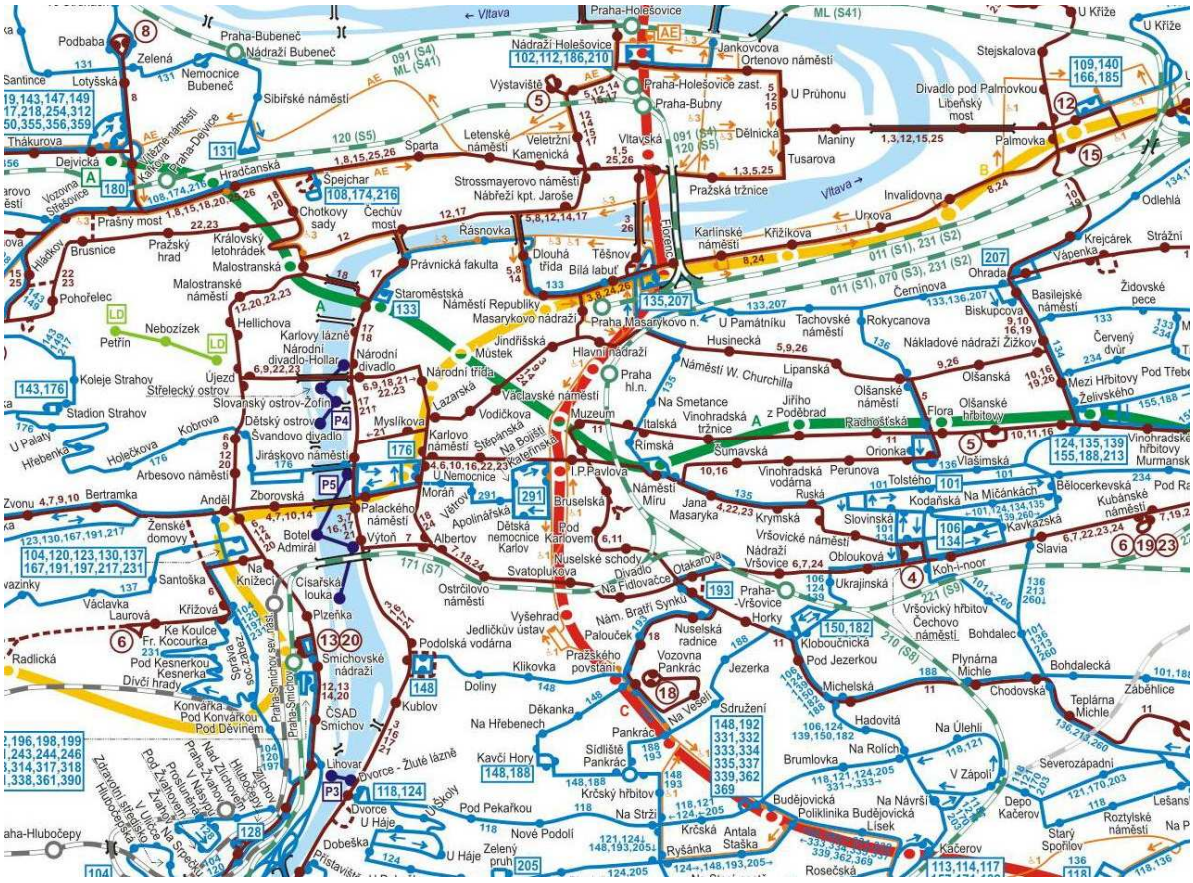
[3] IDOS – http://jizdnirady.idnes.cz/vlakyautobusy/spojeni/ - an internet tool where the passenger transport connections can be find.

[4] REGIONet ELbe – Labe ticket – special one day ticket which can be used for more kinds of passenger transport in the area of Elbe/Labe Euroregion (area around Ústí nad Labem and Dresden).

The integration consists in implementation of uniform tariffs, contract transport conditions, numeration of lines, some parts of information system for passengers, in projection of lines, linkages and in uniform system of transport support contracting.

The system of ferries belongs to the water transport offer in Prague. The passenger boats are used during the drop-out of other kinds of transport near the Vltava River. In 2008 the passenger boats were used as a substitute to trams in the sector under the Vyšehrad tunnel and in 2005 they provided the alternative transport mean in the sector Davle – Štěchovice.

PICTURE 1 : PID ROUTES (SHIPPING - BLUE COLOUR)



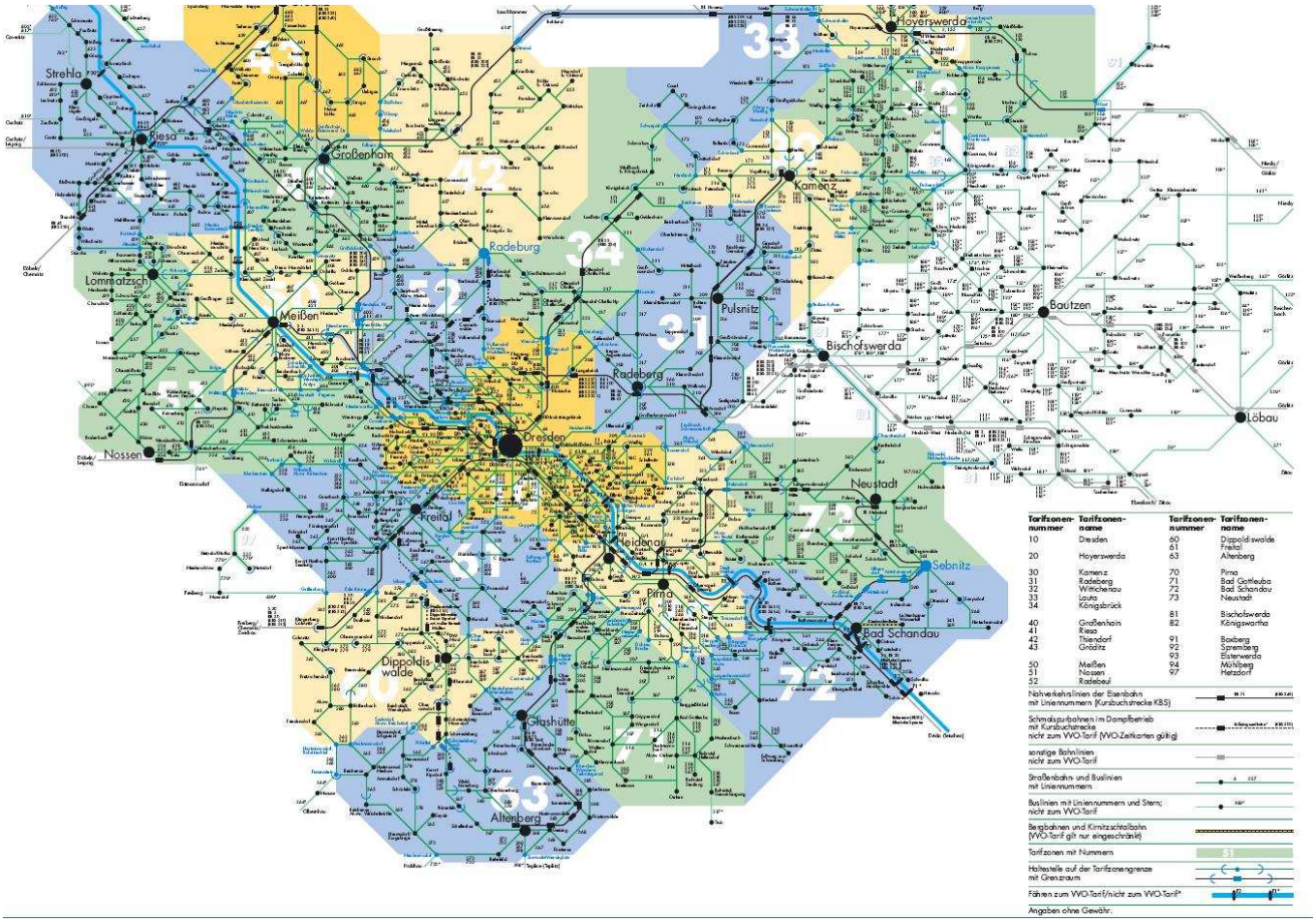
Source : www.ropid.cz

VVO - VerkehrsVerbund Oberelbe (System of integrated transport Upper Labe)

VVO is an integrated transport system which operates in the Saxony and mainly in the area of Dresden. Its function is to integrate the transport operators who work in the region to one joint transport offer. The result is a timetable matched with all partners in the system.

Into the joint offer are included 19 ferries, row of passenger motor ships and steamships and special boat taxi operated by rapid motor boats.

PICTURE 2 : VVO ROUTES



Source : www.vvo-online.de

12 Results

Requirements of passenger water transportation providers

In the framework of this study, two important providers of passenger water transportation around Usti nad Labem were inquired – Labska plavebni spolecnost seated in Decin and Labska paroplavebni spolecnost seated in Litomerice.

Both carriers expressed their requirements, which did not differ from each other too much.

They include especially:

- Development of both formerly planned navigation levels (Decin navigation level and Male Brezno navigation level) between the state border and Strekov navigation level so that stable shipping conditions were retained, especially during summer months when the demand for passenger ship transportation is the highest while the shipping conditions are the worst
- Construction of permanent anchoring with facilities making it possible to refill the drinking water, electricity and fuel in Usti nad Labem
- Construction of anchoring in the center of Usti nad Labem

In the framework of this study, two of these three requirements were dealt with. This study includes documentation of the zoning decision involving two anchoring ports in Usti nad Labem – a floating pier Brna, which will be built including required facilities. The question how both of the above-mentioned anchoring ports will be financed has not been resolved yet. There of course are several possibilities how the investments can be financed. The best way is to use the European or national public sources. Because the river is part of the cross border corridor and is used also by the German boats, therefore one of the financing sources could be the Ziel3/Cíl 3 – cross border program for Czech Republic and Saxony. The other potential sources has to be find.

Construction of both shipping levels is nowadays no longer realistic. The Male Brezno navigation level was cancelled at the end of the first decade of the new millennium. The project of the shipping level Decin has currently still a chance to be carried out but it has not yet received a positive environmental impact assessment (EIA) although the project and engineering works have been underway since the beginning of 1990’s.

Passenger survey

A passenger survey was carried out via a questionnaire that was prepared in cooperation with the City Council of Usti nad Labem. The questionnaire was distributed in the information center of the city, on the website of the Usti nad Labem region, on boards of ships of both carriers and in other public places in the city.

The questionnaire was divided into two parts: for people who had already used passenger ship transportation and for people who had not visited ships in the Usti nad Labem region yet.

The questionnaire was conceived in order not only to contribute to develop passenger ship transportation in Usti nad Labem region but also to improve the services of carriers, the infrastructures and to verify the possibility of incorporating the ship transportation in the integrated transportation system.

Evaluation of the questionnaire has been carried out in a form of descriptive graphs, always including percentage distribution of answers or exact number of received answers. The questions that were common for both questionnaires are accumulated in aggregate graphs; the rest is presented separately for each questionnaire.

A total of 150 filled in questionnaires were received. Excluding the questionnaires distributed by ship carriers, the ratio of people who have not yet used ship transportation against those who have is about 5:1.

Results of the survey in case of respondents who have not used water transportation yet:

The survey shows that awareness of water transportation is very high and a majority of the respondents would like to try traveling on Labe but there are many reasons why they have not done so yet. Only 11 percent of the respondents answered “No” to the question of whether they will use water transportation in the future. This information is relatively positive for the carriers.

Results of the survey in case of respondents who have already used water transportation:

Questionnaires for people who have already used services of carriers of passenger water transportation are directly affected by the fact that most of them were filled in on ships.

There is an obvious growth in the number of visitors of the city of Usti nad Labem. The most used water way is Usti nad Labem – Litomerice in both directions with embarkment and disembarkment on the way. Passengers combine all available types of transportation to get back to the starting point including a return trip on the ship. When referring to the visitors using a combination of transport means, the prevalent one used in combination with this service was the train, whose time schedule is reflected by water transportation.

Three quarters of passengers are content with the price of provided services. The presumption that passengers are not happy about the embankment location in Usti nad Labem – Vanov, since its distance from the city center, was not completely confirmed since most of the respondents replied that Vanov was well accessible.

Results of the survey of general questions about passenger water transportation:

The survey indicates that the most dominant source of information about water transportation is simply friends and reports in media. Satisfaction with ship transportation and sharing of information with the surroundings is thus the best and most importantly the cheapest advertising for carriers.

Most of the passengers are willing to use all the currently provided services. In addition, passengers request sale of gifts and additional program for children to make their way more pleasant.

A slight majority of the respondents think that there is lack of information about water transportation which the carriers should solve by more efficient advertising and cooperation of both carriers. Surprising information is that there is demand for ferries across Labe. In case of ferry Brna-Vanov, 64 out of 150 respondents expressed themselves in this way. Even the remaining two ferries have supporters.

Other surprising information and a tip for the carriers is willingness of the passengers to use multiple-day trips in cabin ships but usually under a condition of a reasonable price. A lot of current and potential passengers then want a new port to be built in the central part of the city which would

significantly contribute to development of tourism in Usti nad Labem. A positive thing is that a construction of a new pier in the city center is being prepared.

Furthermore, many passengers want ships to be operated on regular lines even in evening hours in summer months. Passengers also wish to get more diversiform routes which is caused by passengers' unawareness of the possibility of using two carriers offering different routes. The problem is caused also by the unwillingness of cooperation of both carriers. Passengers further recommend all-day-long trips on the boat including sightseeing and visits of tourist destinations such as ZOO, Vetruse castle, Brna swimming pool etc. Passengers in Usti nad Labem do not like the fact that the schedule of the city's public transport going to and from Vanov does not reflect ship transportation.

12.1 Scenario analysis

Planned ports of passenger transportation in Usti nad Labem

In a near future, several new ports for passenger transportation are considered in Usti nad Labem. Investors of the state sector plan ports without facilities in locations suitable for development of tourism in this city. Furthermore, a private investor plans to build a port of passenger ships with all facilities. Following is a list of planned investments:

Vanov

- location: Usti nad Labem Vanov – behind the headquarters of Povodi Labe

- facility type: solid pier

Pod Vetrusi

- location: Usti nad Labem – center, below tourist chateau Vetruse

- facility type: port wall

- investor: Ceske pristavy, a.s.

- the company is preparing a construction of a public port for passenger ship transportation including facilities

Krasne Brezno

- location: Usti nad Labem – Krasne Brezno, currently a public commercial port

- the proposal of a public port for passenger ships is a part of the urban study “Revitalization of Krasne Brezno” prepared by the Department of Strategic Development of the City Hall of Usti nad Labem.

PICTURE 3 : URBAN REVITALIZATION STUDIES OF KRASNE BREZNO

Source: www.krasnebrezno.cz

Center

- location: Usti nad Labem – center, by the train station

- facility type: floating pier

- the proposal of the “Center” location is a part of this study and is described in details in chapter 12.2

Brna

- location: Usti nad Labem – Brna, edge of the land of the thermal swimming pool Brna

- location type: solid pier

- the proposal of the "Brna" location is a part of this study and is described in details in chapter 12.2

Proposal of new port facilities in Ústí nad Labem

This study includes searching for suitable locations for placement of new ports for passenger ships in Usti nad Labem with a specification of the two most suitable locations.

Presently, as well as in the past, Usti nad Labem is an important port city for cargo ships. Passenger transportation has been omitted in the last 100 years and therefore there is lack of any infrastructure for passenger ships. While there are three big public cargo ports in Usti nad Labem – western and eastern ports in Krasne Brezno and public port Vanov – there is just a single public passenger port in Usti nad Labem: in Vanov and it is designed just as a provisional floating boarding bridge without any other facilities.

In the basin of water work Strekov, there are several private shipyards for small sports ships but they do not make it possible for passenger ships to stop.

Options for placement of ports below Strekov navigation level are significantly limited by the fact that water level of Labe changes here substantially and there is often not enough water in the summer. This situation would improve only in case of a construction of Male Brezno navigation level in original parameters from the beginning of this project as the back water of this water work would reach up to Strekov floodgates. The current solution of navigability of Labe below Strekov navigation level by a construction of Decin navigation level does not solve problems in the location of shipping narrowing between Mariansky and railroad bridges in Usti nad Labem.

In 2010, companies providing services of passenger ships have solved the missing possibility of anchoring and needed infrastructure by an agreement with the owner of the public cargo port Luna in Vanov. A construction of permanent anchoring with infrastructure for passenger ships should however have a stable priority.

Water transportation on lower Labe is carried out in case of water levels between 150 and 540 centimeters at the water level meter in Usti nad Labem. Below 150 centimeters ships do not have enough room for draft, above 540 centimeters water transportation is stopped for safety reasons.

Location Svádov – Neštěmice

Placing the anchorage for passenger ships by the left shore is impossible due to transfer area for freight ships and because it is an unattractive location for local people and tourist.

By the right shore the ship landing is unsuitable because of low sailing depth. Suitable place is situated only near the former Svádov ferry on E.km 761,200. The reasons are the possibility of landing, the attraction of the locality in the centre of city part Svádov and the possibility of connecting the cycling route.

Location Krásné Březno – Olšinky

The right shore between Střekov and Olšinky is an uninhabited area unsuitable for placing the passenger port facilities.

The left shore is used for freight transport at present. If there is realised the project of revitalisation of Krásné Březno, there is also counted with using both current ports for passenger transport. It is realistic to use the west port (E.km 763.90), which serves as a protecting port for freight ships. The port is situated not far from the city centre with good walking access along the river. There is also possibility of placing the port on the outer side of dividing dike between port and river.

Location city centre

Designing of new port facilities is crucial in the city centre since they might foster the tourism development.

The port facilities cannot be placed by the right shore. Current regulation formed by cross spur dykes removes the water flow to the left shore and therefore is not sufficient water level by the right shore.

Placing the port facilities on the left shore is problematic due to the shipway passing very close to the left shore and due to the sailing narrow which markedly increase the speed of flow in this sector. Within the construction of flood-protective embankment on the road number I/30 is expected to build the floating pier on the E.km 765.3 between the Dr. Beneš Bridge and Railway Bridge.

A private investor is interested in building a port facility for passenger ships including the whole infrastructure in the place of former transfer area under the Větruše Castle on E.km 766.00. This location has a problem with suitable walking access and ship anchoring in shipway.

As a very interesting proposal could be presented a solution from a graduation thesis of Petra Chybová (student of architecture on Parisian university) called “New development of the City of Ústí nad Labem Centre, public areas and flood protection”. She proposes placing the port basin for smaller sport boats in the locality where Bilina River embouchures to Labe River, and in the locality of current Car Bazaar.

PICTURE 4 : PETRA CHYBOVA DESIGN

Source : www.usti-aussig.net

Location Střekov,Brná,Vaňov

On the left shore in the locality of Vaňov the only operating pier in Ústí nad Labem E.km 769.00 is already placed. This locality is advantageous because it is placed in the basin of Střekov lock and therefore water level and sailing conditions are guaranteed all year. On the left shore in this location is not necessary to build new port facilities.

On the right shore is optimal to build the new port facilities with linkages to thermal swimming pool in Brná (E.km 769.30).

12.2 Technical analysis

Center Location

In the framework of the construction "Usti nad Labem, transportation precaution – flood levee", it was recommended to build a stairway in the new port wall which could be used for a construction of anchoring. The stairway is designed with landings at two levels that make it possible for the anchoring to be placed at two levels in case of changing water level. The above-mentioned construction includes also a construction of mooring items (anchoring circles) on the port wall.

Because of significant changes in water levels in this location (difference between maximum and minimum water level is 3.9 meters), the design expects a floating pier consisting of a pontoon and an access bridge, primarily placed on the lower stair landing since the water level of Labe is lower when passenger transportation operates. The pier will be anchored to the upper landing when the river Labe reaches the edge of the lower landing. It is possible for ships up to 110 meters long to land.

Ships coming to the pier to anchor will be in the water way copying the left bank in the city center. Therefore it will be possible for ships to stay at this pier for at most 30 minutes.

Access of the pier from the city center is made possible in the framework of a solution of the area behind the train station and the flood levee through a passageway at the main train station and via a bridge over road I/30. Barrier-free access to the pier is made possible via pedestrian crossing on road I/30. The stairway itself leading to the landings of the anchoring will have to include a platform for handicapped passengers to ensure access to the boarding bridge.

Accessibility of the boarding bridge with the pier cannot be ensured during the entire shipping season, unfortunately. Due to big changes in water levels of Labe and the short boarding bridge (the pier must not interfere with the shipping way), it is not possible to design the bridge in a way that would ensure maximum slope of 8.33 percent.

Location: left bank of Labe, in front of Dr. Edvard Benes Bridge, E. km 765.300

Type: floating (pontoon with a access bridge)

Accessible: no

Permanent anchoring: no

Brna location

The anchoring in city quarter Strekov, location Brna, is designed on the right bank of the river Labe, between the thermal swimming pool Brna and former hotel Racek, E. km 769.300.

The advantage of this location is a direct connection to the thermal swimming pool Brna and the biking route “Labska trasa”, the existing parking lot by the thermal swimming pool can be used or a new one can be built above road II/261. There is a bus stop of the city public transport nearby. The location is in the basin of the Strekov floodgate and thus good shipping conditions are ensured all season long.

The anchoring will include facilities for recreational purposes such as benches, information boards, reserved parking places for handicapped users, rental store with sports equipment etc.

The anchoring is placed on land currently owned by the thermal swimming pool from which the premises of the anchoring will be separated by a fence. The premises will be lit.

The anchoring itself is designed as solid for two passenger ships up to 110 meters long and it will consist of an access bridge and two grids at two height levels fixed solid to the base pilots. The length of the grids will be about 17 meters. The anchoring items are designed in four pilots. It enables permanent anchoring of ships. The boarding space of the solid pier will include a connector with electricity and drinking water which is required by water passenger transportation carriers.

All entrances to the site and both levels of boarding bridges are designed as fully accessible.

Location: right bank of Labe, between Brna swimming pool and former hotel Racek, E. km 769.300

Type: solid (boarding grids at two levels)

Accessible: yes

Permanent anchoring: yes

Operators of passenger ship transport

Nowadays the passenger ship transport in Ústí nad Labem and surroundings is developing. There exist several companies which operate regular line transport between cities on the Labe River.

In the year 2010 two important sailing companies operated the ship transport from Ústí nad Labem to both sides (upstream and downstream) with linkages to other lines to Dresden and to Prague. The ship

transportation was intensified and the regular intervals were kept. The 2010 could be the important terminus for the passenger water transport.

Lines operated under the Střekov navigation level will be depending on water level in summer months. The companies consider operating the ships with low draught, which have smaller capacity though.

Labská paroplavební společnost o.p.s.

In the development of passenger water transport on the lower Labe River have merit the association of municipalities joint under the title Labská paroplavební společnost o.p.s. In this association are represented these municipalities: Ústí nad Labem, Litoměřice, Velké Žernoseky, Lovosice, Roudnice nad Labem a Štětí. The main goal of the company with the headquarters in Litoměřice is to ensure the public passenger ship transport operating on the Labe River. The basis is a project which regenerates after 60 years the tradition of excursional steamships. Other goals are activities joint with public passenger water transport operating like development of related infrastructure, publicity and tourism development in Labe valley surroundings and also assuring the conditions for funding.

In its first season in 2008 17 000 passengers were transported under support of Labská paroplavební společnost. In 2009 about 30 000 passengers used this service. These numbers prove that even when the global financial crises started, this hampering the tourist sector; people are still interested in passenger water transport on the Labe River.

Czech Republic:

Auto-moto Jiroušek Ústí nad Labem

Ship: Marie (number of passengers: 35, length: 13,6 m, width: 3,2 m)

- the ship is used as a seasonal irregular ferry between city part Vaňov and open air swimming pool Brná;

- further utilization of this ship can be ordered – for trips, parties.

PICTURE 5 : SHIP MARIE

Source : www.amjirousek.cz/lod

Jiří Štěpánek, Tomáš Zedníček

Ferry Velké Březno – Povrly (Neštědice)

- operator is the Velké Březno municipality;

- ferriage of passengers, bicycles, private and freight cars;

- all year operation limited only by unsuitable sailing conditions.

PICTURE 6 : VELKE BREZNO – POVRLY FERRY

Source : http://www.panoramio.com/

Labská plavební společnost s.r.o.

- place of business : Děčín

- ships : Poseidon (number of passengers : 250, length : 41,0 m, width: 6,5 m)

Ústí nad Labem (number of passengers: 180)

- the company operated in 2010 regular lines on 3 ships with capacity from 180 to 300 passengers,

- the ship with stabile anchorage in Ústí nad Labem (line 2) is starting daily on regular lines from Ústí nad Labem to both side of Labe River,

- the routes are chosen according to the day in a week to different locations with possibility of return,

- lines: Vaňov – roundtrip to Mariánský cliff and back

Vaňov – Litoměřice – Roudnice n.L. (with linkage to Mělník)

Vaňov – Děčín – Hřensko – Bad Schandau

- ships can be used also for parties

PICTURE 7 : ROUTE SCHEMA „LABSKA PLAVEBNI SPOLECNOST“ AND SHIP USTI NAD LABEM

Source : www.labskaplavebni.cz and AZ Consult

p. Karel Svoboda

- company is supported by Labská paroplavební společnosti o.p.s.

- timetables are synchronized with other kinds of transportations along Labe River and involved in IDOS system

- ships: Porta Bohemica1 (number of passengers: 300, length: 47,5 m, width: 8,45 m)

Porta Bohemica 2 (number of passengers: 115, length: 22 m, width: 4,5 m)

- lines are operated from Wednesday to Sunday between Ústí nad Labem and Litoměřice twice a day

- other lines: Vaňov – roundtrip to Mariánský cliff and back

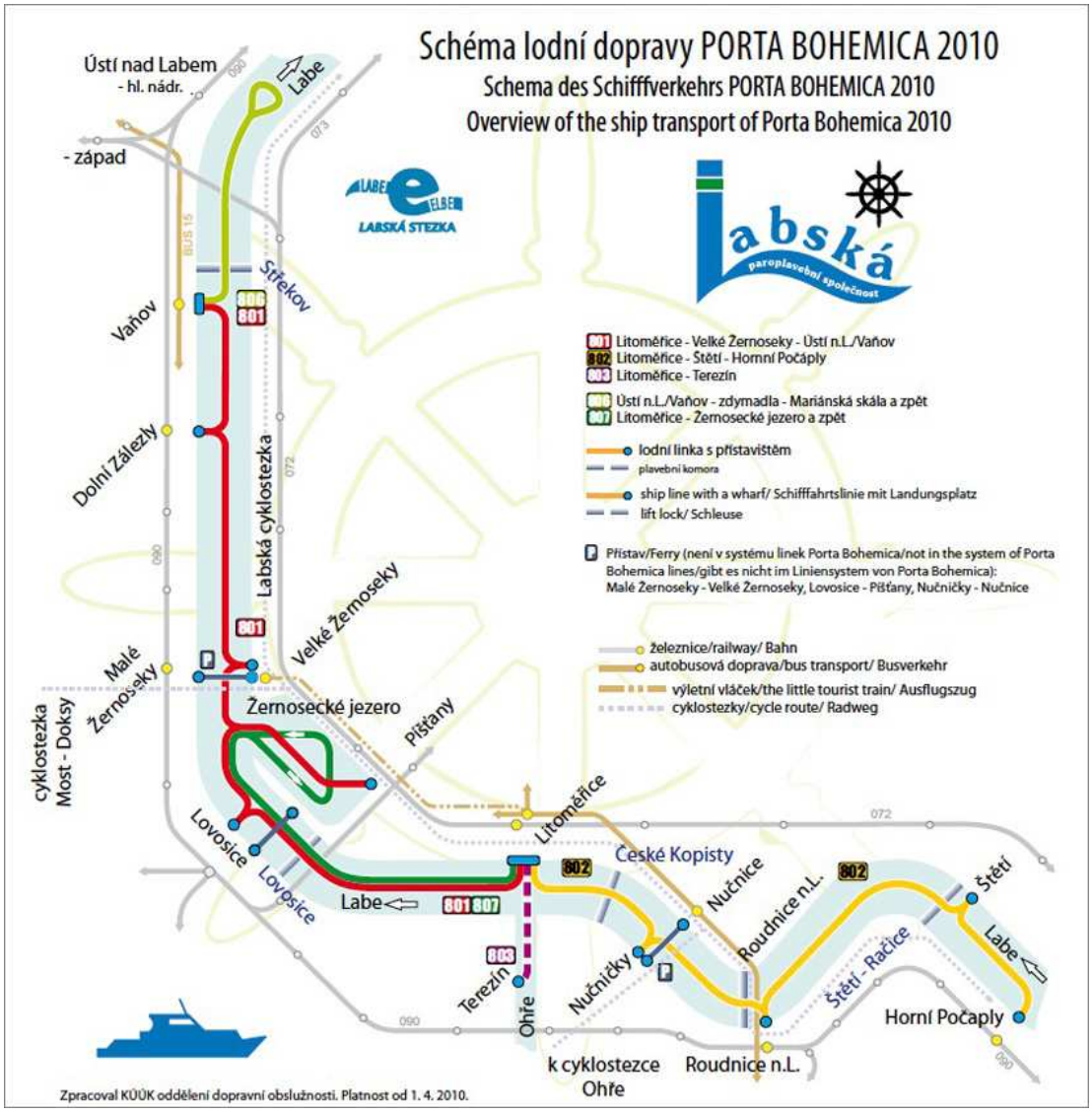
Litoměřice – Roudnice n.L. – Štětí – Horní Počaply

- ships can be used also for parties or as an opportunity for participation on regular disco nights.

PICTURE 8 : SHIP PORTA BOHEMICA 1

Source : www.osobni-lod.cz

PICTURE 9 : „LABSKA PAROPLAVEBNI SPOLECNOST“ ROUTE SCHEMA



Source: Regional office of the Usti Region

Foreign countries:

Viking River Cruises - Germany

Ship: Klara Schumann (number of passengers: 124, length: 94,8 m, width: 11 m)

- company Viking operates 10-days tours on cabin ship Klara Schumann from Berlin to Prague
- for 2010 is planned 16 tours from March to October
- the ship stops in the Czech Republic only in Litoměřice and Mělník at present, landing in Ústí nad Labem was cancelled because of bad placed anchorage out of all services and accessibility of the city centre.

PICTURE 10 : SHIP KLARA SCHUMANN

Source : www.vikingrivercruises.com

Scylla Tours - Switzerland

Ship: Swiss Coral (number of passengers: 90, length: 82 m, width: 9,5 m, draught: 1,1 m)

- company Scylla arranges several-days irregular tours from Magdeburg or Hannover on the cabin ship Swiss Coral with goal destination of Prague Capital and with stop in wine area along Labe River(Velké Žernoseky,Litoměřice,Mělník)

PICTURE 11 : SHIP SWISS CORAL

Source : www.scylla-tours.com

Nicko Tours - Germany

Ships: Frederic Chopin (number of passengers: 80, length: 83 m, width: 9.5 m, draught: 1.1 m)

Katharina von Bora (number of passengers: 80, length: 83 m, width: 9.5 m, draught: 1.15 m)

- the company Nicko Tours organizes regular tours from Potsdam to Prague on the cabin ships Frederic Chopin and Katharina von Bora

- in the 2010 is prepared totally 7 tours from German and Czech side in the time from May to June and from September to October.

PICTURE 12 : SHIPS KATHARINA VON BORA (LEFT) AND FREDERIC CHOPIN

Source : www.nicko-tours.de

Improvement of sailing conditions

To improve the sailing conditions under Střekov navigation level using the sewage method (construction of sluices) has already been made efforts from the time when the Střekov navigation level was finished. First construction attempts under this navigation level stopped the 2nd World War and following post-war restructuring of Czechoslovak industry which meant the change of orientation to the East.

In the beginning of 1970s of the useng waterways for freight transport has restarted. From the Ústí nad Labem port coal were transported, on the Labe waterway, to the Chvaletice power station. This activity has required the reconstruction of whole Labe waterway between these two cities, but the segment under the city of Ústí nad Labem was not reconstructed.

During the 1980s a discussion has started about real project for building of two sluices ensuring full usage of Labe waterway during whole year without restraint to water levels. At present this project is still in the project stage and after a long progress still very limited. More about the project phases read here:

1980s:

- 2 sluices are proposed and projected: one in Malé Březno near Ústí nad Labem and one in Dolní Žleb near Děčín

- both sluices are projected as high with heave to next sluice it is full navigability during whole year

- this solution should have been realized in the times of socialism.

Beginning of 90th of 20th century

- incoming force of environmental groups – conflict around the localities Nebočady and Čertova voda

- compromise according to requirements of the environmental groups– lowering of Děčín sluice and displacement from Dolní Žleb to Prostřední Žleb, the Malé Březno sluice kept

- there is not all year ensured navigation

End of 90th of 20th century

- new conflict with nature protection institutions – localities Střekov and Svádov

- compromise according to requirements of nature protection institutions – lowering of Malé Březno sluice

- there is not all year ensured navigation even in the city of Ústí nad Labem

Beginning of 21st century

- in 2005 a final compromise between the environmental groups and the investor (ŘVC ČR) was found

- cancellation of Malé Březno sluice, Prostřední Žleb sluice renamed to Děčín sluice and it was kept in the project from the end of 90th of 20th century

- navigation sluice solves only the most critical place on the Labe River – the sailing narrow Děčín (Heger)

- hydrostatic sluice is proposed with low pillars with maximum declivity of 5.3 m, the chamber 200x24 m, water power station of 11.2 MW and slotted fish passes by both shores

Present

- the fish passes extended to the width of 2 x 60 m

- project did not pass the EIA evaluation

- efforts of ecological activists on entire cancellation of Labe River navigation using the sluice

PICTURE 13 : DĚČÍN NAVIGATION LEVEL VISUALISATION

Source: RVC CR (The waterways directorate of the Czech Republic)

The compromise about the project of navigation between Střekov navigation level and state boundary with Germany is the Děčín navigation level what does not solve all year navigation in this segment. Děčín navigation level solves the most critical segment of the Labe River in its navigable part – the navigation narrow Děčín. By cancellation of the original solution of 2 navigation sluices is the situation on the lower Labe still critical and depending on natural conditions. The climate prognosis proposes less water in rivers during summer months in the future. Not only the freight transport will be affected by the low water levels but also, and in a deeper way, the passenger transport since it is mostly operated during the touristic season in summer months.

12.3 Financial and economic analysis

Estimated costs for building the anchorages for passenger water transport in Ústí nad Labem are following (source: author estimations):

Anchorage Ústí nad Labem – centre (floating pier without facilities)

Preparation:		2 000 €
Material:		30 000 €
of it:		
	colours:	1 200 €
	unbinding chains, cables	16 800 €
	floor profiles:	1 000 €
Works:		24 000 €
Transportation + anchoring:		4 000 €
Total		**60 000 €**

Anchorage Ústí nad Labem – Brná (solid pier with facilities)

Pier:		520 000 €
of it:		
	groundwork:	1 600 €
	starting the construction:	236 000 €
	steel construction:	243 200 €
	ending works:	1 200 €
	binding circles and navigation marks:	38 000 €

Routes and hard surfaces:	14 000 €
Water-service pipe:	4 800 €
Electric connection + lighting:	3 200 €
Total	**544 000 €**

Direct financial benefit from building of anchorages cannot be awaited. Secondary positive factors will be the benefits from tourism in Ústí region, new job opportunities and increasing of tourism activities offer.

12.4 Social and environmental impact analysis

The Usti region has one of the highest unemployment rates in the Czech Republic. Due to this reason these projects shall be realized, as their realization should reduce the unemployment rate in the region. New jobs arise with the development of tourism caused by the expansion of passenger water transport.

A significant impact on the environment is not expected from the construction of berths.

TABLE 1: UNEMPLOYMENT RATE IN CZECH COUNTIES (1.1. 2010)

Territory	Work force (moving average value)	Number of job applicants	from that available	Free job and job positions - total	Unemployment Rate in %			County position according to the unemployment rate
					Total	men	women	
Total in the Czech Republic	**5,708,580**	**539,136**	**527,728**	**30,927**	**9.24**	**8.44**	**10.33**	**x**
Ústecky County	**431,597**	**59,976**	**58,732**	**1,721**	**13.61**	**11.68**	**16.37**	**14**

Source: Ministry of Labour and Social Affairs

12.5 Importance and impact

Building of anchorages for passenger water transport in Ústí nad Labem has no direct impact to other projects in SoNorA network. This is only a local solution of local problem with passenger water transport infrastructure.

12.6 Added value and expected benefits

Building the anchorages in the city of Ústí nad Labem will bring more tourists to the city, not only domestic but mainly foreigners. Activation of tourism in the city will bring many financial and social benefits such as the creation of new job opportunities tied to tourism development and passenger ship operating, increasing of financial earnings for private and state sector and possibility to bring tourists to interesting places along Labe River.

13 Conclusions

Passenger water transport has been forgotten in last 100 years. That is why the necessary infrastructure for operating the passenger ships is missing. Revival of water tourism on lower Labe in Ústí nad Labem is limited due to missing port facilities in the city centre. This fact is reflected mainly in lack of interest of foreign sailing companies that do not stop in the regional capital. Local businesses and tourism lose not small benefits. Perspective development of water tourism in Ústí nad Labem is tied to construction of infrastructure for passenger water transport. There is high demand on regenerated water transport and the offer of operators improved a lot during 2010. It is necessary to help this phenomenon by constructing the needed facilities.

In the frame of this study the anchorage in Ústí nad Labem city centre was proposed. This anchorage is proposed without facilities according to limited area on the water sheet. The necessary facilities are proposed near the anchorage in Brná.

Total costs for construction of necessary infrastructure for passenger ships in Ústí nad Labem are around 600 000 € but the issue of financing both port facilities was not yet solved.

Direct financial benefit from the construction cannot be awaited. Secondary positive effect can be the earnings from tourism development in Ústí region, creation of new job opportunities and increasing of tourism offer.

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