



LABEL



Recommendations for flood-adapted tourism



SAXONY-ANHALT

Ministry of
Regional Development
and Transport

LABEL – Adaptation to flood risk in the Labe-Elbe river basin



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- Ministry for Regional Development and Transport of the State of Saxony-Anhalt
- Ministry of Agriculture, Forestry, Environment and Nature Conservation of the State of Thuringia
- Ministry of the Environment of the State of Saxony
- Saxon State Office for the Environment, Agriculture and Geology
- County of Ludwigslust-Parchim
- Federal Institute of Hydrology
- German Association for Housing, Urban Development and Urban Planning

Czech Republic

- Ministry of the Environment
- County of Ústí nad Labem
- County of Southern Bohemia
- County of Plzeň
- County of Hradec Králové
- County of Central Bohemia
- County of Liberec
- County of Pardubice
- Elbe Water Board
- Moldova Water Board

Austria

- Austrian Federal Ministry of Agriculture, Forestry, Environment and Water

Hungary

- Central Tisza Water Authority

Introduction

Covering parts of the Czech Republic, Germany, Austria and Poland, the Elbe river basin is the fourth largest in Europe and home to some 24 million people.

On a length of 1080 kilometres, the River Elbe links diverse regions in the Czech Republic and Germany.

Natural riverine landscapes, economic potential, e.g. in the tourism and transport sector, an attractive living environment and various large and small settlements located directly along the river are typical of the Elbe region (or “Labe” as it is called in Czech). However, any kind of development along the river is prone to high flood risks with climate change putting additional pressure on the environment.

The LABEL project aimed at establishing an effective flood risk management system as a prerequisite for the economic development in the Elbe river basin. The contents of the projects had noticeable effects on economic areas such as tourism and shipping and will contribute to devising methods and instruments for risk assessment and reduction in accordance with EU guidelines. As part of the INTERREG III B ELLA Project initiative, an international network for regional planning and water management in the Elbe river basin was designed. The project produced overviews providing information on objects at risk and agreed on a basic action plan for

the future. These elements provide the foundations of the LABEL project.

As an outcome of the LABEL project, this brochure contains recommendations for action for flood-adapted tourism as well as a catalogue listing existing and planned water-based tourism infrastructure while taking flood risks into account.

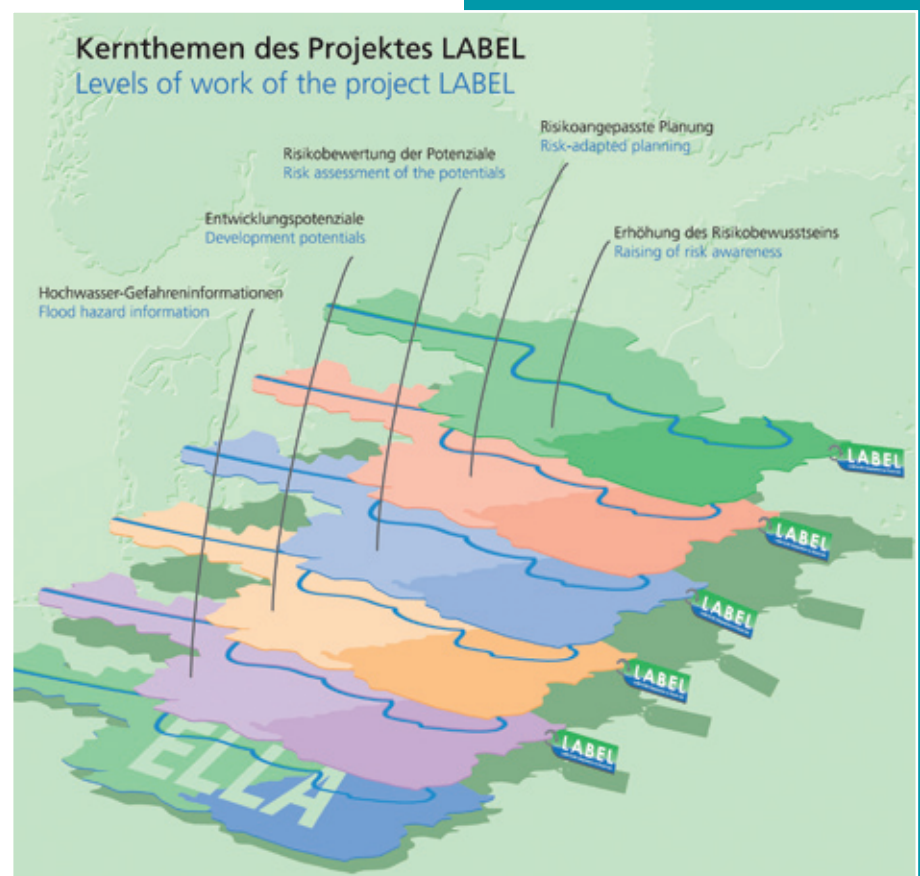


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1. Flood risk-adapted tourism – Recommendations for action

1.1 Project background

The EU-funded project LABEL 'ELBE-LABE – adaption to flood risk in the Elbe river basin' commenced in September 2008 and will be completed in February 2012. One key priority of the project is the development of 'Strategies and measures for the adaptation to flood risks' – a working title to be described, inter alia, a sub-project relating to water-based tourism. At the LABEL project level, partners from the Czech Republic and Germany have analysed inter-connections between water tourism and flood risk since late 2009. The regions started their work package by preparing various regional studies focusing on risk-adapted water tourism in their respective areas. The outcomes of those studies served as a basis to draw up a list of measures and action recommendations. The intention to make the subject of water-based tourism a key priority and central focus of PR activities emerged very early during the collaboration scheme.

1.2 Introduction/partner regions activities

The Elbe river and its tributaries have an invaluable leisure time value and the catchment area is widely known for its unspoiled nature and beautiful landscape. However, the river also has major economic significance for the regions and in some instances economic interests are partially conflicting with preservation of nature. This becomes

particularly apparent in the development of tourism: Tourism has already become an important economic factor in many regions, while there are major touristic potentials in other regions. Areas along the river are of decisive importance for cycling and water tourism but also for further touristic infrastructures, such as cafés. At the same time, utilisation of such spaces may be in conflict with flood protection: Retention areas are lost and damage potentials increase. It is one great challenge to carry out sustainable flood risk precautions with simultaneous touristic developments. In the LABEL project, five partner regions took up this challenge:

- Saxony-Anhalt, DE
- Region South Bohemia, CZ
- Region Central Bohemia, CZ
- Region Plzeň, CZ
- Austria, Region Bohemian Forest, AT

There are large differences in the natural landscape and touristic amenity levels in the regions and in their respective potentials for development: While in Saxony-Anhalt water tourism infrastructures have already been developed a lot with the initiative 'Blaues Band' [Blue Ribbon] there are both infrastructures and offers not yet available in many Czech regions, e.g. in South Bohemia, although there are major potentials: The interest for cross-border offers is existing among users, yet, obstacles are often language barriers, missing information materials and poor equipment of facilities.





Saxony-Anhalt carried out an evaluation and identified strength and weaknesses of the so-called 'Blue Ribbon' in Saxony-Anhalt, also in terms of adaptation of existing infrastructures to floods. In contrast, Central Bohemia and South Bohemia have hardly any existing water tourism infrastructures. Hence, the studies conducted were focusing on determining suitable jetties and other water tourism infrastructures which should be located in such places that are not directly exposed to flood risks. The Region Plzeň also has only a few water tourism offers, such as canoe rides and camping sites at the river which are highly exposed to flood risks. Reviews were made as to how such locations and offers can be developed adapted to potential flood risks.

In addition, experiences gathered in the regions were exchanged during various workshops and meetings of the project partner. An international workshop was held in Magdeburg in November 2010 where partners from all Elbe river regions convened in order to discuss further joint development of infrastructures, offers and marketing strategies. The next workshop will be held in Central Bohemia in February 2011.

1.3 Recommendations for action

Each study was targeted at providing the regions with concrete indications for improvement of risk-adapted water tourism. The workshops also dealt with cross-

border approaches. The different equipment of the partner regions with water tourism infrastructures and offers became obvious: Planning and construction of infrastructures have been largely completed in many parts of Germany while many Czech regions are only commencing this process. However, several shared conclusions and recommendations for action towards flood risk-adapted development of water tourism in the Elbe river basin were deliberated by the project partners:

→ Interconnection of water tourism offers and marketing along the Elbe river

The importance of long-term supra-regional and transnational cooperation for strengthening water tourism was emphasised by all project partners. This collaboration should cover both water tourism offers and their marketing:

- Extension of water tourism offers through improved interconnection, e.g. in passenger cruises. This requires also improving cooperation between associations, organisations and administrations.
- Intensified cooperation between German federal states and between the participating countries (Germany, Czech Republic, Austria) in marketing of water tourism offers: For instance though improved collaboration of German and Czech tourist boards or preparation

of a joint marketing concept for the Elbe river basin.

It is also desirable to introduce a supra-regional and cross-border standardised signage and orientation system for all relevant sights and water tourism infrastructures (ports, jetties, marinas, etc.). Such cooperation schemes require the provision of regional, national and European funding.

→ **Extension of water tourism infrastructures under consideration of flood risks**

The different equipment levels of water tourism infrastructures along the Elbe and its tributaries denote that there is a high demand for upgrading existing infrastructures to similar standards. Jetties, service centres and easy-to-interpret signage systems have to be installed in order to attract more tourists.

All infrastructures planning and design should not only consider safety of such installations from floods but also precautionary aspects. Flood protection installations should be integrated into tourism uses.

Public-private partnerships may be feasible opportunities for financing and operation of new facilities.

→ **Improved communication of flood risks among tourism providers**

The majority of tourism providers is not protected or insured against flood damage in terms of structural or financial precautions, as shown in a survey that was conducted in

Saxony-Anhalt. Specific information about flood risks has to be made available to tourism providers and adapted to their relevant situations, i.e. water tourism utilisation. Such campaigns should be aimed at sensitising the providers to such extent that they pass on such information to their visitors and clients and thus increase the problem awareness also among tourists.

Water-bound tourism in the Elbe river basin will remain a niche topic or complementary offer also in the future. Yet, existing potentials should be exploited and more intensively revalorised, not least in view of already implemented and planned investments into infrastructures and marketing. Long-term utilisation of opportunities for river and nature tourism requires the tourism sector to focus its interest on sustainable and consistent protection of the valuable natural landscape in the Elbe river basin.

Marketing activities should be intensified. The most urgent task in this respect is to improve interconnection of existing offers without restriction to political borders but by strengthening transnational and cross-border cooperation schemes in marketing. Visitors should be provided with theme-specific and condensed information that is presented in a contemporary outfit.

Already existing, attractive infrastructures shall be safeguarded and – where necessary – gaps should be closed. Adaptations are especially required in view of frequent water level fluctuations.





Brochure 'Blue Ribbon', Travel Guide for Water Tourism

1.4 Saxony-Anhalt

Water-bound tourism along the 'Blue Ribbon' has unique natural-landscape and touristic potentials. The special charms are created by a widely branched semi-natural river, an attractive natural space with multi-faceted, flora and fauna worthy of protection in combination with cultural sights and assets, such as various UNESCO World Heritage sites, historic Hanseatic towns, edifices from the Romanesque period, but also wine-growing regions along the river courses. The water tourism infrastructures in the narrower sense (ports, jetties, locks) have a good quality standard.

It is true that the importance of water tourism (in the meaning of water-bound tourism) is still rather low for the travel destination of Saxony-Anhalt – in comparison to culture and city tourism – but constitutes a significant economic factor for individual locations along the Blue Ribbon. The name recognition of the 'Blue Ribbon' was increased through comprehensive marketing activities between 2004 and 2007. In addition, a specifically developed signage and orientation system is acting as an image medium along the rivers. The association Blaues Band e.V. was founded in 2002 to represent the interests of water tourism-related issues and has developed into the central point of contact for water tourism in Saxony-Anhalt.

The association Blaues Band e.V. provides Saxony-Anhalt, like hard-

ly any other federal state, with an appropriate structure and necessary know-how for efficient and professional marketing of water tourism in the future on an adequate (financial) basis. The following recommendations were prepared for adaptation to flood risks:

- Safe-guarding and adaptation of water tourism infrastructures
- Continuation of transnational/cross-border nature and flood protection measures
- Natural flood protection, e.g. by providing further natural compensation areas in cooperation with nature protection organisations
- Technical and structural flood protection, e.g. through (financial) support of tourism providers in securing boat jetty installations (especially for construction of new facilities)
- Development of information systems about the subject of high and low tides

1.5 Saxony

Water-bound tourism is rather a niche topic in the Free State of Saxony.

Historic paddle steamers are offering cruises between Dresden and the Elbe Sandstone Mountains.

The predominant position, however, is taken by cycling tourism along the Elbe river.

Saxony boasts a large variety of water sports offers. Many rivers, vast lakes and ponds are absolutely suitable for water sports. The range of offers in the Saxon regions includes surfing, yachting, fishing and canoeing.

Tourists are invited to enjoy water hiking, wakeboarding or wild-water rafting.

1.6 Combination of water tourism and flood protection in the Region South Bohemia

The interconnection between development of water tourism and flood risks constitutes an essential problem for the Region South Bohemia (Jihočeský kraj) in the development of areas that are bordering on waterways, reservoirs or lakes. The Region South Bohemia is deemed in the Czech Republic as the area with the best-preserved natural landscape. The most important characteristic of this region (beside flood problem) and at the same time its major touristic attraction is the Bohemian Forest, closely followed by a vast tourism resort around the town of Třeboň, with the best-known lake district in Bohemia, and the area around the Orlik River Dam: the Central Vltava River Basin (Střední Povltaví). Those flood-endangered regions were subject to analyses in the LABEL project.

The fundamental key issue for the Region South Bohemia was to identify a synergetic solution to protect the whole region more efficiently against floods while making it more attractive for water tourism. One successful example is the flood protection project at the largest pond in Bohemia, the Rožmberk Pond (Rybník Rožmberk). The planned alterations at the dam enable the containment of floods to a Q100 level. Selection of this solution was based on regional studies in which detailed development strategies for inhabited and uninhabited areas were presented, accompanied by highly accurate analyses of the consequences of potential development projects for the regions – including possible impacts of flood protection. Another example of a solution that combines tourism and flood protection is a draft design for the construction of the port of refuge České Vrbné, located near the northern edge of České Budějovice centre on the upper Vltava river. Construction of this port of refuge is a clear signal to owners of cruise and tourist ships: We take care of your ships – also in times of floods.

Those studies and analyses allow for a deduction of three important conclusions for potentials of the Region South Bohemia regarding further development of water tourism.

Ad 1) Recreational navigation shall be the main driver of develop-



Paddle steamer 'PD Leipzig'



ment of the route on the Vltava to České Budějovice. The basis can be attractive touristic destinations lining the route (e.g. Zvíkov Fortification, the castles of Orlík and Hluboká nad Vltavou, the towns of České Budějovice, Týn nad Vltavou and Písek with historically grown civic infrastructures and a large variety of sights and – in the wider surroundings – the towns of Český Krumlov and Holašovice which are UNESCO World Heritage sites and are accessible by bicycle). In order to achieve this target, the Vltava canalisation project should be further advanced, including extension of logistical and technical infrastructures that are required for navigation. A secondary requirement involves the banks of Vltava river where a touristic infrastructures should be constructed respectively existing infrastructures extended and their qualities improved, e.g. though construction of new accommodation in different standard, construction of golf courses and cycling trails, establishment of new restaurants or bicycle hiring stations.

Ad 2) They fundamental task for the area of the Orlik Dam is cleaning the impounding water and controlling blue-green algae. This means an effective extension of wastewater treatment plants at such watercourses which empty into the dam or into rivers located upstream of the dam. The WWTPs have to be equipped with technical components for elimination of phosphorus, the main nutrient of blue-green algae.

Another aspect in this context includes negotiations regarding management of land plots located at the dam or its inflows, aimed at ecological management with decreased utilisation of chemical fertilisers and increase of pastures and meadows. Also included are negotiations with fish farmers in the districts around Třeboň and Blatná for modification of fish breeding methods, up to lowering additional feeding rates and more nature-oriented fish-keeping.

Ad 3) Regarding water tourism, development in the region of Třeboň and in the areas along Otava river should be increasingly oriented on cruises with small crafts or canoes (rafts). It is required also there to extend touristic infrastructures and improve their qualities. This relates specifically to boat and bicycled hiring as well as to enhancing quality standards of camping sites.

1.7 Region Ústí – Water tourism

Holiday traffic and water tourism on river Elbe (Labe) is an interesting topic and efforts towards its promotion have been taken for quite some in the Region Ústí. Preparation of a list of locations for the construction of a recreational navigation infrastructure in this region was based on already existing Elbe tourism offers. 12 jetties for passenger and cruise ships were selected

from all existing infrastructure locations. The choice comprises various categories of ports and berths which are differing in their equipment standards.

The following jetties were selected:

- Hřensko
- Děčín – Rozbéleny
- Velké Březno
- Brná nad Labem
- Píšany
- Litoměřice, Ship Square (Lodní náměstí)
- Litoměřice, Mill Brook mouth (ústí Mlýnského potoka)
- Litoměřice
- Vědomice
- Vědomice, Pod Lípou
- Roudnice nad Labem – upper navigation canal (horní plavební kanál)
- Roudnice nad Labem – U pily

Still, the above locations have some development potentials. But also plans for other locations for recreational navigation infrastructures are taken into consideration.

One separate map sheet was prepared for each location to show interesting places in the near surroundings (cultural heritage, cycling and hiking trails, nature attractions, etc.) but also information about available service offers (retail, catering, accommodation, medical facilities), transport infrastructure (access to rail and road networks, public transport, fuel stations, etc.) and recreational facilities (camping si-

tes, swimming, etc.). In addition, the map sheets provide graphic information about flood risks, such as demarcation of flooding areas by means of scenarios such as HQ100, HQ20 and HQ5 (HQ100 denotes for example a statistical centennial flood event).

Moreover, each jetty or marina is described in a catalogue sheet which gives detailed information about the respective location and explanations of the location equipment standard. All locations at the Elbe river in the Region Ústí are connected to the Elbe River Cycling Trail which runs in parallel to the river and is suitable for all groups of users. A further benefit for long-distance travellers and users of minor routes is the connection of this cycling trail with other major cycling trails along the rivers Ploučnice and Ohře (Eger) and the Iron Ore Mountains Route. One recently completed project deserves special mentioning among all finished schemes – the Marina Labe in Píšany. This marina provides attractive opportunities for water tourism specialists who are not only interested in local service offers (accommodation, catering, fuelling, bicycle repair, etc.) but also in organised bicycle day trips of the surroundings. One benefit of this port is its ‘protective function’ in case of the occurrence of an unexpected flood situation. To date, various projects have been successfully completed but the potential of the Elbe river for water tourism purposes has not been fully exploited.





Bezirk Pilsen

1.8 Region Plzeň – Water tourism

Insufficient infrastructures and non-existent connections to further touristic activities have prevented the Region Plzeň to fully exploit its potentials for water tourism. Existing facilities are located directly on the waterway and thus endangered by floods. Their extension may result in increased flood hazards for other areas. This is why the Region Plzeň evaluated all experiences gathered in the course of cooperation with partners in the LABEL project and applied the outcomes to its assessment of the framework conditions for water tourism.

The Region Plzeň provides good conditions for water tourism, above all for development of utilisation forms by individual tourists: Recreational and sport canoeing and rafting on smaller rivers.

The study 'Appraisal of conditions for water tourism in the Region Plzeň' evaluated existing infrastructures and further complex utilisation of recreational and tourism potentials and recommended measures for a mitigation of flood hazards. Six out of 36 reviewed jetties camping sites have proven to be not suitable for water tourism under consideration of flood protection.

The study also showed that implementation of flood protection measures does not impair touristic utilisation of the river. The recommended measures detailed in the catalogue sheets were incorporated into the regional plans of the relevant municipalities and

the district and implementation of such measures will also serve to support water tourism.

1.9 Improvement of water tourism infrastructures in Central Bohemia

There are good preconditions for further development of water tourism in Central Bohemia but water-bound tourism infrastructures are not yet available on longer river sections, similar to the situation at the rivers Elbe and Vltava. As part of the LABEL project, the region proposed construction of potential new jetties under consideration of flood risks.

There are very good preconditions for development of water tourism. However, activities in the field of planning and extension of water tourism infrastructures have to be adapted to potential flood situation. The region already has a developed flood warning system (notification of individual flood hazard scenarios) and several ports of refuge.

The Region Central Bohemia has suitable locations for the construction of jetties or marinas and their respective categorisation depending on their respective equipment standards. There are some deficits in the region in terms of extension of infrastructures for leisure time navigation. The above-mentioned study suggests concrete solutions for development of water tourism infrastructures offers which take account of tourism as an economic

factor but also of aspects like flood risks and environmental protection. 53 potential jetties were identified and mapped.

There were no suitable locations outside of floodplains identified at the whole length of the reviewed river section. Hence, the study concentrated on identifying locations that are as far away as possible from the river channel line or least in areas that are safeguarded by suitable protection measures from flood water damage. Such locations must ensure proper fixing of buoys or floating facilities at every water level. The selected locations have to fulfil, e.g., the following conditions:

- Safeguard of good accessibility and good connection to transport networks, as far as possible also during flood levels
- Distances between proposed locations must enable swift relocation of floating installations and moored water craft from ports in flood-exposed locations
- Sufficient capacities for berthing of all endangered water craft
- Other, non-technical requirements must not prevent water tourism utilisation (nature protection, etc.)

Such locations are available: Beside already constructed ports of refuge these are mainly abandoned Elbe

river arms and gravel pits. Where such locations are near larger settlements and are fitted with necessary infrastructures, construction or extension of a permanent facility (fully-equipped port or marina) is recommended. If such locations are lacking infrastructures or are difficult to access, it is recommended to construct only flood fender piles which can be used to safeguard floating installations in cases of high water levels. Precautionary measures, such as the obligation to clear the port of hazardous substances, have to be included in flood protection plans for each port. Also measures for flood protection are described for each location for which extension or upgrading of infrastructures is proposed.



Bezirk Mittelhöhen

2. Flood risk-adapted tourism – List of existing and planned water touristic infrastructures and adaptation measures under consideration of flood risks'



Wasserstraßenkreuz Magdeburg

2.1 List of measures

The studies that were prepared in the course of the project analysed for instance of planning of potential new infrastructures, adaptation of existing infrastructures and enhancing cooperation between Elbe river riparian and neighbouring regions. Accurate maps were used, e.g., in order to define suitable locations for constructing new water tourism infrastructures. It was also shown which existing infrastructures should be adapted on account of flood hazards. In addition, regional asset surveys were carried out of already existing and planned infrastructures. All those efforts are meant to be an initial approach towards area-wide introduction of water touristic infrastructures under best possible consideration of flood risks. This measure is targeted at making the participating regions more attractive for cross-border water tourism.

The following key activities were selected for the list of measures:

- Infrastructure
- Development potentials (where planned)
- Recommendations for investments or planned measures (e.g. adaptation measures, potential construction of new water touristic infrastructures, etc.)
- Information about flood hazards

- Information about flood risk, where possible up to HQ Extreme (where available)
- Contact persons in each region (persons responsible for investments)

This information is structured on a region-by-region basis and addressed to potential investors as well as competent public departments but also to interested members of the broad public.

2.2 Saxony-Anhalt

Infrastructure

Saxony-Anhalt has a high-quality tourism infrastructure, especially water-bound facilities (river ports, jetties, locks, etc.). The infrastructure targets of the overall concept 'Blaues Band' [Blue Ribbon] were almost achieved. There is a uniform, area-wide signage and orientation system in place. The system has a high information contents as it integrates water- and landside offers. There are various highly professional water tourism suppliers active with a wide range of attractive offers in boat and canoe tourism as well as in passenger cruise (e.g. Havelberger Inseltouristik GmbH & Co. KG, Saale-Unstrut-Tours Naumburg, Reederei Süßenbach Schönebeck). They provide offers as one-stop-agencies and have thus improved their economic basis through a variety of footholds. In general, there are an increasing number of water tourists on the Blaues Band route

who provide positive dynamics, especially in canoe tourism.

This development has also prompted a strengthening of niche segments (e.g. houseboat tourism in several route sections).

Notably passenger cruises and canoe tourism have made for attractive daytrip tourism rates. The economic position of suppliers can be estimated to be relatively stable.

Deficits and resulting development potentials

There are still major gaps in landside infrastructures leading to waterways (e.g. access roads, utility supply and disposal, catering, shopping facilities) while there are only a few isolated gaps in waterside infrastructures (recreational craft marinas and jetties for passenger cruise ships, marine fuel stations).

There are also some gaps in landside signage systems (e.g. signage of passenger cruise jetties on pedestrian routes from city centres) and insufficient integration into superior touristic signage and orientation systems.

Very different levels of providers in terms of size and professionalism lead to differing location offers, frequently lacking are innovative and target group-specific offers. The latter is the reason why stagnation tendencies were found among many providers.

Water sport tourism is rather a niche topic Saxony-Anhalt; hence to date there are too few attractive offers in order to increasingly entice multi-day tourists also from other federal states.

Floods

Several individual providers have carried out adaptations to water level fluctuations through specific constructions of facilities and ships.

Nowadays, there is only very limited information provided regarding water level fluctuations and adapted tourism offers. Smaller facilities are lacking funds to intensify their safeguarding actions against flood risk.

There is also a certain level of uncertainty regarding possible increases in extreme water level fluctuations due to human interventions to the natural landscape, global impacts and climate change.

2.3 Region Plzeň – Plzeňský kraj

Infrastructure

The character of water tourism in the Region Plzeň is reflected both in the standards and current conditions of infrastructures for water tourism.

Water tourism has predominantly a leisure time and sports character and is almost exclusively provided by means of smaller, non-motorised boats. Those boats are anchoring in rivers only for brief periods and thus do require cost-intensive berths.

The necessary infrastructures consist mainly of jetties for boating cruises (combined with car parks and public transport), rest areas, campgrounds and camping sites and corresponding sanitary and utility facilities.



Floods Magdeburg



Bezirk Pilsen

Currently, there are 36 campgrounds and camping sites along rivers Otava and Berounka that can be used by water tourism. Under the umbrella of the 'LABEL' project, presently existing quality deficits in such infrastructures were determined and subsequently potential solution approaches were suggested. Simultaneously, further locations were proposed in order to extend the network of facilities.

Improved conditions for water tourism require improvements of waterways navigability, such as adaptation of riverbeds or weirs. Such efforts offer possibilities for coordinated solutions together with flood protection measures. The solution to this problem is to ensure improved accessibility to communication installations for water tourism, cars but also means of public transport (busses and, where possible, trains), including opportunities for shipments. Deficits were also found in hiring of water crafts as well as their maintenance and storage.

Multi-functional utilisation of such facilities – cycling events are practically offering themselves – would contribute to improving the efficiency of such facilities. As a result of the performed study, a cycling trail through the Berounka valley was proposed for the Region Plzeň.

Floods

The facilities were inspected with a view to flood hazards. Implementation of flood protection measures

can often contribute to improving conditions for water tourism and is also necessary in order to integrate the aspect of water tourism already into draft designs.

The most important required activity is deemed to be the incorporation of flood endangered water tourism facilities into crisis management systems, including solution opportunities for evacuation and safe berthing of ships and boats.

Information and Marketing

It is necessary in the Region Plzeň to distribute information materials about opportunities for water tourism, on the one hand, and, on the other hand, to provide information (marking, information signs/boards) for waterways, jetties, infrastructures of water tourism as well as nearby sights.

Commercial guided tours for water tourism (combined with further services) should also be considered – there are a lot of potentials for the future cooperation between the project partners.

2.4 Region Ústí – Ústecký kraj

Infrastructure

Some 100 km of the Elbe river are flowing through the Region Ústí, between Hřensko (Herrnskretschchen) and Dolní Bečkovice (Unter Berschkowitz). The Elbe-Vltava waterway is the most important watercourse in the Czech Repub-

lic. Water transport on the Elbe, however, finds it difficult to come to terms in the Region Ústí resp. in the whole Czech Republic with the specific problem of inland waterways – the critical 40-kilometer-long Elbe section between Ústí nad Labem and the German border is a fundamental capacity bottleneck.

This section (Lower Elbe) depends on current precipitation and basically renders all infrastructures implemented on rivers Elbe and Vltava ineffective.

Water transport in the Region Ústí, including leisure time cruises, is presently involved in construction of missing infrastructures. The objective is to improve navigation conditions and ensuring all-year navigability of the Elbe waterway. The river section from the state border Czech Republic/Germany to Ústí nad Labem is a narrow passage and navigability of this section is limited for most of the year. This situation also impairs passenger and leisure time navigation. Passenger boats on the Elbe are mainly involved in leisure time activities and benefits from the sights in the Elbe valley.

The key stakeholders in passenger transport on the Elbe in the Region Ústí are 'Labská paroplavební společnost o.p.s.' and 'aroplavební společnost o.p.s.' and 'Labská plavební společnost s.r.o.'. Those companies ensure operation of passenger cruises on the Elbe and actively promote development of the pertaining infrastructures and tourism in the surrounding Elbe catchment area.

Problems and resulting development opportunities

Currently there are a number of jetties available at the Elbe for passenger ships and leisure time boats. The existing locations, however, possess further development potentials. At the same time, emergence of further potential infrastructure locations for leisure time cruises on the Elbe cannot be ruled out.

ports and jetties at the Elbe should be available every 40 to 60 kilometres of this waterway; even better would be a suitable jetty every 20 to 30 kilometres. The jetty sites should be located close to touristic, culturally or otherwise attractive places.

Typically, facilities for leisure time cruises in the Region Ústí are well connected in terms of tourism to places in the near surroundings and significant services (restaurants, shops, fuel stations and accommodation). They are likely to be surrounded by interesting natural features and cultural sights worth visiting. Traffic connections to access roads as well as to highways and expressways are given and several locations are also connected to railway lines. Yet, despite all those infrastructures should be further qualitatively improved in the future.

Another important aspect is the combination of leisure time cruises with cycling tourism which is ensured in the Region Ústí by means of the Elbe Cycling Trail.

The quality of offered services for leisure time cruises on the Elbe is not always up to the desired stan-





dards. Hence, improvement of the quality of such services is desirable, especially in view of the increasing importance of river-bound passenger transport and leisure time cruises.

Floods

Equipment standards of river ports to fend off flood situations vary a lot according to their respective categories. Standard procedure in case of a flood (i.e. upon notification of the first flood level) is that ships and boats have to be moved from the waterway to a port of refuge. Subsequently, the boats have to be secured in such a manner that their free movement is prevented. The function of a port of refuge can also be taken on by properly equipped river ports that are fit for berthing and anchorage of sport boats, provided that suitable facilities are available. Out

of 12 monitored facilities for leisure time cruises, two locations fulfilled the requirements to ports of refuge. This means that they are equipped with necessary floating elements which enable mooring of ships during all relevant water levels. The other locations are not fitted with the necessary installations for flood situations. What should be considered for the latter locations, however, is that the installations for safe mooring of ships for the duration of a flood (flood fender piles or even retrofitted floating piers for mooring) are relatively cost-intensive and their utilisation, at least for a certain percentage of available berths, must have the character of a public service.

In addition, such facilities for mooring ships are only required where anchorages are located outside of the exposed sector of an active flood zone.

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