

„Evaluation of recreational potential of near-nature watercourses in urban area in the Czech Republic“

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„Raising awareness and publicity of the importance of forest functions in the landscape and near-natural watercourses in urban areas as a part of basin ecosystem services.“

- The overall benefit of the project is to increase the awareness and knowledge and educate about the near-nature watercourses in urban areas as a part of the ecosystem services of the river basin.

Another part of the project also concerns itself with:

- mapping
- description
- and evaluation of examples of the near-nature watercourses
- We have mainly focused on watercourses flowing in 30 towns in the Czech Republic.



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- The current goals of modifications and regulations of watercourses for recreational purposes within the countryside, mainly concern themselves with optimizing the water regime, as well as anti-flooding devices, protecting property, and supporting biodiversity.
- Restoration and modification of watercourses have great importance even from the standpoint of increasing the potential of recreation in the countryside.
- By fitting modifications of watercourses we have the possibility of increasing the recreational potential of the countryside, a capacity to visit the countryside, and increase the quality of the surroundings of people living in towns.



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- In the Czech Republic, the realisation of polyfunctional modifications are still insufficient.
- In other countries (such as Bavaria, Great Britain, Holland or Denmark) the support of recreational potential of bodies of water is common practice.



The revitalized river Cheonggyecheon in Seoul is a fitting place for recreation of not only local citizens, but also tourists, and its revitalisation greatly supports tourism



The revitalized anti-flooding alteration of the river Isar below the town of Munich.

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- In the past years, many alterations of watercourses have occurred in the Czech Republic, that contributed to the better potential of the recreational potential of the countryside.
- On the basis of these reasons it was seen fit to create a complex/integrated and methodical procedure to evaluate the recreational effect of modifications of watercourses in urban and sub-urban localities.

This methodical procedure has a three-dimensional character and concerns itself with:

- The ecosystem of the watercourse
- The anti-flooding modifications put in place to protect the countryside
- But also the ecosystem services/functions that are put in place to serve the citizens of nearby towns and their surroundings (hydrological, recreational, esthetic, hygienic, climatic, etc.)

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The methodical procedure itself is based on the evaluation of a total of six markers, their criteria and factors from three areas:

1) The location – restoring and modifying watercourses

1. The riverbed and the direction of the current of water
2. Flow of water and the visual evaluation of the quality of water
3. The bottom of the river
4. The bank of the river and also the inundation locations

2)The locality – recreation






- 5.The existence of social utility and accessibility to the locality

3)The locality – countryside

6. The existence of local landmarks

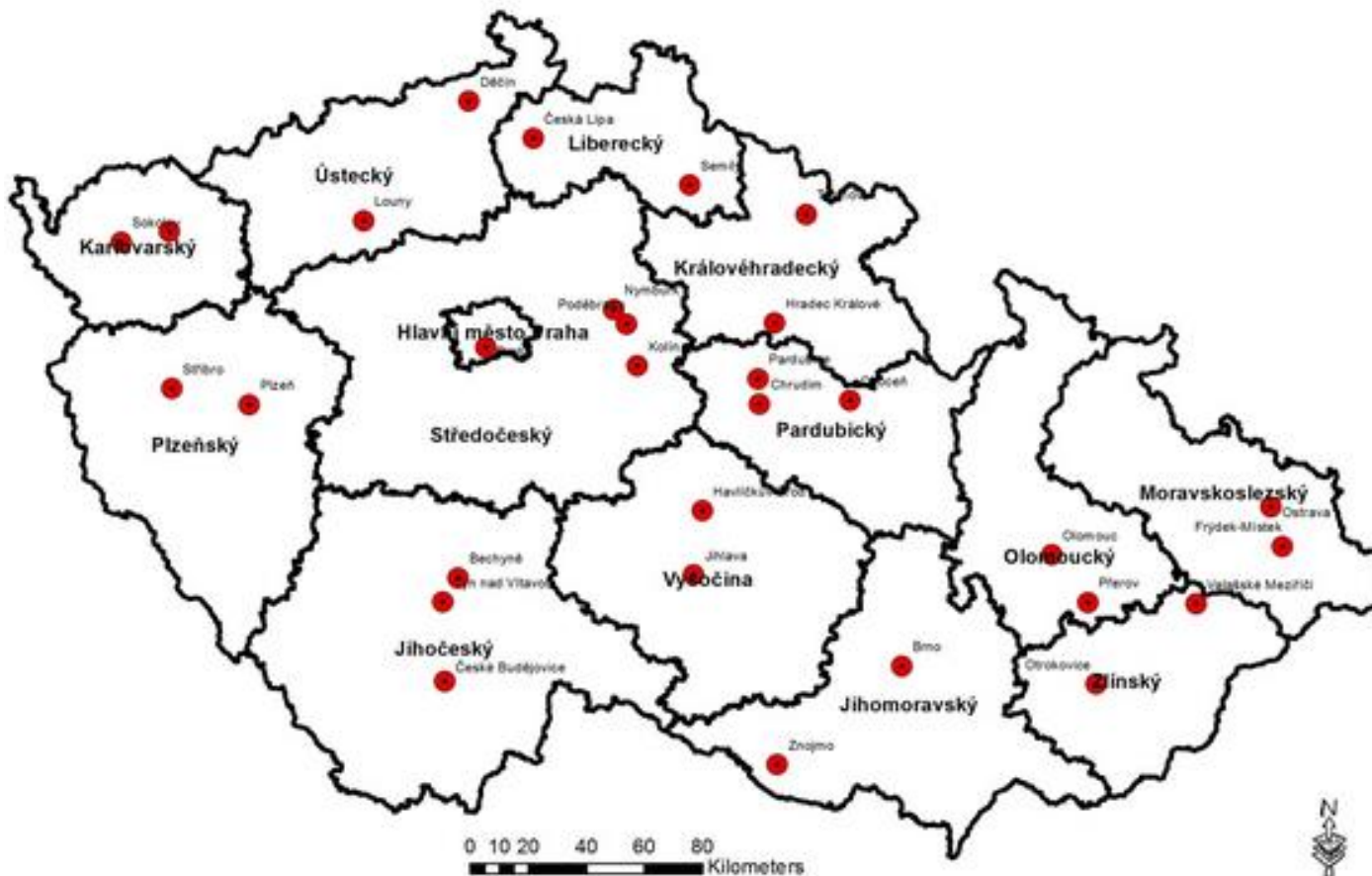
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These three areas are judged in relation to the fitness of the countryside for the purposes of recreation and their recreational activities such as:

- Tourism (walking, cycling, skiing, hipotourism) 
- Recreation by the water itself (swimming, subathing and relaxing) 
- Water tourism (canoeing, rafting, motorboats, etc.) 
- Fishing for sport 
- Observing and photographing (waterbirds and other animals/water and bank vegetation) 

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- Evaluation of the state of the terrain and the recreational effect of modifications of watercourses took place in thirty towns in the Czech Republic.



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The following list contains regions, towns and rivers in the Czech Republic which were evaluated:

1. **Kraj Jihočeský** – České Budějovice, Týn nad Vltavou, Bechyně (Vltava, Malše)
2. **Kraj Středočeský** – Nymburk, Poděbrady, Kolín (Labe)
3. **Kraj Pardubický** – Pardubice, Chrudim, Choceň (Labe, Chrudimka, Tichá Orlice)
4. **Kraj Královehradecký** – Hradec Králové, Trutnov (Labe, Orlice, Úpa)
5. **Kraj Liberecký** – Semily, Česká Lípa (Jizera, Ploučnice)
6. **Kraj Plzeňský** – Plzeň, Stříbro (Radbuza, Mže)
7. **Kraj Karlovarský** – Sokolov, Karlovy Vary (Ohře, Teplá)
8. **Kraj Ústecký** – Louny, Děčín (Ohře, Labe)
9. **Praha** - (Vltava)
10. **Kraj Vysočina** – Havlíčkův Brod, Jihlava (Sázava, Jihlava)
11. **Kraj Olomoucký** – Přerov, Olomouc (Bečva, Morava)
12. **Kraj Zlínský** – Otrokovice, Valašské Meziříčí (Dřevnice, Rožnovská Bečva)
13. **Kraj Jihomoravský** – Znojmo, Brno (Dyje, Svratka)
14. **Kraj Moravskoslezský** – Ostrava, Frýdek – Místek (Ostravice)

„The restoration the river Ostravice in Ostrava “

- One of the judged localities was the river Ostravice in the town of Ostrava – the project named revitalizing the river Ostravice took place here.
- The river was evaluated along 4 650 meters of its current.
- The main reason for choosing this locality was the intention of the project, which concerned itself with the polyfunctional use of the locality, including the importance of the revitalization in terms of increasing the potential of recreation of this locality.
- It was seen that from the possible recreational activities listed above, it is not possible to use motor boats in this location.
- The locality is, however, appropriate for canoeing, rafting, sunbathing and relaxing as well as observing the local wildlife in general.
- The best use of this location is for walking, cycling, in-lining, skiing, hipotourism and fishing for sport.



„The restoration the the river Ostravice in Ostrava “

- As part of the revitalisation project a port for rafting and canoeing was built. The serves the watersport group named Campanula.
- The port was constructed out of wire baskets filled with stone
- However, for health and safety reasons, the construction used is not suitable for canoeing. This is due to the fact that there have been incidents of injury and damage to canoes and rafts.



„The restoration the the river Ostravice in Ostrava “

- Another construction on the river were newly constructed banks with places for fish to cross over serves as a migration route for the local wildlife
- The weir and its surroundings is suitable for watersport enthusiasts, as well as for swimming nad sunbathing.



„The revitalization the the river Ostravice in Ostrava “

- At this type of weir banks were created for sunbathing aswell as stops for watersport enthusiasts. Trees were planted and routes for people travelling on foot were created.
- Citizens spend time here relaxing, swimming, walking and fishing



„The revitalization the the river Ostravice in Ostrava “

- A very frequented place is the newly constructed viewing gallery, which allows its visitors to gaze upon the river Ostravice and her surroundings.



Frýdek – Místek, river Ostravice

- Another evaluated locality was the river Ostravice in the town of Frýdek-Místek
- The river was evaluated along 4600 meters of its current.
- In the year 2014 restoration of the river and its surroundings took place.
- As part of the project, certain layers of the bank were unearthed and worked upon. Also, the banks were humussed and layers of gravel were removed from the riverbed.
- In terms of recreation, the bank is mostly suitable for travelling on foot, cycling, in-lining, hipotourism and ski tourism.
- The environment in the town park allows a sufficient amount of space in order to sunbathe, observe and photograph local wildlife and surrounding vegetation.
- The park accomodates three small campfires which can be used for the purposes of recreation.
- The local surroundings also accomodate various historical, cultural, and aesthetical features.
- The water in the river is clean and suitable for fishing.



Frýdek – Místek, river Ostravice

- A view of the modified river Ostravice and her surroundings. In the background you can see the highest mountain of the Beskydy mountains – the mountain Lysá Hora .



Frýdek – Místek river Ostravice

- As a part of the project of restoration of the river Ostravice wooden plants were planted. In the background you can see the historical landmark – the chateaux in Frydek-Mistek.



Frýdek – Místek river Ostravice

- The weir on the river Ostravice is used for swimming, sunbathing and fishing.
- People from the local area often go cycling and relaxing in this area.



Olomouc, river Morava

- As part of the anti-flooding mechanisms of the town of Olomouc the river Morava was revitalised.
- The goal was to reintroduce nature the the regulated stream of water in an urbanized environment.
- Certain parts of the modification to this watercourses include:
 - Extracting gravel from the riverbed
 - creating islands
 - The use of driftwood as part of a biotechnical fortification of the banks
 - Alterations to the banks
 - constructing dams
 - planting banks and their surroundings with vegetation
 - creating access points to the river
 - creating routes for walking, cycling, and in-lining

Olomouc – river Morava

- Part of the alterations made the river flow in two separate directions in which an island is placed, fortifying the banks with driftwood and planting new trees.
- Part of the alterations also included the construction of a strong wall around property.



Olomouc – river Morava

- The river Morava and her surroundings are a very frequented place
- The conditions for hipotourism are also exceptionally fitting here, as well as for in-line tourism and cyclotourism.
- The conditions for fishing and photographing local waterbirds and other wildlife are also exceptional.
- The conditions for sunbathing and relaxing are also optimal here, as well as walking and cross-country skiing.



„Evaluation of the effect of recreational alterations of waterbodies in towns of the Czech Republic“

As part of the project, we have focused on various aspects to evaluate in terms of the recreational effect of watercourses in various localities:

- Technical aspects
 - Recreational aspects
 - Nature aspects
 - Cultural, historical, and architectonic aspects
 - Aesthetic aspects
-
- For instance furniture, an information table, a bank and surrounding nature, constructions in the river, access routes, bridges, historical and cultural sites, etc

An example of river banks and surrounding nature



Louny

Hradec Králové



Přerov

Waterbirds and other wildlife



Sokolov



Valašské Meziříčí



Constructions accross the river



Frýdek - Místek



Valašské Meziříčí



Jihlava



Hradec Králové

Furniture



Valašské Meziříčí



Plzeň



Hradec Králové



Jihlava

Permeability of the river flow



Znojmo



Bechyně



Brno



Přerov

Permeability of the river flow – ports



Týn nad Vltavou



Semily



České Budějovice



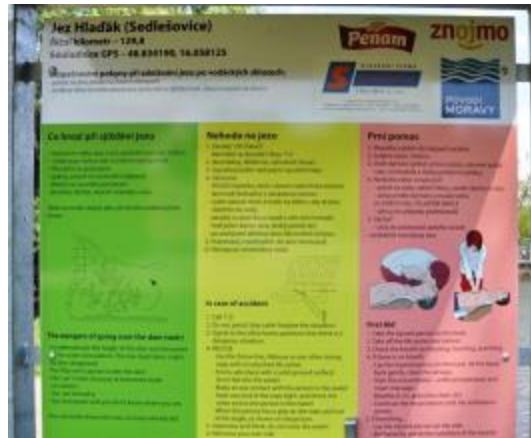
Ostrava

Information points

Frýdek - Místek



Znojmo



Brno



Nymburk

Havlíčkův Brod



Poděbrady



Historical sites



Brno



Poděbrady



Loket



Bechyně

Architectronic sites

Tišnov



České Budějovice



Poděbrady



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- **Members of the judging team**



Thank you all for your attention