

summary of the project’s benefits for carriers and declarations of those involved in the realisation of the D-O-E connection, which does not answer the question whether and to what extent objectives in transport policy can be achieved by other means than by realisation of the D-O-E project, which would irreversibly damage many components of the environment. The D-O-E project study promotes mostly ill-founded assumptions on flood prevention, recreation, and even water management and adaptation to climate change. Neither the economic calculations are very persuasive. On the contrary, its prefers documents which contain information on the D-O-E project and create the impression that the Czech Republic has committed itself to realisation of the river connection or has been imposed some kind of legislation or international agreement (European Agreement on Main Inland Waterways of International Importance, AGN). That is however a completely misguiding interpretation.

Another prerequisite for meeting the objectives of a feasibility study is a thorough evaluation of all available information. By the way, we deal with a feasibility study, not a search of available literature, so it is not an exaggerated demand to expect qualified conclusions regarding the feasibility of the project. A part indicated ‘B.5’ deals, on ca 1400 pages, with the impacts of the D-O-E connection on the environment. These are, although not exhausting (e.g. an assessment of the impact on farmland is missing; the aspect of ecosystem services and the influence on them, neither their inclusion into the economic balance are evaluated in the document; impacts on e.g. Poodří Protected Landscape Area and the UNESCO Biosphere Reserve at the confluence of the Thaya and the Morava are not comprehensively described, only a concluding assessment of the impact on the water regime of the landscape, etc.), in many cases correctly evaluated as serious or even as non-compensable, and are thus a clear proof of the severity of the impacts of the D-O-E project on the environment. Nevertheless, this part is not adequately reflected in the ‘Conclusions’ chapter or in the risk analysis or SWOT analysis. The D-O-E Association has therewith omitted obvious conclusions which are essential for the realisation of the project.



Gravel deposits in the Oder river in Poodří Protected Landscape Area. Photo Zdeněk Patzelt

It is thus the question whether the study can serve as a foundation for a government decision on the meaningfulness and feasibility of the project, now that it mentions the risks which can essentially jeopardise the project on the one hand, but does not find the will to accept and interpret this information in key passages. If these environmental risks had been taken into account, general conclusions in favour of the D-O-E connection would have been practically impossible.

An abstract of the feasibility study was submitted for an interdepartmental comment procedure in January 2019. Even on the significantly reduced number of 167 pages, the material has almost the same shortcomings as the study itself: particular parts are again not interconnected and the environmental impacts are rather mentioned as a minor factor posing a certain risk in the form of difficult enforcement with regard to the professional sector and in permit procedures. In a motion for a resolution, the Ministry of Transport has proposed performing a Strategic Environmental Assessment (SEA) process. Besides the fact that this material is dedicated to a single project and deals with reasons why the project should be realised, and is thus not a strategy but de facto

project documentation, there is hardly any justification for a SEA process also because serious environmental impacts of the D-O-E project are already known today, among others based on the observations in the relevant part of the feasibility study (although not adequately evaluated from the perspective of feasibility). Performing a SEA process at this moment would only be another waste of public funds.

The most important thing is still to come

The task from the Spatial Development Policy ordering the Ministry of Transport to summarise and assess available documents on the feasibility of the D-O-E project still remains unfulfilled three years after it was formulated. Although compiling a feasibility study was a logical and justified choice, the final study cannot be characterised this way, inter alia because it basically misses environmental risks. It will now be essential which position to the study the Government will take after evaluation of the interdepartmental comment procedure. But that is unknown at this moment.

A list of references is attached to the web version of the article at www.casopis.ochranaprirody.cz

Update of the Conception for Unblocking the Czech River Network

Zdeněk Vogl

This year, already a second update of the Conception for Unblocking the Czech River Network, an important water management planning document, will be completed. At present, the Czech Nature Conservation Agency is working on a proposal delineating watercourses which are primarily determined to be made passable for migration, at the same time respecting territorial and species protection.

For this reason, the length of corridors will generally increase as compared to the present situation. These will be prioritised in the subsidy policy also in future. The objective of the updated version of the document is to implement measures providing free migration to fish and other water animals in an effective and systematic way, especially on watercourses of international and national importance.

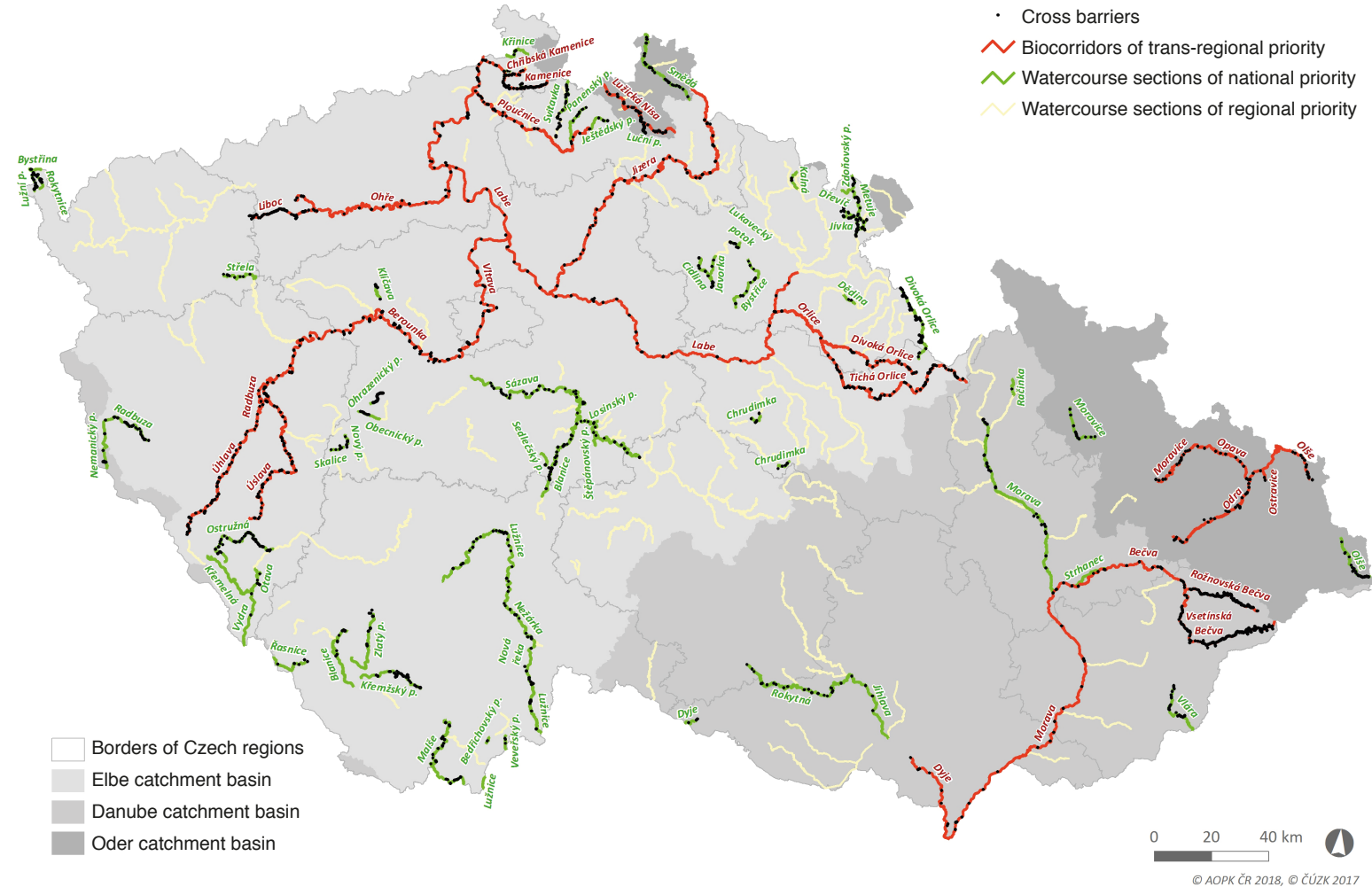


Figure 1. Delineation of corridors of international, national and regional priority in the updated Conception. Compiled by Jan Vrba

Current Conception

The Conception is a strategic document of the Ministry of the Environment, aimed at setting priorities which establish options for bidirectional migration of water organisms on Czech watercourses by opening cross barriers. Particularly longitudinal continuity of watercourses is one of the requirements to achieve a good ecological state of a waterbody according to the ‘Water Framework Directive’ (2000/60/ES) implemented in the ‘Water Act’ (as amended). It is being realised thanks to, among others, a water planning process.

In the presently valid Conception, watercourses of international (Category A) and national (Category B) importance are defined (see Fig. 2). The first ones are formed by corridors linked to marine environments intended for diadromous fish migration, in our conditions particularly eel (*Anguilla anguilla*) and salmon (*Salmo salar*). The other ones have been defined according to priorities in territorial and species protection, primarily with regard to threatened bivalve species.

Why is the Conception being updated again?

Before each stage in water management planning, it is necessary to revise all relevant documents, add current knowledge and update them with newly available data. Besides a selection of priority watercourses, especially for distant migrants, the updated version of the Conception takes territorial and species protection based on national and European legislation into account in a comprehensive way (see Fig. 1). For these reasons, nearly a doubling of national corridors and definition of a completely new category, Category C, for watercourses (or sections of them) of regional importance have been achieved. A numeric comparison of changes in the currently valid and updated version of the Conception is illustrated in Graphs 1 and 2.

Trans-regional International? corridors were originally selected with regard to their high ecological potential, absence of water reservoirs and the abovementioned link to marine environments. The location of lake systems across these watercourses and the excessive number of migration barriers were omitted. The update aims at taking these factors into account. In Category A, the most significant changes have been made in the Oder catchment basin, particularly given the his-

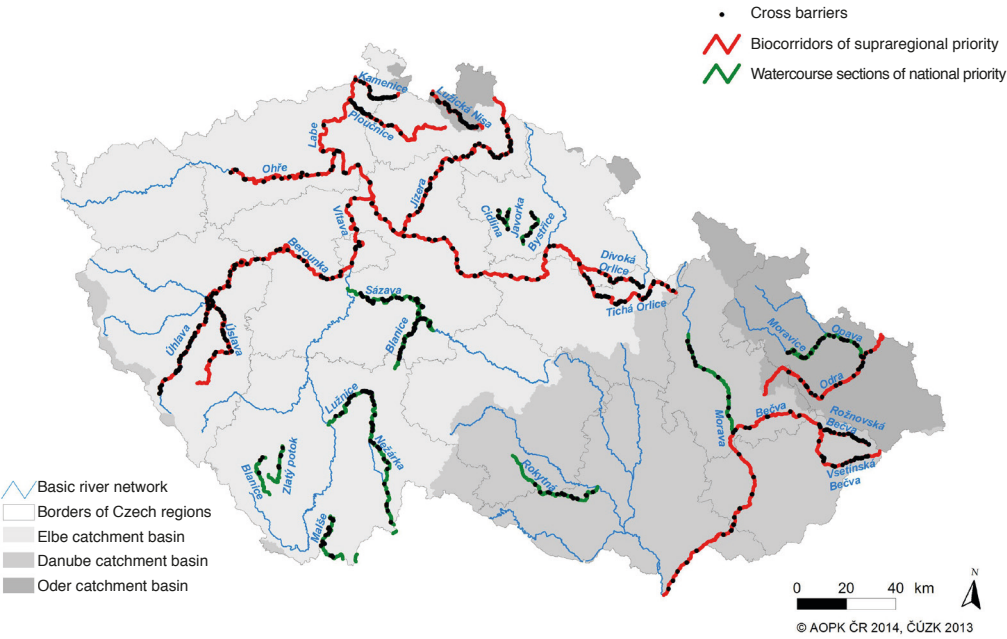


Figure 2. Definition of trans-regional and national corridors in the currently valid version of the Conception for Unlocking the Czech River Network (Ministry of the Environment, 2014 update). Compiled by Zdeněk Kučera

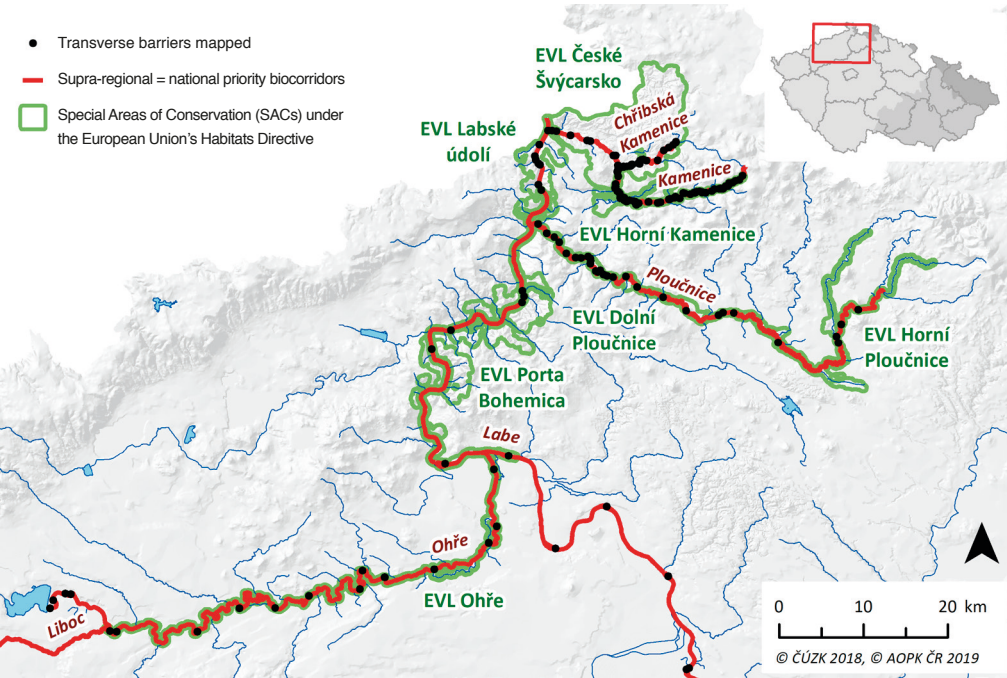
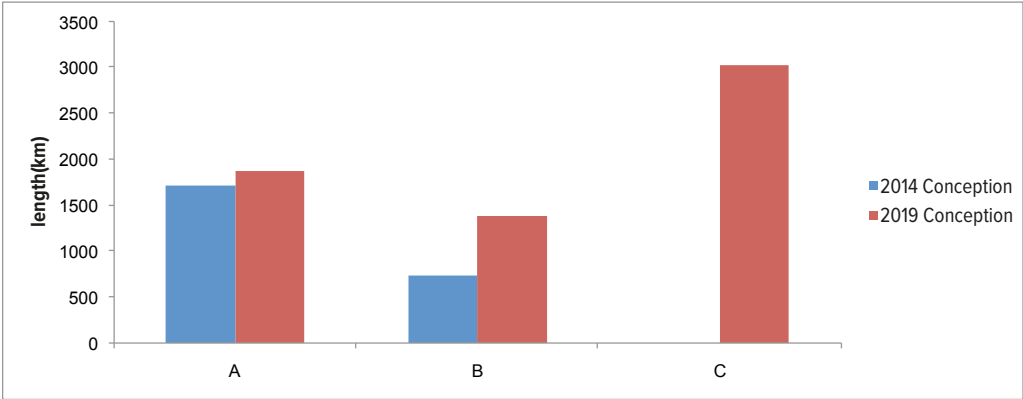


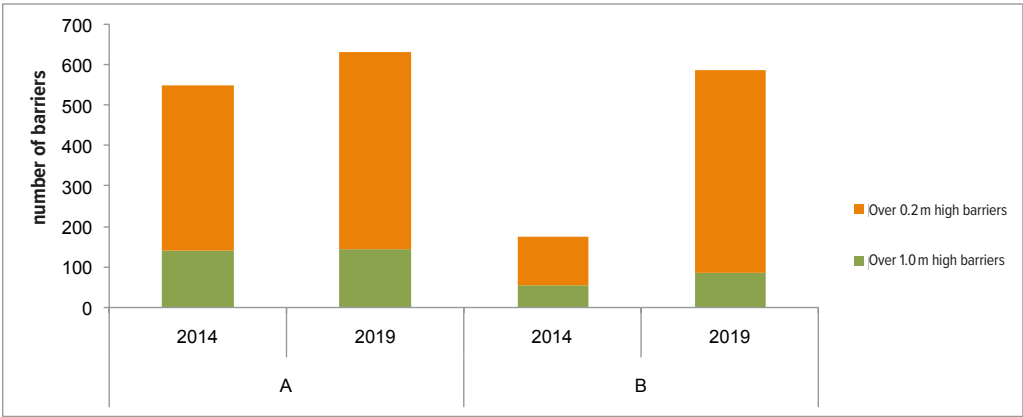
Figure 3. According to the Strategy on Providing Watercourse Network with Permeability, the lower and middle Elbe River stretches with important tributaries are included among the international priority corridors suitable particularly for diadromous migrants, e.g. the Atlantic Salmon. Elaborated by Jan Vrba

torical occurrence of salmon. In order to return this species, the Opava river – in connection to the Moravice river – was delineated up to the water reservoir at Podhradí. In the Elbe catchment basin, moreover, the Chřibská Kamenice river was included up to the village of Chřibská and in the Ohře (Eger) catchment basin, Liboc was in-

cluded for this flag species. In both these watercourses, salmon is repatriated by the Czech Anglers Union as part of the long-term programme Losos 2000. To preserve migration permeability, also the Dyje (Thaya) river from its confluence with the Morava river to Nové Mlýny waterworks was included in this category. On the other



Graph 1. Comparison of changes in length of the river network in the Conceptions of 2014 (currently valid version) and 2019 (updated version). A – Corridors of international priority, B – Corridors of national priority, C – Corridors of regional priority. Compiled by Zdeněk Vogl



Graph 2. Comparison of changes in the number of migration barriers of over 0.2 and over 1m high in the Conceptions of 2014 and 2019, using a dataset from the ‘Migration Barrier Database’ of the Czech Nature Conservation Agency. A – Corridors of international priority, B – Corridors of national priority. Compiled by Zdeněk Vogl

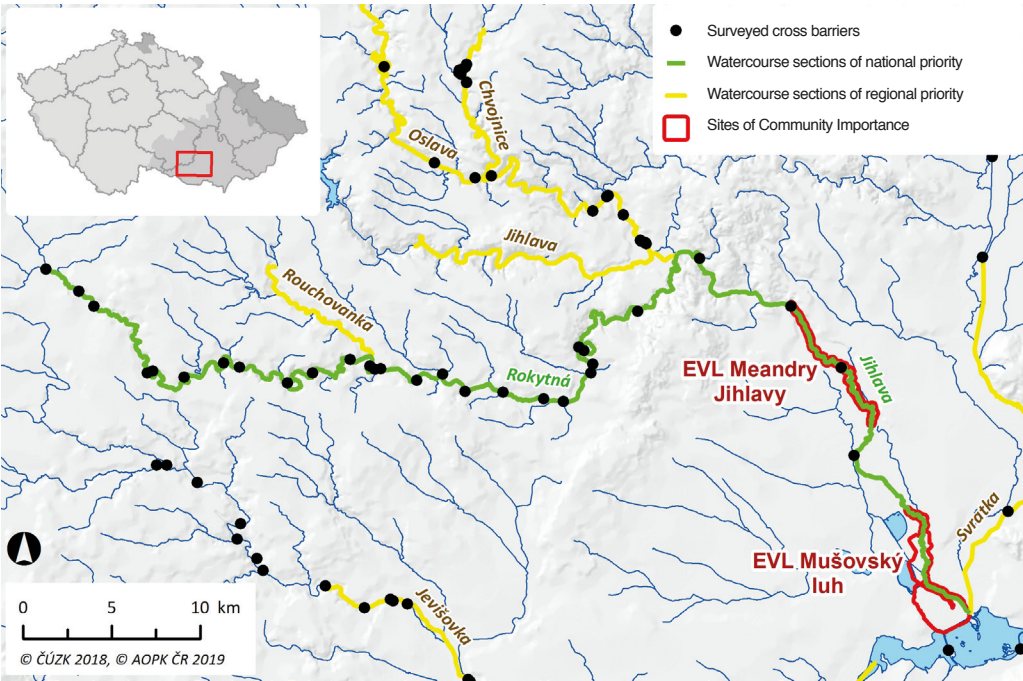


Figure 4. Example of connection of the newly defined national corridor of the Jihlava river to the existing Rokytná corridor. Compiled by Jan Vrba

Databáze migračních bariér

Jedná se o webový portál AOPK ČR, který shromažďuje data získaná v rámci projektu „Vytvoření strategie pro snížení dopadů fragmentace říční sítě ČR“, č. projektu EHP-CZ02-OV-1-016-2014, podpořeného z EHP fondů. Konkrétně se jedná o evidenci migračních bariér, migračně prostupných objektů (např. rybích přechodů) a malých vodních elektráren, které byly sledovány na vybraných vodních tocích. Kromě toho prezentuje výstupy z dalších aktivit projektu, mezi které patří analýza dat nakládání s vodami ve vybraných EVL, hodnocení funkčnosti rybích přechodů extenzivní metodou a pokročilými metodami sledování migrujících ryb v rámci biomonitoringu. Více informací o Databázi migračních bariér naleznete na samotném webovém portálu (www.vodnitoky.ochranaprirody.cz) nebo v článku publikovaném v tomto časopise (číslo 6/2017) pod názvem „Fragmentace říční sítě ČR – Databáze migračních bariér jako jeden z nástrojů omezení jejích dopadů“.

hand, some river sections were shortened, e.g. the currently delineated Ploučnice river (from its confluence with the Elbe to its confluence with the Ještědský potok stream) and the Oder (from the state border to the SW boundary of Poodří Protected Landscape Area). This category may be reduced in the negotiations to be followed by excluding the upper sections of the Rožnovská Bečva and Vsetínská Bečva streams as a result of the relatively high number of cross barriers.

Category B includes watercourses or sections of them inhabited by protected animals or animals of European importance with a high migration demand of the species themselves or of species existentially dependent on these migrants (a list of species is given in Tab. 1). These species are always the protection target of an SCI or nature reserve. Category B watercourses are often short, isolated sections which have been included for the mosaic location of protected areas. An example is the Račinka stream, where Ukrainian brook lamprey (*Eudontomyzon mariae*) is the reason for protection. For European brook lamprey (*Lampetra planeri*), watercourses on the territory of e.g. SCI Olše, SCI Moravice and SCI Údolí Chrudimky have been included. The river Vlára in the Bílé Karpaty (White Carpathians) Protected Landscape Area is included for

the occurrence of chub (*Alburnoides bipunctatus*) and provides at the same time protection to other fish species, particularly the loach *Sabanejewia balcanica*. For pearly mussel *Margaritifera margaritifera*, e.g. Lužní potok stream in the Aš region has newly been included. In some cases, links to currently defined corridors have successfully been made. For example, the Jihlava river, upstream of the Nové Mlýny reservoirs, is connected to the presently defined Rokytna, intersecting SCI Mušovský luh and SCI Meandry Jihlavy, protected for the occurrence of white-finned gudgeon (*Romanogobio albipectus*) (see Fig. 3).

The regional corridors have been defined by staff of the regional offices of the Nature Conservation Agency or national park authorities based on certain criteria according to a uniform methodology displayed on www.vodnitoky.ochranaprirody.cz. For classification into this category, in contrast to national corridors, only species protection has been taken into account. Other criteria were number of migration barriers, hydromorphological and ecological quality of waterbodies, and connection to corridors of higher priority. This category includes among others the Ohře river with notable tributaries upstream of the Nechanice Dam, which prevents inclusion of the entire watercourse into the category of corridors of international priority (Fig. 4). In the areas concerned, also the occurrence of invasive crayfish species has been taken into account in order to prevent spread of the crayfish plague. For these reasons, the Conception does not include e.g. the Stroupinský potok stream in the Křivoklátsko Protected Landscape Area, where our native crayfish was affected by this fungal disease last year.

Financing of the proposed measures

Watercourses delineated as mentioned above will be prioritised in the subsidy policy of the Ministry of the Environment, particularly in the Operational Programme Environment (up to 100% of the expenses). The allocation of finances is still considerable. We expect a substantial increase in submitted projects (or requests), with regard to the demanding preparation of the actual measures as well as to the administration involved in subsidy requests, from a few per year at present to at least dozens next year.

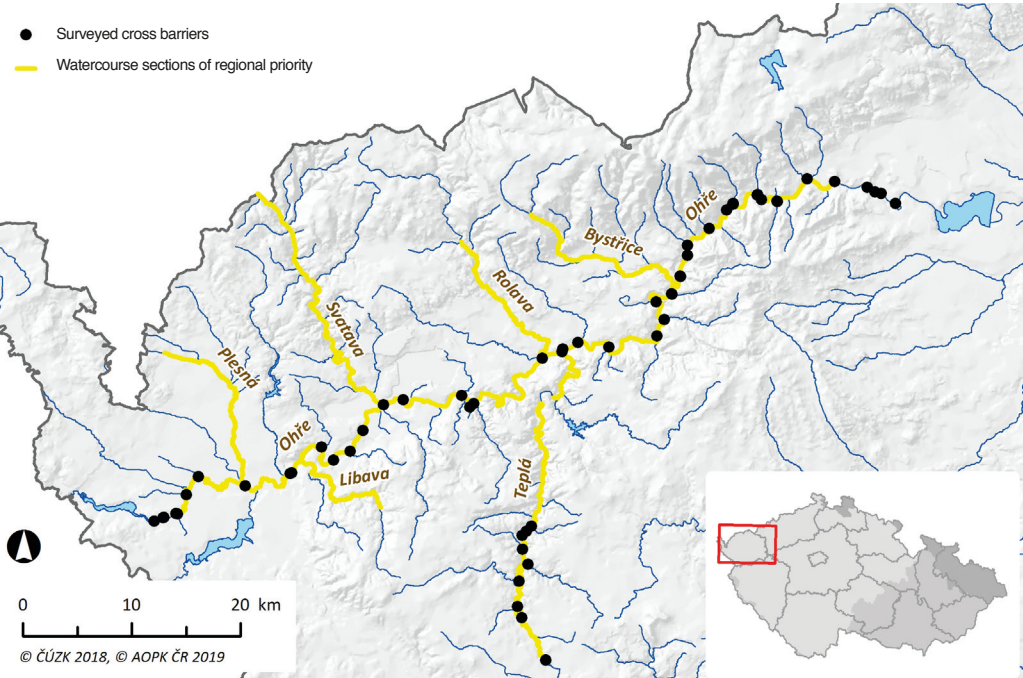


Figure 5. Classification of the Ohře river and selected tributaries upstream of the Nechanice Dam as a regional corridor. Compiled by Jan Vrba.

Table 1. List of fish, lamprey and bivalve species for the delineation of corridors of national and regional importance. Compiled by Zdeněk Vogl.

Class	Species	Protection Category (Act No. 114/92 Coll.)	Habitats Directive
Fish	<i>Leuciscus aspius</i>	—	Annexes II and V
	<i>Gobio albipectus</i>	—	Annex II
	<i>Romanogobio kessleri</i>	Critically threatened	Annex II
	<i>Leuciscus idus</i>	Threatened	—
	<i>Lota lota</i>	Threatened	—
	<i>Alburnoides bipunctatus</i>	Strongly threatened	—
Lampreys	<i>Lampetra planeri</i>	Critically threatened	Annex II
	<i>Eudontomyzon mariae</i>	Critically threatened	Annex II
Bivalves	<i>Margaritifera margaritifera</i>	Critically threatened	Annexes II and V
	<i>Unio crassus</i>	Strongly threatened	Annexes II and IV

Conclusions and expectations of the updated Conception

The updated Conception should serve as a document for the third water management planning period, running from 2022 to 2027. Its objective is to comprehensively define watercourses significant from the perspective of nature and landscape conservation, primarily securing the continuity (migration permeability) of these watercourses, thus implementing, among others, the ‘Water Framework Directive’. This requires, besides securing migration permeability, also the preservation or restoration of other stream functions like the stream load regime and self-purification functions. In accordance with these objectives, appropriate adjustments of the measures

should be chosen in the following order: (1) removal of cross barriers, (2) near-natural solutions such as boulder chutes, (3) fish ladders, optimally accompanied by revitalised watercourse sections linked to them, e.g. in the form of spawning grounds, distributaries, groynes, etc.

The document should further present the current measures and novelties in this particular field in a comprehensive way, including fundamental problems with solving migration permeability, especially on corridors of international and national priorities. The objective of updating the Conception is not only to delimit these corridors, but also to establish conditions to make them passable in a systematic and effective way.

Where is Šumava National Park heading?

Pavel Hubený, Martin Stary, Pavla Čížková

I believe in an authentic internationally recognized national park, but the path to it is thorny, slow and cautious... The hitherto maturing National Park can easily be compared to the life of a human being. Its birth was

full of enthusiasm and great plans developed by fathers, mothers, uncles and aunts, grandmothers and grandfathers – and each person had a different plan. But everybody agreed that it is necessary to put the best into the child's life.

Forest at Medvědice in spring. Photo Zdeněk Patzelt

