

MINUTES
of the Steering Committee meeting no. III

**Project "Monitoring Natura 2000 sites as a tool for effective management and protection
of autochthonous populations of crayfish"**
(EHP-CZ02-OV-1-007-2014)

Location: VH laboratories Povodí Vltavy, State Enterprise - Prague
Na Hutmance 5a, Prague 5 – Jinonice

Date: 9.10.2015, from 8:45 a.m.

Present: Mgr. Jakub Dobiáš, Mgr. Milan Koželuh, RNDr. Marek Liška, Ph.D., Ing. Jan Válek,
RNDr. Jitka Svobodová, Mgr. Libuše Opatřilová

Programme:

- Implementation of project schedule and schedule changes in case of the extension of the project
 - Information on checking of interim monitoring report
 - Information on preparation of annual interim monitoring report
 - Bioaccumulation of toxic substances in crayfish organs – a list of analysed parameters
 - Agreement on the format of the results published in the online information system
 - Information on work progress
 - Interpretation of the existing results - consultation, comparison with legislation
 - Discussion
-
- **Implementation of project schedule and schedule changes in case of the extension of the project**

Activity "Monitoring the load of sediments by chemical substances" will be completed as planned; the analyses have already been completed and the in-house invoice of the project partner to the amount of CZK 563,460 (without VAT) with all the necessary formalities will be attached to the payment request for the annual interim report in November 2015. The invoice was passed on to the main recipient at the meeting of the Steering Committee on 9th October 2015.

The deadline for processing the analyses of crayfish tissues (activity "Bioaccumulation of toxic substances") in case of approval of the extension of the project will be completed by the third quarter of 2016 at the latest, i.e. by the end of September 2016. Analyses of pharmaceuticals in water (partner Povodí Vltavy, replacement analyses for hemolymph analyses, which will not be executed) are approximately two-thirds finished.

- **Information on checking of interim monitoring report**

An interim monitoring report was submitted on 31st July 2015. Currently the comments of MF are being processed; so far they have not been critical.

- **Information on preparation of annual interim monitoring report**

The interim annual monitoring report submission deadline is 30th November 2015. All documentation must be submitted by 15th November, (including in-house invoices of the partner).

WRI report must describe all analyses changes that have occurred (change in the range of parameters and matrices - sediment analyses, crayfish tissue analyses).

- **Bioaccumulation of toxic substances in crayfish organs – a list of analysed parameters**

Crayfish from a total of 14 locations will be processed (2 Norwegian locations, 6 locations with invasive crayfish and 6 locations with native crayfish – permission to catch is needed here).

Partner Povodí Vltavy already has crayfish from locations Labe-Obříství, Dračice, Pšovka, Kouba and 2 Norwegian locations – by the end of October the samples from the Litavka and Vltava will be handed in. In the remaining 6 locations with native species of crayfish, we are waiting for permission to catch.

WRI proposal to supplement the analyses of crayfish by the analysis of calcium in crayfish carapace (shell):

- Because of comparison of the calcium content in crayfish in CR with the content in crayfish in Norway, where due to acidification the calcium content in water is only about 2 mg/l (low calcium content in water causes, among others, easier entry of some metals into cells of crayfish tissues, e.g. cadmium)

- Analyses will be carried out on noble crayfish (3 locations: Pšovka – profile R050, with high calcium content in water, and 2 Norwegian locations, each one separately)

- Determination feasibility may be affected by problematic grinding of crayfish carapaces.

The question of analyses feasibility remains at the hepatopancreas (and perhaps gills), which will probably only be feasible with large crayfish individuals. To ensure sufficient quality and representativeness of heavy metals results, a quarter to half a gram of dry matter is needed.

- **Agreement on the format of the results published in the online information system**

Lists of monitored indicators and characteristic values (aggregated data) and overall results will be published in the form of appropriate graphs.

- **Information on work progress**

See above

- **Interpretation of the existing results – consultation, comparison with legislation**

Brominated diphenyl ethers (PBDE) – the WRI laboratory measured high values in water at some of the monitored locations, exceeding the limit according to Government Decree no. 61/2003 Coll. (average value – 0.0005 µg/l). The limit of 0.14 µg/l for the maximum permissible concentration for water under Directive 2013/39/EU was not exceeded. WRI proposes adding PBDE analyses in crayfish tissues, although the Povodí Vltavy laboratory does not meet the limit of quantification (limit for biota under Directive 2013/39/EU is 0.0085 µg/kg). According to the Czech Hydrometeorological Institute report "Accumulation biomonitoring of surface waters in 2011", the concentrations of PBDE in biota were within 0.5 to 6.3 µg/kg.

Bisphenol A (BPA) – in the spring, high values were measured in water at several locations. The highest readings exceeded the limit of Government Decree no. 61/2003 Coll. by up to 10 times.

Within the operational monitoring, partner Povodí Vltavy measured higher levels in several profiles, but they are significantly lower than those found at the project locations. The source could be for example plastic production lines, paper mills, etc. According to the partner, however, it is not likely that such high values were on unloaded locations, e.g. from atmospheric deposition only.

Povodí Vltavy suggestion: conduct comparative analyses between WRI TGM and Povodí Vltavy laboratories – two common samplings at the project locations into their own samplers, followed by mutual exchange of samples and the analysis and exchange of results.

Conditions for interlaboratory comparison:

Compared parameters: BPA, PBDE, mercury, C₁₀-C₄₀

Sampling: at locations Třítrubecký stream, Litavka nad Příbramí and Trnávka pod Červenou Řečicí (under JIP – paper mill, location will be sampled only for the determination of the BPA parameter, only Povodí Vltavy will sample and hand in the samples to WRI laboratory).

The samples will be always collected in samplers by both organizations, which will then exchange them and analyse them according to their standard operating procedures; experts will make contact in advance.

Deadline: Monday, 19th October – meeting at Příbram 10:00 a.m. at the OMV petrol station

(Trnávka-Červená Řečice will be sampled within the operational monitoring on that day as well)

- Double amount of samplers from each laboratory is necessary for the sampling; after sampling the laboratories exchange the second set of samplers. I.e. there will be two results for both profiles from each laboratory (one from their own sampler and one from the sampler of the other laboratory)! Litavka will be sampled for the determination of mercury, both overall and after filtration.

Results: by the end of December 2015 (WRI laboratory will not manage to deliver results sooner for operational reasons).

- **Other**

The shutdown of locks on the lower Vltava this autumn will be only on the Vraňany-Hořín channel in the second half of October and early November. At the location in Troja, the planned sampling of spiny-cheek crayfish will not be possible during the reduced water levels. Therefore, 3 crayfish caught in the Vltava at Štvanice will be used for the analyses.

Minutes taken by: L. Opatřilová

Checked by: J. Svobodová, J. Dobiáš, M. Liška