

Statement of Scientists

Water abstraction project on Shushica river

Review of the Environmental and Social Impact Assessment (ESIA) of the Water Supply component within the Water Supply Program IV



1 BACKGROUND AND MOTIVATION

Since March 2023 the Shushica river is strictly protected and part of Europe's first Wild River National Park. The character and the intention of this national park concept is to ensure the complex natural processes of an entire river system. The basic prerequisite for this is that the Shushica and the whole Vjosa river system remains without significant changes with regard to its water balance, including groundwater recharge and dependent ecological processes.

From a scientific perspective it is of extraordinary importance to maintain the hydrology of the headwater region undisturbed and in a natural state, in view of the international significance of the Vjosa as a model for Mediterranean river systems.

In autumn 2023, we learned about a project to divert water from the Shushica springs and transfer it to the Ionian coast. By that time, the project had already been approved and the construction was underway. The approval was based on the Environmental and Social Impact Assessment (ESIA), which concluded that no significant consequences for the environment and people were to be expected.

Although we have collected biological and morphological data on the Shushica in recent years (see: <https://balkanrivers.net/uploads/files/3/Shushica%20Report.pdf>) we were not consulted by the ESIA project coordinators or asked to provide data.

A research program on the ecology of the Vjosa river system and its major tributaries including the Shushica has been started in 2022 (VjoSusDev). The project is financed by the Austrian Development Agency and combines and integrates research activities of 3 Albanian and 3 Austrian universities. So far obtained results already indicate the special value of the headwater areas of the river system.

2 The project and ESIA conclusions

In the frame of the European importance of the Vjosa system and with regard to the fundamental impact this water diversion project may have on the Shushica and the whole concept of the Wild River National Park, we assessed the English version of the ESIA.

Our evaluation focuses only on the environmental aspects of the report “Rural Water Supply IV – LOT 1 Environmental and Social Impact Assessment” from 15.2.2021 (English version).

2.1 Description of the project

The plan is to abstract water from the springs of Shushica river and transfer it towards the Ionian coast around Himara including eight smaller villages. The project contains the following basic aspects (copied from ESIA report, pages 14, 25):

- *Water intake located in the area of the village of Kuc,*
- *Coordinates of water intake: 402260,4449975*
- *Water abstraction 139.1 l/s*
- *Water is abstracted by a drainage gallery (approx. 35 m long) with retaining walls*
- *In addition, the water is collected ... also from the alluvial deposits of the Shushica River.... a drainage interceptor is foreseen across the Shushica River upstream of the water intake. This intake serves to collect the groundwater flowing in the Shushica River aquifer. This intake will be used only during dry periods, when the available flow from the Lepusha spring is below the water demand in the water supply system.*

The project is financed by the German KfW (Kreditanstalt für Wiederaufbau), WBIF (Western Balkan Investment Framework) and the Albanian government, developed by the German company CES Salzgitter GmbH Consultant and constructed by a joint venture of Austrian STRABAG AG and Albanian TREMA Engineering 2.

2.2 Conclusion of ESIA (copied from page 45)

Conclusion on biodiversity status along Sushica River valley under specific consideration of Lepusha spring downstream of the proposed intake point:

- *Neither Lepusha spring (upstream & downstream areas) nor connected Sushica River (valley) have any protection status by national or international protection categories.*
- *During recent site visits of the Consultants E&S team in the year 2020, the following observations were made:*
 - *No threatened, rare or endangered species of fauna or flora were registered or known to exist around Lepusha spring and downstream sections of Sushica River.*
 - *No sensitive or fragile habitats were noted in relation to the extent and magnitude of the envisaged works.*
 - *The current degree and extent of the proposed works do not interfere with any protected area in the southwest region of Albania.*
 - *A comprehensive hydrological and water quality investigation were carried out in the period from August 22, 2018 until December 16, 2018.*

- *With reference to the proposed maximum extraction rate it concluded that during minimum water flow in summer periods, given the equal structure of the river bed consisting of coarse and fine gravel will allow aquatic and semi-aquatic species (macroinvertebrates) to move further downstream into habitats with equal conditions to allow for shelter and re-production.*
- *Respecting this situation described before no further surveys or investigations are foreseen in order to clarify potential negative impacts resulting from proposed water abstractions.*

3 The Analysis of ESIA report

- The Shushica river system and its species communities above and below the surface depend on the spring water discharge. Contrary to the ESIA, the implementation of the diversion project would have irreversible ecological consequences not only for the upper part of the river, but for the entire Shushica.
- During low flow periods, the abstracted water volume amounts to 15% or more of the Shushica discharge in even far down stream sections. The Shushica would dry for longer periods in various sections and it would dry out in sections that have never been dry before. This could lead to regional or even global extinction of species.
- A reduction of discharge would cause higher water temperature and lower oxygen levels. Preliminary data from the Science week 2021 confirm that summer river water temperatures are already close to dangerous conditions for several biological species, and tailored studies on this are crucially needed before planning further water abstractions.
- The ESIA ignores the impact on river-related ecosystems and species, therefore, the actual consequences of the project remain unclear.
- Important river-related species groups have not been covered at all (fish), while species irrelevant to the project are included. Example: page 42ff the report mentions species like “...goldfinch, ... wood pecker...” or “...populations of fox (*Vulpes vulpes*), marten (*Martes foina*), weasel (*Mustela nivalis*), rabbit (*Lepus europea*) and hedgehog (*Erinaceus concolor*) are common in the area.”
- Fact check of the conclusions of the *Consultants E&S team* (see 2.2.):
 - “No threatened or rare species ... registered or known”
Wrong. There are hundreds of endangered species in the springs and in the river below (e.g. European Eel, caddisflies, Kingfisher, thick shelled river mussel *Unio crassus*). In addition, recent investigations have documented a rich invertebrate community in the river sediments that have not been described so far. Species may be lost before scientific description.
 - “No sensitive or fragile habitats ...noted”
Wrong. Springs are a highly valuable habitat type per se. Also, the Shushica river is an extremely valuable ecosystem with several habitat types which are protected also by EU Habitats Directive.
 - “...not interfere with any protected area” This has changed – the area is part of the Wild River National Park. However, even in May 2021 – when the environmental permit was issued – the outstanding value of the Shushica was obvious and known.

- *A comprehensive hydrological and water quality investigation were carried out in the period from August 22, 2018 until December 16, 2018... With reference to the proposed maximum extraction rate it concluded that during minimum water flow in summer periods, ...will allow aquatic and semi-aquatic species (macroinvertebrates) to move further downstream into habitats with equal conditions to allow for shelter and re-production.*

Wrong: it is not a serious approach to predict spring quantity based on a 5 months survey (Aug-Dec 2018), even if it includes summer and winter situations. At least two full hydrological seasons (years) need to be covered. If not possible, spring discharge needs to be assessed during extreme years by hydrological modelling. This is standard. Headwater species have highly specific requirements in terms of temperature, current velocity, sediment characteristics and food, that a downstream transposition for many species is unlikely to be possible for the characteristic headwater guild.

- *"... no further surveys or investigations are foreseen in order to clarify potential negative impacts resulting from proposed water abstractions.*

Wrong: The whole ESIA report is based on false and insufficient data and therefore the conclusion is misleading.

4 Our Conclusions

The environmental part of the ESIA is inadequate and seriously deficient. Its results are misleading and incorrect.

Contrary to the ESIA, the implementation of the diversion project would have irreversible ecological consequences for the entire Shushica river.

The spring water quantity assessment was inappropriate and not in accordance with modern standards. The impact of climate change has not been considered.

The ESIA report is not addressing the high ecological value of the riverine habitats in its existing state. As clearly demonstrated by Schiemer et al. (2020), the value of the Vjosa River system (including the Shushica) as one of the few remaining reference sites in Europe for dynamic floodplains is outstanding.

None of the statements in the ESIA concerning river-related impacts are supported by any scientific literature. Although scientists work on Shushica for many years, neither the scientists have been contacted, nor was the existing data included in the report.

The water abstraction would have severe impact on hundreds of endangered species such as the Otter (*Lutra Lutra*), European Eel (*Anguilla Anguilla*), the thick shelled river mussel (*Unio Crassus*) and more than 100 bird species of which two are globally endangered and 18 listed on Annex I of EU Birds Directive.

Following the ecological consequences, the water abstraction interferes with the concept of the Wild River National Park and it may put the national park status for the Shushica at risk.

Due to the possible loss of national park status of parts of the Shushica or the whole river, residents could lose income from ecotourism.

Considering the false and misleading results of the ESIA, and the potential ecological and even economic damage of the project, we urge those involved to stop and to reconsider the project. The least would be to prepare a substantial EIA for this purpose based on scientific data.

Signed by

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