

# The Ulog hydropower plant on the river Neretva, Bosnia and Herzegovina



Photo: Andrey Ralev, CEE Bankwatch Network

## Key issues

- The Ulog hydropower project is being built, and seven more plants are planned, in the middle of the upper Neretva Emerald site.
- The Bern Convention Standing Committee has asked Bosnia and Herzegovina to stop the works and review the project.
- The terrain appears unstable – two workers were killed by landslides in 2013.
- People downstream in Konjic fear that earthquakes could cause flooding.

## Project overview

The Energy Financing Team's (EFT)<sup>1</sup> 35 MW Ulog plant, with a 53-metre high dam, is currently being built on the upper Neretva in the Republika Srpska entity of Bosnia

<sup>1</sup> See the next section on financing for more information on EFT.

For more information

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and Herzegovina, in the middle of the nominated candidate Emerald site *Gornji tok Neretve* – an area which should be protected under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention).

The dam would be sited downstream of the village of Ulog, but the 6.44 million cubic metre (m<sup>3</sup>) reservoir would stretch 4.9 kilometres, up to the entrance to the village. Water would be moved at high speed from the reservoir to the powerhouse by a 2,758-metre-long derivation tunnel.<sup>2</sup> The lowest part of the plant – the powerhouse – will, if completed, be extremely close to the entity border between Republika Srpska and the Federation of Bosnia and Herzegovina.

The project is being implemented by EFT HE Ulog d.o.o., a special purpose vehicle set up for this project, which is part of the larger EFT group. As of early December 2023, EFT Group's parent company is now registered in Liechtenstein as EFT Holdings AG, with UK-registered EFT Investments Limited as the immediate owner of EFT Ulog d.o.o.<sup>3</sup>

The project cost is reported as EUR 70 million.<sup>4</sup> In 2011, the European Bank for Reconstruction and Development was cited as a possible financier for the project,<sup>5</sup> but the project never officially entered the Bank's project pipeline. Despite the involvement of China's Sinohydro in the project as the main contractor, talks between EFT and the China Development Bank failed to result in any financing and EFT is reportedly carrying out the project with its own resources.<sup>6</sup>

Ulog was registered as a Clean Development Mechanism (CDM)<sup>7</sup> project in 2014, allowing it to benefit from so-called carbon credits. The CDM allowed emissions reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to one tonne of carbon dioxide. These CERs can be traded and sold, and could be used by industrialised countries to meet part of their emission reduction targets.

Ulog's crediting period appears to have started on 1 October 2018, despite the plant not yet being completed, and is due to run until 29 September 2028.<sup>8</sup> When the project was registered, it was claimed that its operation would lead to annual greenhouse gas reductions of 87,846 tonnes. In this case, even a carbon price of one euro per tonne would significantly increase EFT's annual income.<sup>9</sup>

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<sup>2</sup> For more technical details, see Gruner, [Ulog hydropower project. Construction of a greenfield dam and hydropower scheme](#), accessed 9 October 2023.

<sup>3</sup> EFT Investments Limited, [Strategic Report. Report of the Directors and Financial Statements for the period 1 January 2022 to 31 March 2023 for EFT Investments Limited, formerly EFT Investments UK Societas](#), Companies House, 22 August 2023.

<sup>4</sup> EFT Ulog d.o.o., [HE Ulog](#), accessed 2 October 2023.

<sup>5</sup> Iskra Pavlova, [EFT Gets Eco Permit for 64 Mln Euro Hydro Power Plant in Bosnia](#), *Renewables Now*, 18 November 2011.

<sup>6</sup> Republika Srpska Concession Commission, [Annual Report 2020](#), April 2021.

<sup>7</sup> The Clean Development Mechanism (CDM), defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO<sub>2</sub>, which could be counted towards meeting Kyoto targets.

<sup>8</sup> United Nations Clean Development Mechanism, [Project 9529: Hydro Power Plant Ulog](#), accessed 9 October 2023.

<sup>9</sup> *Ibid.*

However, the importance of this designation is unclear, due to the fact that the mechanism practically collapsed in 2012 and carbon credit prices have remained low ever since. The Kyoto Protocol has also been superseded by the Paris Agreement, and the CDM is gradually being phased out, but few details are available about how this impacts individual projects. Bankwatch has twice tried to contact the CDM secretariat in writing, but has not received any replies.

### The concession, financing, main contractors and current project status

On 20 November 2009, the Republika Srpska Ministry of Industry, Energy and Mining signed a concession contract with EFT (Holdings) ApS, registered in Denmark, based on a self-initiated bid to build the Ulog hydropower plant. In 2010, the concession was transferred twice to other companies in the EFT group, notably to the special purpose vehicle EFT HE Ulog d.o.o.<sup>10</sup> The concession contract does not foresee any penalties if the concession-holder fails to implement the project.

EFT signed an engineering, procurement and construction contract with China's Sinohydro in September 2012.<sup>11</sup>

Preliminary works originally started in 2013, carried out by local companies. However, in July 2013, two tragic incidents occurred at the construction site. On 4 July a worker from the *Prijedorputeva* company was killed by a rock breaking off a cliff face while building access roads. Only four days later on 8 July another worker from the same company was also killed by a rockslide, and another worker taken to hospital.<sup>12</sup> After this, the works were put on hold until 2020.

In 2014, a Republika Srpska Concession Commission report showed that the project was facing serious problems, including landslides and other geological issues, lack of a nearby transmission line for connection to the electricity network, and problems securing financing.<sup>13</sup> In March 2015, the project was reported as being suspended.<sup>14</sup>

EFT Group's annual review 2014-2015<sup>15</sup> suggested that the project would be split into two smaller plants with a total capacity of 15 MW; however, by 2017 the company had changed its mind and informed the Ministry of Spatial Planning, Construction and Ecology that the capacity would remain at 35 MW but the dam would be built 60 metres further downstream than originally planned.<sup>16</sup>

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<sup>10</sup> Republika Srpska Concession Commission, [Izveštaj o radu komisije za koncesije Republike Srpske za period 01.01.2010. - 31.12.2010. godine](#), April 2011.

<sup>11</sup> Poslovni Jutro, [EFT potpisao ugovore sa Kinezima za HE Ulog i TE Stanari](#), *Poslovno Jutro*, 16 September 2012.

<sup>12</sup> Goran Obradović, [Obron zatrpao radnika](#), *Glas Srpske*, 9 July 2013; Radio-Televizija BN, [Zbog pogibije dva radnika zabranjen rad Prijedorputevima](#), *Radio-Televizija BN*, 9 July 2013.

<sup>13</sup> Republika Srpska Commission for Concessions, [Annual Report for 2019](#), *Republika Srpska Commission for Concessions*, 2020.

<sup>14</sup> For example, see Al-Jazeera report here: <https://www.youtube.com/watch?v=YPSIO63-8nc>

<sup>15</sup> EFT Group, Powering up – EFT Group Annual Review 2014/2015, undated. Available on request.

<sup>16</sup> Ministry of Spatial Planning, Construction and Ecology, [Letter no. 15.04-96-126/11 of 17.08.2017, responding to a notification from EFT on changes in the Ulog project received by the Ministry on 28.06.2017](#).



In December 2019, EFT announced that its works contract with Sinohydro had entered into force and that works would recommence in the second quarter of 2020,<sup>17</sup> which they did.

To the best of Bankwatch's knowledge, four annexes to the concession contract have been signed. Most recently, in 2021 the construction deadline was extended to the end of 2023.<sup>18</sup>

However, as of early December 2023, although works are advanced, the plant is still quite far from completion. The derivation tunnel, powerhouse, dam and 110 kilovolt (kV) power lines are all under construction, with the latter being built by Elnos as a contractor for EFT.<sup>19</sup> Numerous trees have also been cut down where the reservoir is planned to be.

## Hydropower plants or a protected area?

The Republika Srpska spatial plan until 2025 (updated in 2015) mentions the Ulog plant as a potential project.<sup>20</sup> Conversely, it also includes the Upper Neretva (*Gornji tok Neretve*) and Ulog trout spawning ground (*Prirodno plodište pastrmke Ulog*) as planned for protection as 'Areas of managed habitat' (IUCN category 4), by 2025.<sup>21</sup> The spatial plan does not explore or resolve the conflicts between the planned hydroelectric infrastructure and the plans for protected areas.



Photo: Andrey Ralev, CEE Bankwatch Network

<sup>17</sup> EFT Group, [Commencement of Ulog hydropower plant construction](#), EFT Group, 20 December 2019.

<sup>18</sup> Republika Srpska Concessions Commission, [Annual Report 2021](#), Republika Srpska Concessions Commission, March 2022.

<sup>19</sup> Republika Srpska Concession Commission, [Annual Report 2020](#), Republika Srpska Concessions Commission, April 2021.

<sup>20</sup> Ministry for Spatial Planning, Construction and Ecology, [ИЗМЕНЕ И ДОПУНЕ ПРОСТОРОНОГ ПЛАНА РЕПУБЛИКЕ СРПСКЕ ДО 2025. ГОДИНЕ](#), February 2015, 243, 247.

<sup>21</sup> Ibid., 106-109.

## Environmental impacts

In November 2022, a Bern Convention expert who visited the Ulog construction site and communicated with EFT, the governments and non-governmental organisations, produced an on-spot-appraisal report.<sup>22</sup> The impacts of the Ulog plant are very well summarised in the report:

### **Possible hydropeaking**

*According to the environmental permit issued by the Ministry in July 2011, no hydropeaking operation mode will be performed. This statement must be questioned against the backdrop that a large dam and reservoir are planned, indicating a storage power plant. Moreover, the type of turbines planned are also commonly used for hydropeaking. To operate a run-of-river power plant without hydropeaking, a cheaper weir structure or smaller dam with a correspondingly extended derivation stretch would have probably sufficed. For the evaluation of impacts of the hydropower plant Ulog, an operation mode without hydropeaking (as stated by the HPP operator) is of fundamental importance. If hydropeaking will be performed, contrary to all claims, this will have far-reaching consequences for aquatic species, especially fish.*

### **Impacts from the reservoir:**

- *Loss of huge areas of the natural aquatic and floodplain zone of the Neretva River;*
- *Formation of a non-populatable zone: In the area of the temporarily dry area in the reservoir bottom (upstream area of the reservoir) with short-term water level fluctuations, creating habitats that cannot be colonised by plants and animals;*
- *Siltation of the interstices of riverbed within the reservoir.*

### **Impacts from the dam:**

- *Disruption of the longitudinal river continuum;*
- *Disruption of the bed-load transport; dam acts as a “sediment-trap”;*
- *Fine sediments are retained to a large extent because the reduced flow velocity leads to sedimentation within the reservoir;*
- *Extensive loss of hydrodynamics in the river downstream of the power plant: flood peaks  $>35\text{m}^3/\text{s}$  are retained in the reservoir;*
- *Total loss of small-scale floods that have the highest impacts on stream morphology and morphodynamics. This also results in a drastic reduction of successional processes (progression and retrogression) of bank and floodplain vegetation.*

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<sup>22</sup> Bern Convention on the Conservation of European Wildlife and Natural Habitats, [Report of the on-spot-appraisal](#), Bern Convention, November 2022.

### **Impacts in the stretch between the dam and the powerhouse:**

- *Strongly reduced discharge (up to 90% immediately after the dam at the beginning of the residual flow stretch) almost the whole year; the only exception are periods of extreme low flow situations; the residual flow regulation plans a minimum flow of 0.52 m<sup>3</sup>/s*
- *Complete loss of morphodynamics due to lacking bed-load transport.*

### **Impacts from additional infrastructure: roads, pipelines, transmission lines and buildings:**

- *Habitat loss due to destruction;*
- *Fragmentation of habitats;*
- *Large-scale anthropogenic disturbance of the valley and the Emerald site.*

## **Inadequate environmental impact assessment**

In contrast to the above, the environmental impact assessment (EIA) for Ulog<sup>23</sup> was completed in early 2011 and has several main weaknesses:

- The environmental baseline data used in the EIA report is outdated and partially not comprehensible, therefore the project's impacts could only be insufficiently assessed.
- The cumulative impacts of the Ulog plant together with another seven plants planned by Marvel d.o.o. on the upper Neretva were not assessed at all.
- The transmission lines were not included in the EIA but assessed separately, failing to assess the cumulative environmental impacts of the project.
- The proposed mitigation measures are insufficient or not feasible.

### **Baseline data**

The rainfall data are from 1961 to 1990 and 1951 to 1990.<sup>24</sup> Due to the changing climate, there is a high likelihood that current conditions at the site significantly differ from those during the years for which data is included in the EIA.

The accidents in 2013 suggest that insufficient geological research had been done at the site. The EIA also suggests that more research was needed: *'In this area, dormant and active landslides have been recorded... This area, as well as other landslides noticed, needs to be researched in detail.'*<sup>25</sup> It is not known whether this was followed up, but if so, it was not done within the EIA process. This is a matter of safety for both the project itself and for downstream communities.

<sup>23</sup> Projekt Banja Luka, [Studija o uticaju hidroelektrane „Ulog“ na životnu sredinu - Konačno izdanje](#), Projekt Banja Luka, March 2011.

<sup>24</sup> Ibid., 42-44.

<sup>25</sup> Ibid., 31.

The baseline data for fauna consists of only a few birds and animals, including the grey wolf (*Canis lupus*), brown bear (*Ursus arctos*), and golden eagle (*Aquila chrysaetos*).<sup>26</sup> It is not clear where the information came from about their presence, or when they were detected, and the list seems incomplete, as it does not name any small animals or birds. There is no data about any other birds, mammals, insects or crustaceans, even though the EIAs for the nearby Gornja Neretva Phase 1 and 2 hydropower projects mentioned crayfish and otters, for example.

Overall, the study does not adequately describe the environmental baseline ('aspects of the environment likely to be significantly affected') as required by the EU EIA Directive.<sup>27</sup> Moreover the lack of baseline data renders any real analysis of the project's impacts impossible. It increases the risk that the plant will take a greater share of the river's water than planned in an effort to keep electricity generation at the planned levels, and that it will damage some species before they are even properly recorded at the site.

### Insufficiently assessed impacts

Incomplete baseline data can only result in incomplete analysis of the project's impacts. For example, the EIA mentions fish but does not examine other species that are dependent on them. Nor does it mention the impacts of cutting forests in the reservoir area.

The EIA plays down the impact on fish. It admits that the brown trout will be threatened due to the complete halting of migratory movement to their existing natural habitat for spawning, but then states, without any evidence, that '*If adequate measures are applied for the protection and advancement of this fish species, the impact of the Ulog hydropower plant will be minimised... The number of other fish species will not be significantly reduced compared to the before-project state of the ecosystem.*'<sup>28</sup>

It also claims that there will be no significant impacts on the Federation of Bosnia and Herzegovina,<sup>29</sup> which starts just downstream from the powerhouse. Although it is true that there is a waterfall downstream that already hampers fish migration, the claim that there will be no negative impacts is not credible. During construction, muddying of the water has already taken place, for example in September 2023 when local people found hundreds of dead fish nearly two kilometres downstream of the dam construction site.<sup>30</sup>

During operation, the amount and timing of water flow will be changed, which is assessed as positive in the EIA, without any explanation of how it will be changed, why controlled flow will be superior to natural flow, or what impact it will have on particular species and habitats.

Also in case of accidents, there could be extremely serious impacts on the Federation. This is not mentioned at all.

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<sup>26</sup> Ibid., 52 ff.

<sup>27</sup> Under the Energy Community Treaty, at the time the project EIA was carried out, the relevant provision was Annex IV(3) of Directive 85/337/EEC amended by Directive 2003/35/EC.

<sup>28</sup> Projekt Banja Luka, [Studija o uticaju hidroelektrane „Ulog“ na životnu sredinu - Konačno izdanje](#), 104 ff.

<sup>29</sup> Ibid, Section 2.4.12, 112.

<sup>30</sup> Center for Environment, [Pomor ribe u Neretvi uslijed radova na HE Ulog. očekujemo hitan izlazak inspekcije!](#), Center for Environment, 28 September 2023.





Photo: Andrey Ralev, CEE Bankwatch Network

No legally protected areas are cited, nor is the Emerald site that was nominated later in 2011, a few months after the EIA was approved. But it is mentioned that the Republika Srpska Institute for the Protection of Cultural-Historical and Natural Heritage has designated part of the upper Neretva as a natural fish-spawning area, and part of the project site as an area of valuable habitats.<sup>31</sup>

The EIA admits that there would be impacts on the ‘valuable habitats area’ due to lowering of the water level where the derivation tunnel runs in parallel to the river.<sup>32</sup> But since it is not stated what his habitat consists of and why it has been suggested for protection, the seriousness of these impacts is not assessed. Neither are impacts on the natural fish-spawning ground mentioned.

The EIA Directive’s requirement<sup>33</sup> for the study to contain ‘[a] description of the likely significant effects of the proposed project on the environment’ has therefore not been fulfilled.

## Cumulative impacts

One section in the EIA includes ‘cumulative impacts’ in its title, but does not assess Ulog’s cumulative impacts with other planned and existing hydropower plants on the Neretva.<sup>34</sup> Since Marvel d.o.o. was

<sup>31</sup> Ibid. Section 2.1.12, 58-59.

<sup>32</sup> Ibid. Section 2.4.8, 111.

<sup>33</sup> Annex IV(4) of Directive 85/337/EEC amended by Directive 2003/35/EC, which was the legally required standard under the Energy Community Treaty at the time of the Ulog EIA.

<sup>34</sup> See section 2.4, page 97 and 2.4.12, 112. These describe the concept of cumulative impacts and the impact on the Federation of Bosnia and Herzegovina (which the EIA denies will really exist), but do not carry out an actual cumulative impact assessment.



granted the concession for the seven Upper Neretva plants in May 2010, it cannot be claimed that no other plants were planned at the time of the Ulog EIA.

This also applies to the construction of the transmission lines for the Ulog project, which are not examined in the EIA for the plant and were subject to a separate environmental permit.

Thus the EIA Directive's requirement to examine the indirect, secondary, and cumulative effects of the project<sup>35</sup> has not been met.

### Insufficient, unfeasible and counterproductive mitigation measures

Since the baseline data and identification of impacts is incomplete, it follows that only very limited mitigation measures are proposed.

For example, the EIA stipulates<sup>36</sup> the need for a minimum residual flow of 0.52 cubic metres per second (m<sup>3</sup>/s) to be maintained. This is extremely little and the selection of this figure is not justified in terms of whether this would really be sufficient to maintain life in the river.

The EIA also stipulates that fish stocking will be needed twice per year.<sup>37</sup> In one place it states that this should be exclusively with young, autochthonous Ulog fish, whereas in another place it states that if fish are taken from classic salmonid breeding stations, they need to be certified as healthy. These two contradict each other, as there is no facility that breeds the particular type of trout found in the upper Neretva, and fish stocking is controversial in general, due to its failure in substituting wild stocks of fish, but also a because of a series of negative effects ranging from the introduction of non-native species or diseases to disruption of native genetic gene pools and natural selection.<sup>38</sup> Unfortunately, in 2021 some restocking of trout was already carried out.<sup>39</sup>

Thus, although in theory the EIA contains a description of some measures envisaged to prevent and reduce any significant adverse effects on the environment, as required by the EIA Directive,<sup>40</sup> it fails to recognise that some of the key measures are likely to be wholly ineffective or will even be counterproductive, in the case of fish-stocking.

## Environmental permitting and legal challenges

As well as the EIA study being of insufficient quality to meet the requirements of the EU EIA Directive, the processes for approving the EIA and subsequent environmental permits were also highly problematic.

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<sup>35</sup> Annex IV(4) of Directive 85/337/EEC amended by Directive 2003/35/EC, which was the legally required standard under the Energy Community Treaty at the time of the Ulog EIA.

<sup>36</sup> Projekt Banja Luka, [Studija o uticaju hidroelektrane „Ulog“ na životnu sredinu - Konačno izdanje](#), March 2011, 120.

<sup>37</sup> Ibid. 121-122.

<sup>38</sup> Steven Weiss and Stephan Schmutz, '[Performance of Hatchery-Reared Brown Trout and Their Effects on Wild Fish in Two Small Austrian Streams](#)', *Transactions of the American Fisheries Society* 128 (1999): 302–316.

<sup>39</sup> EFT, [Press release](#), accessed 2 October 2023.

<sup>40</sup> Annex IV(6) of Directive 85/337/EEC amended by Directive 2003/35/EC, which was the legally required standard under the Energy Community Treaty at the time of the Ulog EIA.

On 12 October 2010, the only public hearing on the EIA for the project was organised in the small rural town of Kalinovik, Republika Srpska, around 15 kilometres from the project location. Although Kalinovik is the local administrative centre, people from the town would not be directly affected by the project.

Since the project stretches downstream to the border with the Federation of Bosnia and Herzegovina, it would clearly affect the municipality of Konjic and the Federation more generally. Therefore, the local administration of Konjic and the non-governmental organisation Zeleni Neretva from Konjic asked the relevant authorities and EFT to organise proper public consultations in Konjic, due to the potential downstream impact on the environment and local communities. Representatives of EFT organised a meeting with representatives of the municipality of Konjic, but did not invite Zeleni Neretva to the meeting, nor was it announced to the public. Thus, it could not be regarded as a public consultation. Public consultations were not organised in any municipality downstream of the dam.

The EIA documentation was also not sufficiently available during the public commenting period. The full version of the study was available only in Kalinovik, but not in the larger towns of Konjic, Sarajevo, or Banja Luka. It was put on EFT's website only after the public consultation period finished, and much later on the competent ministry's website.

The responsible ministry approved the Ulog EIA in 2011,<sup>41</sup> as well as the project's initial environmental permit,<sup>42</sup> which was extended in 2016.<sup>43</sup>

On 2 December 2011, the Bern Convention Standing Committee adopted a list of nominated candidate Emerald sites, including the Upper Neretva (*Gornji tok Neretve*) in Bosnia and Herzegovina. As discussed above, the Ulog dam location is near the centre of the Emerald site.

After the 2013 accidents and a project redesign process, on 28 June 2017, the ministry received a notification from EFT – HE Ulog d.o.o. about changes in the project and moving the dam downstream about 60 metres. An expert opinion<sup>44</sup> was also submitted, stating that these changes in the project would not result in significant environmental impacts.

On 17 August 2017 the Ministry replied to EFT,<sup>45</sup> confirming that in its opinion, the changes do not represent 'significant changes' to the project,<sup>46</sup> so the existing environmental permit remained valid. Although in principle this represented a new screening decision to see whether a new EIA was needed, the letter did not take the format of a 'decision' that could be challenged in court, thus undermining access to justice on environmental matters.

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<sup>41</sup> Decision no. 15-96-194/10 of 07 April 2011.

<sup>42</sup> Decision no. 15.04-96-126/11 of 11 July 2011. At that time, the validity of the permit was until 11 July 2021, however it was extended in 2016, due to the legal validity period of environmental permits being set at five years by the 2012 Law on Environmental Protection.

<sup>43</sup> Decision no. 15.04-96-126/11 of 08 July 2016.

<sup>44</sup> Јавна научноистраживачка установа институт за заштиту и екологију републике српске: стручно мишљење оновонасталим промјенама на пројекту хе улог на ријеци неретви у РС са аспекта заштите животне средине, *бања лука*, Мај 2017.

<sup>45</sup> Letter 15.04-96-126/11.

<sup>46</sup> In the sense of Article 96 of the Republika Srpska Law on Environmental Protection. If significant changes had been identified, a new EIA process would have had to have taken place.

In 2020, the Center for Environment, Aarhus Center Sarajevo, Riverwatch, EuroNatur, ClientEarth and CEE Bankwatch Network submitted complaints to the Energy Community Secretariat and Bern Convention on the Ulog hydropower plant together with the seven smaller plants planned by Marvel d.o.o. on the upper Neretva.<sup>47</sup>

The complaint submitted to the Energy Community Secretariat in August 2020<sup>48</sup> concentrated on the deficiencies in the EIA studies for the Ulog and other upper Neretva plants, including the lack of cumulative impact assessment, outdated and incomplete data, and insufficient analysis of impacts. It also maintained that the competent ministry should have used the criteria from Annex III of the EIA Directive to decide whether a new study should be done when the project was changed in 2017.

The October 2020 complaint to the Bern Convention concentrated on the harm to the *Gornji Tok Neretve* nominated candidate Emerald site.<sup>49</sup> In December 2021, the Standing Committee of the convention decided to send an on-the-spot appraisal mission to Neretva, which was conducted in October 2022. In December 2022 the Standing Committee decided to open the file and adopted a very strong Recommendation<sup>50</sup> for Bosnia and Herzegovina that includes, among others, a request to halt construction of the Ulog plant.

On 2 July 2021, the environmental permit for Ulog was once again renewed, but this time it was challenged by Zeleni Neretva. However, on 12 October 2022, the Banja Luka District Court rejected the case.

## Potential ways forward

The construction of the project is very advanced, but should still be permanently halted due to its impacts on the pristine upper Neretva river. Otherwise, Bankwatch agrees with the Bern Convention's Recommendation on the project:<sup>51</sup>

1. Officially declare "Gornji tok Neretve" (BA0000002) as an adopted Emerald Network site;
2. Develop a new regulation of a residual flow regime based on scientifically founded studies as the current regulation is inadequate: the regulation should be aligned with the ecological requirements of the important flagship species like Adriatic brown trout (*Salmo farioides*), sculpin (*Cottus gobio*), minnow (*Phoxinus phoxinus*), stone loach (*Barbatula barbatula*) and eventually marble trout (*Salmo marmoratus*);
3. Ensure that no hydropeaking operations will be performed as an obligatory condition for commissioning of the power plant (to be officially stipulated in advance by the authorities); Should hydropeaking still be performed, the operation must be stopped immediately;

<sup>47</sup> CEE Bankwatch Network, [Complaint on Bosnia-Herzegovina dams on Neretva river submitted to the Bern Convention](#), CEE Bankwatch Network, 22 October 2020.

<sup>48</sup> Ibid.

<sup>49</sup> Ibid.

<sup>50</sup> Bern Convention - Convention on the Conservation of European Wildlife and Natural Habitats, Recommendation No. 217 (2022) on the possible negative impact of hydro-power plant development on the Neretva river, December 2022.

<sup>51</sup> Bern Convention, [Recommendation No. 217 \(2022\)](#) of the Standing Committee on the possible negative impact of hydropower plant development on the Neretva River (Bosnia and Herzegovina), 2 December 2022.

4. Elaborate mitigation measures for the destroyed habitats such as C 3.55 Sparsely vegetated river gravel banks (Habitats directive code 3220, F 9.1 Riverine shrub (Habitats directive code 3240), G 1.11 Riverine Salix woodland and G1.21 Riverine Fraxinus - Alnus woodland, wet at high but not at low water (Habitats directive code \*91E0), E 5.4 Moist or wet tall-herb and fern fringes and meadows (Habitats directive code 6430), E 2.2 Low and medium altitude hay meadows (Habitats directive code 6510), G1.A4 Ravine and slope woodland (Habitats directive code 9180);

5. Implement an absolute ban on fish stocking;

6. Formulate monitoring measurements for the affected species and habitats.

7. Halt the construction of the hydropower plant Ulog until:

a. the Bureau or Standing Committee have assessed that the recommendations under paragraph 1- 6 of this recommendation are implemented and complied with; and

b. the assessments pursuant to paragraph 11 of this recommendation have been completed and, taking into account these assessments, compliance with Article 4 II of the Convention is demonstrably ensured.

(...)

11. Perform detailed assessments of potentially affected protected resources (habitats and species) as the current available data situation does not allow any detailed statements on the environmental impacts, thus it is strongly assumed that the deterioration will be dramatic.



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