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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

41st meeting
Strasbourg, 29 November – 3 December 2021

Other complaint: 2020/3

**Presumed threat to Emerald site
“Bugzkyi Gard National Nature Park”
(UA0000040)
(Ukraine)**

- REPORT BY THE COMPLAINANT -

*Document prepared by
Ukrainian Nature Conservation Group*

- July 2021 -

NGO «UKRAINIAN NATURE CONSERVATION GROUP»



Gogol str. 40, Vasylkiv, Kyiv oblast, Ukraine, 08600

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26.07.2021

Secretary of the Bern Convention

Subject: new report on 2020/4: Other complaint: Presumed threat to Emerald Network site “Bugzkyi Gard National Nature Park” (UA0000040)

Dear Ms Ursula,

We would like to inform you about the outcomes of the environmental impact assessment (EIA) that was conducted recently. The developer of the Tashlyk hydropower plant project (Project) to influence the Emerald Network site “Bugzkyi Gard National Nature Park” (UA0000040) has published the EIA report as of 7 April 2021. We submitted our comments on the EIA report. The brief version thereof kindly find in Appendix 1.

The Ministry of Environment has already reviewed the EIA report. It also took into account our remarks together with comments of various Ukrainian NGOs, institutions, scientists, e.g. Centre for Environmental Initiatives “Ecoaction”, Buzkiy Gard National Nature Park, Kherson State University, National Academy of Sciences of Ukraine, etc. Consequently, the Ministry of Environment refused¹ to issue the decision on the EIA based on the following:

- The EIA report is of poor quality. It contains significant mistakes and inaccuracies;
- The EIA report does not contain documents confirming the right to use the land plot;
- No research has been conducted on the flooding of archaeological sites;
- The EIA report does not provide a proper description of justified alternatives;
- Insufficient analysis of the Project’s impact on the environment, in particular on the Buzky Gard National Nature Park, the Hranitno-StepovePobuzhzhya Regional Landscape Park;
- Insufficient analysis of the Project’s impact on the Emerald Network site “Bugzkyi Gard National Nature Park” (UA0000040);
- Lack of information on the possible impact on the PivdennobuzkyIchthyological Nature Reserve;
- The Project contradicts the legal prohibition to carry out any activity on the nature reserve lands;
- The implementation of the Project will negatively affect rare flora and fauna species, particularly those listed in the Red and Green Books of Ukraine and/or protected at the international level in accordance with the Bern Convention.

The Ministry of Environment noted that activities contradicting the requirements of applicable legislation are unacceptable. The Ministry recommended the developer "considers alternative solutions to the Project, with a comparative analysis of the economic benefits and environmental consequences for the environment, particularly, refuses from implementing the Project".

Notwithstanding that, the Project’s developer can still submit another EIA report while the Ministry of Environment can still grant the development consent. Thus, the risk of flooding of the “Bugzkyi Gard

¹Ministry of Environment, [Decision to refuse to issue a decision on the environmental impact assessment](#), *The Unified Environmental Impact Assessment Register*, 30 June 2021.

National Nature Park” remains critical.

Upon your request, we are also sending you a more detailed map of the territories to be flooded.

Please find the map² under the following link: <https://bit.ly/2WoETOJ>.

Appendix 1: Comments on the Environmental Impact Assessment Report for the Tashlyk Pumped Storage Power Plant Completion Project

Many thanks for your attention to this matter. Kind regards,
Oleksii Vasyliuk, UNCG



¹ Ministry of Environment, [Decision to refuse to issue a decision on the environmental impact assessment](#), The Unified Environmental Impact Assessment Register, 30 June 2021.

² <https://carto-lab.maps.arcgis.com/apps/webappviewer/index.html?id=7c743383f1e74092ae741dbfcd92fbc>

Appendix 1:**Comments on the Environmental Impact Assessment Report for the Tashlyk Pumped Storage Power Plant Completion Project**

This paper summarizes our comments on the Environmental Impact Assessment Report (EIA), upon the completion project for the Tashlyk Pumped Storage Plant (storage pumps 3 to 6), with increasing of the water level of the Oleksandrivske reservoir on the river Pivdennyi Buh up to 20.7m compared to current 16m above sea level (hereinafter the Project). The request for a decision on the EIA is filed in the Unified Register of Environmental Impact Assessment with No 2018416564.

The location of the planned Project lies within the Buzkiy Gard National Park in Ukraine's Mykolaiv oblast (region). As this territory makes a cluster habitat for rare biotopes and endemic species, it is subject to conservation on the international level under the Bern Convention on the Conservation of European Wildlife and Natural Habitats as an adopted Emerald site¹. Raising the water level in Oleksandrivske reservoir, as defined in the Project, would lead to flooding of a considerable part of the National Park's territory. That, in turn, would result in significant adverse impacts on the environment, which was underestimated while drafting the Report.

Section 1.3. Detailed description of pre-construction and construction activities and 5.1. Anticipated impact on land resources

According to pages 17 and 123 of the Report, 54 ha of land are due to be flooded, although scientific modelling outcomes suggest flooding of 254 ha². We believe that reevaluation of lands that are due to be flooded is necessary.

The previous raising of water level in Oleksandrivske reservoir to 16m above the sea was performed in 2006-2007. Those actions were later ruled illegal by the court of law, as NNEGC Energoatom obtained the land with breaches of procedures². Mykolaiv Region Ecology and Natural Resources Department voted down the land management plan and the land plot allocation. As the land in question is a wildlife reserve, Verkhovna Rada of Ukraine (part 2 article 150 of the Land Code of Ukraine) must agree upon its allocation. Such reconciliation of the documents ought to begin at the instance of Mykolaiv Oblast Council (part 2 article 150 of the Land Code of Ukraine), yet the Report ignores the need to undergo this procedure. Thus, Energoatom should return the water level to 5m above the sea as before 2006 instead of repeated illegal flooding of the nature reserve fund.

Section 2. Description of justified alternatives

In paragraph 2, part 2 of article 6 of the Law of Ukraine "On Environmental Impact Assessment", the description of justified alternatives includes geographical and technological alternatives. As for the geographical alternatives, the Report offers none at all. Chapter 2 of the Report offers just one single technological alternative, namely the use of accumulator stations (storage systems). However, the authors note that operation lifetime of such stations is half as much as that of the Pumped Storage Power Plant's (20 years against 40 years of service). At the same time, while setting the accumulation batteries is a matter of several months, construction of the Tashlyk pumped storage plant has been going on for over 40 years, and, according to the Report, can be completed no earlier than in another 5 years. That said it took only 2 months for Tesla, Inc. to build the Hornsdale Power Reserve in Australia, a 100MW/129MWh grid-connected energy

¹ [Bugzkyi Gard National Nature Park](#), Natura 2000 Network Viewer, Emerald - standard data form, accessed 6 June 2021.

² Monitoring and Biodiversity Science in Ukraine/ "Conservation Biology in Ukraine" series, no 16, V. 1., Kyiv, 2020: 258.

storage system³. The construction cost was considerably lower as well: USD 66 million, compared to over USD 520 million that NNEGC Energoatom plans to spend in order to complete 4 hydro units 151MW each within the Project. If comparing the efficiency of generation as balancing power, then the Tashlyk plant operates 2.92 h/day and generates 2.637 million kW of energy. Given that, the Project costs 510.75 million dollars then one megawatt balancing power of Tashlyk plant will cost 565.56 thousand

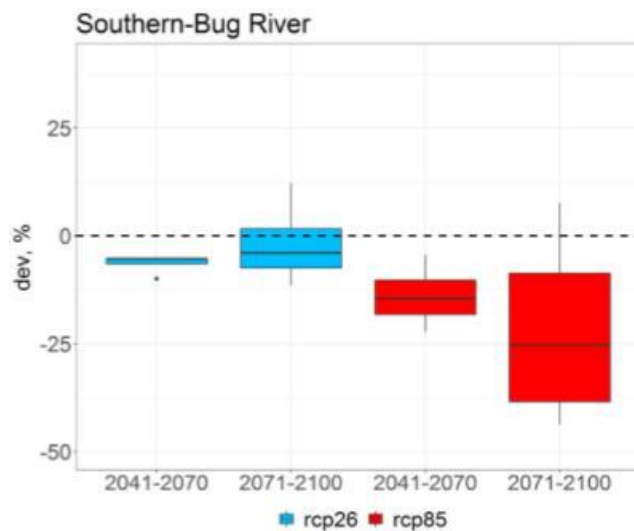


Figure 1. Projected changes in mean annual river discharge simulated by the WaterGAP2 model. Res: Footnote 4.

dollars. For Hornsdale Power Reserve, 1 MW capacity costs USD 511.628, which is 53.932 thousand dollars less, compared to Tashlyk plant.

On page 14 of the Report, the authors acknowledge the challenging hot weather conditions of Pivdennyi Buh basin due to climate change, which leads to the river's shallowing in summer.

Simulations of climate-related future river discharge revealed reduction of Pivdennyi Buh River's mean annual discharge. In the period 2041-70, it will be insignificant, but still up to minus ten per cent⁶. The worst scenario for the Pivdennyi Buh brings reduction of mean annual discharge reaching up to -30 % to the end of the century if greenhouse gas emissions not reduced⁷. Such a considerable discharge reduction would also have a profound impact on the very operation and capacity of the Tashlyk plant, which the Report also fails to mention. Solar and wind-powered renewable energetics are an alternative solution that not only levels the climate-related risks, but presents a solution for climate crisis by itself. Industrial-scale photovoltaics, if installed in place of the reservoir can generate up to 7 times the current hydropower generated by the hydro power plants. Let alone that the efficiency of Li-ion batteries is up to 95%⁹, while the Tashlyk plant can do only 65%.

³ [Hornsdale Power Reserve](#), official website.

Returning to paragraph 2, part 2 of article 6 of the Law of Ukraine “On Environmental Impact Assessment”, which demands that ecological cost of the Project be considered. The Report, meanwhile, contains a very meagre comparative analysis of ecological impact of the only proposed alternative as opposed to the Project.

Thus, the authors of the Report provided a very shallow analysis of the Project, having failed to mention the considerably higher efficiency of accumulator power stations, their smaller size and, finally, the lack of necessity in flooding the outstandingly valuable land.

Section 5.6. Flora Impact Assessment

The area to be flooded consequent on the Project is not only a part of a National Park, but also a part of the European Emerald Network, and was registered by the Bern Committee as Bugzkyi Gard National Nature Park - UA0000040 in 2016. Which means, it is subject to protection at European level. This area is home to 16 types of natural habitats¹⁰, of which the Report indicates only five (E1.2, E3.4, F9.1, G1.7 i X18) and fails to even mention the rest, in particular, H2.5 (acid siliceous screes of warm exposures) and H3.1 (acid siliceous inland cliffs), which cover most of the Project area. Those types have special value, because they are also habitat for rare and endemic species. The Report overall contains many mistakes as of habitat diversity, in particular, it shows the lack of understanding of the geographical placement of habitats for specific biotopes and falsely mentions specific species that *apriori* do not inhabit the Project area.

Noteworthy, the territory of the National Nature Park Buzkyi Gard inhabit all known endemic plant species *Moehringiahypanica* that enjoys the international protection. It grows on granite cliffs, corniches and in the ravines, mostly on the northern side with the right type of overshadow. The species is very sensitive to change in microclimate, which is inevitable in case of increase in the water level of the storage reservoir. It should be noted that proposed by the Report both relocation and controlled reproduction of *Moehringiahypanica* are impossible, as every known attempt to do failed completely.

Ornithogalum boucheanum (also enlisted in Red Data Book of Ukraine, or Ukraine’s Red List of Threatened Species) is worth mentioning as well. The great majority of the specimen in the Buzkiy Gard National Park grows in the humid soil along the bank of Pivdennyi Buh River. Any increase in water level of the storage reservoir would lead to extermination of the total *Ornithogalum boucheanum* population.

In both cases, the Report underestimates the Project’s impact on the rare flora species. It falsely proposed relocation and reproduction of the mentioned species, although it is impossible. Therefore, the big part of the world *Moehringiahypanica* and *Ornithogalum boucheanum* population will be flooded and the rest possibly affected by microclimate change.

Moreover, the authors of the Report mistakenly indicated some typical regional species of flora as rare. The Report contains neither locality map charts for rare species, nor their (at least approximate) estimated abundance in the area that is to be flooded or otherwise impacted as a result of the Project, despite this information being publicly available¹¹.

Section 5.7. Fauna Impact Assessment

Impact on the wildlife is also worth digging into, yet again, the Report makes only a casual mention of the issue. In particular, it contains some general eclectic information on the animal species that are likely to inhabit the area assigned for flooding. We say “likely”, as the Report fails to provide any information as for the areas inhabited by the species mentioned in the document, and only indicates that there is a variety of species in the Project area. The authors of the Report did some research only for certain animal species, namely those that are to be either the

least affected, or not affected at all. At the same time, the species that would be impacted by the Project got no assessment altogether. The research was based on the old version of the Red Data Book of Ukraine (Ukraine's Red List of Threatened Species). In 2021, the Ministry of Ecology and Natural Resources of Ukraine added 1544 species to the Red Data Book. The updated inventory includes 687 species of animals, with 171 of them listed for the first time. Some of these new species inhabit the area around the Oleksandrivske reservoir that is assigned for flooding, like *Coliaschrysotheme*, *Coliasmyrmidone* and *Chelismaculosa*. The authors have not mentioned them in the Report and thus the impact of the Project on those species remains unknown.

As far as the birds are concerned, the Project engineers failed to indicate the impact on the water-related birds. The Report is focusing on the birds inhabiting the recreational zones. However, the nesting does not occur in the recreational zones, but rather along the riverbanks that are due to be flooded. Yet the Report fails to mention how the diurnal variations would influence the nesting, which would no doubt have a devastating effect on the species building nests in the area around the Oleksandrivske reservoir and the river upstream. We stress the lack of data on magnitudes of the bird populations and their distribution, along with the dates when the research was held. The change of water level will certainly influence the nesting habitat of kingfisher (40-80 pairs in the site), cranes (concentrations of 500-1000), some birds breeding in wetlands (marsh harrier, herons, bitterns) etc., and destruct their feeding areas. A careful assessment of the breeding, migrating and wintering birds is important to be carried out at least for a year to understand the impacts. For some species that have large fluctuations a multi-year assessment is necessary.

The Project may also influence the populations of bat species inhabiting the caves in the granite rocks of the Gard, but these were not assessed.

Increasing the water level in Oleksandrivske reservoir can also drastically reduce the habitat for reptiles, and put the endangered local species on the edge of extinction. The authors did not examine the Project's impact on such rare for Ukraine reptile species as *Lacerta viridis* (*vulnerable conservation status*), *Zamenis longissimus* (*endangered*), *Dolichophiscaspicus* (*vulnerable*). Most individuals of these species that were found in Ukraine settle in the Project area. A big part of their population will be flooded and the rest possibly influenced by microclimate change. Lack of this information in the Report indicates that the research is incomplete.

Section 5.8. Hydrobionts and ichthyofauna impact assessment

Increasing the water level would further endanger certain ichthyofaunal species. Oleksandrivka village is a conventional border between the midstream and the downstream of Pivdennyi Buh. This area is home to, by modern data, about 70 fish species. Rheophilic complex of fish species that went extinct or are on the critically endangered in other habitats (mostly in Dnipro basin) due to regulated rivers, are the most valuable part of the local ichthyofauna. Those species include species protected by the Bern Convention: asp *Aspiusaspilus*, spined loach *Cobitistaenia*, *Rhodeussericeusamarus*, meadow viper *Viperaursini* etc. There are other important ichthyofaunal species dace *Leuciscusleuciscus*, common nase *Chondrostomanusus*, Russian spirin *Alburnoidesrossicus*, Pontian shemaya *Alburnussarmaticus*, vimba bream *Vimba vimba*, Dnipro barbel *Barbusborysthenicus*, etc.

The Report does not include any scientific survey of fish behavior conducted at the Tashlyk plant. However, based on such studies, one could facilitate the individual management measures for fish protection. Until 2006, there was a fishing channel on the Tashlyk plant, which was dug to bypass the Oleksandrivka Dam. After raising the level of the Oleksandrivka Reservoir to 16m above sea level in 2007, the channel was covered with earth, which made it impossible for fish to move for spawning and feeding. In case fish by-pass channel around Oleksandrivka Dam is not re-

established, Ukraine is to lose a considerable part of rheophilic complex fish species that need small cascades and flowing water. For some of those species, this means going extinct completely. This will lead also to the decline of fishing, which is common among the local people.

Creating a fish farm for cultivating alien species, as described in the Report, would not compensate the loss of the local species protected by both the national and the international law, and would not prevent violating the law. Moreover, introduction of the alien species would create competition for the local species, so their cultivation cannot be considered as a compensatory measure.

It is important to add that there would be less shallow water areas after the water level is raised (steep terraces are typical for the terrain of the Pivdennyi Buh canyon), which would lead to the loss of spawning grounds. By correlating the total area of the spawning grounds and the number of species of conservation value, one can conclude that increase in water level would make spawning of some fish species impossible. Phytophilous fish species (*Cyprinidae* and jack pike *Esocidae*) spawn on the soft vegetation, usually in flood plain or in soft aquatic vegetation growing in shallow water (up to 1m deep). Water fluctuations would also destroy the spawns.

Section 1.1. Description of the planned activities site

Besides the obvious conservational issues, the Project also imperils the National Security, as it sets out equipment procurements from the suppliers embargoed by both Ukraine and the USA.

According to the Report, turbine pumps POHT115/851-B-630 by LeningradskyMetallicheskyZavod (LMZ, Leningrad Metal Plant) Co. Ltd., affiliated with Private Joint Stock Company Power Machines (SilovyeMashiny), owned by Russian billionaire AlekseiMordashov. Private Joint Stock Company Power Machines is known due to the scandal over the illegal use of Siemens turbines and their installation in Crimea after the peninsula was occupied. The company has been on the USA's sanction list. On 1 March 2019, the National Security and Defense Council of Ukraine also enlisted Private Joint Stock Company Power Machines (SilovyeMashiny) on Ukraine's embargo list. Noteworthy, the embargo also applies to Power Machines' affiliated companies, including the LMZ¹².

Other issues

The Report contains recommendations that obviously cannot be implemented. For instance, it offers to "develop the zoning of the National Park" (despite the fact it was done 10 years ago); conduct further monitoring of bio-diversity (despite the fact that the report fails to provide both the information on populations size and the research methodology, which makes "further monitoring" impossible).

The Report does not incorporate most of the remarks from public, while the annex table of comments wrongly claims that it does.

Summary

Due to the fact that the Project poses a huge threat to the environment, does not take into account the interests of the local society, its effectiveness has not been proven, we oppose the Tashlyk plant completion.

We demand that the Ukrainian authorities develop a power plant project that is less harmful from an environmental and social point of view.

We call on the EIB to demonstrate its willingness to invest in cost-effective and sustainable projects.

References

- ⁶Didovets I., Krysanova V., Hattermann F., López M., Snizhko S., Schmied H., “Climate change impact on water availability of main river basins in Ukraine,” *Journal of Hydrology: Regional Studies*, no 32, December 2020.
- ⁷RCP 2.6 – scenario if reducing CO2 emissions (meets the objectives of the Paris Agreement). RCP 8.5 – without reducing greenhouse gas emissions.
- ⁸Waldman, J., Sharma, S., Afshari, S., & Fekete, B., “Solar-power replacement as a solution for hydropower foregone in US dam removals,” *Nature Sustainability*, no 2(9), 26 August 2019: 872-878.
- ⁹Zablocki Alexandra, “Energy Storage,” *Environmental and Energy Study Institute*, 22 February 2019.
- ¹⁰Shyriaeva D.V., Vynokurov D.S., Boiko G.V., Derkach O.M., Didukh Ya.P., Kolomiets H.V., Kuzemko, A.A., Moysiyenko I.I., Mosyakin S.L., Khodosovtsev O.E. “Threats to rare plant species and habitats of the Southern Bug Valley may result from further water level rise in the Oleksandrivka Reservoir,” *Ukrainian Botanical Journal*, no 78 (2), 2021: 145-154.
- ¹¹Shyriaeva D., Kolomiets G., Vynokurov D., Kuzemko A., Chusova O., Skorobogatov V., Drabyniuk G., Legkyi S., Moysiyenko I. (2021), Records of rare plant species under threat due to the expansion of the Oleksandrivka water reservoir (from 16.0 m to 20.7 m), M.G. Kholodny Institute of Botany, National Academy of Sciences of Ukraine. Occurrence dataset, GBIF.org as of 20.04.2021.
- ¹² Paragraph 225 Annex 2 to the Decision of the National Security and Defense Council of Ukraine “On the Application, Lifting and Amendment of Personal Special Economic and Other Restrictive Measures (Sanctions)”, Decree of the President of Ukraine No 82/2019 of 19.03.2019

- February 2021 -



**NGO «UKRAINIAN NATURE
CONSERVATION GROUP»**

Gogol str. 40, Vasylkiv, Kyiv oblast, Ukraine, 08600
тел.: (+38 097) 100-04-73; (+38 097) 919-39-87
uncg.ua@gmail.com

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Secretary of the Bern Convention

**Subject: new report on 2020/3: Other complaint: Presumed threat to
Emerald Network site “Bugzkyi Gard National Nature Park” (UA0000040)**

Dear Ms Ursula,

The situation with the expansion of the South-Ukraine electric power producing complex is still critical. The risk of flooding of valuable territories of the Emerald Network Site “Bugzkyi Gard National Nature Park” (UA0000040) remains urgent, unfortunately. In 2020, scientists continued to investigate the populations of rare species and habitats, so we have relevant data. Attached you can find the maps with findings of rare species within the potential zone of the flooding. There are two general maps for flora and fauna, but, if necessary, we can provide more detailed data for each species. Also, the experts can take part in the next Bureau meeting in Spring 2021 remotely.

Addition: Findings of rare species within the potential zone of the flooding.

Thanks.

Kind regards,

Oleksii Vasyliuk, UNCG



