

## The hydropower plant Boskov Most

For more information

**Ana Colovic-Lesoska**

Macedonian campaigner,  
Eko-svest/Bankwatch  
ana@bankwatch.org

**Aleksandra Bujaroska**

Campaigner, Front 21/42  
aleksandra.bujaroska@front.org.  
mk

ELEM, a state-owned company, is in the process of implementing the construction and management of the hydro power plant "Boskov Most". The project "Boskov Most" includes the construction of a reservoir (a 33 m high dam), a hydro power plant with the total capacity of 68 MW and an annual production of around 118 GWh and a tunnel and headrace from the reservoir to the HPP. In November 2011 the European Bank for Reconstruction and Development (EBRD) approved a 65 million EUR credit to ELEM for the implementation of the project. The total value of the project is estimated to be 107 million EUR.

More than 80% of the project falls into the territory of the "Mavrovo" National Park – the total project area is around 200 ha, of which 160 ha fall within the Park's territory.<sup>1</sup>

According to the IUCN, most of the Boskov Most project area would fall into category II of protected areas – National Parks – in which it is not allowed to implement any kind of commercial activity, even those deemed "viable", if it has been established that there will be a negative impact on natural ecosystems and living organisms that are characteristic of the area.

### Environmental and legal issues of the project

#### Lack of information in the EIA Study for HPP "Boskov Most"

In 2011 the Environmental Impact Assessment (EIA) Study was prepared. It was lacking significant information that is indispensable for precise and objective evaluation of the impact of the project on the environment, most notably **lacking data on the mammals in the project area and the complete absence of the Balkan lynx from the Study**. Therefore in November 2011 one member of the NGO group, Eko-svest, filed a complaint to the Project Complaint Mechanism of the EBRD alleging that the Bank did not follow its own procedures when deciding to finance the Boskov Most project.

The compliance review report was performed by an independent expert, the investigation took 1 year. The report stated that **the bank failed to comply with four of its policy requirements** because it failed to ensure the appropriate assessment of biodiversity in the project's area and as a result did not provide all necessary information for the decision of the bank's Board to financially support the project.

The PCM process parties – AD ELEM, EBRD and the civil society organisations – concluded that

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it is necessary to implement a one-year monitoring of the environment and the biodiversity of the planned project site in order to eliminate the deficiencies and prepare mitigation measures. This monitoring ended in the spring of 2013 and a final report with results and mitigation measures was prepared in October 2013.

### Lack of information in the one year pre-construction biodiversity monitoring study

The final report on the monitoring of the environment and the biodiversity in the area of the project HPP “Boskov Most” has many flaws and in several cases it leads to erroneous conclusions due to the inappropriate interpretation of the results confirmed by several eminent international nature conservation experts.

A large number of leading international experts who work on the protection of wildlife from organisations such as International Union for Conservation of Nature (IUCN), Plantlife, Birdlife, Riverwatch, Friends of the Earth, Research Institute of Nature and Forest, Karl-Franzens-Universität Graz, and Leibniz-Institute of Freshwater Ecology and Inland Fisheries sent their comments and criticism on the report. They expressed their concern about the inaptness of this report and indicated the problematic conclusions and results of the report.

Some key aspects are:

- The conducted one-year research does not show the reality of the current situation on the site, hence we believe that the conclusions and opinions of the report are not valid.<sup>2</sup>
- In some parts of the report the conclusions are not serious, such as the claim that the decrease of the water level in the rivers due to the building works will benefit the otter (*Lutra lutra*) by allowing it to hunt fish more easily.<sup>3</sup>
- The report never mentions that every day there will be a release of large quantities of water from the reservoir to the Mala Reka River for the

purposes of production of electricity.<sup>4</sup>

- The report has no results from one measurement of the noise and the quality of the ambience air at the site of the planned hydro power plant (even though there were scheduled to be at least 2 measurements during the year, there was only one).

It is evident that the report needs to be completed with results from new researches and analyses of specific groups of organisms. This would lead to the necessity to prepare and suggest new measures for reduction of the negative impacts on the environment.

### Possible extinction of the Balkan Lynx and non-compliance with IUCN international guidelines on category II – National Park

The long term programme for preservation of the Balkan lynx, implemented by the Macedonian Ecological Society, and the research performed on individual animals with the help of GPS collars show that the territory of the planned project HPP “Boskov Most” is a vital area for the survival of the lynx.<sup>5</sup>

There is an estimate of 12 mature individuals of this species that live in the area of the “Mavrovo” park and a corresponding density of around 1,5 individuals per 100 km<sup>2</sup>. On the European level, this density represents an average for the species. Bearing in mind the pressure that this population faces out of the park in terms of prey availability, suitable habitats, habitat connectivity, protection etc., additional disturbance on its current habitat may represent a serious obstacle for further expansion of the population thus making Mavrovo a source and everything beyond it, a sink of the Balkan lynx population. Any further pressure to the core of the population will inevitably lead to the increase of the chances for extinction.

The Balkan lynx is one of the 9 so far described

subspecies of the Eurasian lynx. Although once spread all over the Balkan Peninsula, the distribution of the Balkan lynx is now limited to the border zone between Macedonia and Albania. According to the criteria of the International Union for Conservation of Nature (IUCN), the Balkan lynx is categorized as a critically endangered subspecies of the Eurasian lynx. Consequently, the areal (the territory where it moves, feeds and mates) of the Balkan lynx is a critical habitat and represents an area where measures for protection and preservation of this species should be undertaken.

The fact that “Mavrovo” park is the only confirmed core area for the reproduction of the population of the Balkan lynx clearly indicates the immense importance of the site.

There is no study that assesses the cumulative effect of the project implementation. These cumulative effects mostly imply on the disturbances in the construction phase, both to the lynx and its prey, as well as the construction of the access roads that will interrupt the wilderness and make it available to poachers. This cumulative stress may irreversibly lead to the extinction of the last reproductive unit of the endemic population of Balkan lynx and will affect the capacities of the site to sustain a viable population of the lynx and on a broader scale affect the conservation potential prospective of National park in general.

### Non-compliance with the Law on Nature protection and International conventions

The project is not in accordance with the following international conventions signed and ratified by Republic of Macedonia:

- **Bern Convention** (a complaint is filed to the Bern Secretariat. In attach to this document you will find the complaint and the supporting documents;
- **Bonn Convention** according to which Macedonia

is obliged to contribute to the conservation of migratory species of wild animals;

- **Convention on Biodiversity** according to which Macedonia is committed to increase the percentage of protected areas by 2020 and contribute to the preservation, enhancement and restoration of the natural heritage;

The fact that HPP “Boskov Most” is located in the area where sustainable management is possible does not mean that the project is allowed to change the character of the park. Implementation of the project means clear breach of the following articles from **the Law on Nature protection regarding National Park**:<sup>6</sup>

- Article 74 Management of a national park: Building HPP or use of the natural resources for energy development is not part of management list;
- Article 75 Prohibited activities in national park: *(1) It is forbidden to carry out activities that endanger the authenticity of nature in the national park (2) The national park can be used for tourist-recreational activities and sustainable use of natural resources in a way that does not threaten the survival of the species and their natural balance, co accordance with the provisions of this law.*

### Conclusion and recommendations

The failure of the one year bio-monitoring programme to come up with adequate mitigation measures confirms the warnings of numerous nature conservation organisations that, if implemented, the Boskov Most HPP, will compromise the status of the Mavrovo National Park and the chances of survival of the Balkan lynx.

Therefore we ask the EBRD decision-makers to:

- refrain from disbursing the loan to ELEN and
- take urgent steps to withdraw from the Boskov Most HPP project.

## Notes

1. Mavrovo National Park is one of the oldest national parks in Europe. Has been a protected area since 1949, when the National Assembly of the People's Republic of Macedonia declared the backwoods surrounding Mavrovo Pole a National Park. The Park is known for its rich biodiversity and attractive natural beauties; from the Balkan Lynx, the Wild Cat, the Common Toad, to Sharkova Dupka Cave, Duf Waterfall, Elen Skok Bridge etc. The amendments to the Law establishing the National Park from July 3rd, 1952 expanded the protected area 6-fold i.e. from 11,750 ha to 73,088 ha. Mavrovo National Park is designated internationally as Important Plant Area, Important Bird Area, Key Biodiversity Area as well as an Emerald Network Site. The Emerald Site designation means that the accession to the European Union would make the Park a part of the Natura 2000 network. Finally, the park contains thirteen European threatened habitats and numerous endemic and/or threatened species listed on the annexes of the Bern Convention. It is home to the only remaining breeding population of the Balkan Lynx (*Lynx lynx ssp. balcanicus*) and to one of the last remaining pristine beech forests in the Balkan region.

2. In some cases the methodology used in the research is not precise and is insufficiently explained, nor it is supported by evidence, for example the research on the Balkan lynx does not contain any information about the location of the camera-traps and the photographs of the animals, their trails, fur, excrements found etc. The conclusions about the lynx are also mistaken as they claim that the chamois (*Rupicapra rupicapra*) is the main source of food for the lynx. Quite the contrary, the chamois only takes 28% of the lynx's prey. These claims lead further on to other erroneous conclusions such as the claim that the lynx inhabits the higher mountain areas. In fact, the lynx mostly hunts and feeds on deer (*Capreolus capreolus*) in the hills and lower parts of the mountains with forest areas. The lynx and the chamois rarely come in contact due to the differences of their habitats and the territories they inhabit.

3. With the drastic variability of the water level the population of the ichthyofauna will be significantly reduced. Furthermore, the report does not mention at all that the frequent flooding of the river banks will lead to destruction of the riparian vegetation that serves as shelter for the otter.

4. Here we are talking about a period of 5 hours when the maximum quantity of 22 cubic meters per second will be released into Mala Reka. Taking into account that in the drier part of the year (summer and autumn) the flow of 2 cubic meters per second is the biological minimum to which the water fauna and the riparian vegetation has become accustomed to for many years, the planned release would represent a major change in the conditions due to the drastic fluctuations of the water level. This kind of fluctuation is not mentioned in the report and neither are the measures or solution for its negative impact. This type of extreme changes will especially affect the ichthyofauna, the larvae of the water insects, the molluscs and aquatic arthropoda like the water crab because of the disruption of the water regime of oxygen and the temperature changes caused by the variation of the water quantity from small to large and vice versa.

5. *Explanation of the international standards and use of the IUCN categories to help regulate activities in the IUCN protected area category II - national park:*

According to the IUCN guidelines a protected area is defined as: "A clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve long-term conservation of nature with associated ecosystem services and cultural values" (Dudley, 2008). This definition should be applied with accompanying principles that are valid for every protected area, regardless of its management category. Those principles says that "for IUCN, only those areas where the main objective is conserving nature can be considered protected areas", which implies that "in case of conflict, nature conservation will be the priority" (Dudley; 2008: 10). In addition, "protected areas must

*prevent, or eliminate where necessary, any exploitation or management practice that will be harmful to the objectives of designation.” For IUCN, it is also essential that “protected areas should usually aim to maintain or, ideally, increase the degree of naturalness of the ecosystem being protected” (Dudley, 2008: 10).*

Any activity that is planned to be implemented within the borders of the IUCN category II – national park should be assessed through the objective of protection of the natural biodiversity, ecological structure and environmental processes in the area and how this activity would affect them. In the IUCN protected area guidelines (Dudley, 2008) there is no mentioning that any commercial activity, although considered “sustainable” can be implemented within the limits of the IUCN category II – national park, if it affects complete or almost complete complement of species native to the area and naturally functioning ecosystems. Activities that are not compatible with the primary management objective of the national park are not specifically listed in the IUCN protected area guidelines (Dudley, 2008) as it is considered that scientists and experts will be able to assess the impacts of such developments against retaining the functioning of the natural ecosystems, aimed at strict protection in the national parks.

#### **6. Article 74: Management of a national park :**

*“The national park is managed on an integrated whole in a way that ensures: 1) protection of natural areas of national and international importance for cultural, scientific, educational, tourist and recreational purposes; 2) stability of ecological processes and diversity through sustainable preservation of representative natural and geographic regions, biocenosis, genetic resources and species in authentic condition; 3) creation of conditions for development of tourism in accordance with the principle of sustainable development and 4 ) realization of cultural , scientific , educational and recreational purposes, which at the same time maintain the natural state of the area“.*

(Building HPP or use of the natural resources for energy development is not part of management list; )

#### **Article 75 Prohibited activities in national park :**

*“(1) It is forbidden to carry out activities that endanger the authenticity of nature in the national park (2) The national park can be used for tourist-recreational activities and sustainable use of natural resources in a way that does not threaten the survival of the species and their natural balance, co accordance with the provisions of this law”*