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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE  
AND NATURAL HABITATS

**Standing Committee**

35<sup>th</sup> meeting  
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**File open**

**Hydro power development within the territory of  
Mavrovo National Park  
("The former Yugoslav Republic of Macedonia")**

**- ON-THE-SPOT APPRAISAL -**

24-25 June 2015

*Document prepared by  
Mr Pierre Galland*

## INTRODUCTION

The National Park Mavrovo is one of the richest and best preserved mountain protected areas in South Eastern Europe. Together with the adjacent protected areas in Kosovo\* and Albania it contributes to the preservation of the Shar and Korab mountains, including broadleaf forest, subalpine mixed forest, subalpine and alpine meadows and pastures. In addition, specialized habitats of high conservation value are found at various elevations of the Park (peat bogs, riparian vegetation, meadows, etc.).

The integrity of the park, and in particular its hydrologic system, has been affected for several decades by hydropower projects including diversion of significant amount of waters from the natural streams. Recently, some large and small scale projects to increase the capacity for electricity production have been reactivated by the authorities of the “former Yugoslav Republic of Macedonia” and the ELEM company, with the support namely of the European Bank for Reconstruction and Development (EBRD) and the World Bank.

Alerted by the NGO Eco Svest, whose complaint submitted to the Bern Convention was supported by various international and national nature and environmental conservation organisations, the Committee of the Bern Convention decided in December 2014 to open a case file. It further instructed the Secretariat to seek the agreement of the Party for the organisation of an on-the-spot appraisal to the area in 2015. The mission took place on 24 and 25 June 2015. It included observers from the International Union for Conservation of Nature (IUCN) and the European Commission.

Due to the limited duration of the mission, the size of the Park and the large geographical coverage of the hydropower projects to be discussed, it was not possible to see everything and to discuss each issue to the last details. However, thanks to the intensive preparatory work done by the Secretariat of the Bern Convention and the extensive documentation provided by the State Party, by ELEM Company as well as by the different non-governmental organisation (both of the “former Yugoslav Republic of Macedonia” and international), it was possible in two days to discuss the most crucial issues and to visit the most relevant areas in the Park. The delegation would like to thank all the above-mentioned partners as well as the representatives of the EBRD and the Mavrovo National Park staff for their collaboration before, during and after the mission, and for their active participation during the discussions.

During the visit, the delegation agreed to elaborate a report, drafted by the independent expert to the mission and including some of the observers’ findings. The full observers’ reports can be found in document T-PVS/Files (2015)41. The current report takes into account proposals and opinions made during the meetings with the national authorities and the various stakeholders during the mission. It further incorporates some of the findings by the different members of the delegation, including observers.

### **1. BACKGROUND OF THE OPEN CASE FILE 2013/1: HYDRO POWER DEVELOPMENT WITHIN THE TERRITORY OF THE MAVROVO NATIONAL PARK (“THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA”)**

In March 2013, a complaint was submitted to the Bern Convention by the NGO “Eco-svest - Center for environmental research and information” to denounce a possible breach of the Convention by “the former Yugoslav Republic of Macedonia” with regards to the development of hydro-power projects within the territory of the Mavrovo National Park, an Emerald candidate site since 2011.

According to the complainant, the construction of several hydro-power plants and supporting infrastructures (roads, bridges and transmission lines) will result in the direct destruction of forests, severe disturbance of water sources and fragmentation of wildlife habitats – the home of numerous strictly protected species of plants, mammals, birds, amphibians and reptiles listed in Appendix I and II of the Bern Convention. The complainant emphasised that some of these species, namely the *Lynx lynx balcanicus*, might be critically endangered if the projects are implemented.

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\* All references to Kosovo, whether the territory, institutions or population, in this text shall be understood in full compliance with United Nation's Security Council Resolution 1244 and without prejudice to the status of Kosovo.

The Secretariat addressed a reporting request to the government, stressing that according to Recommendation No. 162 (2012) of the Standing Committee, on the conservation of large carnivore populations in Europe requesting special conservation action, “the former Yugoslav Republic of Macedonia” should assess the environmental impact on the lynx population of dams in the Mavrovo National Park - a site identified as a candidate for the Emerald Network - and consider abandoning the project if the dam poses a risk of endangering the lynx population. The Secretariat also reminded that, according to Recommendation No. 157 (2011) of the Standing Committee, on the status of candidate Emerald sites and guidelines on the criteria for their nomination, national authorities should “take the necessary protection and conservation measures in order to maintain the ecological characteristics of the candidate Emerald sites”, until their full inclusion in the Emerald Network.

In the period 2013 and 2014, several reports were submitted by both the complainant and the national authorities of “the former Yugoslav Republic of Macedonia”, in support of their arguments.

The Government report, received in September 2013, informed that an Environmental Impact Assessment Study for the hydropower plant project Boshkov Most was prepared by GEING Skopje, a “the former Yugoslav Republic of Macedonia” based engineering company operating in the Balkan area. Additionally, a 4-seasons biodiversity monitoring had been carried out by a team of experts on invertebrate and vertebrate species. The report said that according to EIAS and monitoring study, the hydropower plant project Boshkov Most satisfied entirely the requirements of the national legislation and that a decision authorising the development of Boshkov Most’s project had been already issued. The report did not provide conclusions from the EIAS or monitoring study allowing to judge about possible impacts of the project on the species and their habitat, referred to by the complainant. The report further informed that the Ministry of Environment and Physical Planning (MEPP) instructed the ELEM to implement an Environmental Impact Assessment Study for the hydropower plant project Lukovo. An international tender was published and the company BRL from France was selected to develop the EIA Study by engaging international and national experts. When accomplished, the ELEM would send the Study to the independent expert committee established by MEPP, for review.

In a report submitted in January 2014 the complainant informed that a lawsuit was pending before the Administrative court against the decision of the Ministry of environment to approve an incomplete EIA study for the hydropower plant project Boshkov Most. The complainant underlined that the irregularities on the EIA study were confirmed by an EBRD compliance review report (January 2014) which concluded that the EIA was “not sufficiently comprehensive and conclusive”.

In a short report submitted in March 2014, the national authorities informed that the EIA for the Hydropower plant Boshkov Most was concluded, and that the results of the biodiversity monitoring implemented were taken into account in the final EIA report. The EIA for the Hydropower Plant Lukovo Pole was under preparation. No mention was made by the authorities of the pending lawsuits against the EIA results and procedures, reported on by the complainant.

The national authorities did not submit a report for the September 2014 meeting of the Bureau, but informed via e-mail that the EIA report for HPP Lukovo Pole was expected for the end of December 2014. The authorities claimed that they didn’t receive the reporting request sent by the Secretariat. The complainant, who was copied in the letters addressed by the Secretariat to the authorities, had - on the contrary - submitted detailed information regarding both hydropower plants’ projects. Regarding the Boshkov Most HPP project, the complainant informed on two pending lawsuits, (1) one claiming that the Ministry approved the EIA report based on insufficient data (supported by a compliance report of an independent experts charged by EBRD) and (2) a second one on denied access to the expert’s reports on Mavrovo HPP projects. In addition, the complainant claimed that the civil society organisations were supposed to participate to the bio-monitoring mentioned by the national authorities, but their comments and proposals were not included in the final EIA report. Comments on the insufficient data used for the bio-monitoring report were also made by the Vice-Chair of the IUCN World Commission on Protected Areas and other IUCN committees, as well as by Birdlife and national/international experts.

In December 2014, the Standing Committee decided to open a case file against “the former Yugoslav Republic of Macedonia” and instructed the Secretariat to seek the agreement of the Party for the organisation of an on-the-spot appraisal to the area in 2015, with the objective of collecting more

information and data for the preparation of a draft recommendation to be submitted to the next Standing Committee meeting in December 2015.

## 2. THE MAVROVO NATIONAL PARK

The Mavrovo National Park, established in 1949, is one of the oldest National parks in Europe. It was significantly expanded in 1952 to reach approximately 73'000 ha. A small area (212 ha) was recently added, following a border modification (land exchange with Kosovo\*). According to the 2014 UN List of Protected Areas, it covers an area of 734.10 km<sup>2</sup> and it is classified as IUCN Category II, though surprisingly it does not stand as "National Park" but under "Designated area not yet reviewed" in the List. It is adjacent to the Sar Planina National Park in Kosovo\*, equally classified as IUCN Category II (WCMC 2014 database). Protected areas seem to exist in the Albanian side of the Korab Mountain as well, but apparently they have not been communicated to the WCMC.

The three Macedonian National Parks cover a total area of 1'150 Km<sup>2</sup>, which constitute 4.6 % of the national territory and they are all declared as IUCN Category II, despite numerous activities hardly compatible with that level of protection. They are part of the Dinaric Arc Initiative. The total cover of the protected areas of "the former Yugoslav Republic of Macedonia" is estimated to 9%, while the candidate Emerald sites reach ca. 29 %. The country has declared 2 Ramsar sites (215 ha) and the Ohrid region is listed as mixed (natural and cultural) World Heritage property.

The National Park Mavrovo has been identified as:

- (1) an Important Bird Area (IBA): Radika river catchment with IBA CODE MK002 and partially Shar Planina with IBA Code MK001<sup>2</sup>. Both sites are evaluated with criteria A3 and B2 (Global and European importance);
- (2) an Important Plant Area;
- (3) a Prime Butterfly Area;
- (4) part of the Macedonian Ecological Network and
- (5) a candidate Emerald site (would become a Natura 2000 site upon the accession of "the former Yugoslav Republic of Macedonia" to the European Union).

It was declared as National Park due to its "exceptional natural beauty, historical and scientific importance of forests and forest areas surrounding Mavrovsko Pole", however the Mavrovsko Pole field was flooded few years later for the purpose of the existing hydro energy system "Mavrovo". Mavrovo National Park is appreciated for its extensive beech forests, alpine meadows, pristine rivers and streams. In terms of biodiversity, the National Park Mavrovo is one of the richest areas in "the former Yugoslav Republic of Macedonia". It is home of about 50 mammal species, including the wolf, brown bear, fox, wild cat and lynx; 129 bird species, 11 out of the total 15 species of amphibians and 24 out of the total 32 species of reptile found in "the former Yugoslav Republic of Macedonia", and 924 species of invertebrates as well as 1435 plant species. Of these, 14 species of mammals, 45 species of birds, 5 amphibians and 18 species of reptiles are listed in Appendix II of the Bern Convention (for more info see Appendix 1). This indicates the great importance that National Park Mavrovo has in terms of biodiversity conservation; hence preserving the quality of the habitats that sustains and host each of the important species is of even greater importance.

According to the NGO at the origin of the complaint before the Bern Convention, many years of inappropriate conservation measures have adversely affected the diversity of National Park Mavrovo. It must be noted that the National Parks of "the former Yugoslav Republic of Macedonia" are not financed by the State budget; they have to generate their own income, which is in contradiction with the current legislation. The existing hydropower plant system "Mavrovo" that affects about 946.1 km<sup>2</sup> added additional pressure on the natural ecosystems, in particular on the rivers. Inadequate management and conservation of river ecosystems significantly affects the structural and functional characteristics of the aquatic and riparian communities that are directly dependent on the river ecosystem.

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<sup>2</sup> Velevski and all. 2010

## ➤ **Species conservation**

The key data presented here are extracted from the detailed report by Alexander Dutsov, an IUCN observer to the mission (his full report can be found in document T-PVS/Files (2015)41).

### **Fish species**

In the rivers in the planed accumulation HPP Boshov Most are registered only 2 species of trout. Both are with conservation importance and the hydro power plants are causing changes in the river's hydrologic regime, which affects the species reproduction:

- *Salmo obtusirostris Heckel* with synonyms *Salmo monenegrinus Karaman*, which is listed in IUCN list as endangered species;
- *Salmo farioides Karaman*. This species probably represents an artificial assemblage of several species. *Salmo* occurring from Alfios (Peloponnese) possibly refer to this species. Status of threat: near threatened. Not in IUCN list but listed in LIFE.

### **Reptiles and amphibians**

The list of reptiles and amphibians in the park consist of 27 species. Two species of amphibians and two of reptiles are listed in Annex II of 92/43 directive and 5 species amphibians and 13 species reptiles are in Annex IV of Habitat directive. Amphibian species are vulnerable to changes in hydrology as their reproduction is strictly related to water.

### **Bird species**

In the frame of the park there are two IBAs based in criteria of Bird Life International. The IBA Shar Planina list totally 130 species (Melovski et al. 2010), some of them with significant importance. In the IBA Radika River Catchment, the list of registered bird species amounts to over 140 species (Velevski et al. 2003a, Micevski 2010). Triggering species are the Golden Eagle (4–6 pairs) and Eagle Owl (8–15 pairs). Of particular interest is the Radika river catchment territory, which is planned to be flooded under the Lukovo pole HPP. The area is feeding place for the eagle owl, the golden eagle and other species with European importance.

For the area of the HPP Boshkov Most, available data is from Ecological Monitoring of River system of HPP Boskov Most (summer, autumn, winter spring) report. There are 75 registered species during the summer monitoring, breeding in the area, of which 26 are with conservation status in Europe. From them 12 species are listed in Appendix II of the Bern Convention.

### **Mammals**

The Ecological Monitoring of the river system of HPP Boskov Most (summer, autumn, winter spring) reports about 32 species of mammals from total 49 in Mavrovo NP. All reported 24 mammal species are with different protection status in Europe; 28 are listed as Least Concern in IUCN red list, one is Near Threatened (*Lutra lutra*) and 1 is Data deficient (*Spalax leucodon*). As a species connected to water bodies, the otter (*Lutra lutra*) will be affected by any change in the river regime.

The Brown bear (*Ursus arctos*) is species with high priority for the EU. The Macedonian population of the species is part of the Dinara-Pindos subpopulation in Europe, estimated to around 3070 individuals (Brown Bear Specialist Group 2013). The species inhabits the area of planed investments and part of the territory of the individuals in the park will be lost. Additional negative effect will be caused by disturbance during the building phase and after by the recreational use of reservoirs.

Regarding the threats to the Eurasian lynx, Balkan subspecies (*Lynx lynx balcanicus*), see the dedicated section below and the special report from A. Demeter (available in document T-PVS/Files (2015)41).

## ➤ **Mavrovo National Park as a candidate Emerald site (Area of Special Conservation Interest)**

Site no. MK0000007 – Mavrovo has been officially nominated as a candidate Emerald site in 2011. The Emerald site Standard Data Form (SDF) completed by the Ministry of Environment and

Physical Planning (date 2008-10) identifies it as the Mavrovo National Park and gives 73088.8 ha as its size. According to the ecological information contained in the Standard Data Form, there are 8 habitat types from Resolution No.4 (1996) of the Standing Committee to the Bern Convention present on the site and 49 species listed in Resolution No. 6 (1998) of the Standing Committee to the Bern Convention. The list of other important species of fauna and flora contains 69 species.

The section on quality and importance (4.2) states that it is “exceptionally rich in flora and vegetation diversity”, and the “classical finds (*locus typicus*) of high number of species are situated”. It also describes the significance of the site for Taiga type Coniferous Forests on higher altitudes whereas Balkan-Middle-European Broadleaved Woodlands dominate the site. The Fairy Shrimp *Brachipus intermedius* is given as an example of the importance of this site since this is the only known location of this species having gone extinct in the Carpathian Mountains of Romania from where it was described. The text also mentions that for the Corncrake (*Crex crex*) the population is likely to be sufficient to meet A1 criterion for an Important Bird Area in Europe. The Balkan Lynx (see document T-PVS/Files (2015)41) is not mentioned in the site SDF. Unfortunately the SDF contains no information in 4.3: Threats, pressures and activities with impacts on the site.

In addition, the Mavrovo candidate Emerald site MK0000007 was assessed at the biogeographical level during the Emerald biogeographical Seminar for the West Balkans (Bar, Montenegro, 2-4 November 2011). The major significance of this site for the Emerald Network was clearly confirmed at the occasion of this scientific evaluation. Hence special responsibility bears on the authorities of the “former Yugoslav Republic of Macedonia” for preserving its ecological integrity. In addition, one should remind that according to Recommendation No. 157 (2011) of the Standing Committee to the Bern Convention on the status of candidate Emerald sites and guidelines on the criteria for their nomination, national authorities should “take the necessary protection and conservation measures in order to maintain the ecological characteristics of the candidate Emerald sites”, until their full inclusion in the Emerald Network.

#### ➤ **IUCN position regarding the Hydropower Plant Developments in the Western Balkan**

High number of Hydropower Plants (HPPs) in Western Balkan adversely affects natural ecosystems, including protected areas, especially national parks. However positive news came from Albania recently. New law which will end issuing construction permits for Hydropower Plants (HPPs) in protected areas is in the process of preparation, announced Albanian Prime Minister. High number of planned HPPs in Albania harmfully affects natural ecosystems, including protected areas, especially national parks.

“There is an alarmingly growing pressure on protected areas and key biodiversity sites in the Western Balkans stemming from hydropower development. If put into effect, the announced law will be a positive sign which will hopefully help curb this negative trend across the region,” says Boris Erg, Director of IUCN Regional Office for Eastern Europe and Central Asia.

The IUCN also states that protected areas should aim to maintain or increase the degree of naturalness of ecosystems within protected areas. The IUCN points out clearly that protected areas must prevent or eliminate any exploitation harmful to the objectives of the designation. Any technical infrastructure, which has a negative impact on various habitats, such as aquatic ecosystems, is harmful in various ways. In the present case, the construction plans for the dams would have unacceptable impacts due to their interference in the aquatic ecosystems in more or less the total area, regardless of their size (see report by R. Brunner in document T-PVS/Files(2015) 41, officially endorsed by the IUCN WCPA).

#### ➤ **Hydropower in Mavrovo National Park**

The waters from the NP Mavrovo have been used for electricity production over several decades. Several hydro power stations, artificial lakes and extensive pipe systems have been built during the communist time. A significant part of the water originally flowing into the Drina River (Albania and Adriatic Sea) has been diverted into the Mavrovo Lake, and then re-directed into the Vardar River to Greece and the Aegean Sea. The following description can be found in the Mavrovo National Park management plan:

*One of the most complex hydropower systems (HPS Mavrovo) is located in the Municipality of Mavrovo-Rostushe. The Mavrovo Hydropower System with its three hydropower plants: HPP Vrutok, HPP Raven and HPP Vrben, and with a total capacity of the reservoirs of 277 million m<sup>3</sup> is one of the largest and most complex system in the Macedonian Hydropower systems. It accounts for 42% of the total installed hydropower capacity in “the former Yugoslav Republic of Macedonia”.*

*The Mavrovo Hydropower system is the largest and the most complex system of hydropower plants in the Republic of Macedonia comprising three hydropower plants with 9 turbines in total, the Reservoir Mavrovsko Ezero Lake, 133.3 km of intake tunnels, pipelines and channels, 91 km of which being closed headrace channels, 36 km of tunnels and 6.4 km of high pressure steel siphons and pipelines, as well as 167 km of access roads for maintenance and facility surveillance.*

Several projects to increase the water storage capacity and subsequently to fulfil the need for peak electricity production were planned during the communist period; projects have been stopped after the democratic changes, but have been reactivated a few years ago.

Currently a significant part of national electricity production is coming from low quality coal burning power station. “The former Yugoslav Republic of Macedonia” is intensively promoting the development of renewable energy sources and storage on its territory in order to decrease the carbon intensity of the national electricity production sector and to enhance the security of supply. To this end government plans to have about 22 dams constructed in the Mavrovo National Park area alone. 20 of them are small-scale hydro power and storage projects and two of them – the Hydro power projects “Boskov Most” and “Lukovo Pole” - are large scale enterprises. Out of the planned 22 projects so far two small-scale hydropower plants have already been constructed.

Most of the water in the Mala Reka and its tributaries will be discharged via a tunnel to the powerhouse. This will reduce the amount of water that flows in the rivers. This reduction in flow rates will reduce aquatic habitats and could damage populations of fish and other organisms that live in the water. The construction of the dams and the additionally planned 20 to 30 small HPPs as well as the associated technical infrastructure would not only impact the Radika and the Mala rivers, but also the proposed HPP sites. The aquatic system would be devastated along outstanding river sections. Dry sections can already be seen around previously built technical installations.

#### ➤ **HPP Lukovo Pole**

This project is planned to be constructed on the territory of Mavrovo National Park on the junction of the Shara and Korab Mountains on “the former Yugoslav Republic of Macedonia”, Kosovo\* and Albania border. The Lukovo Pole project shows many similarities with Boskov Most. The water will be diverted from several tributaries to the Radika River, which will be channeled to the reservoir through a pipe system. Originally part of the Drina watershed, the water will eventually flow into the Mavrovo Lake and into the Vardar River. The project comprises on the one hand the construction of a ca. 20 kilometres long covered feeder channel, running slope parallel, to transfer water from the Korab catchment to Lukovo Pole storage and Crn Kamen river and an about 70 meter high dam at Lukovo Pole that will have a storage capacity of about 39 million cubic meters, and on the other hand additionally a small hydropower project (Crn Kamen) of about 5 MW downstream of Lukovo Pole shall be constructed. The main funding source for this project could be the World Bank.

#### ➤ **HPP Boskov Most**

The Boskov Most HPP will be using water from the river Mala Reka and its tributaries. The Boskov Most HPP Project intends to utilise the tributaries that combine to make up the river Mala Reka. The water will be carried to the tunnel and reservoir in parts that are widely spaced. A dam 33 meters high will be constructed in a narrow gorge about one kilometer from Tresonce and Selce villages on the Mala Reka just downstream of where the rivers Jadovska Reka and Tresonecka Reka come together. Water will be taken from local tributaries through aqueducts and siphons. The reservoir will cover about 22 hectares, of which about 15 hectares are now used for pastures and the rest is forested. The headrace tunnel will be excavated in the hillside on the right side of the Mala Reka and will flow 8.7 kilometers to a surge tank. From the tank, water will flow another 0.85 kilometers through two buried pipelines down to the power house, which is 365 meters lower than the reservoir and is located on the right side of the Mala Reka just before it flows into the Radika River. The plant

will operate for about five hours per day. After passing through turbines to generate electricity, the water will be returned to the Mala Reka about 200 meters upstream from where it joins the Radika River. A transformer station and 110kV overhead power line will connect the powerhouse to the national grid. The route by which this connection will be made into the grid is not yet fully determined. Once a decision is made, it will be determined if a separate impact assessment will be needed for the transmission line.

### ➤ **Global impact of the 2 large projects**

Significant impact on natural ecosystem will be observed, in particular during the construction phase. But also the flooding of small valleys with well-preserved cultural landscape, the diversion of many rivers, the quarries opened for providing the material for the dams and the construction of many piped and other infrastructure for water uptake and its transport to another valley will affect the landscape and a large part of the hydrographic system.

In the case of Boskov Most project, the water will remain in the Drina watershed, but while being released only shortly upstream from the Debarsko Lake it won't be available for irrigation to the towns and villages close to the National Park. On the other hand the water uptaken to replenish the Lukovo Pole artificial lake will be conducted first to the Mavrovo Lake and eventually into the Vardar River, to flow to the Aegean Sea.

### ➤ **Small hydropower plants**

According to the Public call for concessions published by the Ministry of Environment and Physical Planning, Ministry of Economy another 20 Small hydropower plants are to be built on the territory of National Park Mavrovo. The small hydropower plants (SHPP) as projected will affect the rivers and streams in Bogdevska Reka, Ribnichka Reka, Mavrovska Reka, Tairovska Reka, Galichka Reka and Rosochka Reka watersheds. Two of the planned SHPP are already built and operational (Galichka Reka and Tresonechka Reka), 1 is under construction (Galichka Reka), while 4 have already agreed concessionaires and construction work may start at any time. Significant impact on natural ecosystems can be expected during not only the construction period but the hydrological regime of the rivers and their specialized ecosystems will be permanently affected as well, even if the legal provision for minimum residual flow is strictly observed.

### ➤ **National Park status and management plan**

The park is declared as a Protected Area IUCN category II by the “former Yugoslav Republic of Macedonia”. The primary objective of this category is “*to protect natural biodiversity along with underlying ecological structure and supporting environmental processes, and to promote education and recreation.*” A detailed analysis of the requirements for this category has been prepared by Robert Brunner, Observer to the mission from the IUCN World Commission on Protected Areas; in addition more information about species and habitats and their respective threats can be found in the reports by A. Demeter and A. Dutsov, also observers to the mission (see document T-PVS/Files (2015) 41).

Every 10 years, at the expiration of the validity of their Management Plan, the National Parks of “former Yugoslav Republic of Macedonia” have to be re-declared on the basis of a “revalorization study”, which is a global assessment of a park. In parallel, a new management plan has to be prepared and both documents have to be adopted by the national authority. For the Mavrovo National Park, the process is ongoing. A new management plan had been prepared by OXFAM Italia for the period 2012-2021, and includes a revised zoning of the protected area and new terms for the various zones. This management plan has not been officially adopted yet and the proposal of the Law for proclaiming the protected area Mavrovo in the category National Park is under discussion.

It is the intention of the Government of “former Yugoslav Republic of Macedonia” to ensure the existence of the National Park Mavrovo on the basis of the proposed proclamation within IUCN category II, with the possibility to implement various projects including the construction of HPPs in the protected site, in particular the two larger HPP projects depend and the 20 micro HPP. According to the report by the complainant, up to 29 additional small HPP are planned in the park. The draft law has set up the overall objective of the park as follows:



**- Article 6**

*(1) In order to protect and preserve the original condition, biological and landscape diversity in NP Mavrovo, activities can be performed only for the purposes of science, spatce development, tourism development, and sustainable use of natural resources, upon prior consent obtained from the state administration responsible for the affairs of nature protection, in accordance with the Law on Nature Protection and other regulations concerning the environment.*

*The understanding of the concepts of "tourism development" and "sustainable use of natural resources" differ significantly according to the different authorities and organizations active in the park.*

*The new zoning foresees 3 categories of protection:*

**- Article 8**

*Depending on the natural values, needs, requirements and opportunities for landscaping and use of space, the following zones shall be established in NP Mavrovo:*

- Zone for strict protection,*
- Zone for active management,*
- Zone of sustainable use and*
- Protection belt.*

**- Article 9**

*(1) The zone for strict protection shall be part of NP Mavrovo with highest conservation interest, characterized by original, unaltered ecosystem characteristics, or slightly changed as a result of traditional management practices.*

*(2) In the zone for strict protection, activities which threaten the authenticity of the nature or disturb the natural balance shall be prohibited.*

*(3) In the zone for strict protection only scientific research activities shall be allowed, provided that they are not inconsistent with the primary purpose of the protection of the National Park, and exceptionally well organized visits on marked trails for educational, tourist and recreational and cultural purposes, upon prior approval of the state administration responsible for the affairs of nature protection in collaboration with the Public Institution NP Mavrovo.*

*(4) In order to maintain the characteristics of strict protection zone, Public Institution NP Mavrovo shall provide continuous monitoring of the natural heritage.*

*The total surface area of the zone for strict protection of NP Mavrovo shall be 8.391,9 hectares or expressed in percentage 11.6% of the total area of the Park.*

**- Article 11**

*(1) The **zone for active management** is part of NP Mavrovo with high conservation interest, requiring more management interventions aimed at restoration, revitalization and rehabilitation of habitats, ecosystems and other elements of the landscape.*

*(2) In the zone for active management, activities of economic nature that do not have negative impact on the primary objective of the protection, such as ecotourism or traditional extensive farming, shall be allowed.*

*(3) In the zone for active management, scientific and research activities, setting of road signs, hiking on marked trails and outside of the marked trails, ski running, setting info-boards, arranging of places for resting (tables, benches, awnings), wilderness camping in certain locations, setting of outlooks and view platforms, collecting of mushrooms, fruits and plants, collecting of snails, grazing by cattle, growing of crops in traditional way, mowing of grass, beekeeping (temporary placement of bee-hives), alpine skiing, climbing in regulated areas, mountain biking on arranged paths, horseback riding, using of existing facilities of the Public Institution NP Mavrovo for the purposes of operational management of NP Mavrovo, setup of new facilities for agricultural activities (shipfolds, enclosures,*

*etc.), new infrastructure (earth roads), as well as new infrastructure to control erosion, shall be allowed.*

The total surface area of the zone for active management of NP Mavrovo shall be 23.387,0 hectares or 32.2% of the total area of the Park.

*(3) The zone for sustainable use shall include all areas not covered by Articles 10 and 12 of this Law.*

*(4) In the zone for sustainable use, activities referred to in Articles 9 and 11 of this Law shall be allowed, such as intensive agricultural production, sustainable use of forests (sanitary wood cutting), fishing, production of offspring of indigenous trout, hunting of wild species (sanitary shooting), maintenance and improvement of the reproduction center for adaptation of red deer in Bunec, driving motor vehicles, regulation of unregulated springs, construction of new facilities for capturing water from springs and watercourses, construction of new buildings for housing, and family weekend houses, new buildings for tourism purposes (hotels, restaurants, motels, campgrounds, mountain lodge, lodge, information center parking spaces, etc.), construction of new infrastructure (pipelines for water), electricity, construction of earthworks and asphalt roads, construction of water supply and water intake and sewage removal facilities, construction of wastewater treatment plants, as well as other activities specified in the management plan and annual programs for nature conservation, and urban plans in the municipalities that are situated within the territory of "NP Mavorovo", where special attention should be paid for carrying out the activities in a way that will not disturb the natural balance in the National Park.*

### **3. COMMENTS ON THE DRAFT MANAGEMENT PLAN FOR THE NP**

According to the Ministry of Environment and Physical Planning, the zone for strict protection has been significantly increased in comparison to the previous management plan, to reach slightly more than 10 % of the park. The regime is quite logical for a core zone of a national park.

The zone for active management, which covers almost 1/3 of the park, is more problematic; quite a few permitted activities have already a severe impact on the natural ecosystem and some of the activities, namely those linked to tourism, are not primarily oriented toward the landscape, habitats and species conservation or education and awareness raising.

But the biggest problem occurs with the definition and coverage of the zone for sustainable use; basically everything is permitted, and since the zone is covering more than 1/2 of the park, the potential impact is very high and not really compatible with a status of protected area - see above definition. To keep the Park in IUCN category II, some of the activities should not be possible and the zone should not exceed 25 % of the total territory, according to the IUCN guidelines. In addition, the design of this zone appears to follow much more the intentions of the use of hydropower than it follows the needs of protected areas, thus allowing the construction of the network of HPP with all their flanking measures (roads construction and improvement, gravel extraction etc.). In particular all major stream and their adjacent corridors have been put in this so-called sustainable development zone, while at least a majority of them should be strictly protected.

The report by the IUCN WCPA's expert report states that the current zoning is not appropriate to secure the protection of species, landscapes and biodiversity. The size of the zone for sustainable use is large, and any development within the zone, even those in line with the proposed National Park Law, could cause negative impacts on the small and scattered zones for strict protection and active management. Regarding the activities in the zone for sustainable use, it is recommended to revise the potential usage of natural resources and constructions in line with the IUCN guidelines for management categories. It would also be advisable to draft a different zoning for the area of the National Park Mavrovo that considers the urban development of the settlements as a distinct zone, as well as specific zones for the construction of visitor facilities to provide more legal certainty for communities and citizens. The urban development zone should have a clear border to all three zones as determined in the management plan (see report by R. Brunner in document T-PVS/Files(2015) 41).

This relatively low percentage of surface dedicated to conservation and not subject to disturbance, and the division in numerous small areas, does not provide sufficient conditions to guarantee undisturbed natural processes and the development of viable population of large mammals, and

especially the Balkan Lynx the future of which at present depends very much on successful reproduction in the parks and dispersal to surrounding areas

### ➤ **Management planning of the Mavrovo National Park for the Balkan lynx**

Irrespective of the hydropower plant projects, the Government of “the former Yugoslav Republic of Macedonia” and the management authority of the Mavrovo NP must recognize their special responsibility for the conservation of the Balkan lynx and formulate policy and take measures accordingly. Within this framework, the management plan of the Mavrovo National Park should place greater emphasis on the special role that this protected area plays in the recovery of the Balkan Lynx. The next 5-10 years period is absolutely crucial for the survival of the Balkan Lynx. The draft new management plan of Mavrovo briefly mentions the lynx but does not highlight its very poor conservation status and the national park's significance for its conservation.

More dedicated efforts should be made, based on sound scientific data, to implement concrete conservation measures. The mission of the NP should include the outstanding task of caring for a critically endangered species, and this new approach and increased outreach to the public can also be turned into a win-win situation in terms of ecotourism.

If the Mavrovo "nucleus" of reproducing population is successfully preserved, it could in the long-term serve as the basis for the recovery of the Balkan lynx. According to habitat models, only 17% of the historical range of distribution still offers suitable habitats but could host up to 275 resident individuals (Ivanov, 2014; see also BLRP Newsletter 02/20143). Such a range with good conservation measures could allow to down-list the Balkan lynx from Critically Endangered to Vulnerable, which would be a major conservation success for both “the former Yugoslav Republic of Macedonia” and the other range states.

### ➤ **Environmental and social impact of the hydropower projects**

A series of increasingly more detailed studies has been carried out for the Boshkov Most project on behalf of the project promoters; however they do not take into consideration all the elements concerning the impact on the environment and the communities outside the park area. In addition, different NGOs and individual specialists consider the results of the Environmental Assessment insufficient and consider that the real impact, especially on large mammals and bird communities, have been underestimated.

The most important point is the lack of a global and comprehensive social and environmental impact assessment including all the hydropower projects planned in the Park and surrounding areas.

While the increase of renewable energy production in “the former Yugoslav Republic of Macedonia” would be welcomed to reduce the pollution and the CO<sup>2</sup> emissions, the value of intact large natural habitats and ecosystems has to be carefully taken into consideration. Hydropower infrastructures are hardly reversible, and their impacts, namely on the rivers and their tributary streams, will remain permanently. Other arguments to justify the new artificial lakes, like the increase of the atmospheric humidity, do not look very serious. The significant reduction of open running water across the park is probably a much more serious influencing factor. It is mentioned that the re-directing of significant amounts of waters from the Drina to the Vardar would stabilize the flow of the latter; however, there is no mention of the reduction of the flow of the Drina, which is providing water for several existing hydropower plants downstream in Albania.

**Waste water:** according to the Management Plan 2012 - 20121, *"a larger part of the settlements in the Mavrovo-Rostushe Municipality are not connected to any sewerage system. According to a UNDP study (2004) on the municipalities in the Republic of Macedonia, only 9% of the households in the former Municipality of Mavrovi Anovi and 12.5% households of the former Municipality Rostushe live in dwellings that are connected to sewage collection systems. The situation is alarming in most of*

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<sup>3</sup> Ivanov Gj. 2014. Spatially explicit model for habitat suitability and potential distribution of the critically endangered Balkan lynx (*Lynx lynx balcanicus* Bures 1941). MSc Thesis. Institute of Biology, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University, Skopje, Republic of Macedonia. Article in BLRP Newsletter 02/2014

[http://www.catsg.org/balkanlynx/01\\_recovery-programme/1\\_9\\_newsletter/BLRP\\_Newsletter\\_02-2014.pdf](http://www.catsg.org/balkanlynx/01_recovery-programme/1_9_newsletter/BLRP_Newsletter_02-2014.pdf)

*the settlements of the Mavrovo-Rostushe Municipality". The strong reduction of water flow in many streams in the Park will certainly not improve the situation.*

*In addition, "in the area around the reservoir Mavrovsko Ezero Lake, besides the settlements of resident citizens, there are 1,106 weekend houses and 18 hotels with 2,000 beds. The wastewater collection, conveyance and disposal from the settlements and the weekend houses are unorganized, through several separate sewage collection systems. The collected wastewaters are discharging in the local river watersheds or directly in the Lake".*

In the absence of i) a strategic environmental assessment of the national renewable energy production policy and ii) a global social and environmental impact assessment study regarding the globality of the hydropower infrastructures in and around the Mavrovo National Park, the precautionary principle should be applied and the projects as they are presented should not be permitted nor financed by international financial institutions.

### ➤ **Species and habitats conservation**

According to the law, the main objective of the declaration of the Mavrovo NP is the conservation of the biological diversity, namely the species and habitat of particular importance

#### - **Article 2**

*(1) In order to protect the biological diversity within natural habitats and landscape diversity, which are of particular importance for nature conservation, as well as goods of public interest, Mavrovo shall be proclaimed protected area under the category of National Park.*

In the park a significant number of high values for conservation species and habitats can be found (see introduction and specific studies in annexes). The objectives of the park, as stated in the law, are:

#### - **Article 19**

*(1) Public Institution NP Mavrovo shall be obliged to implement protection of nature, biological diversity, landscape diversity and natural heritage through:*

- *protection and conservation of the natural habitats of national and international significance for scientific, educational, tourist and recreational purposes;*
- *protection and conservation of biological diversity;*
- *protection and conservation of landscape diversity;*
- *protection and conservation of specific geomorphological forms;*

....

The importance of Mavrovo National Park as candidate for the Emerald Network has been underlined in the chapter **Mavrovo National Park as a candidate Emerald site (Area of Special Conservation Interest)**. There are 8 habitat types of Resolution No. 4 (1996) of the Standing Committee of the Bern Convention (1996) and 49 species listed in Resolution No. 6 (1998) of the Standing Committee of the Bern Convention present on this site. The list of other important species of fauna and flora contains 69 species. It is "exceptionally rich in flora and vegetation diversity", and the "classical finds (*locus typicus*) of high number of species are situated".

### ➤ **The Balkan lynx**

The Lynx is of special significance for the conservation of the Mavrovo National Park. A separate report by András Demeter present in detail the status of this species in the Balkans and the high importance of an adequate management of the Mavrovo National Park (see document T-PVS/Files(2015) 41). The most significant sections and key conclusions are included in the present report.

According to the latest comprehensive review of the statuses of large carnivore species in Europe, the Balkan lynx is the smallest and most threatened native Eurasian lynx population (Kaczensky et al. (2012)<sup>4,5</sup> Chapron et al. 2014<sup>6</sup>, IUCN Red List 2015<sup>7</sup>. The newest global Red List assessment of 2015 for the Eurasian lynx states: “The European population with the greatest conservation concern is the Critically Endangered Balkan Lynx subpopulation”.

The present total size of the population is estimated to be only about 27-54 independent (adult plus subadult) individuals, corresponding to about 20–39 mature individuals (maximum number, probably an optimistic estimate based on the lynx density in the core area of the population (Mavrovo NP). It is divided into two distinct distribution nuclei: a) in northern Albania and the bordering areas in Montenegro and Kosovo and b) and the western, north-western part of “the former Yugoslav Republic of Macedonia”.

It has been shown to be morphologically and genetically very distinct from the other Eurasian lynx populations in Europe; irrespective of its status in nomenclatural terms, it is a distinct phylogenetic lineage of the Eurasian lynx (Breitenmoser, 2011) and should be regarded a conservation unit, and as such it requires special attention. Data from different studies clearly indicate that “the former Yugoslav Republic of Macedonia” bears a special responsibility for the survival of the Balkan lynx, as it hosts the last reproducing nucleus.

### ➤ **Legal protection**

In “the former Yugoslav Republic of Macedonia”, the species *Lynx lynx* is a strictly protected by the Law on Hunting (Official Gazette of RM 26/09) and the List of Strictly Protected Species (Official Gazette of RM 139/11) according to the Law on Nature Protection (Official Gazette of RM 67/04).

The species *Lynx lynx* is listed in Appendix III of the Bern Convention on the Conservation of European Wildlife and Natural Habitats, which requires, under Article 7.1, that "Each Contracting Party shall take appropriate and necessary legislative and administrative measures to ensure the protection of the wild fauna species specified in Appendix III"<sup>8</sup>.

In light of “the former Yugoslav Republic of Macedonia” status as a candidate country to the EU, the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora<sup>9</sup>) is also relevant. *Lynx lynx* is listed in Annex II, requiring designating the most appropriate sites hosting this species as Special Areas of Conservation under Article 2.1 of the directive. In addition, it is also listed in Annex IV, for which species a system of strict species protection under Article 12 is required.

A recovery strategy and two (“the former Yugoslav Republic of Macedonia” and Albania) National Action Plans for the Balkan lynx (Conservation Strategy and National Actions Plans for the conservation of the critically endangered Balkan Lynx (T-PVS/Inf (2011)33 and T-PVS/Inf (2011)34)<sup>10</sup> have been presented to the Bern Convention as results of several planning workshops. The 31<sup>st</sup> meeting of the Standing Committee to the Bern Convention in 2011 took note of the results of the strategic planning workshops and encouraged both states to implement them without delay, as well as to collaborate as appropriate to achieve the successful recovery of the lynx populations in the region<sup>11</sup>. However, follow-up actions by the relevant national ministries are still pending.

### ➤ **The significance of Mavrovo National Park for the Balkan Lynx**

According to recent scientific information, the Mavrovo National Park and its immediate surroundings is the only area in the entire distribution range of the Balkan lynx where reproduction has

<sup>4</sup> [http://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/task\\_1\\_part1\\_statusoflcineurope.pdf](http://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/task_1_part1_statusoflcineurope.pdf)

<sup>5</sup> [http://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/task\\_1\\_part2\\_species\\_country\\_reports.pdf](http://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/task_1_part2_species_country_reports.pdf)

<sup>6</sup> Chapron et al. 2014. Recovery of large carnivores in Europe’s modern human-dominated landscapes. *Science* 346, 1517-1519.

<sup>7</sup> <http://www.iucnredlist.org/details/12519/0>

<sup>8</sup> <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=0900001680078af6>

<sup>9</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

<sup>10</sup> <https://wcd.coe.int/comintranet.InstraServlet?command=comintranet.CmdBlobGet&IntranetImage=1979317&SecMode=1&DocId=1826416&Usage=2>

<sup>11</sup> <https://wcd.coe.int/comintranet.InstraServlet?command=comintranet.CmdBlobGet&IntranetImage=2263468&SecMode=1&DocId=1865310&Usage=2>

been documented by camera-trapping young individuals since the Balkan Lynx Recovery Programme has started<sup>12</sup>. It is hence the last remaining functional population nucleus. All lynx discovered in other areas within “the former Yugoslav Republic of Macedonia” or in the neighbouring countries are likely to be dispersing individuals from this core area.

As regards to the two planned hydropower project in Mavrovo National Park, Lukovo Pole possibly poses less threat for the lynx. During the site visit, the representatives of the NGO informed us that lynx cross the open alpine habitats around the site only occasionally. Therefore the impact of this planned project on the lynxes may be considered limited, unless the construction works and the extraction and transport of materials of the dam and the haulage of equipment from lower down the Radika river would cause significant disturbance. However, the information on these aspects provided for the visit was limited, so at this stage no conclusion can be drawn.

In contrast, the Boskov Most HPP site is situated in prime lynx habitat and known to be used by several lynxes as three males have been monitored by GPS tracking and young lynxes have also been camera-trapped in the area. The planned hydro power plant developments at the Boskov Most site of the Park has been considered by experts in some of the documents not have a large-scale long-term impact on the lynxes, since they are known to have very large ranges. However, the change of the landscape with the possibly increased human presence and the greater use of the area around the planned reservoir on the river Mala Reka may cause the lynx to avoid the valley, which they have been documented by GPS-tracking to visit and cross during their movements. This is the core area of the population and important for reproduction.

The short-term impacts, however, might be very significant given the volume and intensity of the planned construction works which might affect a much larger area, and which could lead to long-term impacts (loss of habitat around the dam and the reservoir). The short-term disturbance from the civil engineering works, although temporary (a number of years), may have a decisive negative impact on the lynx.

### **Conclusions about the impact of the planned Boskov Most HPP projects on the Balkan lynx**

Although the planned construction site would cover only a very small part of the National Park, the current analyses have not documented in a convincing manner that the associated massive construction works of not only the dam itself but the construction or upgrading of roads and the construction of 6 intakes, even if temporary (several years) would not pose a high level of risk of major disturbance to and displacement of both to the prey species of the lynx and the lynx individuals themselves. Statements made during the meetings also gave indications that the surrounding area of the reservoir would be opened for developments and these aspects have not been properly addressed in the assessments.

#### **➤ The environmental impact assessment and the EU Water Framework Directive**

Although the Birds and the Habitats Directives are the main implementing instruments of the Bern Convention in the EU, in none of the documents we found reference to the EU Water Framework Directive (WFD) (Directive 2000/60/EC of the Parliament and the Council). Unless it exists in documents in the national language, this seems unexpected in light of the alignment process of the “former Yugoslav Republic of Macedonia” to the EU “*acquis communautaire*”, and its relevance for the changes to the water regimes of the rivers and their tributaries the planned projects would bring.

The main purpose of this directive is to prevent any further deterioration of waters and to protect aquatic ecosystems and those ecosystems connected with aquatic ecosystems. The WFD recognizes the importance of certain protected areas and makes special reference to Natura 2000 sites (the EU equivalent of Emerald sites). Given the magnitude of changes to the biological characteristics of the watercourse expected to be impacted by the project, and by the fact that water would be transferred from one river basin to another one, it is necessary to supplement the environmental assessments with proper considerations of the requirements of this relevant EU legislation.

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<sup>12</sup> <https://www.facebook.com/balkanlynx>

➤ **Local acceptance of the projects**

There is a considerable difference of acceptance of the hydropower construction project among the different municipalities. While those located in the park, and which have been involved in the process and will be compensated, accept the project and see positive effects, those located downstream and outside the park complain about the uptake of their water and the lack of possibility to participate to the project planning. The municipality of Debar has already suffered from the first pack of projects and the mayor is complaining about the drastic decrease of available water to farmers for irrigation in its territory. Local people from villages located on the south-eastern border of the park foresee negatively the uptake of their water which will be brought into the Boskov Most reservoir.

➤ **Pastoralism and tourist infrastructure development**

Tourism and agricultural activities are allowed in the park and even should be promoted to a certain extent in designated areas, providing that they are conducted in a fully sustainable way. However, the construction of many kilometres of new roads and upgrading long stretches of rough tracks across the park, needed for the hydropower plant constructions and maintenance, might lead to severe changes in agriculture and tourism practices.

➤ **Mountain pasture**

The law encourages the sustainable use of the pastures and forests. Centuries of pasture grazing have contributed to the building of a highly valuable cultural landscape and to the development of the biodiversity, especially at and above tree line. The construction of the Lukovo Pole Lake and the associated uptake of rivers and stream would have a significant impact on a well maintained high mountain cultural landscape, with a valley bottom offering space for a naturally meandering high value alpine river.

It appears that the grazing has severely decreased during the last decades, with potential long-term impact on the biodiversity. The law has provision for maintaining the components of the landscape diversity:

- **Article 19**

*(1)Public Institution NP Mavrovo shall be obliged to implement protection of nature, biological diversity, landscape diversity and natural heritage through:*

....

- *sustainable use of natural resources for the benefit of current and future development without damaging the parts of nature and with the least possible disturbance of the natural balance;*
- *creating conditions and measures to protect the National Park to conserve and sustainably manage components of biological and landscape diversity;*

....

The Management Plan considers that the high-mountain pastures have always been used for grazing and can be defined as cultural landscapes; they are part of the "Rural Landscapes" identified for the Park.

*"Significant traditional cultural landscapes represent areas where the interaction of people and nature over time has produced an area of distinct character with significant ecological, biological, cultural and scenic value: and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.*

*The Landscape and Cultural Heritage Conservation Programme is directly related to the third management goal: To protect and promote landscape diversity and cultural heritage of the Park, including traditional landscape that has been developed by interaction of local people and nature over centuries."*

## ➤ Tourism

Mavrovo has great potential for the development of soft tourism. There is a network of dirt roads and trails allowing discovering large areas of close-to-nature ecosystems and beautiful cultural landscapes. However, the upper part of the park, with wild high mountains and very interesting subalpine and alpine ecosystems, is currently of limited access being a border area under relatively strict control. The rest of the park is accessible, but an integrated tourist development plan does not seem to exist. Different initiatives, without apparent planned coordination, were mentioned during the visit. One of the concerns is the major road system development which will be required by the hydropower projects. It is well known that once a road exist, it is very difficult to impose restrictions on its use.

During the discussion with local municipalities, it was mentioned by local representatives that the artificial lake to be created for the Boskov Most project would facilitate the development of tourist infrastructures around it, as it would be re-zoned as a built-up area. This was not mentioned in any of the technical studies and in the EIA. It was also never mentioned during the discussion at the Ministry of Environment and Physical Planning or in the field with ELEM representatives. Such a tourist development would add another unacceptable pressure in a very sensitive area, namely for the Balkan Lynx population.

## CONCLUSIONS

Article 2 of the Mavrovo National Park proclamation Law clearly presents the following objective:

### - Article 2

- (1) In order to protect the biological diversity within natural habitats and landscape diversity, which are of particular importance for nature conservation, as well as goods of public interest, Mavrovo shall be proclaimed protected area under the category of National Park.*
- (2) By the proclamation of Mavrovo protected area in the category of national parks, it shall acquire the status of national heritage.*

Obviously, there is an important contradiction between the general intention regarding the protection of the Mavrovo NP as expressed in the Law and some provisions in the management regime and their application. Several activities allowed in the "sustainable development zone" are not sustainable and therefore in contradiction to the overall intention. Moreover the surfaces occupied by this zone (> 50 % of the Park territory) is not compatible with the IUCN guidelines for a protected areas Category II area („the 75 % Rule“).

Though a global impact assessment of all the HPP has not been done, it appears already quite clearly that the extension and the expected impacts of the HPP in the park would affect several species and habitat identified of European significance; thus these construction projects would be in contradiction with the general objective as stated in art. 2. Such constructions would also be in contradiction with the international commitments of “the former Yugoslav Republic of Macedonia”, namely regarding the Bern convention and as a candidate country to the EU, alignment with the Birds and the Habitats Directives as well as the Water Framework Directive.

For these reasons, **the general conclusion from the mission is** that the proposed hydropower construction planned in the Park is not compatible with the status of protection of the Park, its high value ecosystems and species; the projects, as currently planned, should be abandoned.



## **RECOMMENDATIONS TO THE GOVERNMENT OF “THE FORMER YUGOSLAV REPUBLIC OF MACEDONIA”**

- Before any HPP construction project, make an integrated strategic social and environmental impact assessment study, taking into account all the planned activities and integrating the potentially impacted local communities outside the Park and the global long distance effects, namely on the water regimes of the Drina and Vardar rivers; supplement this study with the provisions of the EU Water Framework Directive;
- Carefully weigh the level of impacts against the benefits provided by a well-preserved large protected area with a recognised European significance. Evaluate the global consequences of the loss of an IUCN category II status for Mavrovo National Park which would derive from the impacts of the hydropower plants implemented in the Park, as well as the consequences in regard to the implementation of the Emerald Network of the Bern Convention and subsequently on the Natura 2000 network in prospect of EU accession of “the former Yugoslav Republic of Macedonia”;
- Apply the precautionary principle and suspend all construction projects within the Park as long as the overall impact has not been fully assessed;
- Re-evaluate the management plan, especially regarding zoning and protection regimes of the Park, in order to make the Management Plan compatible with an IUCN category II protected area;
- Ensure long-term financing for the basic operations of the National Park administration from the state budget, as foreseen in the law:

### *Article 26*

*(1) Means of financing NP Mavrovo shall be provided by:*

- *The Budget of the Republic of Macedonia*
- *Own revenues.*
- Make provision for a long-term contribution to the biological monitoring of the Park (minimum 2 full-time permanent positions) from the income generated by any development project;
- Identify those species of fauna and flora for the conservation of which the Mavrovo National Park bears special responsibility and specify measures in the management plan of the national park to be taken for their conservation. Use Recommendations No. 162 (2012) on the conservation of large carnivore populations in Europe requesting special conservation action and No. 157 (2011) on the status of candidate Emerald sites, for fulfilling this task;
- Provide incentives for pastoralism in the upper parts of the Park, in order to maintain biodiversity and to provide source of income to the local populations;
- Prepare an integrated tourism and recreation management plan fully in line with the conservation principle of an IUCN category II protected area.

## **RECOMMENDATION TO THE EBRD AND OTHER RELEVANT FINANCIAL INSTITUTIONS**

- Apply the precautionary principle and suspend the financing of the project accordingly.

**ANNEX 1: COMPOSITION OF THE BERN CONVENTION DELEGATION**

1. Mr Pierre Galland (Switzerland), Independent expert to the mission
2. Mr András Demeter (Bruxelles), expert, European Commission (observer)
3. Mr Robert Brunner (Austria), expert, WCPA, IUCN (observer)
4. Mr Aleksandar Dutsov (Bulgaria), expert, IUCN (observer)
5. Ms Iva Obretonova (Strasbourg), Programme Officer, Secretariat of the Bern Convention

## **ANNEX 2: PROGRAMME OF THE ON-THE-SPOT APPRAISAL VISIT**

**TUESDAY, 23 JUNE 2015**

**1. Arrival in Skopje and informal meeting of the mission delegation**

**WEDNESDAY 24 JUNE 2015**

**2. Meeting with officials at the Ministry of Environment and Physical Planning and representatives of the National Committees (Offices of the Ministry of Environment and Physical Planning)**

- Mr Nurhan Izairy, Minister of Environment and Physical Planning
- Mr Vlatko Trpeski, Head of Department of Nature, EA/MoEPP
- Mr Stevo Temelkovski, Deputy Minister of Environment and Physical Planning
- Mr Igor Trajkovski, Director of Environmental Administration
- Mr Vlado Matevski, President of Macedonian Committee for CBD
- Mr Svetozar Petkovski, Deputy President of MCBDD
- Mr Branko Micevski, President of Macedonian Committee for RCW and CMS
- Mr Aleksandar Nastov, Deputy President of MRC and MBC
- Mr Pejo Kirovski, Secretary General of MRC

**3. Meeting with representatives of ELEM and EBRD (ELEM Offices)**

**4. Meeting with representatives from the NGO sector (Macedonian Ecological Society HQ)**

- Mr Metodija Veleviski, Secretary general, Macedonian Ecological Society
- Ms Daniela Jovanovska, Biologist, Macedonian Ecological Society
- Mr Dime Melovski, Lynx expert, Balkan Lynx Recovery Programme, Macedonian Ecological Society and IUCN Cat Specialist Group member
- Ms Aleksandra Bujaroska, Environmental lawyer, NGO Front 21/42
- Ms Vesna Ilievsk-Utevska, Project coordinator, NGO Eko-svest

**5. Meeting with representatives of the Mavrovo National Park authorities (Mavrovo National Park HQ)**

- Mr Oner Jakupovski, Director of the Public Institution for management of Mavrovo National Park

**THURSDAY 25 JUNE 2015**

**6. Visit of the Park area and areas concerned by the HPP projects (visit of both Lukovo Pole locality and Boshkov Most locality, as well as the small HPP Tresonechka Reka)**

**7. Meeting with local authorities and stakeholders from the Municipalities of Mavrovo-Rostushe and Debar**

**9. Closing of the mission and dinner in Debar (Debarsko Lake)**