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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

36th meeting
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File open

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

- REPORT BY THE COMPLAINANT -

Document prepared by
Eko-Svest, "the former Yugoslav Republic of Macedonia"

- October 2016 –

Skopje, October 20, 2016
To the Bern Convention Secretariat

File open

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

Letter by the Complainant

Article 118 of the Constitution of Republic of Macedonia defines that "International agreements ratified in accordance with the Constitution, such as Bern Convention, are part of the internal legal system and cannot be changed by domestic law" meaning that signatory parties have a general duty to align national legislation to the requirements of the international treaty in order to accommodate its implementation. Based on the aforesaid, the ratified agreements are considered as integral part of the legal order in the country, thus having legal power of a law and cannot be changed by law.

The case of "Hydro power development within the territory of Mavrovo National Park" is an example where both implementation of national and international law need to go hand in hand if nature protection is to be achieved.

Having said this, the Complainant would like to raise several points in relation to the compliance with the Recommendation adopted at the 35th meeting of the Standing Committee of the Bern Convention:

1. To date, no Strategic Environmental Assessment has been commenced, as prescribed in the Recommendation text.

The Recommendation No. 184 (2015) required that a Strategic Environmental Assessment focused on cumulative impacts of all developments planned in the territory of the Mavrovo national park, social impacts as well as regional long- term effect of water regime modification of Drin and Vardar River be prepared. In the frame of the assessment, address the specific conservation needs of those species of fauna and flora for the conservation of which the Mavrovo National Park bears special responsibility, including the species and habitats for which this site was nominated as candidate Emerald site; and take into account the results of the analysis recommended when adopting the Management plan for the area.

Until the submission of this letter, the Complainant and other NGOs included in the monitoring of this case have not been invited to discuss the SEA preparation, neither have received information about the process envisioned. On the contrary, on several occasions we have learned that the Government considers the preparation of such a SEA as "obsolete".

We would therefore like to clarify that a Strategic Environmental Assessment for the Mavrovo National Park Management Plan **can NOT be equivalent** to a Strategic Environmental Assessment that covers cumulative impacts, social impacts and regional effects of water regime modifications from the planned hydro projects (as described above). The focus of the Mavrovo National Park Management Plan is protection and preservation of the natural values of the park, whereas the Strategy/plan/decision to construct a series of hydro power plants in Mavrovo is to produce electricity. SEA studies prepared for these two different plans would have a completely different approach, scope and result.

In the light of the above stated we would also like to remind about the legal conflict and collision of the planned hydropower projects and management goals according to Article 74 from the Law on nature protection:

"*Manner of National Park Management*

The National Park shall be managed on its whole territory in an integrated manner that shall provide the following:

1. Protection of the natural areas of national and international importance for cultural, scientific, educational, tourist and recreational purposes;

2. Stability of the environmental processes and diversity through sustainable conservation of the representative physical and geographical regions, biocenosis, genetic resources and species in an authentic state;

3. Creation of conditions for tourism development in accordance with the principle of sustainable development;

4. Achievement of cultural, scientific, educational and recreational objectives, which at the same time maintains the natural state of the area."

Therefore, in our view, a SEA requested by the Recommendation is still to be prepared, in an inclusive and transparent way.

2. The suspension of the Governmental projects in the national park does not stop the damage done

As stated in our previous letters dated 15.02.2016 and 12.05.2016 ongoing construction of several small hydro power plants is seriously damaging the Park's integrity. Although the Government has not issued call for new hydropower project concessions within park's territory as of December 2015, the existing concessions have not been suspended and at the moment 2 hydropower projects are in construction phase and 4 hydropower projects are in pipeline expected to be constructed in 2017.

Based on the Bern Convention recommendation and the updated list of planned projects, on 23rd February 2016 we submitted request for suspension on all small (concessioned and planed) HPPs in Mavrovo NP to the Ministry of Environment and to the State Environmental Inspectorate (32. Request for suspension Small HPPs). On 30th March 2016 we received a response from the Ministry of Environment, Water Department, explaining that in further calls for concessions the Ministry of Environment will take into account the recommendations from the Bern Convention and will not publish a call for concessions on Mavrovo NP territory. However, the small HPPs that are already concessioned are not governmental projects and will not be suspended (33. Response request for suspension of small HPPs 2016).

We would therefore propose to extend the text of the Recommendation with the following wording:

Suspend the implementation of all government and private projects, in particular the hydropower plants foreseen and related infrastructure, within the territory of the Mavrovo National Park, until a Strategic Environmental Assessment will be completed taking into account the following point of the Recommendation, putting specific emphasis on cumulative effects of all planned development activities on the territory of the Park, also taking into account social aspect; the assessment needs to consider the regional long-term effects, on the water regimes of the Drin and Vardar rivers;

3. The Balkan Lynx recovery programme currently existing in Macedonia is being impeded, while at the same time the Government develops a new programme.

Appendix A. Summary on the Status of Lynx Population in the National Park Mavrovo of the Report by the Government, submitted to the Bern Convention Secretariat on August 19th, 2016 raises notations towards the implementation of the Balkan Lynx Recovery Programme (BLRP) and the relations with the Mavrovo National Park management authorities. We would therefore like to shortly present a list of

document, activities and permits that we believe show a different picture for the Programme than the one presented in the Government's response.

On multiple occasions, via direct meeting, in hard copy or electronically, and also for the purposes of the re-valorization study for Mavrovo National Park, the following reports and other important documents produced in the framework of BLRP have been provided by Macedonian Ecological Society (MES) to the National Park Management Authority:

1. Report "Balkan lynx workshop", "Srna Hotel", Mavrovo, 22.04.2005 – first workshop before the official start of the project.
2. Report on the first field research in Mavrovo – 20-25.03.2006.
3. Report of field survey on Bistra Mt., Mavrovo NP, 19-20.01.2007.
4. Summary of the Baseline survey report – questionnaires in western Macedonia.
5. Report from the Monitoring Network Workshop Mavrovo, 18.02.2008.
6. Reports on the camera-trap studies in Mavrovo for 2008, 2010, 2012 and 2015.
7. Radio-telemetry annual reports for 2010 and 2011.
8. Final report on the first phase of the Balkan Lynx Recovery Programme.
9. Regional Balkan lynx Conservation Strategy.
10. National Balkan lynx Action Plan.
11. Decisions and adopted texts of Bern Convention Standing Committee 2011.
12. Budget for the SCOPES project (2010-2012) – a scientific project implemented by MES and supervised by KORA from Switzerland. Data from this project are included in the camera trap and telemetry reports.
13. Future plans for the third phase of the project.
14. Conservation Action Plan (CAP) for the protection of the Balkan lynx only in Mavrovo NP – September-December 2013.
    a. First report from the initial workshop on 16-17.09.2013;
    b. Second report with preliminary action plan 04-05.11.2013;
    c. Third and final report from the workshop and final draft of the CAP – 16-18.12.2013.
15. Agreement for Cooperation on the basis of the CAP signed by MES and Mavrovo National Park signed on 17.04.2015.

During the implementation of the two project phases, besides regular presence of National Park's staff on the field, on multiple occasions training activities (workshops) were held:

1. Regional Balkan lynx workshop – regional gathering of relevant stakeholders from Macedonia and Albania before the official start of the project, took place in "Makpetrol Hotel", Mavrovo on 15.11.2005.
2. Training workshop for the Balkan lynx monitoring methods organized in the administrative building of the park on 18.02.2008 (report, see above).
3. Workshop with the Balkan lynx monitoring network with representatives from Mavrovo National Park, on 18.01.2011.
4. Three Conservation Action Plan workshops together with the representatives from the park – September-December 2013.

5. Workshop on camera-trapping method. Full methodology including design of the survey, selecting sites, setting cameras, collecting data and analyzing results. The examples were taken from the previous camera-trapping sessions from Mavrovo. The workshop took place in the administrative building of the Park on 26.03.2015.
6. Workshop on basic GIS work. Creating maps, downloading GPS data and projecting vectors and raster. Introduction to the ORUXMAPS application for smart phones and tablets. Practical examples and outdoor trainings. The workshop took place in the info center of the Park on 20.04.2015.
7. Repetition of the GIS training on 14.05.2015.
8. Workshop on project application and writing projects. The workshop took place in the info center of the Park on 21.05.2015.
9. Repetition of the camera-trapping workshop with data from the 2015 session. The workshop took place in the administrative building of the Park on 03.06.2015.

For the entire work of the BLRP team, official permissions for work on the research and monitoring of the Balkan lynx were provided by the Ministry of Environment and Physical Planning

1. Permission issued on 19.02.2010 – First permission given by the Ministry to Macedonian Ecological Society. This permission exclusively says that the work is allowed in every national park in the country with special emphasize on Mavrovo National Park.

   Duration: 2 years and 10 months – 19.02.2010 to 31.12.2012. Permission number: 11-2186/2.
2. Permission issued on 29.01.2013 – Continuation of the previous permission given by the Ministry to Macedonian Ecological Society. The permission is granting access to all national parks of the country.

   Duration: 3 years – 24.01.2013 to 24.01.2016. Permission number: 11-546/2.
3. Permission issued on 17.05.2016 – This permission was not delivered on time despite the fact that the MES applied for it 26 days prior to the expiry of the previous one. The permission request had to be supplemented with additional information upon demand by the Ministry of Environment and Physical Planning, which was done on 19.02.2016. The request was to state each location and each researcher in the following years. Permit includes all of the localities for which access was required, except those in the Mavrovo National Park. It is exclusively stated that the MES is granted access to all national parks except Mavrovo.

   Duration: 3 years – 15.04.2016 to 01.04. 2019. Permission number 11-1006/10.

The BLRP team/MES was banned from any research in the park by the park authorities in 2012, 2014 and 2016. From 2012 to 2016 Mavrovo NP did not allow the radio-telemetry research, although an official valid permit issued by the Ministry including this activity existed.

Sincerely,

Ana Colovic Lesoska
Eko-svest

- July 2016 –

Summary

Mavrovo National Park is one of the oldest national parks in Europe, established in 1949. In terms of biodiversity, it is one of the richest regions in Macedonia. It is home to about 50 mammal species, including wolf, brown bear, fox, wild cat and lynx; 129 bird species, 11 species of amphibians, 24 species of reptiles and 924 species of invertebrates, as well as 1435 plant species. Of these, 82 are listed in Appendix II of the Bern Convention, 65 species are listed in the Annex I & II of the Habitat Directive and 19 species are under Bird Directive. It is one of the last reproductive areas of the Balkan Lynx *Lynx lynx balcanicus*, subspecies of the Eurasian Lynx classified as Critically Endangered by IUCN. For a reason, the National Park Mavrovo has been identified as an: important bird area, important plant area and prime butterfly area. It is part of the Macedonian Ecological Network and a candidate Emerald site.

Neglecting the effects of the functioning hydro system "Mavrovo" on the naturalness of the Park, the government of Republic of Macedonia has initiated implementation of projects for construction of two large hydropower plants - "Lukovo Pole and "Boshkov Most". There are also approvals, and plans to grant concessions to private investors for additional 17 small hydro power plants. Almost all of these locations are in remote, inaccessible areas of high natural values.

Two SHPP that are already built are Tresonechka Reka and Galichka Reka 3. Two more SHPP are under construction: Kakachka Reka and Belichica. An access road for the planned SHPP Galichka 2 is under construction. Further known planned locations are those on Rosochki Potok and Galichka Reka 2 and 3. Presently, no information is available for the remaining five locations, but rivers under question are Jamska Reka, Petilepska Reka, Leunska Reka, Krakornichka Reka and Osojski Potok. Permits based only on superficial studies on their effect on the nature are issued for three locations: Tairovska Reka, Jadovska Reka and Ribnichka Reka.

The governmental plans to use almost all rivers in the National Park for energy production had faced the country with the Standing Committee of the Bern Convention on the Conservation of European Wildlife and Natural Habitats. In December 2015, this Standing Committee adopted a Recommendation, calling for re-evaluation of the plans, and protection of the National Park, a candidate Emerald site in Macedonia. Three years earlier, in 2012, the International Union for Conservation of Nature (IUCN) also adopted a resolution for conservation of Mavrovo National Park. The first success against this hydro-boom was achieved in December 2015 - the World Bank dropped the project "Lukovo Pole" from their agenda, while the European Bank for Reconstruction and Development has frozen the funds for "Boshkov Most" until the cumulative effects of all projects on the Park are properly assessed.

The SHPPs' construction, however, continues. Read more details in the document attached.

WILL MACEDONIA DAM ONE OF THE OLDEST NATIONAL PARKS IN EUROPE?

Background information on Mavrovo National Park

Mavrovo National Park is one of the oldest national parks in Europe, established in 1949 due to s "exceptional natural beauty, historical and scientific importance of forests and forest areas surrounding Mavrovsko Pole. The Mavrovsko Pole field was flooded few years later for the purpose of the existing hydro energy system "Mavrovo". In 1952, the territory of National Park Mavrovo increased for more than six times to approximately 73,088 ha. In 2011, the change of the national state border with Kosovo contributed towards extension of the National Park "Mavrovo" by 212.7 ha.

In terms of biodiversity, the National Park Mavrovo is one of the richest in Macedonia. It is home to about 50 mammal species, including wolf, brown bear, fox, wild cat and lynx; 129 bird species, 11 species of amphibians (out of total 15 species found in Macedonia), 24 species of reptiles (out of total

32 species found in 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, 65 species are listed in the Annex I & II of the Habitat Directive and 19 species are under Bird Directive. It is one of the last reproductive areas of the Balkan Lynx *Lynx lynx balcanicus*, subspecies of the Eurasian Lynx classified as Critically Endangered by IUCN, of which only 20-39 adult individuals are believed to remain in total. This indicates the great importance that National Park Mavrovo has in terms of biodiversity conservation. Hence sustaining the quality of the habitats that sustain and host each of the important species is of even greater importance. For a reason, the National Park Mavrovo has been identified as an: Important bird area; Important plant area; Prime butterfly area; it is part of the Macedonian Ecological Network and a candidate Emerald site (site predefined to be a Natura 2000 upon Macedonia admission to European Union). A law of re-proclamation has been prepared in 2014, defining a new zoning of the National park, within three zones (1. zone of strict protection, without any human activity except research; 2. zone of active management, that is a zone of high interest for conservation, where activities for restoration, revitalization and rehabilitation of habitats and ecosystems are foretaken and 3. zone of sustainable development, where traditional activities and development are allowed). This law is still not adopted by the Macedonian Parliament.

Hydropower development in the National Park

Regretfully, many years of inappropriate conservation measures have adversely affected the diversity of National Park Mavrovo. The existing hydropower plant system "Mavrovo" that affects about 946.1 km^2 added additional pressure. Not once a proper implementation of Article 56 of the National Law on Nature Protection, regarding the biological minimum discharge of watercourses, has been noted (Figure 1 & 2). The negative consequences of the disregard of the biological minimum discharge have been scientifically validated and the negative effects are particularly noticeable in the spruce-fir forests

(Ass. Abieti-Piceetum scardicum Em, (1958) 1985) along the river Adzhina Reka. This forest is defined as a zone of strict protection within the Park. In general, the current hydropower system significantly affects the structural and functional characteristics of the riparian communities that are directly dependent on the river flow.

Figure 1. The biological minimum discharge downstream of constructed HPPs is not met at river Adzhina Reka

Overlooking the effects of the functioning hydro system "Mavrovo" on the naturalness of the Park, the government of Republic of Macedonia has initiated implementation of projects for construction of two large hydropower plants (LHPP) - "Lukovo Pole", which is to complement the existing hydro system "Mavrovo", and "Boshkov Most". Both projects depend on funds from international financial institutions and undermine the very idea of a National Park.

Figure 2. River Crn Kamen is also dry in the summer period, as all the water is taken for the existing Mavrovo hydropower system.

SMALL HYDROPOWER PLANTS IN MAVROVO NATIONAL PARK

The government of the Republic of Macedonia has approved, or is planning to grant concessions to private investors for 17 small hydro power plants (SHPPs, with installed capacity of up to 15 MW) in National Park Mavrovo. Some of the locations are in remote, inaccessible areas of high natural values. For five of them, the exact locations are still unknown. What they all have in common is intake of pristine mountain rivers (Table 1).

Two SHPP are already built: Tresonechka Reka and Galichka Reka 3. Two more SHPP are under construction: Kakachka Reka and Belichica. An access road for the planned SHPP Galichka 2 is under construction.

Permits based only on superficial studies on their effect on the nature are issued for further three locations: Tairovska Reka, Jadovska Reka and Ribnichka Reka. Some of the plans foresee more than one intake point per power plant project. Therefore, two intakes (and power houses) are planned on Tairovska Reka, and three different intake points are planned for Ribnichka Reka.

Table 1. Overview of SHPP projects in Mavrovo National Park

NO.	RIVER	SHPP NAME	KW	INVESTOR	PROJECT STATUS
1.	Belichica	Belichica	74,03	Akva Elektro Mavrovo DOO Skopje (Akvamont-ING and PE Mavrovo)	under construction
2.	Galichka Reka	Galichka Reka 1	1800	PCC Hidro	Listed in the public call for concessions
3.	Galichka Reka	Galichka Reka 2	1800	PCC Hidro	Listed in the public call for concessions
4.	Galichka Reka	Galichka Reka 3	1800	PCC Hidro	Constructed
5.	Jadovska Reka	Jadovska Reka	2565	Rad-KOM Hidroenerdzi Skopje	Approved
6.	Jamska Reka	Jamska Reka	793	406 SHPP 1982	Information only - exact location unknown
7.	Kakachka Reka	Kakachka Reka	112,74	Akva Elektro Mavrovo DOO Skopje (Akvamont-ING and PE Mavrovo)	under construction
8.	Krakornichka Reka	Krakornichka Reka	432	406 SHPP 1982	Information only - exact location unknown
9.	Leunska Reka	Leunska Reka	91	406 SHPP 1982	Information only - exact location unknown
10.	Osojski Potok	Osojski Potok	375	406 SHPP public call from 1982	Information only - exact location unknown
11.	Petilepska Reka	Petilepska Reka	268	406 SHPP 1982	Information only - exact location unknown
12.	Ribnichka Reka	Ribnichka Reka	3640	Aktuel JS	Approved
13.	Rosochki Potok	Rosochki Potok			Listed in the public call for concessions
14.	Trebishki Potok	Trebishki Potok		Municipality of Mavrovo and private investor	Listed in the public call for concessions
15.	Tresonechka Reka	Tresonechka Reka	676	Hydro Energy Group	Constructed

16.	Zhirovnichka (Tairovska) Reka	Zhirovnica 5	683	Hydro Energy Group	Approved
17.	Zhirovnichka (Tairovska) Reka	Zhirovnica 6	683	Hydro Energy Group	Approved

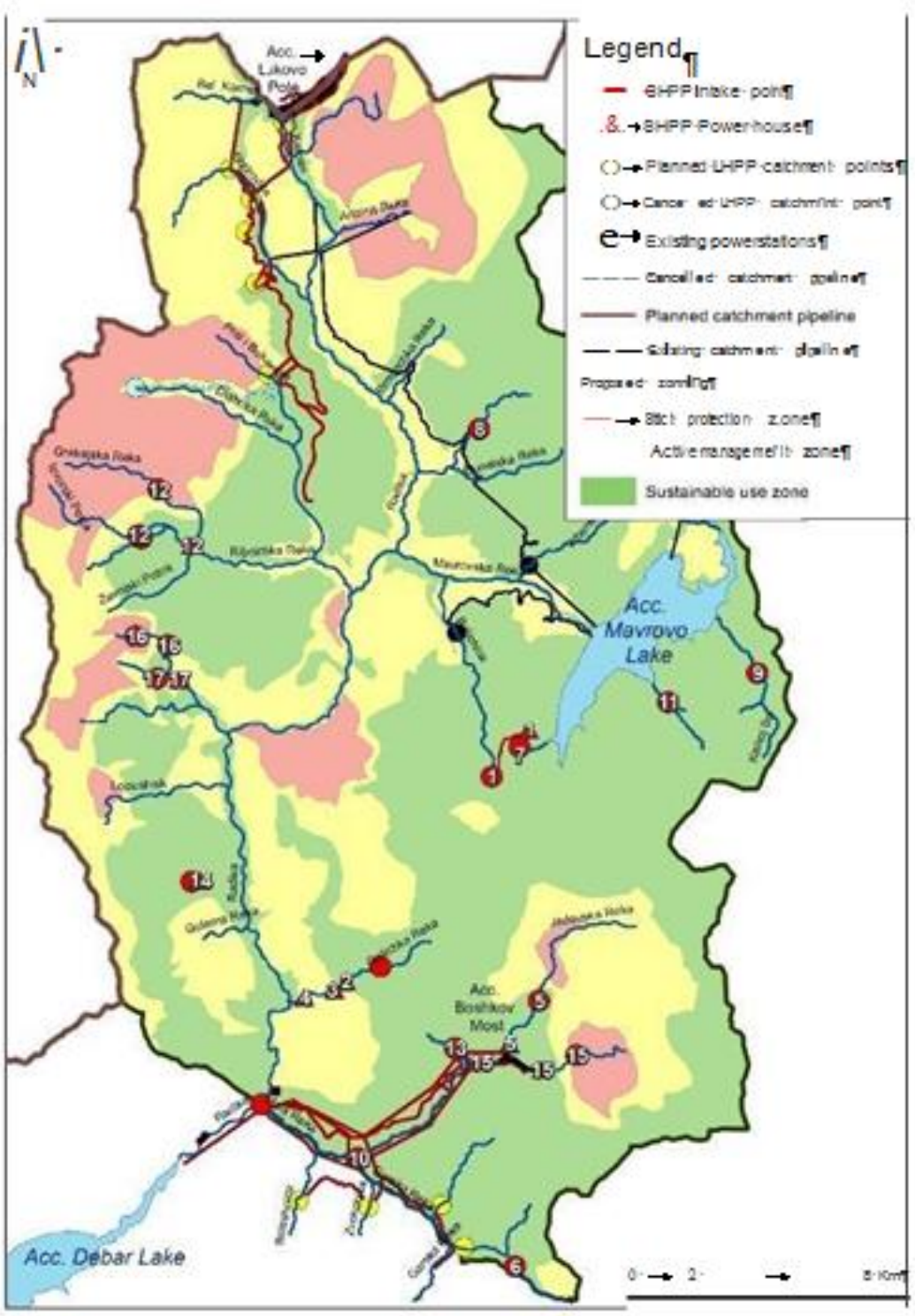

Figure 3. The hydropower boom in Mavrovo National Park (numbers in the map indicate the SHPPs' number(see Table 1).

Further known planned locations are those on Rosochki Potok and Galichka Reka 2 and 3. Presently, no information is available for the remaining five locations, but rivers under question are Jamska Reka, Petilepska Reka, Leunska Reka, Krakornichka Reka and Osojski Potok.

These 17 SHPP come as an addition to the two larger HPP, "Lukovo Pole" and "Boshkov Most", against which the national and international conservation organizations are successfully fighting for over five years.

The governmental plans to use almost all rivers in the National Park for energy production had faced the country with the Standing Committee of the Bern Convention on the Conservation of European Wildlife and Natural Habitats. In December 2015, this Standing Committee adopted a Recommendation, calling for re- evaluation of the plans, and protection of the National Park, a candidate Emerald site in Macedonia. Three years earlier, in 2012, the International Union for Conservation of Nature (IUCN) also adopted a resolution for conservation of Mavrovo National Park.

For the entire period of fight against the dams, the law on re-proclamation of Mavrovo National Park, that is to establish the management regimes, is on hold. The position of the citizens'' associations objecting against the construction of the power-plans, is that the proposed zoning is done in a manner that makes possible the construction for the two large power plants, not reflecting the present actual situation and natural values in the areas.

The first success was achieved in December 2015, right after Bern Convention's recommendation: World Bank dropped the project "Lukovo Pole" from their agenda, while European Bank for Reconstruction and Development has frozen the funds for "Boshkov Most" until the cumulative effects of all projects on the Park are properly assessed.

The SHPPs' construction, however, continues. Private investors behind these projects are ignoring the recommendations from the Bern Convention, as they are not legally binding.

SHPPS INSIDE MAVROVO NP

Four SHPP: Zhirovnicka Reka (two), Ribnichka Reka and Jadovska Reka are currently "in the pipeline", as concessions have been given to investors and environmental studies are approved by the Ministry of Environment and Physical Planning. The studies lack a detailed description of the state of habitats and species and review of their vulnerability. Conversely, the studies offer repeated description of the situation in the Park, not going into the specifics of the areas of interest. It is expected (taking into account the results of the study for the revalorization of the National Park "Mavrovo" and therein proposed zoning) that the potentially affected areas sustain a greater number of endangered, protected and strictly protected wild species of plants, fungi and animals. For example, the studies do not mention the presence of the rare willow tree *Salix elaeagnos* subsp. *elaeagnos*, found in the valley of the river Zhirovnica, which is found only on another site in Macedonia, endemic *Cynoglossum scardicum* in the valley of River Ribnichka, the rare species *Trifolium subterranum* and others. The studies should give a presentation of the fact that these areas host important (and strictly protected) species such as the brown bear, the Balkan lynx, the otter, red deer, Adriatic Salmon, several bird species, and many invertebrates. There are neither descriptions of habitats, nor the state of naturalness, and therefore estimates of forest areas which would be affected by construction of access roads and construction of intakes, pipelines and power houses. With the exception of proposed and projected fish trails (whose effectiveness has not been proven at European level), practically there are no measures to mitigate adverse impacts. Additionally, the few proposed measur es are in collision with each other, e.g.: (for example, there is recommendation to avoiding construction in autumn-winter period, while fish are spawning, as opposed to the recommendation to avoid construction during the breeding of reptiles, birds and mammals, which is, of course, during the spring-summer period).

The studies do not take into account cumulative effects of all HPPs planned inside Mavrovo NP. Considering the potential disturbance in the construction period these hydropower plants will have adverse impacts on a number of wild species (e.g. the Balkan Lynx). Along with other infrastructural plans of Macedonia (e.g. the highway Kichevo - Ohrid) and the already recognized threats to the Balkan Lynx (poaching, prey depletion and loss of habitats) the HPP projects inside Mavrovo NP will have a negative cumulative effect on the lynx population and will eventually cause its extinction. A strictly specialized predator such as the Balkan lynx, with high demands for pristine nature, stands little chance in an ever changing world.

SHPP N° 1 AT BELICHKA REKA („MAVROVO-1 BELICHICA“)

Investor: AKVA ELEKTRO MAVROVO DOO Skopje (pursuant to a contract for a public private partnership for construction and operation of SHPP among Public Enterprise “Mavrovo” and “AKVAMONT-ING” export-import DOO Skopje, dating from 04.08.2011)

Installed capacity: 74.03 kW

Planned annual generation of electricity: 457.059 kWh

Pipelines: YES, no info on exact length

Access roads: YES, no info on exact length

Belichka Reka river is already caught for the needs of the existing hydro-system “Mavrovo” at a lower point. Present plans foresee second intake upstream of the existing one, and transfer of the water to another part of the same catchment. The power house is already built (Fig. 4) and access road is open (Fig. 5), while the intake point will be in mountain beech forest (Fig. 6).

Figure 4. The power house of Belichica SHPP

Figure 5. A road to Belichica SHPP's power house.

Figure 6. View on Belichica river valley. Beach and Fir forest is present on the approximate intake location. The site is currently difficult to access.

SHPPS N° 2-4 AT GALICHKA REKA ("GALICHKA REKA 1", „GALICHKA REKA 2" AND „GALICHKA REKA 3")

Galichka Reka 3 (SHPP n° 4) has already been built (Tab. 2) and it is only one part of the intake system planned to be forced on Galichka Reka.

Table 2. Basic parameters of SHPP "Galichka Reka 3"

Parameter	Parameter value
Average flow	Qsr = 0,333 m3/sec
Installed flow	Qin = 0,610 m3/sec
Elevation grip	929,00 m
Elevation of powerhouse	690,00 m
Supply, PE pipes	800 mm L = 1.170 m
Pipeline	ND 609,6 / 8 mm L = 580 m
Installed capacity	1.154 kW
Estimated annual production	4.729 MWh

Construction of Galichka Reka 1 (n° 2) and 2 (N° 3) is pending.

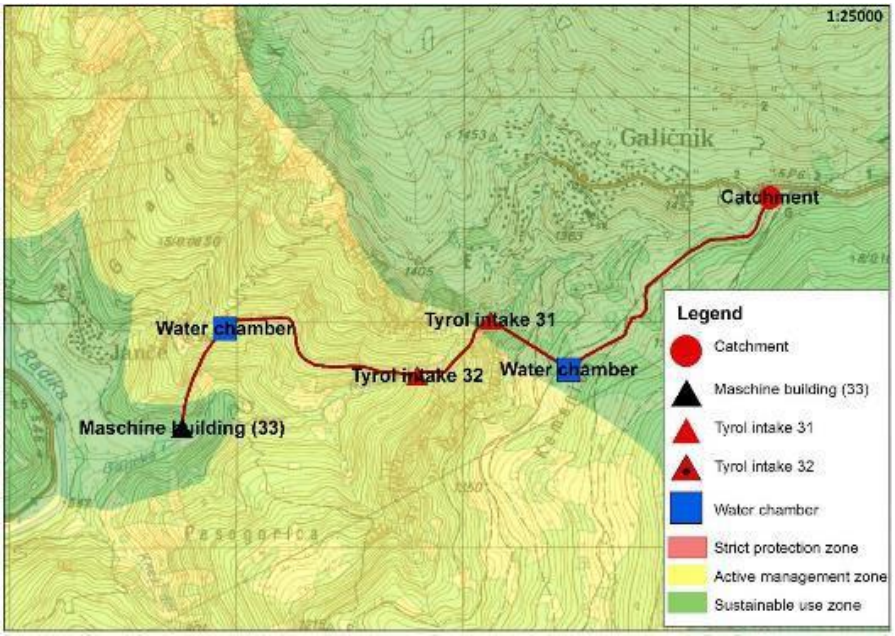

Figure 7. Galichka Reka 1, 2 and 3 as projected. Note that Galichka Reka 2 falls in the proposed zone for active management

Heavy machinery has already entered this known reproductive area of the Balkan Lynx (Fig. 8), a subspecies of the Eurasian Lynx classified as Critically Endangered by IUCN and flagship species of the efforts to save Mavrovo National Park. Development activities in the inaccessible forest zones mean habitat loss and loss of prey base for the Balkan lynx, and increased accessibility of poachers. These are all listed as the main threats that the Balkan Lynx faces, according to IUCN.

The last of the three intakes (SHPP n° 2?) will be in the vicinity of village Galichnik, just under the karst springs of Galichka Reka (Fig. 9).

Construction works might also disturb the breeding pair of Golden Eagles in Galichka Reka valley, one of the trigger species for recognition of the Park as an Important Bird Area in Europe.

Figure 8. Access roads to Galichka Reka power plants. On the bottom is village Janche, and on the top village Galichnik, both well-known tourist destinations in the National Park. A pair of Golden Eagles breeds in the cliffs, and Balkan Lynx reproduction in the river valley is proven.

Figure 9. Galichka Reka just under its springs, at village Galichnik. An intake point (SHPP n° 1) is planned here, that will take the water to power house under the cliffs visible at Figure 8.

5. SHPP N° 5 AT JADOVSKA REKA ("JADOVSKA REKA 9")

Investor: ENVIRO RESURSI DOO Skopje

Installed capacity: 3200 kW

Intake: 1242 m a.s.l.

Pipeline: L 1865 m; DN 1000 mm

Additional structures: concrete sill, side walls, adhesive intermediate channels of the sedimentation tank, water chamber, fish trail

Access roads: YES, the exact length is difficult to estimate

Situated above the planned "Boshkov Most" reservoir (Fig. 10), presently inaccessible Jadovska Reka is surrounded by Illyrian hop-hornbeam mixed oak woods, a priority habitat for conservation according to Bern Convention's Resolution 4 (1996)[1] (included in a habitat type of higher level - G1.7) and as such in Annex I of the Habitat Directive (31AA). Its lower sections, that will lose most of the water due to the water diversion, are characterized by the priority ash belts along the stream. The region is well-known for the presence of lynx, and is core area of their activity.

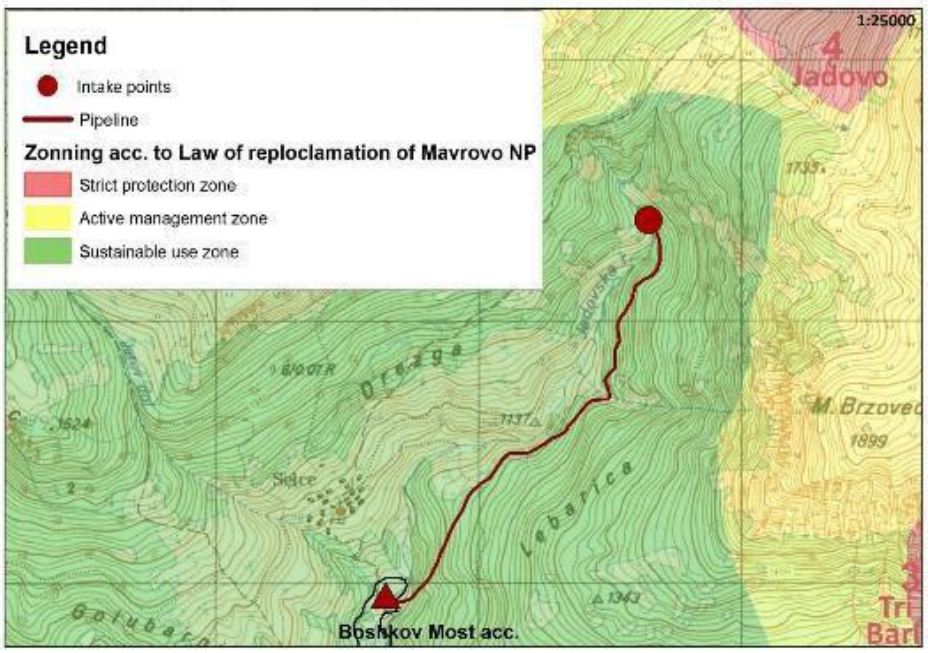

Figure 10. SHPP "Jadovska Reka 9" as projected

[1] Revised Annex I of Resolution 4 (1996) of the Bern convention on Endangered Natural Habitat Types Using the Eunis Habitat Classification (https://wcd.coe.int/com.instranet.InstraServlet?command=com.instranet.CmdBlobGet&InstranetImage=1763389&SecMode=1&DocId=1648180&Usage=2)

Figure 11. The presently inaccessible valley of Jadovska Reka above village Selce. An access road will probably be built through the oak forest on the left valley side. The region is well known for the permanent presence of the Balkan Chamois (in the higher rocky parts) and the Balkan Lynx.

Figure 12. The approximate region of the planned power house of Jadovska Reka HPP.

SHPP N° 7 AT KAKACHKA REKA ("KAKACHKA REKA")

Installed capacity: 112,74 kW

Planned annual generation of electricity: 438.719 kWh

Pipelines: YES, no info on exact length

Access roads: YES, no info on exact length

Investor: AKVA ELEKTRO MAVROVO DOO Skopje (pursuant to a contract for a public private partnership for construction and operation of SHPP among Public Enterprise "Mavrovo" and "AKVAMONT-ING" export-import DOO Skopje, dating from 04.08.2011)

Located above Mavrovo reservoir, Kakachka Reka has also been used for energy production in the past. Construction activities are ongoing since 2015 (Fig. 13). Construction area is in a beech forest, and the river itself is relatively intact in this section (Fig. 14).

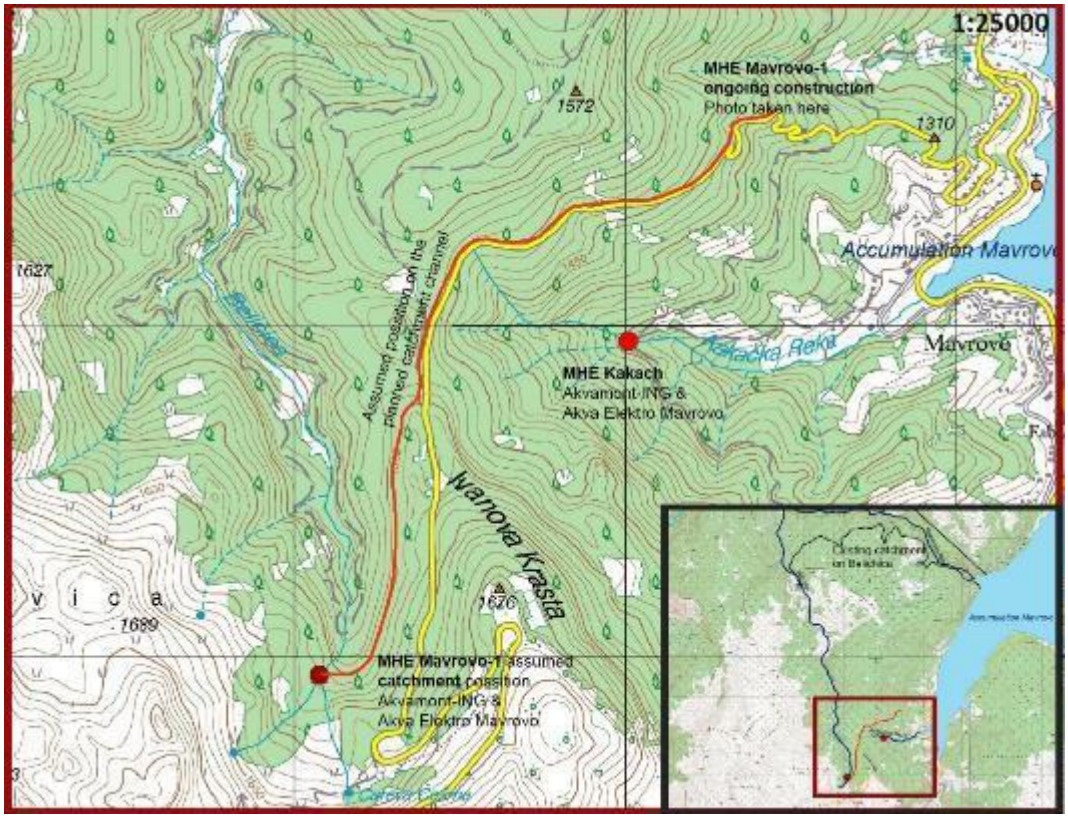

Figure 13. Planned SHPPs on Kakachka Reka (N° 7) and river Belichica (N° 1) (as estimated to be projected). The overview window shows also the existing intake and pipeline of Belichica (black line)

Figure 14. Ongoing construction at Kakachka Reka

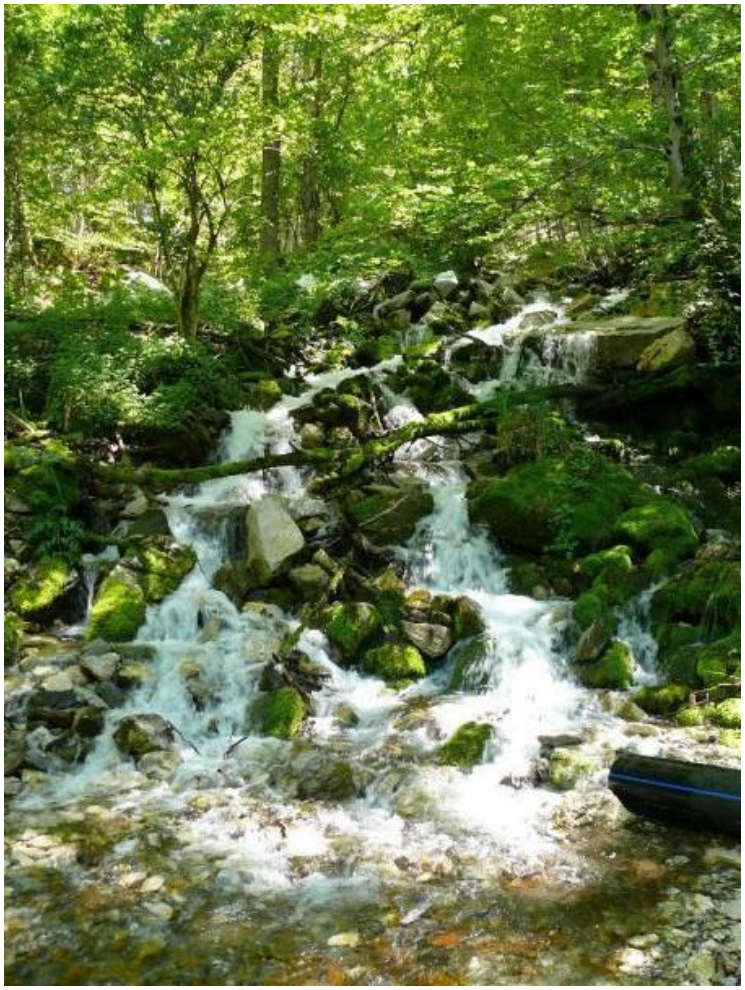

Figure 15. Kakachka Reka, just above the construction site

SHPP N° 12 AT RIBNICHKA REKA („RIBNICHKA REKA“)

Investor: AKTUEL-ENERDZI GRUP DOO Skopje

Installed capacity: 500 kW

Planned annual generation of electricity: 13.150.511 kWh

Incudes **3 intakes** points:

1) **River Proj Babes intake details**: massive concrete with 2.14 m height and 3.22 m base width and and pipeline of 191.40 m; DN 400 mm

2) **River Izvorska Reka Intake details:** massive concrete with 6.04 m height and 7.94 m base width and pipeline of 2260.85 m length; DN 700 and 800 mm

3) **River Dagon/Grekajska Reka Intake details:** massive concrete with 4.60 m height and 5.17 m base width and and pipeline of 2854.08 m; DN 800 mm

Additional structures: concrete sill, side walls, water chamber, fish trail

Access roads: YES, no info on exact length and position

Again, intake points are in the heart of the Park, one is near the border of the proposed zone of active management, another falls in the proposed zone of strict protection, and the pipeline and possibly the access road will pass through the zone of active management (Fig. 18). The entire region is picturesque landscape, with undisturbed forest tracts, primary habitats for protection such as birch belts along the mountain rivers, and large ungulates and carnivores are regularly present.

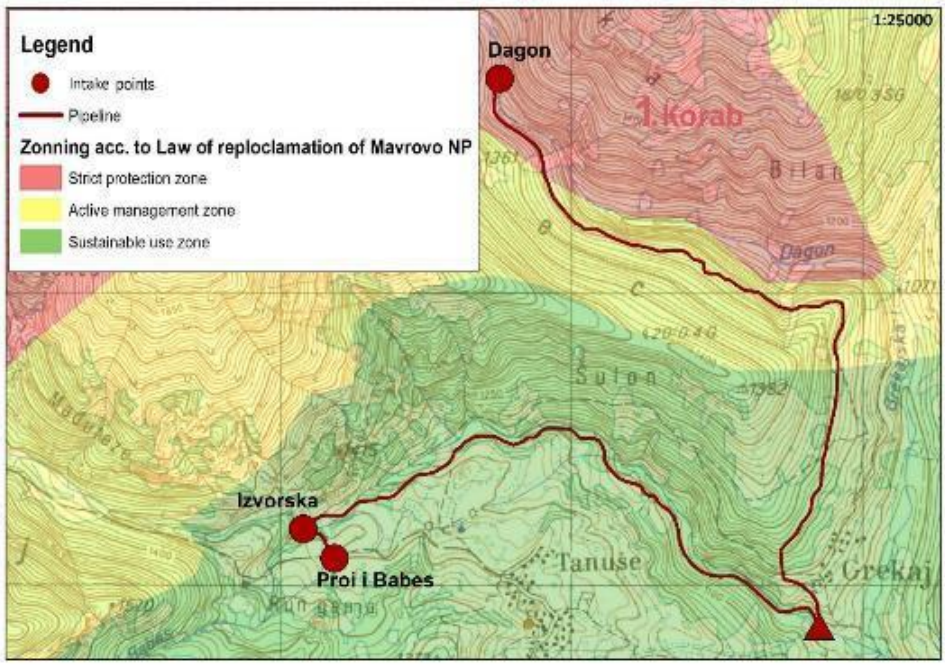

Figure 16. SHPP “Rhibnichka 7” (N° 12) as projected

Figure 17. Immediate surroundings of intake point at Izvorska Reka, above village Tanushe.

Figure 18. Izvorska Reka, at one of the two intake points for "Ribnichka Reka" SHPP N° 7)

Figure 19. In the presently inaccessible valley of stream Dagon the second intake point of Ribnichka Reka HPP (N° 7?) is planned, just below the cliffs protruding in the forests, in the proposed zone of strict protection of the Park.

Figure 20. Planned location for the future power house of Ribnichka Reka HPP (N° 7), at village Grekaj.

SHPP N° 13 AT ROSOCHKI POTOK ("ROSOCHKI POTOK")

Part of the water from these karstic springs is already taken for water supply of the town Debar. The new intake brings the risk to render the riverbed without any water in the summer months, on the section between the intake point and the power house.

Figure 21. The immediate surroundings of the projected intake point at Rosochki Potok.

Figure 22. Rosochki Potok at the approximate intake point.

Figure 23. The approximate location of the power house for Rosochki Potok HPP, on the right bank of river Mala Reka.

SHPP N° 14 AT TREBISHKI POTOK ("TREBISHKI POTOK")

Located in valley between the villages Rostushe and Trebishte, the surroundings of this river are mature beech forests, with priority ash belt along the stream.

Figure 24. Trebishki Potok at the approximate intake point, in the ash belt along the river.

Figure 25. The approximate location of the power house for Trebishki Potok HPP – it is unclear whether this existing cottage will be taken down to make space for the new building.

SHPP N° 16 & 17 AT TAIROVSKA (= ZHIROVNICHKA) REKA ("ZHIROVNICA 5" & "ZHIROVNICA 6")

Two SHPP are planned to be built on river Tairovska (= Zhirovnichka) Reka (Fig 26).

Zhirovnica 5

Investor: Hidrogen Enerdzi Grup DOO Skopje
Installed capacity: 780 kW
Planned annual generation of electricity: 823 kWh
Intake details: massive concrete with 3.97 m height and 3.77 m base width
Pipelines: L 1314m and DN 500 mm
Additional structures: concrete sill, side walls, water chamber
Fish trail with dimensions 0.20/0.30 m is considered sufficient to provide a flow rate of 2 m/s
Access roads: YES, no info on exact length and placement

Zhirovnica 6

Investor: Hidrogen Enerdzi Grup DOO Skopje
Installed capacity: 464 kW
Intake details: massive concrete with 3.77 m height and 3.85 m base width
Pipelines: L 1235.33m and DN 500 mm
Additional structures: concrete sill, side walls, water chamber
Fish trail with dimensions 0.20/0.40 m is considered sufficient to provide a flow rate of 0.032 m^3/s
Access roads: YES, no info on exact length and placement

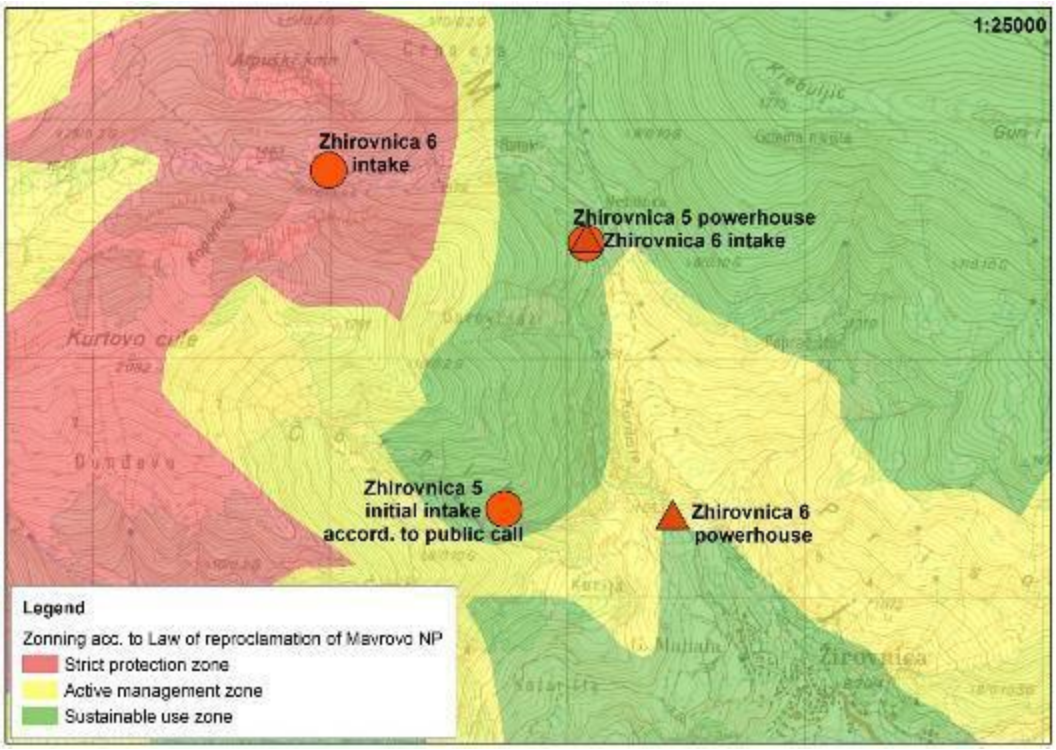

Figure 26. SHPP Zhirovnica 5 and 6, as projected. Note that intake point on Zhirovnica 6 is in the proposed zone of strict protection.

The SHPPs are planned in the almost pristine valley of Tairovska Reka, with mature beech forest. The upper intake point of SHPP N° 17 is foreseen in proposed zone for strict protection of the Park – a region where Brown Bear, Balkan Chamois and Balkan Lynx are found.

Figure 27. Approximate location of the planned power house for SHPP N° 17, and the intake of the SHPP N° 16.

Figure 28. Tairovska Reka at the higher intake point (SHPP N° 17). The beech and beech-and-fire forest on the right river valley side is (nearly) virgin, but access road is likely to pass through it.

Figure 29. Tairovska Reka 200m above the intake point (SHPP n° 16), in the proposed zone for strict protection.

Figure 30. Immediate surroundings of the power house of SHPP N° 17 at Tairovska Reka, above village Zhirovnica.

Еко-свест

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To
Bern Convention Secretariat
Skopje, 15.02.2016

Dear Ms. D'Alessandro,

First of all, let us thank You and the Secretariat for the dedicated work and efforts put into the Mavrovo case before and during the Standing Committee meeting. We truly hope that all our deliberations will have a positive outcome for the protection of the Park.

As you may have heard, shortly after the Bern Convention Standing Committee recommendations were published, the World Bank dropped the Lukovo Pole project[2]. In our view, this is indeed a positive interpretation of the recommendations by the Bank and a step forward in the case. On the other hand, the EBRD did not cancel the Boskov Most HPP project, and stated that after the consultations with ELEM and the Government, they will fully comply with the Bern recommendations and will keep the project suspended until an SEA is performed.

With this letter, we would like to communicate important issues which we find closely relevant to the Mavrovo case. Consequently, we would like to ask for action from your side.

1. During the meeting is Strasbourg we informed you that there are 4 small hydropower projects concessioned in 2015 to private investors. These projects are in pipeline and the construction work is expected to start this spring. Additionally, new call for small hydropower projects is expected to be published this month by the Ministry of Environment, Water department.

2. In February 2015 the process for adoption of the Law on re-proclamation of Mavrovo National park started. We participated in the process and had numerous comments regarding the articles that enable construction work in the Park. Serious comments regarding the draft Law were also sent by IUCN asking to make full revision of the text. Until the sending of this letter there has been no official response to our comments from the Ministry of Environment or the park authorities.

3. ELEM published a statement (8.12.2015, on their website) about the activities to be undertaken around Boskov Most HPP project stating that the "new study will be carried out fully in compliance with the recommendations as well as international standards and it will once again confirm the meaningfulness of this project and its benefits in all spheres."[3]

   As by "study" they refer to the Strategic Environmental Assessment, stated in the Bern recommendation, and as by "project" they mean Boskov Most, in our opinion this statement demonstrates that the institutions do not understand the purpose of the SEA. We fear that taking this direction might jeopardise all efforts concentrated on Mavrovo's protection.

   Having said this, we would like to ask for the Secretariat to:

- Ask from the Government of "the former Yugoslav Republic of Macedonia" to suspend the construction of the concessioned small hydropower projects on the territory of the Park and ask the Ministry of Environment, Water Department to cancel the call for small hydro power projects to be located in the park;

[2] http://www.worldbank.org/projects/P112730/lukovo-pole-water-regulation-renewable-energy-project?lang=en
[3] From Macedonian: Со новата дополнителна студија која ќе ја изготвиме во целосна согласност со препораките и според највисоките меѓународни стандарди, ќе се потврди целисходноста на овој проект и придобивките од него во секоја сфера.

- Ask the Government to postpone the adoption of the Law on re-proclamation of Mavrovo National park until the Strategic Environmental Assessment for the projects in the Park is adopted;
- Send a statement with the interpretation of the specific recommendation for the Mavrovo case possibly including guidelines to all relevant stakeholders (ELEM, Government of "the former Yugoslav of Macedonia", EBRD). We would like to create clarity on all sides on what is expected;
- Demand from the relevant authorities that the SEA process is fully transparent and that as a first step, all involved stakeholders will be consulted on the Terms of Reference for the SEA, and later on according to national and EU laws;
- React to the relevant institutions (ELEM, Government of "the former Yugoslav Republic of Macedonia", NP authority) that now is a crucial time for carrying out and further intensifying activities of the Balkan Lynx Recovery Programme. Stress the importance for carrying activities that would benefit the recovery of the Balkan lynx and provision of full governmental support in that direction.

We sincerely hope that 2016 will be an important year for the protection of Mavrovo National Park by uniting all efforts for its preservation.

We remain at your disposal for any further information.

Warm regards,

Ana Colovic Lesoska
Eko-svest
"the former Yugoslav Republic of Macedonia"