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PROBLEMS AND THREATS FOR EXISTING AND POTENTIAL NATURA 2000 SITES IN BULGARIA

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Bulgaria has established its NATURA 2000 National Ecological Network in the period 2003-2007. The Special Protected Areas (SPAs) - 119 – have been designated with minister of environment's orders in 2007-2014. So far, most of the protected sites under the Habitats Directive (SCI) have not been designated with orders (8 out of 233 were announced in 2015-2016). While there are prohibitions and limitations on human activities in the designation orders (where existing), they are too general, superficial and are not based on detailed studies on specific threats to the conservation objectives. This combined with the lack of Management Plans for most of the NATURA 2000 sites (only 8 MPs have been approved) and the lack of NATURA 2000 management bodies, allows both a misused interpretation of nature conservation legislation in detriment to the conservation objectives and its apparent violation without serious consequences for the offenders. In this report have been systematized only a small part of the numerous threats to species and habitats in Natura 2000 sites.

The Kaliakra Case

In the area of Cape Kaliakra and its closest coastal areas there are several N2000 sites - Kaliakra BG0002051 SPA, Kompleks Kaliakra BG0000573 SCI, Belite Skali BG0002097 SPA and Kraymorska Dobrudzha BG0000130 SCI. Here is the only place in Bulgaria where remains of the Dobrudzha steppe are preserved (*see Map 1 and Map 2 of Appendix 1*). Here are also the largest sea cliffs on the Bulgarian Black Sea coast. The area is inhabited by typical steppe bird species - Eurasian stone curlew (*Burhinus oedicanus*), Greater Short-toed Lark (*Calandrella brachydactyla*) and Calandra lark (*Melanocorypha calandra*), 4 species of Wheatears (*Oenanthe*), Rosy starling (*Sturnus roseus*). Kaliakra is of crucial importance for the survival of the first three species, because they have the highest numbers for the country in this region. Almost the entire breeding population of the Pied wheatear (*Oenanthe pleschanka*) - 81% - is concentrated in the Kaliakra region. Rocky seashores are inhabited by the only colony of European shag (*Phalacrocorax aristotelis*) in our country. In the sea area of Kaliakra are registered the largest flocks of Mediterranean shearwater in Bulgaria.

The importance of the region during migration is extremely high, as it is located on one of the two most intense migratory flyways in Europe - Via Pontica. Over the Kaliakra there are significant numbers of soaring birds every autumn - up to 200,000 storks, pelicans and cranes, as well as over 10,000 birds of prey, including the globally endangered Pallid harrier (*Circus macrourus*), Saker falcon (*Falco cherrug*) and Imperial Eagle (*Aquila heliaca*). Due to Kaliakra's specific geographic location as well as due to constant winds, when the birds meet the sea on their way south, they stay longer in the area to overcome air



currents and to return overland, as well as to gain height. Over 60% of birds fly up to 150 m of height and thus fall directly within the range of the wind turbine blades. Due to the strong winds migrating birds (mainly storks and harriers) land here to rest also in the day, and raptors stay to feed. Stork flocks regularly roost in the areas between Kavarna and Tyulenovo. Numerous flocks of migratory songbirds stop for rest and search of food - Quail and globally threatened Corn crane (*Crex crex*). These birds are mainly night-time migrants. Over 50,000 songbirds are recorded during autumn migration only during the daylight. Significant numbers of waterfowl spend the winter in Kaliakra region, mainly geese, which stay from December to March. They spend the night in the sea and fly over the area daily to feed in the inshore fields. Coastal Dobrudzha is of primary international importance for the conservation of the Red-breasted goose (*Branta ruficollis*), as during the winter here concentrates almost entire of the world's population of the species.



Ponto-sarmathian steppe, Kaliakra

Photo: The author

Because of the unique landscape, endangered habitats, plant and animal species, Cape Kaliakra, the rocky shores and their adjacent steppes and coastal waters are under protection - the Cape is declared "Kaliakra" strict reserve, and part of the rocks and coastal steppes - "Yailata" protected area. The Kaliakra area has been declared an Important Bird Area (IBA) because of its importance for birds. In 2007 a part of the Kaliakra IBA was included in Natura 2000 as a bird protection site, and only in 2013 the entire territory of the IBA was included in Natura 2000. The coastal areas were designated as SCI "Kaliakra Complex".



Rocky formations, Tyulenovo, Kaliakra

Photo: The autor

By the end of 2014 a total of 482 projects had been registered in area, excluding those who were declared to have lost validity by that date (a total of 15 projects). Twenty-six of the projects are related to the construction of wind turbines. A total of 147 wind turbines have already been built and 102 turbines operate, another 11 are under construction, 26 have been approved but not built and 8 are in an EIA procedure (*see Map 3 of Appendix 1*). Wind farms are approved in an area where there is a high risk for birds, without EIA or EIA procedures, but based on incomplete reports of poor quality. The already operating wind generators have led to the mortality of endangered bird species such as White pelican, Common crane, Eurasian eagle-owl, Griffon vulture, Common buzzard, and displaced the Red-breasted goose from its feeding grounds in the Kaliakra region. It has also been shown that wind turbines are the main reason for the loss of this species' habitats in the Coastal Dobrogea. They are also a barrier to bird migration - both raptors and waterfowl. The wind farms built in the steppes around the village of Bulgarevo have resulted in the destruction and significant deterioration of priority and strictly protected habitats - the Ponto-Sarmathian steppes, with over 180 ha of affected area. Although the measures taken in 2012 to stop new wind turbine projects and limitation of decisions taken to approve wind turbines, on documents it is possible to build 45 wind turbines on the territory of the IBA and the Kaliakra SPA, and over 200 wind turbines in the surrounding areas, which will further exacerbate the problem of significant impact on birds and their habitats.



Wind farm, Kaliakra

Photo: The author

458 projects, other than wind turbines, fall entirely or partially in Kaliakra SPA. All of them are approved with the judgment that no EIA is required. Some of them have undergone Appropriate Assessment, but have been approved on the basis of incomplete reports of poor quality. By the end of 2014, 11 projects were implemented, 3 of which are in the agricultural sector (creation of orchards and irrigation of vineyards), 5 energy projects related to the construction of wind farm infrastructure, 3 projects for resort development and 1 aquaculture project in coastal marine waters. Realized projects cover 288.7 ha of land. Some of these projects include the creation of orchards on the place of Ponto-Sarmathian steppes and arable farmland, and the destruction of these important habitats took place with spending public resources from EU funds. Although the institutions deny, in practice 26.4 hectares of steppe habitats are irretrievably destroyed from the implementation of the projects in question.

In 2005 large wind farms were approved in the Kaliakra area, falling into the future Natura 2000 Kaliakra SPA. Same year, the Berne Convention opened a dossier against Bulgaria on the grounds of planing to build wind farms near Balchik, which threatens the migratory route of birds. The Ministry does not take measures and the process of approving new wind turbines does not stop, in most of the cases wind turbines are approved without an EIA. In 2006 the Berne Convention opened a new dossier against Bulgaria regarding the threatening of birds on their migratory route due to the approval of wind farms in Balchik and Kaliakra, but also across the Northern Black Sea coast. In 2007 a mission of the Convention visited Bulgaria for the second time (after its 2004 visit for the Balchik case), and at the end of the year it came up with Recommendation 130 (2007). It requires the government to review the wind turbine decisions already made in the Kaliakra and Coastal Dobrogea regions and



find alternatives for their construction in other places safe for birds; to improve the quality and detail of the EIA and to commission an external assessment of the reports; to prepare planning instructions and environmental assessment of wind farms; to prepare a national strategic assessment of the development of the wind power sector; last but not least, requires the government to declare a moratorium on the approval of new wind turbines in Dobrogea. The Berne Convention Recommendation is based on an in-depth analysis of the existing situation in Bulgaria and of the reports prepared for the three large wind farms in the Kaliakra IBA, confirming their poor quality.

The government did not take actions to meet the recommendations.

In March 2008 the European Commission sent a first warning letter on the Kaliakra case, initiating infringement procedure 4260/2008 against Bulgaria for non-compliance with EU legislation for the above reasons. In response to the open infringement procedure in 2008 was made a detailed inventory of all the projects on the territory of the IBA and the Kaliakra SPA. A detailed analysis reveals new facts. 340 projects were registered in the Kaliakra N2000 site only until April 2008. Of these, 103 projects were initiated between 2003 and December 2006, and the remaining 365 were initiated after the date of accession to the EU, between January 2007 and April 2008. As a result of the implementation of projects initiated prior to the date of accession, 5% of the terrestrial area of the protected site was destroyed only in the first year of EU membership, with the prognosis this percentage to increase to 11% with the implementation of all 103 projects initiated before 2007. Most of the projects initiated since 2007 are located in the approved N2000 site, with assessments for habitats losses from 20.7% of the terrestrial territory of the protected site.

In the autumn of 2008, the first case of killed endangered bird species in the Kaliakra region was recorded - a White pelican and later a Common crane. These birds died in a collision with the turbines of the newly launched wind farm Kaliakra.

According to RIEW's data at the end of 2009 a total of 2,840 wind turbines were approved, 83% of which without EIA, and another 1683 turbines are under approval procedure. Almost all approved and planned wind turbines fall into areas with high risk for biodiversity, with about ¾ of turbines located in Dobrogea. Together with the significant risks to birds and the compromised EIA procedures (permits without EIA or with very poor quality EIA) questions have been raised about the real scale of development of the wind power sector, are there phantom investors, are there real access to public information, why and how have been approved a risky projects which are essentially inconsistent with national and European legislation, what are the scale of fragmentation of projects, and are there intentions in established vicious practices.

With careful reading of the existing nature conservation legislation, NGOs and independent experts have identified the following KEY LEGAL VIOLATIONS:

Bulgarian legislation

1. A violation of the Biological Diversity Act has been allowed, destroying rare and endangered species and their habitats. Activities that contradict the subject and objectives of



conservation in Kaliakra SPA have been admitted. Significant damage to birds and their habitats has been caused by failure to comply with the statutory requirement in the Biodiversity Act, to prioritize the inclusion of Important Bird Areas in the National Ecological Network - Natura 2000. More than 100 species of birds are affected, most notably the Red-breasted Goose, migratory and wintering birds of prey and waterbirds in the region (White Stork, Great white pelican, Griffon vulture, Common crane, Common buzzard, etc.) and birds breeding in the region, object of protection in SPA - Eurasian eagle-ow, Calandra lark, Eurasian stone curlew, Long-legged buzzard etc. Strictly protected habitats are destroyed or deteriorated - Ponto-Sarmathian steppes and their biodiversity, which have a local distribution and are mainly found in this area.

2. EIA, EA and Appropriate Assessment procedures are violated:

The following failures are identified when the competent authority decides there is no need of EIA for a wind farm project:

- Large projects are performed without EIA/EA by fragmenting them in smaller parts;

- The approval procedure is not public, only the decision;

- Avoiding the need for performing preliminary studies by the investor, related to potentially impacted elements of the environment;

- A public EIA/EA procedure is avoided, where it is necessary to develop an EIA report that takes into account all aspects and the extent of expected impacts on environmental elements, including biodiversity and the risk to human health; where alternatives are considered, the cumulative effect is assessed, mitigation measures are reported and a self-monitoring plan is presented; where consultations with stakeholders are taken, as well as public deliberations;

- In the resolutions for assessment the competent authority does not impose requirements to the investor regarding the realization of the investment proposal, does not require monitoring and there is no basis for further control;

- The need for the investor to monitor the impacts of wind farm work is avoided, as well as implementation of mitigation measures (although there may be a large wind park following the approval of multiple single projects).

- Issued decisions that an EIA is not required are not final, upon request of the investor they can be realized after 10, 20 or 50 years; this circumstance changed with an amendment of the EPL, where a period of 5 years was laid down for the decisions on assessment that becomes valid backdated. The procedure for determining the expiry of legal effects of decisions is not public and the competent authority has no obligation to disclose when a decision has lost its statute of limitation.

Typical for all EIA procedures, whether before or after 2009, is that:

1. The description of the investment proposals does not include the full scale of the project, not including infrastructure - roads, buildings, electrical infrastructure for grid connection, as well as a radar system if it is part of the mitigation measures;



2. The disclosure of the investment proposal is insufficient. The applied scheme for informing the locals shows little effectiveness, even at the stage of public deliberations; investors have sufficient mechanisms to demonstrate at document that the public is properly informed and, at the same time, the public is not generally aware of the project.

3. Consultation with stakeholders - scientific institutes and NGOs is not mandatory by law and is therefore avoided in most cases or it is purely formal - only by a letter of a general nature. Investors start looking for NGO's support only if decisions on their project are being appealed;

4. In the EIA /EA/AA reports the following vices have been documented: no alternatives to the investment proposal are considered, both technologically and by location, also claiming that the zero alternative would be detrimental to the future of the territory; the cumulative effect is not assessed or, if this is done, it is done very selectively in order to prove the lack of such; the actual impacted environmental elements are not assessed, but are selected those for which no significant impact is expected; analyzes and assessments are not made on the basis of field studies to ensure qualitative and sufficiently comprehensive information for assessment purposes; where preliminary studies are conducted, the results are interpreted in a way that allows a positive assessment; the mitigation measures mentioned in the reports do not correspond to the actual expected significant impacts.

In fact, even EIA Reports with large volume have a very low quality of content. The assessment of the quality of the EIA reports is an internal (non-public) procedure of the competent authority before releasing the report to a public consultation; it is the responsibility of RIEW Varna to be responsible for the admission of EIA reports with the above vices. The practice of submitting poor quality EIA reports is ongoing as the competent authority approves them in the presence of these vices.

Following Recommendation 130 (2007) of the Berne Convention, attempts to improve the quality of the EIA reports were made. However, despite the fact that the reports began to receive more analyzes, their content was essentially unchanged and the abovementioned vices were valid for the later reports too;

5. Arguments submitted during the EIA/EA/AA procedure are not included in the reports and are not accepted by the RIEW during indication of arguments against the construction of the wind farms;

6. When there are negative opinions submitted for an investment proposal and there is a risk that it will be appealed and suspended or delayed, the RIEW Varna issues a preliminary enforcement decision whose appeal time is only 3 days. This type of decision allows project implementation regardless of whether court procedures are taking place. In the judgments on the need for EIA issued by the RIEW Varna and publicly available (published on the Internet or provided according to the LAPI), the following failures/vices have been identified, which are relevant to the observed development of the sector and are in contradiction with the principles the administrative law and process validated in the APC and the general principles of law:



1. Many of the published decisions do not have a date of delivery or the date of issue is not readable;
2. The decisions state the name of the contracting entity and the headquarters address, but no single identification code (UIC) is given. The data for the investor in the decision is not sufficient to identify the investor as a legal entity. Sometimes there are companies with similar names in the Commercial Register, but not the ones mentioned in the decision. In recent years, the headquarters of companies are not mentioned, but their correspondence addresses, which is contrary to the law;
3. Decisions do not always describe the parameters of the investment proposal, and when describing it, only a part of the characteristics are mentioned. In some decisions some characteristics are highlighted, while others state others. A single standard for a comprehensive description of the characteristics of the wind farm proposal is not applied;
4. When the decision identifies the location of the investment proposal, the numbers of the property are indicated. These numbers can change and are not publicly available. If the decision does not specify the property number from which the listed property originates, it is impossible to tell if it is the same location. When property numbers change several times over a short period of time, the concrete location of the investment proposal can not be established. There is no such practice the decisions to indicate geographic coordinates of wind turbines so to be clear where the project is located, although such information is required by the investor when submitting the investment proposal to the RIEW;
5. Decisions are published on the web site of RIEW Varna backdated or after the deadline, thus shortening the legal period of appeal, thus being impossible to be proved to the competent authorities;

(source: <http://forthenature.org/cases/43>)

European legislation

When the case of Kaliakra (infringement procedure 4260/2008) was referred to the European Court, the European Commission put forward the following arguments for breach of European legislation:

Since the areas of the important bird areas are not fully included in the Kaliakra SPA, the Republic of Bulgaria did not classify as the special protection area the most suitable territories in terms of number and area for the conservation of the species listed in Annex I of Directive 2009/147/EC and regularly occurring migratory species not included in Annex I, in the terrestrial and maritime geographical areas to which Directive 2009/147/EC applies. Consequently, the Republic of Bulgaria has thus failed to fulfill its obligations under Article 4 (1) and (2) of Directive 2009/147/EC.

By approving projects "AEC GeoEnergy" Ltd., "Windtex" Ltd, "Brestiom" Ltd, "Disib" Ltd, "Eco Energy" Ltd and "Longman Investment" Ltd on the territory of the Kaliakra IBA, which was not designated as a special protection area but had to be, the Republic of Bulgaria has failed to fulfill its obligations under Article 4 (4) of Directive 2009/147/EC as interpreted by the European Court in Cases C-96/98 and C -374/98.



By approving projects within Kaliakra SPA, Kaliakra Complex SCI and Belite skali SPA (Kaliakra Wind Power JSC, EVN Enertrag Kavarna Ltd, CID Atlas Ltd, Vertikal - Petkov & Co. Ltd., Golf Course and Spa Resort Thracian Cliffs Golf & Spa Resort Ltd), the Republic of Bulgaria has failed to fulfill its obligations under Article 6 (2) of Directive 92/43/EEC, as interpreted by the European Court in cases C-117/03 and C-244/05, since it has not taken appropriate measures to prevent the deterioration of the status of natural habitats and the habitats of the species, as well as the disturbance of the species for which the territories are classified.

As the cumulative effect of the projects approved on the territory of Kaliakra IBA, which is not classified as SPA, is not assessed correctly (AES GeoEnergy Ltd, Windtex Ltd, Brestiom Ltd., Dicib Ltd, Eco Energy Ltd and Longman Investment Ltd), the Republic of Bulgaria has failed to fulfill its obligations under Article 2 (1) in conjunction with Article 4 (2) and (3) and Annex III (1) (b) of Directive 2011/92/EC.

International legislation

With the admission of the described above wind power projects on the Via Pontica migratory road, Bulgaria violates Article 1, paragraph 2, Article 3, paragraph 2, Article 2 and Art. (4) of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Recommendations 117 (2005) and 109 (2004) of the Standing Committee of the Berne Convention. Similarly, the projects admitted violate the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) and the related AEWAs.

For all the abovementioned violations the EC has condemned our country (judgment of the European Court 14.01.2016), which justifies subsequent criminal proceedings and sanctions by the EC against the Republic of Bulgaria.

(source: <http://curia.europa.eu/juris/liste.jsf?num=C-141/14>)

Ski area Bansko case

Most of the territory of Pirin Mountain is included in two overlapping N2000 sites - Pirin BG0000209 (SPA & SCI). It has its unique natural resources, including over 120 years old coniferous forests, including the oldest tree on the Balkan Peninsula - Baikushev's pine, the Wonderful Tree of Trionska meadow, the Balkan Pine trees - the Candlesticks, the century-old beech forests, the edelweiss and the remarkable natural formations of Pirin, are a prerequisite for its conservation both nationally and globally (*see Map 4 of Annex 1*).



Baikushev's pine, Pirin

Photo: The author

In this connection, on 08.11.1962 the alpine part of Pirin was declared a Vihren People Park with an area of 6736,0 ha. In 1974, the Ministry of Forests and Environmental Protection renamed the park to the Pirin People Park, increasing its area to 26 413 hectares. In 1982, in order to protect the unique variety of landscape forms, plant and animal species, the Pirin People Park was included in the UN list of National Parks and their equivalent reserves. In 1983 Pirin People Park was included in the UNESCO Convention on the Protection of the World Cultural and Natural Heritage. On 15 October 1999 the Ministry of Environment and Waters carried out a recategorization of the Pirin People Park in Pirin National Park with an area of 40356 ha and Pirin National Park Directorate is established in the town of Bansko, which manages, protects and preserves the protected area. On 02 March 2007 the entire territory of Pirin National Park became part of the European Ecological Network Natura 2000 and the two Directives of European Union - Directive 92/43/EEC on the conservation of



natural habitats and of wild fauna and flora and Directive 79/409/EEC on the conservation of wild birds.



Retige river, Pirin

Photo: the author

The first steps towards destruction of Pirin's natural heritage began in 2000 with the adoption of a Special Territorial Plan (STP) of a ski area with a center in Bansko which envisages a significant extension of the existing ski runs and facilities in Pirin National Park. This puts the conservation of the National Park under threat. In the period 2004 - 2016, besides the realization of a TSP in a ski area with center Bansko (6 new runways and 6 lifts), in the Pirin NP are implemented additional building activities within the territory of National Park, not included in the TSP and accordingly not approved by any institution - 4 ski runs and 3 lifts, and for 8 of the constructed runs the requirements for width and minimum excavation activities in the EIA decisions issued by MoEW were not met. All these activities were carried out in violation of the concession contract between MoEW and the Yulen JSC (the concessionaire), the National Park Management Plan and the approved STP of the ski area.

As a result of the numerous signals sent by citizens and NGOs in 2010 UNESCO's 34th session in Brazil issued a decision recognizing that the construction of a ski area with center Bansko seriously damaged Pirin world's natural heritage and in the future Pirin National Park will be included in the List of World Heritage in Danger.

Despite the decision of UNESCO, in 2014 the building intentions in Pirin National Park continue and the Minister of Environment and Waters allowed the construction of a new 6-seat lift in the place of Todorka 3-seat lift by the offshore company "Marengo Trading", which is not a concessioner of a ski area with a center in Bansko.

At the same time the new Pirin National Park Management Plan is being developed with a period of action 2014-2023, that does not guarantee the conservation of the natural

character of the park's environment and minimization of human intervention in natural processes, even a possibility to log forests in the park and removing the restrictions on new construction is foreseen. In this MP is included a possibility for construction of 12.5 times bigger area in the National Park compared to the built up to date, as well as cutting of forests on 60% of the park territory. The preparation of the MP has been financed with European funds (see Map 5 of Annex I).



Ski area Bansko, Pirin

Photo: <http://forthenature.org/gallery/413>

Key violations in Bansko ski area, on the territory of Pirin NP and Pirin BG0000209 (SPA&SCI)

Bulgarian legislation

Allowed violation of:

1. Art. 21 of the Protected Areas Act stipulating that in the National Parks it is forbidden to construct, besides "tourist shelters and chalets, water catchments for drinking needs, water treatment facilities, buildings and facilities for the needs of park management and visitor service, underground communications, repair of existing buildings, roads, sports and other facilities". Entirely new construction is allowed.

2. Norm 77, item 13 of the Management Plan of Pirin NP, which allows "the completion of the approved ski runs, facilities and objects in accordance with the approved TPS of Bansko Ski area and its EIA since 2000".

3. The Biodiversity Act, by allowing the destruction of Balkan pine forests, activities which contradict the conservation objectives of the Pirin SPA, especially in the bird breeding



period, may lead to the direct destruction of species of conservation significance and further fragmentation of forest natural habitats.

4. Art. 2, para. 2 of the Ordinance on the terms and procedure for conducting Appropriate Assessment, by not ordering any procedure under Chapter II of the Ordinance on AA.

European legislation

The construction of ski lifts in Pirin National Park is in breach of the EIA and Habitats Directives due to lack of environmental assessment.

International legislation

Construction in the Pirin National Park is in violation of the Convention for the Protection of the World Cultural and Natural Heritage, adopted by Decree No 13 of the Bureau of the Council of Ministers on 4 February 1974, in effect since 17 September 1975 and promulgated with SG. No. 44 of May 27, 2005.

In 2013 an audit of the Court of Auditors for a ski area with Bansko center in Pirin National Park is published, which proves the following:

- from 2001 until 2013 the government did not control the situation in the ski area with center Bansko;

- there is no system for control of the concession in the Ministry of Environment and Water to provide timely information on the actual implementation of the concession contract;

- the control of the contract is not structured according to the requirements of the Concessions Act and there are no appointed officials who are responsible for this in the ministry;

- during the period 2009 - 2011 the Regional Inspectorate of Environment and Waters - Blagoevgrad has controlled the activity of the concessionaire under the respective special laws on components and environmental factors. As a result six punitive injunctions were issued for Yulen JSC for violations under the Waste Management Act, the Water Act and the Environmental Protection Act.

- in Bansko Municipality there is no designated office-bearer for the control on the Protected Areas Act and the execution of the concession contract with Yulen JSC.

In the same year, a file of the Supreme Administrative Prosecutor's Office (SAP) was closed, which was referred by environmentalists for the violations. Although all of the abuses listed above have been found, the conclusion is that there is no evidence of committing a crime and no action has been taken against the offenders. Two successive governments are trying to "solve" the problem by legalizing the offenses committed by the concessionaire.

After a series of negative opinions and protests, the Management Plan of Pirin NP was returned and is still in the process of elaboration.

(source: <http://forthenature.org/cases/35>;
https://www.wwf.bg/what_we_do/protected_areas/bansko/;



<http://www.greenbalkans.org/bg/search/%D1%81%D0%BA%D0%B8%20%D0%B7%D0%BE%D0%BD%D0%B0%20%D0%B1%D0%B0%D0%BD%D1%81%D0%BA%D0%BE>)

Mini HPP Case

The energy source of hydropower plant (HPP) - water - is a renewable energy source. But that does not mean that HPPs produce "green" energy. The above applies to almost the same extent for large and small hydropower plants. During the construction of HPP the water flow is blocked by dam walls or barrages and these barriers violate all of the most important functions of the rivers, which cease to act as bio-corridors. This destroys biodiversity and negatively affects nature in the area. Therefore, the energy produced by HPP can not be called "green". It is generally produced by impacting negatively plant and animal species whose habitats are being destroyed directly - by direct construction, swamping or draining (above and below the dam wall, respectively) or indirectly - by disrupting the natural links between ecosystems. In temperate and warm climates the organic waste that accumulates at the bottom of the formed lake begins to rot and emit significant amounts of marsh gas (methane) whose greenhouse effect is 20 times greater than that of carbon dioxide.

In many cases the construction of HPPs is also associated with negative social consequences, affecting the economic and recreational functions of rivers and depriving local communities of resources.

Classifying HPP as "small" and "big" is conditional and dependent on production capacities. The boundary is about 10 MW.

According to the constructive features there are two types of small hydropower plants:

1. Derivative – water is taken from the river through pipes and transported to the turbines - hundreds of meters or miles downstream, using the natural fall for that distance. According to the law it is necessary to leave 10% of the average water quantity flowing along the river (ecological minimum), ie. on the pipes in theory can deviate up to 90% of the water. Moreover, the minimum (these 10%) must not be less than the amount of water in the river runoff during the less water months. This type of HPP is built on rivers with a greater slope, predominating in mountainous areas and small rivers with rapid currents and is the predominant construction in the construction permits issued in recent years. In the case of the derivative HPP all the animals living in the water are affected - invertebrates, fish, crabs, otters, etc. These changes on the natural characteristics of the river often lead to the complete extinction of species. The minimum is not enough for the most sensitive inhabitants of the river - most fish species such as trout, barbell, etc. In any case, the river with a derivative HPP is not a normal river. In the most drastic cases, which are not uncommon, the riparian forests also dry up. The flooding of the river in the spring and covering of the marshes with mud is part of the natural ecological cycle. It is important, for example, for the riparian trees - willows, alders, etc., which can not breed if there is no such freshly deposited mud and sand



along the shore from the incoming water - they have very small seeds and can breed only in such conditions.

2. River bed - it is built on the larger rivers with a smaller slope and less frequently in the middle streams - for example Vacha River, Mesta River, Arda River and others. On them is created a dam with a wall (for example) between 7 and 11 meters. The turbine is placed at the base of the wall. Such dams in the middle of the rivers are rapidly filled with mud and sediment, so valves are placed, which periodically release the accumulated amount of sand and mud down the river to prevent clogging of the turbine. This does not lead to normal formation of a lake bottom, which interferes with the natural life in the ecosystem. River bed HPP turns the river into an artificial lake, which can not develop naturally. River species can no longer live there, and whole river sections literally disappear and become unfit for life for river species. Bursts release of large amounts of sediments - mostly mud - leads to a sharp drop in the water temperature in the first few kilometers downstream, inappropriate for the season and the natural rhythm rising of the water level, a sharp deterioration in water quality, both at the moment and in the weeks after discharge (the rotting sludge absorbs large amounts of oxygen from the water and in the subsequent anaerobic processes extra toxic gases are released).

Both types of HPPs through their walls create major obstacles for the animals to moving along the river.

It is considered that by the end of the eighties of the last century, the useful and accessible potential for extracting electricity from the Bulgarian waters was utilized at about 80% for which they were modified (destroyed natural habitats) about 20% of the rivers. To date, they produce about 90% of the country's hydropower. Nevertheless, stimulated by the preferential purchase prices for electricity, more than 260 new small plants up to 10 MW (see Annex 6, Map 6) were built after 2004, the points identified as suitable for water abstraction for energy purposes are 900, issued building permits – 700. Their contribution to energetics, however, is insignificant and totally disproportionate to the destruction of the nature they cause. In practice, new HPPs put into service produce about one tenth of the hydropower energy in Bulgaria, which is about 2% of the total installed power generation capacity in the country. With implementation of all permits issued, their share will reach only 5% of the electricity produced, at the expense of almost 100% destruction of the natural river habitats in the upper and middle rivers and with unprecedented consequences for the lower ecosystems of the rivers. Therefore, the expected implementation of the planned over 400 projects for MHPP is a serious concern.

All of the abovementioned problems and deficiencies of HPPs in terms of environmental protection can be avoided to a great extent or, in the worst case, severely minimized in compliance with certain norms and rules. The reasons for this not happening in Bulgaria are complex and concerns all stages in the design, construction, operation and control on the operation of the plants.

Violations in issuing permits for water use.

Permits are issued by RBD, in breach of a number of legal rules:

- permits are issued for the construction of HPP in N2000 sites (Existing prohibition in Art. 118 g of the Water Act, and despite the explicit prohibition in the River Basin Management Plans (RBMP).) About 1/3 of the newly built (after 2004) 266 HPPs are in N2000 sites. So is the ratio in the case of non-built but issued permits (about 450). Example: HPP Rumyantsevo, Karlukovo BG0001014 (SCI);

Conservation objective in the N2000 site, besides several species of hydrophilic plant communities, there are also five species of fish, three species of amphibians, European pond turtle (*Emys orbicularis*), Otter (*Lutra lutra*), several species of invertebrates, which are affected to a lesser or greater extent of the constructed facility.



HPP Rumyantsevo, Zlatna panega river

Photo: <https://dams.reki.bg/0253-dam>

- assessment of the need for EIA (by the RIEW): - it is often considered that this is not necessary. Even if the Opinion explicitly states that there is a significant risk of harmful impact in a N2000 site, it is concluded that no EIA is required. Example: HPP Rumyantsevo;

- poor quality EIA or such with deliberately manipulated data and conclusions;

- lack of methodology for determining the minimum allowable runoff. The minimum allowable runoff is always defined as only 10% of the average annual runoff, without taking into account the minimum monthly average runoff - even when the relevant authorities have the necessary data as a result of studies (see Transitional and final provisions of the LW). In most cases such data is missing. In many cases, in order to provide a legal minimum monthly average runoff, it must be much higher than 10% of the average annual runoff. Examples:

Petrovo HPP, located in Sreden Pirin Spa - Alibotush BG0001028 (SCI), Slavianka BG0002078 (SPA) and HPP Rumyantsevo.



HPP Petrovo, Petrovska river

Photo: <https://dams.reki.bg/0210-dam>

Violations when designing

- designers often distort data on the term for return of the investment. The calculations are presented for a situation where all water is used all year round (according to the WL the water use is terminated or reduced if a minimal average monthly outflow can not be ensured). This makes the investment more attractive and increases the number of orders;

- in many cases no fish passages are planned (there is no such requirement) and, wherever they are planned, in most cases despite the considerable additional investment for its construction, it is unusable (there are no methods and standards for the construction of fish passes. For many years the Ministry of Environment and Water has delayed the necessary regulation). Example: Martinovo HPP, Eli dere HPP etc. In many places fish passes are fictitious. Examples - Dragovishtitsa HPP; Davidkovo 2 HPP, Slivka HPP and Hladilnika HPP located in the Rhodopi-Sredni BG0001031 (SCI) and Dobrostan BG0002073 (SPA);

Even when fish passages are designed and operating properly, they provide upstream migration and do not provide it downstream. Passage is ensured only for a certain species of fish and at a certain age. For example, the maximum denivelation in basin-type fish passes that can be overcome by fish in the trout zone is 10 m, and the recommended height of the barriers is 20 cm except for the bottom one on river side.



Fish passage Martinovo HPP, Naydenitsa river

Photo: <https://dams.reki.bg/0174-dam>



Fish passage Dragovishtitsa, Dragovishtitsa river

Photo: <https://dams.reki.bg/0435-dam>

Violations in issuing building permits

All 266 functioning small scale HPP are built on state-owned public land. In order to start building on such a property, the investor must have an established right for construction by MRDPW. Only 3 of all small scale HPPs have a such document.

Violations during construction

- Not finished and terminated facilities which, although not producing electricity, have a negative impact on river habitats;

- the water catchment coordinates from water use permit were not met, i.e. willfully relocation of the point for the construction of the object. Example: HPP Cherna Mesta. It is built further downstream to take advantage on the next right-hand inflow which would otherwise provide the necessary river flow down;

- In many cases, in addition to mistaken coordinates the water level is also not met. Barrages are built higher to increase pressure. Sometimes this is happening in the project stage, and yet the chief architects give permission for construction. RNCCD gives authorization for commissioning, even when it is established on the Acceptance Commission itself that the barrage has been upgraded. The sanction is up to BGN 10,000, without requirement to remove the violation. Example - Zabardo HPP located in Rhodopi - Zapadni BG0001030 (SCI) and Zapadni Rhodopi BG0002063 (SPA).

Violations during exploitation

- non-compliance with the requirement to ensure an ecological minimum (minimum water outflow). As a result - partially or totally dried rivers. At best, the possibility for migration is violated. In general, the consequences are more severe: species extinction, habitat change/destruction. Dewatered river beds are overgrown with bushes and cause problems related to future floods, do not perform function as fire barriers. Example - HPP Sveta Petka;



HPP Sveta Petka, Sestrimska river

Photo: <https://dams.reki.bg/0257-dam>



- the sludge in the underbarrage lakes is not cleaned. The rot leads to oxygen deficiency and to the release of toxic gases. Example - HPP Manastirska, located in the Zapadna Stara Planina i Prebalkan BG0001040 (SCI) and Zapaden Balkan BG0002002 (SPA);

- for river bed plants - burst release of the mud. Example: Lakatnik HPP, located in Vrachanski Balkan BG0000166 (SCI) and Vrachanski Balkan BG0002053 (SPA). In 2008, 30 km downstream the majority of aquatic organisms were extinct.

Violations during control

- no unannounced checks;
- there are cases where there are signals for violations but no checks are carried out;

- when serious violations are found insignificant fines are imposed;
- no checks on compliance with the instructions are carried out;
- no checks are carried out by state authorities under the Water Monitoring Ordinance. According to Article 174 of the WA, this privilege is granted to persons who have been granted the right for water use;

- there is no monitoring of the efficiency of the fish passes;
- fish passes are deliberately blocked at the upper end in order to use more water.

In addition to the abovementioned violations of Bulgarian legislation, there are **violations of three European directives** - the Strategic Environmental Assessment, the Habitats and the Water Framework Directive.

In 2010, as a result of the numerous violations, complaints and established legal gaps, the ban on the construction of small scale hydropower plants came in force. At that point, however, 600-700 permits have already been issued to build such plants. Thus, from 2010 to 2014 the number of these plants increased by 75, despite already existing ban.

The more striking is that although permit terms begin to expire without HPPs being implemented, they are prolonged by the relevant authorities without any further assessment being made.

Sources: <https://dams.reki.bg/Dams/List>;
https://www.wwf.bg/get_involved/rivers;
<http://www.greenbalkans.org/bg/Stanovishta>

Yazovir Zhrebchevo SPA case

The Special Protected Area Yazovir Zhrebchevo BG0002052 was approved by Order No. RD – 749/24.10.2008 of the Minister of Environment and Waters (*see Map 7 of Annex 1*).



The conservation objectives are 14 species of birds under Art. 6, par. 1, item 3 of the Biological Diversity Act (BDA) and another 27 species under Art. 6, par. 1, item 4 of the same act.

During development of the Management Plan (MP) of the site in the period 2012-2014, a number of threats directly affecting the conservation objective were identified, but also indirectly - through the elements and the quality of the environment and by changing the number and species diversity of other taxa. In some of them, the possibility of being neutralized despite their clear and uncontested definition, the availability of methods and means for this, as well as the legal basis, is very small.

Large seasonal fluctuations at the water level.

At Zhrebchevo dam the amplitudes of the water level are significant. The absolute minimum as a water level elevation for the data period (6-year period) is 250 m and the absolute maximum is 264 m. This is a difference of 14 m. The annual denivelation between minimum and maximum is about 9 m, sometimes reaching 12 m.



Anti-hail rocket site, Zhrebchevo dam, april 2013 and september 2013

Photo: The author

The reason for this is the seasonal high water of the water supply sources (Tundzha River and several small inflows, mainly left-bank), as well as the water use regime. The main flow of water is in the late autumn from rains and in spring by melting snow and spring rainfall. The main quantities of water that are being drained are for irrigation (insignificant quantities in the last decade) and for the production of electricity from Zhrebchevo HPP with two peaks of production - winter and summer. Since the summer peak also coincides with the use of water for irrigation, the evaporation is greatest and the water flow - the smallest - leads to a drastic drop in the water level during late summer and autumn. The state-owned HPP, built in the past century, has worked mainly in peak water seasons and in peak hours of energy consumption. The current private owner is interested in continuously producing electricity and only partly meets the requirements of the Ministry of Environment and Waters, which are set out in the water consumption schedule - ensuring minimum water outflow (the Tundzha River is one of the main rivers in South Bulgaria) and a high level in the dam during the spawning. Things are further complicated by the newly built Karanovo HPP, which uses



the water from the irrigation channel and works continuously even if there is no need for irrigation.

Large fluctuations in water levels have a negative impact on the majority of aquatic organisms. In fact, macrophytes, developing in the shallow parts and characteristic for most of the standing water basins, are missing in the Zhrebchevo dam. Hygrophytes and hydrophytes die out when water level drops, and drought-loving species - during prolonged flooding. This prevents development of characteristic for wetlands habitats and leads to the degradation of faunal species diversity. There are also no hiding places for fishes inhabiting shallow plots and/or breeding there.

The zoobenthos is also negatively affected by fluctuations in water levels. As a rule, this type of organism is immobile to poorly mobile. With rapid water withdrawal, they remain dry and die quickly. Given the presence of large quantities of biomass from macrozoobenthos as a consequence of the invasion of the Zebra mussel, the decomposition after death of these quantities leads to deterioration of the environment conditions and consequently to the intensification of the eutrophication of the water basin.

The water level in the period 15 April - 1 June (the time of spawning and hatching) rises by up to 2-3 meters, leaving the spawned caviar under a thick layer of cold water and abruptly reducing the success of breeding of fishes. The reason is the investor's desire to accumulate maximum water quantities in the dam in the months when by schedule he is obliged not to work. The MoEW do not want to revise their schedules for the two plants in order to ensure a steady (not rising) water level during the spawning period and smaller fluctuations during the dry season. The State Company "Irrigation Systems", responsible for the control of the facilities and the water level, does not, in fact, control the water consumption of HPPs.

As far as the above-mentioned classes of aquatic organisms seriously affected by large fluctuations at the water level are the main food for most of the birds that are subject to protection, this is a high threat.

Barriers to the migration of the aquatic organisms.

Large fluctuations of the water level are the reason for the disappearance of water and aquatic vegetation in the shallow parts of the Zhrebchevo dam. This has deprived many of the species of fish (mainly carp) from breeding grounds, practically there is only one suitable for that bay. In the near past, the fish moved freely upstream along the river and used the riverbed for breeding grounds. After the construction of a dam, serving Nikolaevo fishponds (part of SPA), this is to a large extent limited. The fish passage is constructed improperly, with great inclination, water velocity and denivelation between individual cells, lacking a natural substrate on the bottom of the cells. At low water levels of the Zhrebchevo dam, its operation is further hampered. After partial damage to the flood gates, water passes through them with a higher volume than that in the fish passage and misleads the migrating fish for the direction of movement. Additionally, the fish passage is closed at its upper end with sand sacks to provide additional quantities of water to the fishponds. There is no continuous control

by the East Aegean Basin Directorate. All this causes an average degree of threat to the subject of protection.



Fish passage, Nikolaevo fishponds weir, Tundzha River at Zhrebchevo SPA

Photo: The author

Bad structuring of Natura 2000 sites.

The preparation of the documentation related to the designation of the N2000 sites contains several significant problems, which seriously threaten the existence of the object of protection. Outside the site have been left two important wetland habitats adjacent to it - the Tundzha river bed over the Nikolaevo fishpond, the Radova River mouth at the tail of the dam, and the strip of land between them, where breeds one of the few living colonies of European ground squirrel (*Spermophilus citellus*) in the whole region (*see Map 8 of Appendix I*). The lack of a wider strip of land around water areas, which to be part of the SPA, is also a serious deficiency in the structuring of the site (the boundaries of the site are actually the boundaries of the water bodies - 98% of the territory of the SPA is a water surface). Restrictions introduced by MP apply only to the territory of the SPA. As far as part of the main threats to biodiversity are related to cultivation of farmland in the surrounding area as well as to construction, this means in practice that they can not fulfill their purpose - neither to limit the pollution from the surrounding agricultural lands nor to end the investment proposals on key areas around SPA.



Tundzha river above the dam at Nikolaevo fishponds

Photo: The author



The Radova River mouth in the Zhrebchevo Dam

Photo: The author

And even after approval of the MP as it stands, if the SPA boundaries does not change or the legislation to build buffer zones around the SPA (as in most EU countries) is changed, the threats concerned will continue to influence without being compensated or neutralized. Currently, the MoEW refuses to use the information gathered during preparation



of MP with a view to restructuring the SPA, as well as to initiate a deliberate process for making a proposal for changing its boundaries. The process is also hampered by the lack of SPA management body to monitor the implementation of the MP and its prescriptions.

Case Yazovir Ovcharitsa SPA

Yazovir Ovcharitsa (SPA), BG0002023 was approved by Order No. RD - 549 of 05.09.2008 of the Minister of Environment and Waters (*see Map 9 of Appendix 1*).

There are 35 species of birds, subject of protection in the site, under art. 6, para 1, item 3 and 32 species under art. 6, para. 1, item 4 of the Biological Diversity Act.

Besides an SPA according Art. 12, para. 6 in connection with Art. 6, para 1, items 3 and 4 of the Biological Diversity Act, Yazovir Ovcharitsa is an Important Bird Area, and Corine site.

During the development of the SPA's Management Plan (MP) in the period 2012-2014, a number of threats directly or indirectly affecting the subject of protection were identified. Some of them are outlined by the boundaries of the SPA and others are due to gaps in the legislation, lack of control by state bodies or lack of structures for SPA management.

Burning of stubbles, fallow strips and reed beds

The burning of stubble, fallow strips and pastures is a widespread phenomenon in Bulgaria, and in particular in the SPA. In addition to reducing soil fertility, soil erosion and air pollution, this vicious cultivation technique leads to the destruction of habitats outside farmland, the destruction of the few remaining trees and forests in the protected site, the death of a large proportion of slow-moving animals, the destruction of reed beds. It has a high intensity and a high level of threat. Prohibition of such actions is laid down in the Agricultural Land Protection Act (SG 35/24.04.1996), Ordinance I-1053/19.04.2011 of the Ministry of the Interior and Ministry of Agriculture and Food and in the Law on the Protection of the Environment (SG, issue 91/25.09.2002).

There are also sanctions of considerable size, as well as when proving the violation the perpetrator to be sanctioned by deprivation of European subsidies. The problem is the lack of a specialized control body as well as a resource for an adequate investigation to identify the perpetrator. At present, the annual burning of large areas in the SPA continues, but file filing, investigative actions, established perpetrators and sanctions are missing.



Burned pastures, Yazovir Ovcharitsa

Photo: The author

Disturbance by fishermen during the winter and breeding season for the purpose of preserving fish or carrying out fish-farming activities

For the period 2006 - 2010 there are repeated expulsions of the fish-eating bird flocks during the winter season with the help of a powerful motor boat in Yazovir Ovcharitsa. In Ovchi Kladenets-1 dam (also part of SPA) boats, gas cannons and firecrackers are used to expulsion of birds during the winter and breeding season for the period 2011 - 2013. Fishing with nets also provokes disturbance in the waterfowl and the associated use of motor boats. Disturbance during the winter season causes inability to feed, high mortality in the result of enervation, birds become an easy prey to predators. During the breeding season the expulsion from boats and sound-generating means leads to the failure of the breeding season and displacement of species from the site. These actions by water concessionaires/leaseholders represent a high level of danger to waterfowl, such as most of the birds - subject of protection in SPA, and are carried out with high intensity.

The terrain around and in the SPA is difficult through the wet part of the year, which severely hampers the implementation of control. The concession company's concession rights also include the ability to control access to the pond through checkpoints, as well as to impose and control ban on the boats use in concession areas, which also greatly reduces the effectiveness of control. In the initial version of the MP were set restrictions to relieve and make control more effective but subsequently they were rejected because of "limitation of concession rights". There is not also SPA body for management, which to have the technical

means for 24-hour control and to be located in the vicinity of SPA. There is no clear and reliable legal basis with regard to the collection of evidence of infringements by technical means (video and sound recording devices) and their validity in court cases.

So far, violations of the prohibitions in the MP continue, though with less intensity. Perhaps due to the constant presence of environmentalists and officials from state bodies involved in the preparation of the MP.

Bad structuring of the SPA area

During field studies it was found out that outside the boundaries of the SPA but in the near vicinity of it there are important habitats - wet meadows and pastures, year-round gullies flowing, native wood species - oak, maple, ash, white and black poplar.



C. nigra nest at 0.5 km from Yazovir Ovcharitsa
Photo: The author



H. albicilla nest 1 km from Yazovir Ovcharitsa

In fact, the nests of rare species were found there, such as - Northern goshawk (*Accipiter gentilis*), Black kite (*Milvus migrans*), Black stork (*Ciconia nigra*), White-tailed eagle (*Haliaeetus albicilla*), Lesser Spotted Eagle (*Aquila pomarina*) (See Maps 10 and 11 of Appendix 1). More importantly, the identified valuable habitats and nesting habitats are located as a rule along potential bio-corridors linking SPA with other wetlands, forests or other SPAs. These are serious deficiencies in delineating the boundaries of the SPA which may lead to fragmentation, migration barriers, lack of possibility to apply measures for the protection of important habitats and breeding habitats of species subject of protection in the SPA.

During the preparation of the MP, most of the information needed was collected and analyzed in order to eliminate the deficiencies during outlining of the borders. Unfortunately, the secondary legislation does not allow for this to be done at the same time with the



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preparation of the MP, and at the moment the MOEW did not initiate a procedure for changing the area/boundaries of SPA on the basis of the collected facts and their analysis.