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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

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Possible File

**Complaint No. 2001/04: Follow-up of Recommendation No. 98 (2002)
on the project to build a motorway through the Kresna Gorge
(Bulgaria)**

- REPORT OF THE ONLINE ADVISORY MISSION -

25-27 August 2021

*Document prepared by
Lazaros Georgiadis and Radu Mot, independent experts*

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1. THE KRESNA GORGE AS A BIODIVERSITY KEY AREA IN SOUTH-EAST EUROPE

The Kresna Gorge with the Struma River passing through has been recognised as a biodiversity key area in South-East Europe as unique biodiversity is concentrated in the area and the river itself is important both as a habitat and ecological corridor. Two Natura 2000 sites (SCI BG0000366 “Kresna-Ilindentsi” and SPA BG0002003 “Kresna”) and five national protected areas (Reserve “Tisata”; Protected territory “Kresnensko defile”; Protected territory “Moravska”; Natural Monument “Molina skala”; Protected territory “Estestveno nahodishte na chinara – Buina”) have been designated within the area. The whole complex of protected areas plays an important role as a regional corridor and stepping stone system for both mammal and bird species in South-West Bulgaria.

According to standard data forms, the SCI BG0000366 “Kresna-Ilindentsi” site has several separate cores connected by river valleys in a single site. The site is like a buffer zone to the west of Pirin National Park, it also includes the highest parts of Maleshevska and Vlahina Mountains towards the border with North Macedonia, and between them the deep Kresna Gorge of the Struma River. Unique biodiversity is concentrated in the site. Here, the Rhodope Mountains have the best ecological connection with the mountains on the border between Bulgaria and North Macedonia. Simultaneously, the Struma River is a bio-corridor for the migration of species in a southerly and northerly direction. Steep mountain slopes are a strong barrier for these migrations, and in the region of Kresna gorge, a unique and highly vulnerable bottleneck bio-corridor is formed. The area includes natural and semi-natural ecosystems of sub-alpine level in Pirin as well as areas with vegetation typical of the continental sub-Mediterranean and in the south of the meso-Mediterranean climate. There is a temperature gradient from north to south which is unique in Europe: for about 20 km in the valley, the average annual temperature varies by just 1 degree. There are representatives of pre-glacial Mediterranean vegetation and fauna in the site, as well as relict glacial species in the higher parts. The site includes the northern boundary of distribution of many species and Mediterranean communities, including communities of *Platanus orientalis*, *Quercus coccifera*, *Phyllirea media*, and *Juniperus excelsa*. Some areas of forest monocultures are excluded from the site. “Zandana” at 490m above sea level is a complex of 3 caves situated between the villages of Ploski and Ilindentsi. Breeding colonies of horseshoe bats and migratory groups/colonies of other bat species were observed in these caves. Other species of bats are known to live in rock fissures.

The rivers of the SCI are preserved in their natural or semi-natural condition. They follow their natural riverbeds and the territories of their riparian terraces are slightly fragmented. The riparian forests of *Alnus glutinosa* and *Salix sp.* (Priority Habitat 91E0) and riparian forest of *Platanus orientalis* (92C0) form one of the most qualitative riparian galleries in the country. The ichthyofauna is distinctly rich and diverse (an important food resource for the otter's stable population) There are 12 inhabitant fish species, 3 of which are included in Annex II of Directive 92/43/EEC and 10 species of herpetofauna, 3 of which are in Annex II of the same Directive. This makes pSCI “Kresna-Ilindentzi” one of the most valuable areas for the protection of ichthyofauna, herpetofauna and their natural habitats. The natural river system of the mountain is of great importance for the fish migration. The majority of the horseshoe bats which live in the southern parts of the Struma River Valley hibernate in the cave.

The SPA BG0002003 “Kresna” is situated along the Struma River valley in the region of Kresna Gorge. On the south it reaches the villages of Palat and Drakata, on the north the village of Krupnik, on the east - the foot of the Pirin Mountains and on the west the foothills of the Maleshevska Mountains. The site supports the populations of 44 bird species of European Union (EU) importance, 35 of which are included in Annex I of the EU Birds Directive. Kresna is of global importance as a representative example of the Mediterranean biome. Eight biome-restricted bird species, typical of the Mediterranean biome occur there: Rock Partridge (*Alectoris graeca*), Olive-tree Warbler (*Hippolais olivetorum*), Masked Shrike (*Lanius nubicus*), Black-headed Bunting (*Emberiza melanocephala*), Black-eared Wheatear (*Oenanthe hispanica*), Subalpine Warbler (*Sylvia cantillans*), Sardinian Warbler (*Sylvia melanocephala*) and Rock Nuthatch (*Sitta neumayer*). For the Levant Sparrowhawk (*Accipiter brevipes*), the region of Kresna is one of the most important breeding sites in Bulgaria. The Kresna Gorge is situated on the migration route Via Aristotelis and it is of regional importance for migrating birds - mainly passerines and raptors, but also waterbirds.

2. ENVIRONMENTAL CHALLENGES OF THE STRUMA MOTORWAY IN THE KRESNA GORGE AREA

The case of this advisory mission concerns the planning of construction of a 17 km-long motorway (section of the “Struma motorway”) in the Kresna Gorge as an alleged threat to the unique biodiversity of the area. The gorge was the only corridor for humans in the north-south direction for thousands of years and today it is an important European transport corridor (European road and railway) which already impacts on biodiversity, safety and local communities. The narrow valley and the close vicinity to the river make solutions more difficult especially on the perspectives of widening the road to a four-lane motorway and double line railway.

In general, motorways and other linear transport infrastructure are vital for the prosperity of societies, but their construction can cause drastic and permanent changes in the structure and functionality of the landscape and ecosystems reducing their cohesion and increasing the fragmentation of natural habitats. The main effects of these changes are: a) loss of habitats, b) barrier effect for both local and migratory species populations, negatively influencing their natural movements which increases genetic isolation and can contribute to extinction of endangered species, c) wildlife casualties resulting from collisions with vehicles, d) disturbance and loss of habitat quality due to noise, light and chemical pollution, and d) subsequent changes in the landscape and land use in the neighbouring areas and deterioration of the adjacent habitats (e.g. new urbanised areas close to junctions, tourism, hunting etc.). In evaluating these impacts, it is critical to acknowledge that for some environmental parameters there is a threshold of irreversibility, such as for the habitat loss and the barrier effect.

To understand the impacts of linear infrastructure on biodiversity and especially on habitat fragmentation, the following concepts have to be considered in order to respond to the challenges of securing their ecological sustainability: a) The problem: Genetic isolation and wildlife mortality, b) The cause: Habitat fragmentation and land degradation, c) The aim: Ecological and landscape connectivity, d) The objective: Sustainability, e) The conflict: Green and grey infrastructure intersected areas; and f) The solution: the Mitigation Hierarchy: Avoidance – Mitigation – Compensation - Recommissioning.

The motorway solution should take into account existing and future problems such as degradation of habitats, the combination of natural and artificial barriers, impacted species from both existing pressures or future threats, access and safety, other impacts on local communities and on ecosystem services and look for ways to address them.

To achieve sustainability of linear transportation development combined with securing the functionality of ecological networks and cohesion of the Natura 2000 network, it is critical to take into account that a multiple use of the mitigation hierarchy is necessary. Avoidance of impact is the priority choice, followed by effective mitigation of impacts. Safeguarding (preserving and enhancing/reconstruction) ecological and landscape connectivity through avoidance and mitigation is critical as compensation for connectivity is more often unfeasible especially for regional/national important bio-corridors as is the case in the Kresna area. It should be mentioned that avoiding overlap of protected areas and linear transport infrastructure does not represent by default the avoidance of any impact on the functionality of regional corridors and on the coherence of the ecological networks.

3. BACKGROUND OF COMPLAINT OF THE CASE FILE NO. 2001/04

The case concerns the plans for the construction of a 17 km-long motorway (section of the “Struma motorway”) in the Kresna Gorge in the South-west of Bulgaria.

In September 2001, the Standing Committee of the Bern Convention (BC) was sent a complaint by a group of Bulgarian NGOs relating to the construction of a motorway through the Kresna Gorge which, at the time, was an Emerald Network site.

In May-June 2002, a Bern Convention on-the-spot appraisal by expert Mr Guy Berthoud took place. The Bulgarian authorities had not considered any other alternatives to motorway construction and the construction inside the gorge of a full-scale motorway was considered harmful to biodiversity. The Standing Committee adopted [Recommendation No. 98 \(2002\)](#), deciding that the routing of the motorway should be subject to an in-depth environmental assessment (point 2 of the Recommendation) and that

the option of enlarging the current road should be abandoned and alternative routes outside the gorge be studied (point 3).

In the absence of information on the progress of the construction project from the authorities in 2004, a file was opened. The Complainant informed that construction had actually started in the northern sections without a full EIA of the motorway.

By a decree of 14 November 2005, the Ministry of Environment and Water prohibited certain activities which could have adverse consequences for the site, such as the building of hydro-electric power stations. In 2006, the Bulgarian delegation informed the Standing Committee that a new EIA had been initiated, in consultation with all the partners concerned. The European Union delegation informed the Standing Committee that a complaint had been lodged with the Commission.

In 2007, Bulgaria joined the EU. In 2008, the Bulgarian delegation informed the Standing Committee that the decision to construct the Struma Motorway had been issued after intensive consultations. The Bulgarian government had taken into account Recommendation No. 98 (2002) particularly with regard to the stages of preparation and quality of the EIA report and the determination of the motorway route in the Kresna Gorge, which was carried out with the collaboration of relevant institutions, NGOs and scientists. It was decided to avoid the Gorge.

In 2009, the Standing Committee closed the case-file, in the light of the information from the Bulgarian authorities that the decision to avoid the Kresna Gorge had been taken (“tunnel” alternative), although the final technical project for the actual roadbed had not been prepared yet.

In 2010, the Bulgarian authorities informed the Standing Committee that there were no changes in the situation and no decision to construct an alternative route in the Kresna Gorge section. The representative of BirdLife asked the Bureau to continue to monitor the implementation of the recommendation.

Between 2011 and 2015, no new information was submitted on the issue by the Bulgarian authorities, nor was the issue raised at the Bureau or Standing Committee meetings.

In September 2015, eight Bulgarian NGOs informed the Secretariat that the Bulgarian government planned to construct the last section of the Struma motorway through the Kresna Gorge and to reject the “tunnel” alternative. Following the request of the Bureau the authorities reported that no decision had been taken as to an alternative solution, and that an EIA was being conducted in consultation with the public and that any decision would be taken in close cooperation with the European Commission (EC).

The “tunnel” alternative had been indeed approved by the 2008 EIA. The EIA decision, however, was based on limited environmental information, including for potential Natura 2000 sites proposed in 2007, and lack of detailed technical data and geological surveys. At that time, only the environmental consequences of the tunnel operation and not those of its construction, nor of its maintenance were considered. The EIA decision included further a number of recommendations for improvement of the route on the next stages of research and design. One of the conditions laid down for the design phase required, alongside the development of the tunnel option, additional ways for its improvement and achievement of the best possible environmentally-friendly, technically and economically feasible option to be sought. Actually, studies carried out afterwards revealed a number of potential problems which might occur if this alternative was implemented, such as insufficient public safety and environmental damage to the Kresna Gorge which could not be overcome by compensatory measures. Risks related to the construction of the tunnel had been established given the seismic nature of the region and the presence of radioactive substances, as well as high exploitation and maintenance costs which rendered the tunnel alternative economically unfeasible.

A “backup alternative” was being developed and should be evaluated through a new EIA initiated in December 2014. The “backup alternative” was designed as a dual carriageway in the Kresna Gorge. The “backup” design intended to minimise the footprint of the road and reduce impacts on habitats and species.

In light of the information provided, the 2015 Standing Committee decided to consider this closed file as a possible file at its next meeting. The EC informed that a final decision as to the route had not been taken and that it was following project developments and would intervene in case of possible non-compliance with EU legislation.

In the course of the EIA/AA procedure, three new alternatives were elaborated and assessed together with the “tunnel” alternative and the “backup alternative” developed in 2014. The new alternatives included: an improved variant of the “backup alternative” of a dual carriageway in the Kresna gorge; the Eastern Bypass alternative which envisages the construction of a unidirectional two-lane road going south in the Kresna Gorge and a northbound carriageway to be constructed to the east, outside the gorge; and the full Eastern Bypass, which envisages both carriageways outside of the Kresna Gorge. The revised scope of the new EIA included five options in total and assessed them all on an equal footing.

The complainant held that the scope of the EIA/AA was not in accordance with the 2008 EIA decision of the Ministry of Environment and Water approving the “tunnel” alternative, nor with the commitments made by the authorities before international institutions, including the one funding the infrastructure project. They argued that all alternatives should be considered – not only those offered by the investor, but also the ones proposed during the consultation.

The 2016 Standing Committee invited the authorities to report in detail on the current EIA results and ensure alternatives are considered on an equal footing in the present assessment.

In 2017, an EIA/AA Decision was issued choosing the eastern alternative G10.50 featuring the construction of a new unidirectional two-lane road to bypass Kresna Gorge so that traffic in one direction uses the new road and the traffic in the other direction uses the existing road.

The Bulgarian Minister of Regional Development and Public Works announced that the application form for financing the Struma motorway was about to be submitted to the EC.

The 2017 Standing Committee took note of the report of the national authorities on the alternative chosen for the development of the section of the Struma motorway passing through the Kresna Gorge, after careful examination of all alternatives studied in the frame of an EIA/AA. It further noted the concerns expressed by the complainant NGO coalition about the objectivity of the EIA. The Standing Committee further requested that the authorities report on the outcomes of the national court appeal of the EIA/AA and the pending submission of an application package to the EC for the funding of the construction.

In 2018, the Bulgarian Supreme Administrative Court rejected the complaint against the EIA/AA decision on procedure and substance and the authorities expressed strong opposition to an external review of the EIA/AA study, in view of the Court’s final decision confirming equal treatment of the assessed alternatives and compliance with relevant national and EU legislation. The authorities manifested nevertheless their readiness to continue their reporting to the Bern Convention. The complainant requested an on-the-spot appraisal visit. The 2018 Standing Committee decided to wait until the application package to the EC was submitted and the evaluation by the EC services made available, as this would certainly be done taking into account the EU acquis on nature conservation.

In 2019 illegal works alongside the potential route were reported. The works were carried out in Natura 2000 sites without permission, assessment of impact or before the procurement procedure was even launched. In October 2019, the EC issued observations on the application form submitted by the Bulgarian government for EU funding and assessed that the Bulgarian Government had deficits in implementing Article 6.3 of Directive 92/43 in performing the environmental procedures for the Struma highway project since it was not assessed against the site-specific conservation objectives for the affected Natura 2000 sites. The EC requested that the Bulgarian Government ensures the necessary detail of conservation objectives and amend the Appropriate Assessment (AA) accordingly.

The 2019 Standing Committee supported the organisation of an on-the spot appraisal as a means to collect information from the field, from the various assessments, reports and data available and to meet with relevant actors, with the view of formulating recommendations on ways to find a solution that will be acceptable for both the safeguard of the protected wild fauna and flora and for putting in place a safe and effective road connection.

In 2020 after temporarily withdrawing the project from the EC for revision, the Bulgarian authorities took steps to elaborate site-specific conservation objectives, including approaching the EC to provide the financing for two independent experts to ensure compliance with the further steps of the project development within the Environmental Acquis. In addition, a contract was signed which envisages continuous monitoring of the conservation status of 4 priority species. Furthermore, the road authorities

undertook steps to procure a design and implementation contract for measures to mitigate pressures on the concerned species from traffic in the gorge, as well as to improve road safety of this road section.

The 2020 Standing Committee noted the information of the authorities and of their proposal to defer a Bern Convention OSA until the completion of the EC-funded expert mission. However, several member states insisted and thus the Committee decided to reiterate its 2019 decision to organise an OSA, which should build on but not duplicate the work of the EC-funded mission.

4. THE SITE-SPECIFIC CONSERVATION OBJECTIVES OF NATURA 2000 SITES WITHIN THE KRESNA GORGE AREA

As mentioned above, in 2020, after temporarily withdrawing the project from the EC for revision, the Bulgarian authorities took steps to elaborate site-specific conservation objectives in collaboration with the EC.

The completion of the overall process of finalisation and official designation of the SSCOs of the Kresna Natura 2000 site is assumed to be a fundamental prerequisite to the overall process of finding a solution for the Struma Motorway and Kresna Gorge case. During the current advisory mission, special effort was made to understand the status of development of the SSCOs and to support the effective cooperation between the government and the complainants in order to gather and use the best available data.

According to the European **Commission Note on setting conservation objectives for natura 2000 sites** (Final Version 23/11/2012: the purpose of the note is to provide guidance to assist Member States in setting conservation objective for Natura 2000 sites), establishing site-related conservation objectives is necessary for identifying site-related conservation measures and for carrying out appropriate assessments of the implications of plans and projects for a site.

“The **conservation objectives** at the site level must have full regard to:

- the ecological requirements of the species & habitat types listed in the Natura 2000 Standard Data Form (i.e. present on the site, except for those whose presence is non-significant according to the SDF);
- the local, regional, national conservation status of the habitats and species;
- the overall coherence of the Natura 2000 network;
- higher level conservation objectives at national/biogeographical level and the contribution of the site to them.

Conservation objectives for Natura 2000 sites need to be as clear and straightforward as possible and allow to put in place operational conservation measures in practice. They need to be specified in concrete terms and wherever possible be quantifiable in numbers and/or size. In other words, the definition of site level conservation objectives must not be ambiguous, vaguely formulated, unverifiable or involve unclear responsibilities with regard to the corresponding establishment of specific conservation measures.

The following standards for conservation objectives may be relevant:

- **be specific** - relate to a particular interest feature (species or habitat type) and define the condition(s) required to satisfy the conservation objective;
- **be measurable and reportable** - enabling monitoring to be undertaken to determine whether the conservation objectives are being met and for the purposes of Article 17 of the Habitats Directive;
- **be realistic** - given a reasonable time-frame and application of resources;
- **be consistent in approach** - the structure of conservation objectives should, as far as is possible, be the same across all sites, and at sites supporting the same interest feature, use similar attributes and targets to describe favourable condition; and
- **be comprehensive** - the attributes and targets should cover the properties of the interest feature necessary to describe its condition as either favourable or unfavourable.

The level of detail given in conservation objectives for certain species or habitats may be constrained by current limitations of scientific knowledge. In such circumstances the overall objective on favourable conservation status, as defined in Article 1 of the Directive, can be applied in combination with site specific knowledge on the actual occurrence, distribution etc. of the actual species or habitat.

Landowners and local agents must have a good knowledge and understanding of the conservation objectives at all levels, and particularly at the site level and the way they are expected to contribute to them. Clearly communicating the site's conservation objectives and its contribution to higher level conservation objectives should help improve awareness and commitment of local stakeholders".

5. OBJECTIVES AND APPROACH OF THE MISSION

On the basis of the instructions by the Standing Committee, the information provided by the authorities and the complainant, and taking into account the EC funded expert mission, the objectives of the mission are to:

1) **Part I** (conducted online)

- Review information for alternatives analysed throughout the development of the project (a total of 20 up to now), and make recommendations to the Bulgarian authorities on actions to ensure that a solution acceptable for both the safeguard of the protected wild fauna and flora and for putting in place a safe and effective road connection will be implemented;
- Review relevant scientific and recorded data of the presence and distribution of protected habitats and species in the Kresna Gorge, including that which is available in the NGO community;
- Review the implementation by the Bulgarian authorities of Recommendation No. 98 (2002) of the Bern Convention;
- Discuss with relevant competent authorities at national and local levels, NGOs, stakeholders and citizens' groups.

2) **Part II** (conducted online, taking into consideration the EC-funded mission)

- Collect information on the existing mitigation measures put in place and the newly proposed measures for diminishing the impact of traffic on species and habitats; and assess their potential effectiveness.

3) **Part III** (needed to be conducted on-site but didn't take place due to current COVID-19 restrictions)

- Verify the on-site situation to ensure that no illegal works continue.

Based on the history and particularities of the case, and considering the time limitations and pandemic-enforced restrictions, in agreement with the Bern Convention Secretariat, it was clarified that it would be impossible for the current OSA to provide concrete solutions on motorway alignments. Therefore, the overall approach of the mission had three aims:

- 1) To enable the parties to identify complementarities and gaps and future actions which should be taken, and to take ownership of a process towards finding an agreed solution. To achieve this, a special effort was made in order to:
 - Understand on a deeper level the work that has already been done in the area by all the engaged stakeholders;
 - To have a better representation of interested and engaged stakeholders;
 - To understand better the parties' positions and their approaches;
 - To keep the overall process transparent.
- 2) To get a better understanding of the status of the key elements such as policy support, data support, decision-making approach and the participatory engagement of stakeholders and on possible

updates or new developments related to BC Recommendation no 98 (2002) and JASPERS' recommendation (2016).

3) To commonly agree on the structure for the mission, which consisted of three main parts:

- The collection and assessment of information: existing materials at the beginning of the mission were requested in the form of a questionnaire and provided by both parties before the meetings, and additional complementary information was provided by both parties during and after the meetings.
- The organisation of the virtual meetings with the parties: the meetings' approach was presented and agreed beforehand with representatives of the parties regarding schedule, content and engagement. There were three consecutive meetings on separate days: on 25th August with the authorities, on 26th August with the complainants, and on 27th August a final common meeting. It is important to note that it was agreed that a representative of each party would be permitted to have an observer role during the meeting held with the other one.
- The development of the report with the final recommendations based on the most available data on important issues requested and received in the available time from both the government and complainant sides.

Additionally, as an EC funded mission was under development at the same time, an informative call was arranged to keep the EC and BC informed on the advisory mission development.

No other formal or informal meetings have been conducted with the parties or with other individual organisations, ensuring full transparency in the overall mission implementation.

The overall communication with the Bulgarian authorities, the complainants and EC team took place via the kind contribution of the Secretariat of the Bern Convention and the immediate and effective responses of all parties is very much appreciated.

6. MISSION'S MAIN FINDINGS

As a result of the overall implementation of the advisory mission, two sets of findings could be distinguished:

- a) The information provided by the questionnaire focusing on the processes followed by the government;
- b) The status of cooperation between the government and the complainants concluded by the combination of answers received from both sides.

6.1. Information provided by the answers of a questionnaire focusing on the process being followed

6.1.1. Information provided by the government

A. General - Policies approach

A.1. Environmental Policy

A Strategy for Biological Diversity in the Republic of Bulgaria and a National Plan for Conservation and Sustainable Use of Biological Diversity and Genetic Resources 2021-2024 are being developed, the projects of which include goals for conservation and restoration of ecosystems and biological diversity.

By Decree of the Council of Ministers from 2020, an Advisory Council in connection with the European Green Deal was established, which advises and assists the Council of Ministers on issues of the European Green Deal, including the implementation of the Green Transitions. The objectives of the Green Deal, in particular the objectives for nature restoration are included in the National Development Program of Bulgaria until 2030 (adopted by Protocol of the Council of Ministers from December 2020).

The full integration of the EU Green Infrastructure Strategy at national level is a subject of the National Restoration and Resilience Plan of the Republic of Bulgaria: "Integration of ecosystem approach and

application of nature-based solutions in the protection of Natura 2000 protected sites”, where actions include mapping and assessments of ecological status of ecosystems, ecosystems services and elements of green infrastructure.

The requirements of Art. 10 of the Habitats Directive are introduced in Art. 30 of the national Biological Diversity Act, according to which, for providing the connections between the Natura 2000 sites in the development plans, the district plans for development of forest areas and forest economy plans and programs, national and regional programs worked out according to other laws shall include measures and activities for preservation of the elements of the landscape which, on the basis of their linear and uninterrupted structure or connecting function, are important for the migration, geographic spreading and genetic exchange of the vegetation and animal populations and species.

The Protected Areas Act (1998) defines six categories of protected areas in accordance with modern international requirements (IUCN categories) and categories that differ in the state and degree of conservation of natural elements, objectives and management regime:

- Reserve (IUCN category I)
- National Park (IUCN category II)
- Natural Monument (IUCN category III)
- Maintained reserve (IUCN category IV)
- Nature Park (IUCN category IV or V)
- Protected territory (IUCN category IV and/or V)

The regimes for protection and management of the protected areas are determined by the Protected Areas Act, the order for their declaration and the management plans. The Natura 2000 network consists of a separate category of protected areas.

Close to the project of Struma motorway, the national protected areas are the following: the Reserve “Tisata”, the Protected territory “Kresnensko defile”, the Protected territory “Moravska”, the Natural Monument “Momina skala” and the Protected territory “Estestveno nahodishte na chinara – Buina”. The sites of the NATURA 2000 network are: the SCI BG0000366 “Kresna-Ilindentsi” and the SPA BG0002003 “Kresna”. From the above-mentioned protected areas, there is a developed and adopted management plan only for the “Tisata” Reserve.

A.2. Transport policy

The Integrated Transport Strategy for the period until 2030 (ITS) was adopted by the Council of Ministers of the Republic of Bulgaria by Decision No 336/23 June 2017. The Strategy underlines the main aspects for the development of the national transport system for the period until 2030. The Integrated Transport Strategy for the period until 2030 is elaborated in accordance with the principles of consistency, continuity and synergy with national and European strategic documents.

A Strategic Environmental Assessment (SEA) of the Integrated Transport Strategy (ITS) was prepared for the period until 2030, according to the requirements of Art. 29, para. 1 of the Ordinance on the conditions and procedure for carrying out ecological assessment of plans and programs, which has been approved by the Ministry of Environment and Water. According to the SEA of the ITS, the Strategy has connection with the EU Biodiversity Strategy to 2020, the Strategic Plan for Biodiversity (2011 – 2020) and the Aichi Biodiversity targets.

Regarding the implementation of special measures to reduce noise and light pollution caused by infrastructure projects, no specific guidelines or standards have been developed at national level. The generally applicable requirements set out in the national legislation are the Environmental Noise Protection Act (2006) and Ordinance No. 6 (2006) on the indicators for environmental noise, taking into account the degree of discomfort during the different parts of the day, the limit values of the indicators applicable for environmental noise, methods for estimating the values of noise indicators and the harmful effects of noise on the health of the population.

With regard to securing the functionality of ecological corridors and permeability of the roads for animals, the international project on "Restoration of ecological networks through transport corridors in Bulgaria" (2008) has been implemented where the good European practices were studied, and tools and recommendations were developed that aim to avoid or reduce the isolation of natural habitats as a result of the development of transport infrastructure in Bulgaria. Problem areas have been identified and practical solutions have been proposed, including measures that have been identified for each of these areas.

B. Support-data

B.1 Biodiversity data of Kresna Gorge area

The official data for the biodiversity of Kresna Gorge are published on the website of the Information System for protected areas of the ecological network NATURA 2000 (<http://natura2000.moew.government.bg/>) and the SDFs of the two Natura 2000 sites, the SCI BG0000366 "Kresna – Ilindentsi" and the SPA BG0002003 "Kresna". Data on the species and habitats from Kresna Gorge area could be found in the Important Bird Areas in Bulgaria, in the Atlas of nesting birds in Bulgaria and in the Red Data Book of the Republic of Bulgaria. Several projects have been implemented in the area both for the biodiversity of the area and the monitoring of the impact of the operation of Struma motorway in the Kresna Gorge mainly to the four species of reptiles: the tortoises *Testudo hermani* and *Testudo graeca* and the snakes *Zamenis situla* and *Elaphe quatorlineata*. Apart from those four species, the list of important fauna includes the brown bear, the wolf, the otter, ten species of bats but also several species of invertebrates.

Currently, there is an ongoing effort on developing site-specific and detailed conservation objectives for the two Natura 2000 sites in the Kresna Gorge. Within the scope of the project, additional field studies were carried out and additional biological information gathered that will be reflected in the expected site-specific conservation objectives for the other Natura 2000 sites in the gorge.

B.2 Land-use data and landscape permeability

Land-use data is publicly available on the website of the Cadastral administrative information system (<https://kais.cadastre.bg/en/Map>) which includes the boundaries of the Natura 2000 sites as well. All data related to the effects triggered by the motorway project are described and analysed in detail in the assessment documentation of the project under the Environmental legislation.

As to the study on "Restoration of ecological networks through transport corridors in Bulgaria" (2008), landscape permeability has been assessed for the key species towards identifying the bottleneck spots at national level. Also, in the ongoing project "Public procurement with subject: Pilot development of the fourth level of nature protection (conservation) objectives for the target features of protected area BG0000366 "Kresna-Ilindentsi" for protection of natural habitats and wild flora and fauna and of protected area BG0002003 "Kresna" for protection of wild birds (Specific conservation objectives for Natura 2000 site BG0000366 "Kresna-Ilindentsi", mammals, without bats, April 2021), bio-corridors of the brown bear have been identified, while presented data from telemetry of a wolf are indicating the home range and the landscape permeability for the species in the area. The draft Specific Conservation Objectives for the brown bear include the maintenance of the 4 bio-corridors in the site and at least 2 passing individuals. Respectively, the draft Specific Conservation Objectives for the wolf include the maintenance of the population size of at least 4 family packs, the maintenance of an area of 11,302 ha of sub-optimal habitats and the provision of connectivity of the potential habitats.

Also, it is critical to mention that connected with land use and linear infrastructure development, aside from the Struma Motorway, there is a plan for implementation of the project "Modernisation of the railway line Radomir - Kulata" (modernisation of a single electrified railway line to reach speeds of 160 km/h for passenger trains and 120 km/h for freight trains). The track development has the possibility for future doubling. A cumulative impact assessment of linear infrastructure was conducted in the course of the procedure leading to EIA Decision No 3-3/2017. It should also be noted that the chosen alternative for the modernisation of the railway line does not envisage changes to the existing route through the Kresna Gorge.

B.3 The impact and mitigation systems for motorway alternatives

Monitoring procedures have been launched in accordance with the terms of the EIA Decision No. 3-3/2017. The current monitoring program (of the populations of two species of tortoises and two species of snakes) will continue until 2023. The overall monitoring programme, according to the EIA Decision, will continue for at least five years after the project is operational. To that end, additional contracts will be commissioned. All mitigation measures are listed for implementation in the EIA Decision No. 3-3 / 2017 while for the section passing through the Kresna Gorge, the following main solutions are outlined:

- Modification of the existing culverts, as the aim is to ensure unimpeded access of small animals to pass under the road;
- Building new culverts in order to serve as reptiles' underpasses;
- To envisage the installation of bilaterally located protection nets with a size of 0.5 / 0.5 cm and a height of 1.20 m above the ground;
- Installation of bird protection nets on large facilities.

Towards achieving an analytical impact assessment for each of the motorway alternatives, the overall combined procedure of AA and EIA reports included an in-detail analysis of all proposed alternatives and compared the impact of every single variance. All alternatives were compared in a table format and directly compared in every single aspect of impact.

According to the Bulgarian Authorities, all conditions and measures included in the 2017 EIA Decision for Struma Motorway reflect the conducted consultations and public discussions and are designed to prevent, reduce or, where possible, eliminate significant negative impacts on the environment. They should be reflected in the project design at a subsequent design phase due to the fact that the EIA Decision is mandatory for execution.

C. Decision-making approach

By order of the Minister of Regional Development and Public Works dated 29.11.2012, an interdepartmental Committee for monitoring the construction of the Struma Motorway was established to successfully prepare and implement the infrastructure project "Struma Motorway". It is attended by representatives of: the Road Infrastructure Agency, the Ministry of Environment and Water, the Ministry of Regional Development and Public Works, the Ministry of Transport and Informational Technologies, the Ministry of Finance, affected municipalities, environmental NGOs, "Bulgarian Association of Victims of Traffic Accidents", the Chamber of Builders in Bulgaria, the Federation of Consumers in Bulgaria, the Bulgarian Hunting and Fishing Union, the Forum for Balkan Transport and Infrastructure, and the Bulgarian Road Safety Branch Association. The main activity of the Committee is to engage the representatives of the state institutions and the non-governmental organisations with the implementation of the infrastructure project. Its main objectives are to ensure maximum transparency, information and efficiency in the overall development and successful completion of the infrastructure project. The Committee performs its activity according to the adopted Rules of Procedure. The control over the implementation is personally exercised by the Minister of Regional Development and Public Works. Additional members with international experience could be added to the Committee.

Transparency of decisions and information on this project has followed all necessary legal requirement, and has gone above and beyond them. Public consultations have been conducted at all the main stages in the development of the EIA procedure for Lot 3.2 of Struma Motorway and the participation of the public in the process (the scope and content of the EIA; conducting public discussions of the EIA documentation; the manner of reflecting objections, suggestions, opinions, requests in the EIA Statement, the EIA Report and the EIA Decision). In addition, through the established interdisciplinary Committee, relevant stakeholder organisations have been involved in the decision-making process.

Additionally, during the project development of LOT 3.2. of Struma Motorway, in 2016 the National Company Strategic Infrastructure Projects (NCSIP) developed a Multi-Criteria Analysis to balance technical, biodiversity and environmental, socio & economic considerations in selecting an alternative for the implementation of the project.

D. JASPERS comments and recommendations regarding the Struma Lot 3.2 EIA process

In the development of the project, corrective measures have been identified and undertaken to minimise the impact on the priority habitats and associated species protected by the Natura 2000 sites. During this period, numerous consultations and meetings have been carried out, as well as with JASPERS (Joint Assistance to Support Projects in European Regions). In early 2015, the completed EIA scope was sent to JASPERS for review and comments. After taking into account JASPERS' recommendations and methodological comments, the revised EIA scope was submitted for consultations to the Ministry of Environment and Water in 2016. The approved EIA scope was sent to the services of the EC (DG Environment and DG Regional Policy), to the Bern Convention Secretariat and JASPERS for information.

6.1.2. Information provided by the complainants

A. SEA of Transport Connectivity Programme 2021-2027 and Struma Motorway in Kresna Gorge

The SEA of Transport Connectivity Programme 2021-2027 consent from 2021 is fully in compliance with the Recommendation 98/2002 – if applied: Lot 3.2 of the Struma Motorway in Kresna Gorge Area is part of the Programme and will apply for European funds. An Appropriate Assessment for the plan according to Articles 6.3 and 6.4 of the Directive 92/43/EEC was not made and is missing. The SEA procedure finished with SEA consent “ST_EO 4-3-2021” adopted by the Ministry of Environment and Water. The consent has obligatory mitigation measures regarding Struma Motorway and Kresna Gorge. In point “I.” “Measures for prevention, mitigation and full compensation of negative impacts from application of TCP 2021-2027”, chapter “B” “During implementation of TCP the following measures and conditions should be applied:“, Paragraph “B.2.18”, Page 10 of the official SEA consent states: "To assign an additional environmental assessment of the alternatives and possibilities for construction of the two lanes of Lot 3.2 (G10.5 and G20) of the Struma Motorway outside the gorge, including with regard to the Site Specific Conservation Objectives (SSSOs) and conservation measures for the NATURA 2000 sites (independently from the activities for designation of SSCOs), with a view to and in strict compliance with the recommendations of the European Commission (objective assessment of alternatives, application only of mitigation measures with proven effectiveness, assessment of cumulative effect, compliance with Article 6.3 of Directive 92/43 / EEC), with regard to assessment of the impact on species and habitats in SAC BG0000366 “Kresna-Ilindentzi” and SPA BG0002003 “Kresna” especially in the Kresna gorge area.”

B. Site Specific Conservation Objectives of Kresna Gorge Natura 2000 sites

The NGOs object to the current process of designation of SSCOs, stating that:

- the project result does not respect Bulgarian Biodiversity Law and the developed SSCOs are not part of any legal or designation procedure;
- the development of SSCOs is following a fully undemocratic and secret procedure without participation of a large part of the scientific community and NGOs and also respondents for the zones are not participating;
- the development of SSCOs does not respect article 4.4 of the Directive 92/43/CEE. Particularly for Kresna Gorge that means that it's biogeographical role for the NATURA 2000 coherence as a narrow distribution corridor and border of distribution for species like *Elaphe situla*, *Elaphe quatorlineata*, *Testudo graeca*, *Eurotestudo hermanni* – the main issue in the Kresna Gorge case - will be missing in the SSCOs developed for this project.

C. EIA/AA of the Struma Motorway in Kresna Gorge

The NGOs and National Museum of Natural History objected to the EIA/AA from 2017 on a number of positions, stating that:

- The AA/EIA has not in any way assessed the most significant impact of traffic and road infrastructure in view of the priority biogeographical role of the area as a narrow distribution bio-corridor for the species *Elaphe situla*, *Elaphe quatorlineata*, *Testudo graeca*, *Eurotestudo hermanni* and border of distribution for the first 2 species. In particular the EIA/AA fully

disregards the habitat deterioration around the road due to barriers and mortality of individuals and the resulting isolation of functionally different key habitats for their annual life cycle by interrupting the seasonal and diurnal migrations of individuals between these habitats within their individual territory. Art. 6.3 of Directive 92/43/EEC is clear and obliges to assess all impacts. This impact differs significantly from the often-considered effect of population fragmentation, although it is caused by the same road factors - barriers to movement and mortality;

- The mitigation measures to reduce the above-mentioned impact included in the AA/EIA from 2017 - underpasses for small animals - have no proven effectiveness, the terrain does not allow the construction of functional small underpasses for about 80% of the road length in the gorge, the planned underpasses do not meet the standards and good practices set out in a number of defragmentation guidelines, including the European ones;
- The assessment of the alternatives is not objective, specifically underestimating the priority role of the area as a corridor for *Elaphe situla*, *Elaphe quatorlineata*, *Testudo graeca*, *Eurotestudo hermanni* and adopting an alternative having major impact on this feature, without proven effective mitigation measures;
- The Art. 6.4 of Directive 92/43/EEC should have been applied in this case. An alternative must be chosen that allows for the greatest possible reduction and compensation of the impact on this SSCO. This has not been done.
- The mitigation measures for the planned motorway lanes by-passing to the east the Kresna Gorge are not sufficient for the two priority species *Ursus arctos* and *Canis lupus*. They should include the best practices, including the experience in the construction of Via Egnatia in Greece: additional underpasses and overpasses for migration; effective and enhanced fences to prevent bear accidents; management of the habitats adjacent to the highway after construction, including restoration of the forest vegetation and of the made technological roads (opinion of the BALKANI Wildlife Society from 2017).

D. Decision-making approach

The NGOs object to this approach so far, stating the following reasons:

- The public consultations of the EIA report in 2017 procedurally followed the law, but in reality no proposal or opinion of the NGOs or National Museum of Natural History including on mitigation measures and the choice of alternatives were taken into account in the final decision.
- The public discussions in the town of Kresna in September 2017 were poorly organised and did not give a voice to the people who opposed the government's decision. After several campaigns and hundreds of signatures collected by the local people of Kresna in 2020, the local municipal parliament voted its position supporting the option to build the highway either through a tunnel or entirely east of the town and out of the Kresna Gorge and asked for a change in the government's decision.
- The Multi-Criteria Analysis developed by the National Company Strategic Infrastructure Projects (NCSIP) in 2016 does not reflect the requirements of Art. 6.3 of Directive 92/43 /EEC insofar as it does not include the results of such an assessment and does not include the alternatives east of the Kresna Gorge corresponding to points 3, 4 and 6 of Recommendation 98 (2002). These alternatives are included in the scope of the future EIA and AA at the end of 2016 after the development of this multicriteria analysis.

6.2. Information received during the meetings and based on the responses of the two parties to the questionnaire

The described information gathered by the questionnaire focused on the processes followed by the government. According to the overall information received and the communication with the two parties during the meetings, the main conclusions can be described as the following:

- 1) The level of knowledge accumulated as well as the dedication and the effort invested by both parties in solving the case is impressive.
- 2) It was apparent from the beginning of the mission that a gap has been created over time between parties in terms of efficient communication, exchange of information and collaboration. However,

during the meetings, both parties recognised that this gap is a key issue, and they already agreed on common steps towards addressing it.

- 3) Additionally, the main issue from the side of the complainants was that the concerns and proposals that they have presented were not taken into account and were finally neglected.
- 4) Both parties acknowledged that setting up a transparent, comprehensive and robust process that should lead naturally from facts and agreed objectives to specific commonly-agreed solutions is the key.
- 5) In every complex case like this, it is required to balance a wide range of objectives and to find solutions that are feasible from many perspectives; as a result, the final solution for the motorway project may not be perceived as the ideal one by all of the stakeholders. Although responsibility for a final decision is for the Bulgarian authorities, if the parties will seek and achieve consensus at the process level, they should both be able to contribute to explaining the approach and the fundamentals behind the decisions to a wider interested audience.
- 6) Parties have agreed that the new developments, namely the development of the site-specific conservation objectives for the Natura 2000 site, the additional review/analysis of the EIA/AA report/study for compliance with the developed objectives and the potential revision of the EIA/AA are concrete opportunities that they will have to collaborate in the near future towards an agreed solution.
- 7) Despite the complicated history of the case, the conclusion of the mission is optimistic. This is based on the fact that during the past 20 years, the concept of mainstreaming biodiversity into transport has been acknowledged as a priority for both sectors; the knowledge accumulated in terms of how to implement specific policies and concepts has greatly expanded and the new paradigm offered by the Green Deal and resilience plans is actually addressing this type of approach. However, the greatest argument supporting the concluded optimism is the impressive knowledge accumulated both at national and local levels, on the remarkable engagement of local communities, scientific and civil society, on the dedication, commitments and clear steps already made by both parties to break the existing deadlock and to fundamentally collaborate towards a solution.
- 8) Two important concerns expressed by the local stakeholders have to be assessed with high priority: a) the loss of considerable agricultural land vital for the livelihood of local communities taking into account the limited area suitable for agriculture in the mountain area, and b) the restricted local mobility (access to properties, safe passage for people and livestock, the impact on local businesses including eco-tourism etc.) caused by the one-way motorway sections solution which may replace the existing two-way road.
- 9) Although the main aim of the BC is biodiversity, it also highlights taking a holistic approach, and, according to the Natura 2000 principles/ philosophy, the relationship between local communities and management/ conservation of habitats and species is a key aspect. Noting the strong bond of communities, civil society and scientific body representatives to the Kresna area and the high potential of eco-based small business for local communities, it is strongly encouraged for the parties to include such objectives and to investigate appropriate measures for addressing them during the process, continuing to foster the connection between people and the nature of Kresna. Setting up a safety-focused working group between the parties has been already proposed during the meetings.
- 10) Finally, there was a positive conclusion to the meeting when both parties showed their openness to engage on a future functional cooperation. During the mission the possibility for the parties to present a common report at the 41st meeting of the Standing Committee was mentioned and, after the mission, a first cooperation proposal made by the complainants was sent to the Bulgarian Government and to the Secretariat (presented in Annex III, as a reference).

7. RECOMMENDATIONS TO THE GOVERNMENT OF BULGARIA AND OTHER STAKEHOLDERS

1. Establish a fundamental cooperation relationship between the government and complainants, going beyond the usual informative and consultancy type of engagement, and maintaining it during construction, operation and maintenance, and as part of the Natura 2000 sites management – related activities.

2. Ensure a functional and transparent engagement mechanism with the complainants and other relevant stakeholders (scientific bodies, NGOs, civil society including representatives of the local communities) by re-activation of the Steering committee for the building of the “Struma” Motorway and by establishing common working groups (on themes such as biodiversity, traffic safety etc.);

3. As a priority, initiate a concrete cooperation with complainants and other relevant stakeholders during development of the **Site-Specific Conservation Objectives** for the Natura 2000 sites addressing the potential impact of the motorway on species, habitats and on the regional bio-corridors, and during the **additional review/analysis of the EIA/AA report/study** for compliance with the developed objectives and during the **potential revision of the EIA/AA**;

4. Develop a common functional data-support mechanism, creating a common GIS database and a best practices library, using commonly-agreed methodologies (on collecting, validating and interpreting the data) and tools towards supporting the production of and enriching the locally available scientific knowledge and **ensure a commonly-agreed process** of using best available information for data-driven solutions. This mechanism has to **focus on all relevant species** in assessing the impact of the future motorway (one reference is the study “*Restoring Ecological Networks Across Transport Corridors in Bulgaria. Identification of bottleneck locations and practical solutions*” (2008) which identified umbrella-species for the regional bio-corridors such as the brown bear, wolf, and bats, but also bird species);

5. Include in the ongoing monitoring programme the assessment of functionality for the target species of the mitigation measures that have been already implemented on the European road E-79 and make sure that the complementary fencing is not / will not create significant **new barriers for other species**, as a basis for further decisions;

6. Implement the principle of Mitigation Hierarchy giving priority to avoidance, as the Struma Motorway project is evaluated in relation to two Natura 2000 sites. Even in the case of avoidance, two actions have to be addressed:

- a. If the final solution will be outside of Kresna area, it still has to include all the appropriate mitigation and compensation measures in order to secure the permeability of the motorway for all the species of local fauna and the overall cohesion of the protected areas network of South-West Bulgaria and the South-Eastern Balkans in order to implement the principles of Green Infrastructure EU Strategy and to develop a functional TEN-G;
- b. Set up and implement a Kresna Gorge Restoration Plan following the Green Deal Strategy of the European Union at local / regional level, based on the needs for conservation of all the species and habitats included in the Natura 2000 sites and considering the local society’s needs;

7. Update the decision-making table and the multicriteria analysis for the evaluation of the alternative alignments by changing the values of the environmental parameters in order to reflect the prioritisation for Natura 2000 objectives; as a result, **assess all motorway alternatives which comply with Natura 2000 objectives** during the additional review/analysis of the EIA/AA report/study and during the potential revision of the EIA/AA, in order to fulfil the basic requirements of the Habitats, Birds and EIA Directives;

8. Seek solutions that will address, alongside the impacts of the new motorway, the **cumulative potential negative effects of existing and future linear features** (European road, railway, Struma River), as well as opportunities of potential ecological restoration (of affected habitats and connectivity);

9. Address the concerns and the needs of the local society - i.e., loss of agricultural land and the restricted local mobility (access to properties, safe passage for people and livestock, the impact on local businesses including eco-tourism etc.) caused by closing the main local road;

10. Consider organising a **technical workshop/s** in Kresna focused on best practices relevant for the Kresna Gorge and Struma Motorway case involving all concerned stakeholders, and possibly in collaboration with the Bern Convention, Infrastructure & Ecology Network Europe, or other international bodies;

11. The complainants / NGOs /scientists are invited to follow the above recommendations with regard to cooperation with the authorities of Bulgaria, including by sharing data, engaging in cooperation bodies and activities, and agreeing on a detailed **time plan** of next steps inspired by the following proposal:

| Milestone | Steps to be completed |
|-----------------------|--|
| December 2021 | <ul style="list-style-type: none"> • Setting up of a common functional data-support mechanism; • Setting up of a common working group for development of the final form of the Site-Specific Conservation Objectives for the Kresna Natura 2000 sites following the results of the EC-funded independent mission; • Setting up of a common working group for the additional review/analysis of the EIA/AA report/study for compliance with the final form of the Site-Specific Conservation Objectives for the Kresna Natura 2000 sites and for the potential revision of the EIA/AA; • Re-activation of the Steering committee for the building of the “Struma” Motorway. |
| March 2022 | <ul style="list-style-type: none"> • Finalise the Site-Specific Conservation Objectives for the Natura 2000 sites. |
| May 2022 | <ul style="list-style-type: none"> • Organise a Technical Workshop in Kresna. |
| September 2022 | <ul style="list-style-type: none"> • Finalise additional review/analysis of the EIA/AA report/study for compliance with the final form of the Site-Specific Conservation Objectives for the Kresna Natura 2000 sites and for the potential revision of the EIA/AA; |
| December 2022 | <ul style="list-style-type: none"> • Present to the Bern Convention Standing Committee the results and progress of the above actions |

8. IMPORTANT COMPLEMENTARY TECHNICAL BACKGROUND TO THE RECOMMENDATIONS

1. Functional communication is a key component of the process as the final decisions should reflect a multitude of different expertise (local knowledge, ecology, engineering, etc) and be based on cooperation between a variety of stakeholders. During such a process, conflictual situations are inevitable and are not necessarily a negative aspect as they may trigger valuable changes. However it is important that any conflict is addressed openly and handled constructively and not ignored or kept aside (see for example <http://www.mspguide.org/topic/principle-4-deal-conflict>).
2. Establishing a common database is key for a data-based process and as the solutions for the motorway should be found in a reasonable timeframe, all relevant available and new data should be used based on a commonly-agreed validation system (apart from strict academic validation); whenever there is a reasonable doubt that the existing data may still be incomplete, the precautionary approach should be used during decision-making.
3. There are some key GIS outcomes based on field data, multi-criteria analysis and modelling that should be used during the process, after (field) validation:
 - habitat favourability,
 - barrier maps for all linear features, and
 - land permeability maps for all relevant species such as species of conservative interest, umbrella-species/key species for safeguarding connectivity, common species for monitoring etc.
4. The results of former studies in selecting key species are important resources. For example, the study “Restoring Ecological Networks Across Transport Corridors in Bulgaria. Identification of bottleneck locations and practical solutions” (2008) clearly refers (map on page 44) to the Kresna area as one of the most important fragmentation spots in Bulgaria as it is a bottleneck for the highest number of species (9-10). The loss and degradation of habitats for the minimum number of species has to be a main parameter of the choice of the final alignment taking into account the percentage and the position of the alignment in relation to the total surface and location of their distribution. Also, as the experience from all over Europe shows, distribution of large carnivores’ species is dynamic, therefore we are recommending the use of the potential distribution of the brown bear and wolf presented on the Natura 2000 network website when assessing the future spatial and connectivity needs of the species.
5. The motorway alternatives have to be presented based on the favourability and permeability maps for the key species. In order to assess their potential on effectively addressing structural fragmentation:
 - All objects requiring construction (culverts, bridges, viaducts, tunnels) have to be assessed for their potential functional role as wildlife passages or landscape bridges (based on technical specifications, species requirements, local or regional relevance and contextual elements – other barriers, land use etc.) in relation to existing movement routes, corridors, permeable terrain and core areas, etc. Whenever these objects cannot play the role of efficient and sufficient wildlife passages or landscape bridges, they should be improved and/or new, dedicated objects should be included as mitigation solutions.
 - From the cost-benefit analysis perspective, the comparison between motorway alternatives should be made over two stages – without any dedicated mitigation solution and with the dedicated mitigation solutions included.
 - The opportunities of potential ecological restoration (of affected habitats and connectivity) should be also used as criteria of assessment.
 - The constructive solutions (underpasses, overpasses, and fencing system) for addressing the structural barriers for movement of species should represent an overall functional *system* and not only individual local solutions.

6. It's essential to make use of the constantly increasing relevant knowledge at European and Global level and to consider exchanging know-how with similar cases, for example:
 - The IENE Handbook on Traffic and Wildlife is available online and includes a portal of Transport Ecology Guidelines from all over the world (<https://handbookwildlifetraffic.info/>). (For example, referring to the mitigation measures for reptile species on the European road E-79, it is commonly accepted that rectangular structures are more appropriate as fauna crossings than cylindrical ones).
 - Access the most up-to-date and state of the art knowledge from organisations and authorities from Europe with a special focus on Ministries of Transport of counties that have dealt with similar cases or which are currently implementing defragmentation projects such as the Netherlands, Austria and Sweden.
 - The experience of development of sustainable transport and ecological corridors in the Carpathians under the coordination of the secretariat of the Carpathian Convention, Vienna Programme Office of UNEP.
7. The overall process should reflect the particularities of the Kresna case and adapt the existing best practices to the concrete local situation.

The final message

Historically, the Kresna Gorge is an important path for both humans and wildlife. During the last century the existing road and railway have already changed the landscape creating barriers for wildlife. Any future transport development has to ensure that it will meet the needs of people and wildlife ensuring the best possible conservation and cohesion status of the area for the next centuries.

As the Kresna case is important not only for Bulgaria but for the whole Balkan region and Europe, and as national and international stakeholders are aware of the case and ready to contribute by exchanging relevant knowledge, a final message to be stated is that: all the prerequisites are present, not only for solving the existing case, but for actually developing a solution that will stand as a reference for best-practices and which will truly reward the remarkable dedication of all parties during the past decades and during the future years.

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Annex 1: Programme of the on-the-spot appraisal

WEDNESDAY 25TH AUGUST

MEETING WITH GOVERNMENTAL PARTIES

All times are given in Eastern European Summer Time

| Time (EEST) | Themes, topics and guiding questions for the open discussions |
|------------------------|--|
| 09.00-09.15 | Introduction of the meeting |
| 09.15-09.30 | Introduction of participants |
| 09.30-10.00 | <p>Theme 1: Natura 2000 management in Bulgaria</p> <p>Topic A: Categories of protected areas and Natura 2000 sites Topic B: National Framework for Priority Actions for Natura 2000 Priority Species</p> |
| 10.00-10.30 | <p>Theme 2: Natura 2000 network in Bulgaria</p> <p>Topic C: Bio-corridors of SW Bulgaria in the National Biological Diversity Act</p> |
| 10.30-10.50 | Coffee break |
| 10.50-11.50 | <p>Theme 3: EU Green Infrastructure Strategy and Bulgarian Transport Strategy / Master plan</p> <p>Topic D: Bottlenecks in SW Bulgaria as a result of the "Restoration of ecological networks through transport corridors in Bulgaria" project in 2008: Identified problems and solutions. Topic E: National Framework for Priority Actions and cohesion of Natura 2000 network</p> |
| 11.50-13.10 | Lunch break |
| 13.10-14.10 | <p>Theme 4: Kresna Natura 2000 sites management</p> <p>Topic F: Conservation status, conservation/management measures, specific conservation objectives for Species and habitats Topic G: Zoning / high priority areas within Kresna sites Topic H: Local movement corridors, regional bio-corridors and present (pressures) and future (threats) barriers</p> |
| 14.10-14.30 | Coffee break |

| | |
|-------------|---|
| 14.30-15.30 | <p>Theme 5: Struma Motorway plan update</p> <p>Topic I: Data base, as support for an informed decision making in Kresna</p> <p>Topic J: GIS support & maps to fundament decisions</p> <p>Topic K: The motorway planning process, EIA & AA process</p> <p>Topic L: Participatory engagement & communication</p> |
| 15.30-16.00 | <p>Q & A,</p> <p>Observer statement or comment for the experts</p> |
| 16.00 | <p>End of the meeting</p> |

THURSDAY 26TH AUGUST

MEETING WITH COMPLAINANT PARTIES

All times are given in Eastern European Summer Time complainant

| Time (EEST) | Themes, topics and guiding questions for the open discussions |
|------------------------|---|
| 10.00-10.30 | Introduction of the meeting and of participants |
| 10.30-11.30 | <p>Theme 1: Kresna Natura 2000 sites management</p> <p>Topic A: Conservation status, conservation/management measures, specific conservation objectives for species and habitats</p> <p>Topic B: Zoning / high priority areas within Kresna sites</p> <p>Topic C: Local movement corridors, regional bio-corridors and present (pressures) and future (threats) barriers</p> |
| 11.30-12.00 | Coffee break |
| 12.00-13.30 | <p>Theme 2: Struma Motorway plan update</p> <p>Topic D: Data base, as support for an informed decision making in Kresna</p> <p>Topic E: GIS support & maps to fundament decisions</p> <p>Topic F: The motorway planning process, EIA & AA process</p> <p>Topic G: Participatory engagement & communication</p> |
| 13.30-14.00 | <p>Q & A,</p> <p>Observer statement or comment for the experts</p> |
| 14.00 | <p>End of the meeting</p> |

FRIDAY 27TH AUGUST**COMMON MEETING WITH BOTH PARTIES - TOWARDS COMMON SOLUTIONS**

All times are given in Eastern European Summer Time

| Time (EEST) | Theme |
|--------------------|---|
| 10.00-10.15 | Introduction of the meeting |
| 10.15-10.30 | Introduction of participants |
| 10.30-10.40 | Set up the discussion framework based on the two previous meetings: identified gaps and proposed solutions, following a participatory approach, on: <ul style="list-style-type: none"> - Conservation objectives - Support-data - Assessment of planning alternatives - Decision support - Communication |
| 10.40-11.10 | Feedback of the Governmental Parties & Proposed solutions |
| 11.10-11.40 | Feedback of the Complainant Parties & Proposed solutions |
| 11.40-12.00 | Coffee break |
| 12.00-13.30 | Common Discussion – About the process and a roadmap of the parties towards common solutions |
| 13.30 | End of the common meeting |
| 13.30 – 13.45 | Coffee break |
| 13.45-14.15 | Conclusion meeting with the delegates of the two parties |

Annex 2: List of Participants

MINISTRY OF ENVIRONMENT AND WATER

- Mr Miroslav Kalugerov
- Mr Valeri Georgiev
- Ms Asya Doneva
- Ms Yulia Grigorova
- Mr Krasimir Donchev
- Mr Nikolay Nedyalkov

MINISTRY OF TRANSPORT AND INFORMATIONAL TECHNOLOGIES

- Ms Iveta Koleva
- Ms Marina Agalareva
- Ms Galina Vassileva
- Mr Martin Georgiev

STATE AGENCY ROAD SAFETY

- Ms Anzhelina Toteva
- Mr Ivan Petkov
- Mr Ivan Tabakov
- Ms Malina Kroumova

ROAD INFRASTRUCTURE AGENCY

- Ms Nina Stoilova
- Mr Nikolay Natchev

NGOS

- Mr Andrey Kovatchev, BALKANI Wildlife Society
- Ms Desislava Stoyanova, Environmental Association "ZaZemiata"
- Mr Dimitur Vassilev, School for Nature Vlahi,
- Ms Anelia Stefanova, BankWatch,
- Mr Petko Tzvetkov, Bulgarian Foundation for Biodiversity

SCIENTISTS

- Mr Stoyan Beshkov, lepidopterologist, National Natural History Museum
- Mr Simeon Lukanov, herpetologist, Institute of Biodiversity and Ecosystem Research
- Ms Elena Tzingsarska, mammologist, BALKANI Wildlife Society

LOCAL CITIZEN IN KRESNA

- Mr Georgi Ivanov, former mayor of Municipality
- Mr Anton Drachev, local councillor, business owner
- Mr Todor Georgiev, local citizen, goat breeder
- Mr Borislav Paunovski, Reflip rafting club

INDEPENDENT EXPERTS

- Mr Lazaros Georgiadis
- Mr Radu Mot

SECRETARIAT OF THE BERN CONVENTION

- Ms Ursula Sticker
- Mr Eoghan Kelly

Annex 3: NGO proposal for a mechanism for finding a solution in the case of Kresna and Struma motorway

following the Mission of the Bern Convention, 25-27 August 2021

2nd September 2021

Document prepared by:

BALKANI Wildlife Society, Environmental Association "Za Zemiata" (For the Earth)/Friends of the Earth Bulgaria, Bulgarian Society for the Protection of Birds, Green Policy Institute, Vlahi Nature School, CEE Bankwatch Network.

This proposal was made by NGOs during the mission of independent experts of the Bern Convention conducted through online meetings with stakeholders between 25 and 27 August 2021. The proposal was made in order to propose and find a mechanism to resolve serious differences between stakeholders. It includes:

Objective: to reach a common solution to the case accepted for all interested parties

Basic principles and rules of decision making:

- Discussion of all key issues for the final decision
- Early discussion - at the beginning of the decision-making process
- Involvement of all relevant stakeholders
- Consensual decision-making process as the only mechanism for overcoming the difference in positions
- Full transparency (including full publicity and broadcasting of all meetings, documents, etc.) and full public access to relevant information

Proposed mechanism:

1. Scientific working group to the national environmental authorities

Tasks:

- Task 1 development of a consensus scientific proposal for nature Conservation Priorities /Site Specific Conservation Objectives (SSCOs) of NATURA 2000 sites Kresna-Ilindentzi BG0000366 and Kresna BG0002003 according to art. 4.4 of Directive 92/43 and by the order of art. 8 of the National Biodiversity Act and based on the principle of best available scientific information.
- Task 2 development of a consensus scientific proposal for the scope and terms of reference of a revised EIA / AA report for the Struma Motorway in Lot 3.2 (Kresna Gorge)
- Task 3 development of a consensus scientific opinion on the quality of the revised EIA / AA report for the Struma Motorway in Lot 3.2 (Kresna Gorge) and the selection of alternatives and mitigation measures.

Participants / stakeholders:

- Representatives of the respondents for designation the two sites (Bulgarian Society for the Protection of Birds and the BALKANI Wildlife Association): NATURA 2000 management

expert from NGOs and experts in habitats (forest and non-forest), invertebrates, fish, reptiles and amphibians, birds, mammals (bats and large carnivores).

- Experts from the Bulgarian Academy of Sciences and Sofia University working on behalf of national authorities to determine SSCOs
- NATURA 2000 management experts from other NGOs and representatives of complainant NGOs
- Representatives of national environmental authorities
- Observers: invitation to experts from the European Commission

2. Social, Economic Affairs and Road Safety working group at the National Road Authorities

Task: development of a consensus public proposal for road safety assessment according to art. 3 of Directive 2008/96 / EC of all feasible alternatives and selection of the safest and most socially acceptable, incl. for the local community, an alternative

Participants / stakeholders:

- Representatives of a local civic committee from the town of Kresna
- Mayor of the town of Kresna and municipal council of the town of Kresna
- Representatives of the complainant NGOs
- Representatives and experts of the national road authorities

3. Establishment of a new monitoring committee

Tasks:

Task 1: Exchange of information between working groups

Task 2: Exchange information with other stakeholders

Participants / stakeholders:

- Representatives of the scientific working group
- Representatives of the social working group
- Other representatives of government institutions
- Other NGOs
- Other representatives and experts of the national authorities
- Observers: invitation to the European Commission