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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

42nd meeting
Strasbourg, 28 November - 2 December 2022

New complaint: 2022/06

Possible negative impact of mining activities in Bosilegrad and in the Homolje Mt region (Serbia)

- COMPLAINT FORMS -

Document prepared by

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Convention on the Conservation of European Wildlife and Natural Habitats

COMPLAINT FORM

First name: Zorica

Surname(s): Lujic

On behalf of:
1)Earth Thrive,international NGO, serving as a stand-in legal guardian to represent the rights of impacted wild flora and fauna species and endangered habitat in Serbia

2) EkoKrajiste, Bosilegrad, Serbia

3) Kings College Legal Clinic, London, UK

4) Balkanka Association, Sofia, Bulgaria

Web site: https://www.earth-thrive.org/

Date: 4th October 2022

1. Please state the reason of your complaint (refer also the Contracting Party/es involved and the Articles of the Convention which might be violated).

Serbia has violated Articles 2, 3.2, 4.1, 4.2, 4.4 of the Bern Convention by failing to take appropriate and necessary legislative and administrative measures to protect wild flora and fauna species (including those listed in Annexes I, II, and III) and protected natural habitat from Bosil Metal, d.o.o. Bosilegrad's ("Bosil Metal") copper, zinc and lead mine on the Karamanica ore field ("Karamanica Mine"). Bosil Metal constructed a pilot mine in 2017 with a capacity of 25ktpa. Serbia allowed the pilot mine to commence without any Environmental Impact Assessment, and it has continued to operate since 2017 despite only having a licence to operate for three years. Processing occurs via two flotation plants near the Karamanica and Golema Rivers, which has led to severe heavy metal pollution from cadmium, copper, arsenic, and lead. A 2021 study by the University of Belgrade has shown that metal levels in the water and soil downstream from the mine and at a control point at Lake Vlasina far exceed maximum permissible concentrations (see Appendix 1).Despite domestic and international complaints regarding this pollution, Serbia has failed to prevent the ongoing harm to protected flora, fauna and habitats in line with its obligations under the Convention.
The documented pollution from the Karamanica Mine has caused transboundary environmental impacts in at least one neighbouring state, Bulgaria. As a result of the pollution, Bulgaria filed a complaint against Serbia with the Implementation Committee of the Convention on Environmental Impact Assessment in a Transboundary Context ("Espoo Convention"). The Implementation Committee upheld parts of the complaint on 13 July 2022 (see Appendix IV).

The limited available information shows the mine has had widespread severe impacts to wild flora and fauna species and protected natural habitats (see Questions 2-3). Bosil Metal intends to scale operations at the Karamanica Mine to 240ktpa, and has submitted an Environmental Impact Assessment to that end. An expansion of the mine would compound already severe environmental impacts and violations of the Convention.

The mine would also violate the inherent rights of impacted species and their habitats. Due to the shortcomings of Serbia's laws, enforcing the Rights of Nature is "necessary" to protect species and their habitats in accordance with the purpose of the Bern Convention (see Articles 1-10 and Appendix I).

2. Which are the specific specie/s or habitat/s included in one of the Appendices of the Bern Convention potentially affected? (Please include here information about the geographical area and the population of the species concerned, if applicable)

Location: The project is located 30km southeast of Bosilegrad, near the Bulgarian border. The mine exploits two deposits called "Podvirovi" and "Popovica" on the Karamanica ore field near Karamanica village. Both deposits lie adjacent to waterways emptying into the Karamanica and Golema rivers. There is a flotation plateau belonging to the mine on the Popovska river and a flotation tailings location on the Karamanica river. The waterways in the area are highly interconnected and flow across state boundaries. The Golema flows into the Dragovištica river which crosses into Bulgaria, later joining the Struma river in the Aegean basin.

The area is home to numerous species of flora and fauna protected under the Bern Convention. The Bosil Metal EIA Application at p49 states that the municipality of Bosilegrad contains protected sites such as IBA-Important Bird Areas, Prime Butterfly Areas, and preliminary IPA-Important Plant Areas, while also bordering candidate NATURA 2000/Emerald network sites and Ramsar sites by way of an interconnected ecosystem.

Habitats and Species: The mine is impacting and will continue to impact at least 29 species protected under the Bern Convention: 15 species of Annex II Strictly Protected Fauna; 9 species of Annex III Protected Fauna; and 5 Annex 1 habitat types (see Appendix II).

3. What might be the negative effects for the specie/s or habitat/s involved?

The Karamanica Mine is causing negative effects on surface and groundwater, soil, air pollution, and noise. Clear evidence already exists of severe water and soil pollution, which will be exacerbated by scaling the mine to a production level ten times greater than current operations (see Appendix III).These effects have harmed local ecosystems,affecting flora, fauna and habitats protected under the Convention. Despite acknowledging the possibility of these effects in its notification to Bulgaria under Article 3 of the Espoo Convention, Serbia has not taken sufficient legislative or administrative steps to limit or prevent the harm. Beyond domestic effects,the Implementation Committee of the Convention found that both Serbia and Bulgaria agreed that the mine "is likely to cause a significant adverse transboundary impact".

4. Do you know if potentially affected species or habitats also fall under the scope of other international Conventions, (for instance: RAMSAR, CMS, ACCOBAMS, Barcelona Convention, etc.) or if the area has been identified as a NATURA 2000/Emerald network site?

As stated above in Question 2, the Bosilegrad region borders a Ramsar site, and two candidate Natura 2000/Emerald network sites: the Vlasina Site on the Bosilegrad-Surdulica border, and the German-Pchinja Site just below the Macedonian border. The mine affects approximately 30-50 breeding pairs of the Semi-collared Flycatcher (*Ficedulasemitorquata*), which is protected under both Annex II of the Bern Convention and Annex II of the Convention on the Conservation of Migratory Species of Wild Animals ("CMS").

5. Do you know if there are any pending procedures at the national or international level regarding the object of your complaint?

There are no pending procedures at the international level. A complaint was previously lodged with the Directorate-General for Environment of the European Commission ("DG ENV") by Balkanka Association on 30 June 2015 (CHAP(2015)02363). The complaint was treated under EU Pilot ref. EUP(2017)9183. Eight appendices were subsequently provided, including Appendix 8 on 16 November 2018 and Appendix 8A on 8 January 2019, which addressed, inter alia, pollution from the Karamanica Mine. While DG ENV formally closed the complaint on 23 February 2021, a related structural investigation into possible breaches of the Water Framework Directive in Bulgaria was opened in 2020 (ref. EUP(2020)9721). Additionally, Balkanka Association filed a complaint reporting pollution from the Karamanica Mine with the Implementation Committee of the Espoo Convention on 10 February 2019. The Implementation Committee received submissions from both Serbia and Bulgaria, and found on 13 July 2022 that both parties had breached the Espoo Convention (see Appendix IV).

Domestically, we understand there to be no pending procedures. Serbia's legal system has failed to provide adequate legislative and administrative protection for wildlife and habitats. Despite some domestic enforcement action (see Appendix IV), Serbia has taken a pro-mining stance through its law and policy. Serbia's weak EIA process also makes it difficult for the public to fully review environmental impacts.

6. Any other information (existence of an Environmental Impact Assessment (EIA), size of projects, maps of the area, etc.)

The Serbian Ministry of Environmental Protection issued a decision determining the scope and content of the Environmental Impact Assessment for the expanded Karaminica Mine on January 14 2022. We do not have further information regarding the implementation of the EIA, however the pilot mine continues to operate in breach of multiple domestic orders to the contrary. A map of the site is set out at Appendix V.

Convention on the Conservation of European Wildlife and Natural Habitats

COMPLAINT FORM

First name: Zoe

Surname(s): Lujic

On behalf of (if applicable):

1) Earth Thrive, international NGO, serving as a stand-in legal guardian to represent the rights of impacted wild flora and fauna species and endangered habitat in Serbia;

2) Mlavska Vojska and Čuvari Homolja- NGOs, Serbia

3) Earth Law Center - NGO USAWeb site: N/A

Web site: https://www.earth-thrive.org/

Date: 4th October 2022

1. Please state the reason of your complaint (refer also the Contracting Party/es involved and the Articles of the Convention which might be violated)

If the Timok Gold Project mine were allowed to be constructed in the Homolje region the Serbian government would violate at minimum the Bern Convention's Articles 3.2, 3.3, 4.1, 4.2, 5 by neglecting to provide appropriate and necessary legislative and administrative protection measures for the wild flora and fauna species (including those listed in Appendices I and II). Canadian Dundee Precious Metals (DPM), an international gold mining company, operates in the Homolje region with expressed permission from the Ministry of Mining and Energy, in conjunction with the Ministry of Environmental Protection, the Ministry of Culture, and the Media of the Republic of Serbia.[1]

The affected Homolje Mountain region is in Eastern Serbia, is located between the National Park Kučaj-Beljanica to the south (five, and National Park Đerdap adjacent to the Danube River to the north (c. 25km?), and close to two Nature Monuments: river Mlava source and Homoljska potajnica. Furthermore, there are three Important Bird Areas surrounding the affected region, all within 10km distance. Many rivers run through the project area with the catchments of the Zlotska Reka, Mlava, Veliki Timok and Crni Timok rivers which all drain into the internationally protected Danube. The mine would be in close vicinity to small settlements of Laznica and Žagubica (three and nine kilometres away, respectively).[2]

DPM has been exploring extensively since around 2007 and currently holds three exploration licences. The company has drilled more than 1200 drill holes, and continues to explore and plans further expansion into the adjacent area Čoka Rakita. The current mine project, for which a Spatial Plan of around 292km2 is currently being drafted by the Serbian authorities, features seven-eight open mining pits (!), three waste rock dumps, and one heap leach area, with other accompanying infrastructure.

The mine will critically endanger the ecosystem due to the impacts from deforestation, soil removal,

[1] Maria O'Connor et al., *Updated Preliminary Economic Assessment for the Timok Gold Project, Serbia*, CSA Global (Apr. 30, 2019), https://www.miningnewsfee d.com/reports/Timok_8292019_PEA.pdf

[2] All technical details regarding mine operation have been taken from *Timok Project Pre-Feasibility Study*, Dundee Precious Metals (Mar. 30, 2021), https://s27.q4cdn.com/486073686/files/doc_downloads/2021/03/30/Timok-Technical-Report.pdf.

heap-leaching, pit dewatering (and sedimentation ponds), different types of waste (including potentially the formation of Acid Mine Drainage), potential cyanide use, fumes or gases (including mercury vapours), acid rock drainage, non-mineral wastes (packaging, used oil, batteries, medical waste, sewage). The impacts during the exploration phase, as per usual practice of the relevant authorities to Serbia, have been poorly monitored, however negative impacts have been independently observed. According to the relevant data from the Faculty of Biology, University of Belgrade, in the area was registered the presence of 143 species important for protection, including 57 species protected under the Bern Convention.

2. Which are the specific specie/s or habitat/s included in one of the Appendices of the Bern Convention potentially affected? (Please include here information about the geographical area and the population of the species concerned, if applicable)

Location: Eastern Serbia, the Homolje Mountains, around 25km south of the Danube River Some of the dominant habitat of Beech Woodland, hay meadows, Fagus & oak-hornbeam forests, wetlands, ponds, gorges, and underground springs. **Please refer to Appendix VIII for a full list with the EUNIS codes.**

Mammals: Balkan Lynx (*Lynx lynx balcanicus*), Brown Bear (*Ursus arctos*), alpine marmot, small marmot…

Birds: Golden Eagle (*Aquila chrysaetos*), Peregrine Falcon (*Falco peregrinus*), Gray Partridge (*Perdix perdix*), Eurasian Teal (*Anas crecca*), Wigeon (*Anas penelope*), Mallard (*Anas platyrhynchos*), Garganey (*Anas querquedula*), Common Pochard (*Aythia ferina*), White fronted Goose (*Anser albifrons*), Bean Goose (*Anser fabaliss*), Eurasian Woodcock (*Scolopax rusticola*), Common Wood-pigeon (*Columba palumbus*), Eurasian Collared-dove (*Streptopelia decaocto),* European Turtle-dove (*Streptopelia turtur),* Common Quail (*Coturnix coturnix),* Common Coot (*Fulica atra*), Common Moorhen (*Gallinula chloropus*), Eurasian Jay *(Garrulus glandarius*), Rook (*Corvus frugilegus*), Great Cormorant (*Phalacrocorax carbo),* Northern Goshawk (*Accipiter gentilis),* Grey Heron (*Ardea cinerea),* Hooded Crow (*Corvus cornix),* Black-billed Magpie (*Pica pica),* Rock Partridge (*Alectoris graeca*), Hazel Grouse (Tetrastes bonasia), Common Snipe (Gallinago gallinago), Northern Pintail (Anas acuta L), Northern Shoveler (Anas clypeata L), Gadwall (Anas strepera L), Tufted Duck (Aythya fuligula L). For more info on the impacted bird species please follow this link https://pticesrbije.rs/wp-content/uploads/lista-vrsta-ptica-Potaj-cuka.pdf

Please refer to Appendix VI for the rest of the list of the impacted species

3. What might be the negative effects for the specie/s or habitat/s involved?

Gold mining is extremely toxic and corrosive to Nature. The announced strategies to be used for the gold mine include cyanide heap leaching and possibly would involve froth flotation. Planned exploitation in three open cast mining areas containing multiple pits of different sizes increases the odds of contamination.

Risks to the natural environment stem from pit dewatering (and sedimentation ponds), mineral waste (potentially generating acid drainage), fumes and gases, rock waste, which all have potential to harm the region's natural features. Site-wide deforestation, soil removal, water diversion and likely contamination, noise disturbance, dust pollution, habitat destruction & fragmentation will all disturb, harm and potentially kill members of protected species and their habitats. Risks to groundwater and surface water quality are deemed high. (Detailed explanation in Appendix VIII.)

4. Do you know if potentially affected species or habitats also fall under the scope of other international Conventions, (for instance: RAMSAR, CMS, ACCOBAMS, Barcelona Convention, etc) or if the area has been identified as a NATURA 2000/Emerald network site?

According to the report from Professor D Lakusevic from the Faculty of Biology of the Belgrade University, within the limits of MGRS (UTM) 10x10km squares EP44, EP45, EP54 and EP55, **the presence of 143 species important for protection was registered, among which there are 42 species from the Habitat Directive, 57 species from the Bern Convention, 7 species from the Bonn Convention, 7 species with Cites concession, 106 species from the Rulebook on Protected and Strictly Protected Species of Serbia and 32 species in the "endemic/relict/rare" category.**

5. Do you know if there are any pending procedures at the national or international level regarding the object of your complaint?

There are at the moment no pending procedures at either level regarding the object of this Complaint. Serbia's legal system fails to provide adequate legislative and administrative protection for wildlife and habitats. Serbia has taken a pro-mining stance through its law and policy. Serbia's very weak EIA process also makes it extremely difficult for the public to fully review environmental impacts and participate in the decision making processes.[8] **Hence why we had to address this Convention for help in enforcing Nature protection.**
We therefore urge the Standing Committee to arrange an on-the-spot visit as soon as possible.

6. Any other information (existence of an Environmental Impact Assessment (EIA), size of projects, maps of the area, etc)

The EIA and Feasibility Study (FS) were supposed to be released in June 2022 and then by the end of September 2022, but still have not been. DPM has released a Pre-Feasibility Study in February 2021. They have also commissioned and released a Draft of the Spatial Plan for the mine in September 2021. The Spatial Plan in Serbian legislation is a key step to progress with obtaining construction and exploitation licences.
The maps in the Appendix X show exploration licences (red bordered areas) and mineral deposits targeted for exploitation

APPENDIX I: Rights of Nature

Introduction*:* The Karamanica Mine violates the inherent rights of wild flora and fauna species and protected natural habitats in Serbia. Due to the shortcomings of traditional environmental laws, recognising and enforcing the Rights of Nature is "necessary" to protect species and their habitats in accordance with the purpose and requirements of the Bern Convention (see Articles 4-7).

Background on the Rights of Nature*:* Despite the passage of thousands of environmental laws, Nature's health continues to decline due to biodiversity loss, deforestation, the destruction of rivers and watersheds, climate change, and other harms. For example, there has been a 68 percent loss of global wildlife populations over the last 50 years.[3] Serbia has also experienced massive losses of natural habitats and wild flora and fauna, as showcased in the recent European Rights of Nature Tribunal on the subject of the devastated rivers of the protected Mountain Kopaonik.[4] Environmental decline impacts humans as well, because we are part of Nature.

A primary cause of these crises is the legal system's treatment of Nature as mere human property, with only humans and human-made entities possessing even the most basic rights. In turn, the economic system in Serbia and globally treats Nature as a commodity, encouraging its exploitation for short-term profits. This fundamentally flawed model has led to the inevitable result of the global degradation of Nature.[5]

The Rights of Nature challenges the notion that Nature is mere property and instead acknowledges that natural entities—including ecosystems and plant and animal populations—possess inherent rights, just as humans do.[6] The Rights of Nature are **similar to human rights but for <u>all life</u> on the planet**.[7] Sometimes, legal guardians are appointed to defend Nature's rights, or they can be enforced by the general public. The Rights of Nature is recognised at some level of government in at least 15 countries.[8]

The Rights of Nature supports the paradigm shift necessary to protect species and habitats. A 2019 United Nations "mega report" on biodiversity loss called repeatedly—*21 separate times*—for "transformative change" to safeguard life on Earth.[9] In 2020, the "Leaders' Pledge for Nature," signed by more than 60 heads of state and governments, similarly concluded that "transformative change is needed."[10] The Rights of Nature achieves the "transformative change" being called upon by the international community.

Rights of Nature and the Bern Convention*:* The Bern Convention supports consideration of the Rights of Nature. First, the Preamble of the Bern Convention explicitly recognises the "intrinsic value" of wild flora and fauna ("Recognising that wild flora and fauna constitute a natural heritage of (…) *intrinsic value* that needs to be preserved and handed on to future generations").[11] Therefore, the Bern Convention takes an eco-centric, or Earth-centered, perspective, rather than taking the typical anthropocentric perspective that Nature's value is derived from its human benefits. Legal scholars have posited that "*entities that have value for their own sake*, rather than for the value they provide others, *can have rights*."[12] Therefore, recognising the Rights of Nature is the natural extension of recognising Nature's inherent value.

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[3] WWF, *Living Planet Report 2020*, https://www.worldwildlife.org/publications/living-planet-report-2020.
[4] Balkan Rivers Case, https://www.rightsofnaturetribunal.org/cases/balkans-rivers-case.
[5] Grant Wilson, *Envisioning Nature's Right to a Stable Climate*, 10(1) Sea Grant L. &Pol'y J. 60 (2020), https://heinonline.org/HOL/LandingPage?handle=hein.journals/sglum10&div=9&id=&page=.
[6] *See generally*Zelle et al., *Earth Law: Emerging Ecocentric Law—A Guide for Practitioners* (2021).
[7] Interactive Dialogue on Harmony with Nature (Apr. 2020) http://files.harmonywithnatureun.org/uploads/upload905.pdf.
[8] *See* UN Harmony with Nature, http://www.harmonywithnatureun.org/rightsOfNature/.
[9] IPBES, https://www.cbd.int/doc/press/2019/pr-2019-05-06-IPBES-en.pdf.
[10] Leaders Pledge for Nature (2020), https://www.leaderspledgefornature.org/Leaders_Pledge_for_Nature_27.09.20.pdf.
[11] Convention on the Conservation of European Wildlife and Natural Habitats Rm.coe.int, https://rm.coe.int/1680078aff.
[12] *See*Chapron, Epstein, and López-Bao, *A Rights Revolution for Nature, Science* (2019), citing J. Raz, *The Morality of Freedom* (Clarendon Press, 1986) (emphasis added).

We encourage the Secretariat to likewise interpret the Bern Convention in a manner that considers, supports, and/or enforces the Rights of Nature.This is one of the primary purposes of our complaint.

Article 4 of the Bern Convention also supports, if not necessitates, consideration of the Rights of Nature (see also Articles 5, 6, 7, 10). Article 4 of the Bern Convention requires Contracting Parties to "take *appropriate* and *necessary* legislative and administrative measures" to conserve the habitat of wild flora and fauna species and endangered natural habitats. As described above, so long as Nature is legally defined as mere human property, its full protection is impossible, and its exploitation and decline are inevitable.As we have already established, Serbia's legislative and administrative measures fail to adequately protect species and their habitats from the Karamanica Mine and, to the contrary, encourage nature's wholesale exploitation. Recognising and enforcing the Rights of Nature is "appropriate" and "necessary" to protect species and their habitats. It may be impossible to achieve Article 4 in particular and the overarching purpose of the Bern Convention in general without fundamentally addressing root causes of ecological decline, such as by enforcing the Rights of Nature.

Conclusion: We ask the Secretariat to consider the Karamanica Mine in light of the Rights of Nature. Specifically, we ask you to infer the Rights of Nature based on the purpose of the Bern Convention and to incorporate it into Article 4, at a minimum, by finding that upholding the inherent value and Rights of Nature is "appropriate and necessary" to conserve wild flora and fauna species and endangered natural habitats. More broadly, we ask that you consider the totality of our complaint based upon the Rights of Nature. In making this analysis, note that oftentimes Nature is determined to possess, at a minimum, the rights to exist, thrive, and evolve naturally.[13]We would be pleased to provide additional legal analyses on the Rights of Nature and the Bern Convention upon request.

APPENDIX II: Affected Species and Habitats

Annex I of Resolution 4 of the Bern Convention on endangered natural habitat types using the EUNIS classification (year of revision 2014)
(1) (Sub-) Mediterranean pine forests with endemic black pines (*Pinus nigra*) **[G3.56]** (2) Cryptogam and annual dominated vegetation on siliceous rock outcrops (*Dianthus cruenthus*) **[RLE1.1b]** (3) Helenic tall herb communities (*Cirsiumappendiculatum*) **[E5.571]** (4) Oro-Moesian grasslands (*Festuca valida*) **[E4.3921]** (5) Northern Apennine (*Asperula apiculate*) [**E1.2721]**

Annex II of the Bern Convention – Strictly Protected Fauna Species
(1) Yellow-bellied toad (*Bombina variegate*) (2) Agile frog (*Rana dalmatina)* (3) Green toad (*Pseudepidaleaviridis)* (4) European tree frog (*Hylaarborea)* (5) Hermann's Mediterranean Tortoise(*Testudo hermanni*) (6) Common wall lizard (*Podacarismuralis*) (7) Green lizard (*Lacerta viridis*) (8) Sand lizard (*Lacerta agilis)* (9) Aesculapian snake (*Zamenis longissimus* (before *Elaphelongissima*)) (10) Smooth snake (*Coronellaaustriaca)* (11) Dice snake (*Natrixtessellata*) (12) Nose-horned viper (*Viperaammodytes*) (13) Southern crested newt (*Trituruskarelinii*) (14) Macedonian crested newt (*Triturusmacedonicus)* (15) Semi-collared Flycatcher (*Ficedulasemitorquata*)

Annex III of the Bern Convention – Protected Fauna Species
(1) Fire Salamander (*Salamandrasalamandra*) (2) Stream frog (*Rana graeca*) (3) Lake frog (*Rana ridibunda*) (4) Common toad (*Bufobufo*) (5) Common slow worm (*Anguis fragilis*) (6) Grass snake

[13]*See e.g.,* UN Harmony with Nature Initiative, http://www.harmonywithnatureun.org/rightsOfNature/. Colombian courts found the rights of ecosystems to protection, conservation, maintenance and restoration. *See id.* Thomas Berry found that nature has at least three rights: the right to be, the right to habitat, and the right to fulfill its role in the ever-renewing processes of the Earth community. See https://www.therightsofnature.org/thomas-berrys-ten-principles-of-jurisprudence/.

(*Natrixnatrix*) (7) Adder (*Viperaberus*) (8) Smooth newt (*Triturus vulgaris*) (9) Alpine newt (*Triturusalpestris*)

APPENDIX III: Negative Effects on Species and Habitats

The Karamanica Mine causes harm to species and habitats protected under the Convention by way of severe water, soil and air pollution. An August 2020 report prepared by scientists from the University of Belgrade[14] has documented extremely high concentrations of the toxic elements lead (Pb), copper (Cu), arsenic (As), and cadmium (Cd).[15]For example, lead levels in water flowing through the Karamanička River downstream from the Podvirovideposit are **200-600 times higher** than the maximum permissible level of 10 µg/L. Similarly, lead levels in sediment in the Karamanička River and further downstream in the Golema River far exceed the maximum level of 310 mg/kg.

The other toxic elements tested show similarly elevated water and sediment concentrations, depending on location.There are elevated levels of copper and cadmium in water and sediment at various testing sites impacted by the mine. High levels of arsenic in water were measured immediately downstream of the Podvirovi deposit. Of particular concern are arsenic levels in sediment exceeding the maximum permissible level of 42 mg/kg, which were found both close to the Podvirovi deposit **and 15km downstream in the Brankovačka River**. Such extensive environmental harm causes transboundary impacts and negatively affects large areas of habitat containing species protected under the Convention. These negative effects will rapidly increase in scale if the Karamanica Mine expands production capacity tenfold to 240ktpa.

Serbia has clear knowledge of the serious pollution described above, as shown in its notification to Bulgaria under Article 3 of the Espoo Convention, which sets out at pages 3-4"expected environmental impacts" of the project, such as effects on water, air, soil and noise. The notification also describes the possibility of "significant chemical accident[s]" affecting the Karamanička River, Golema River and ultimately impacting on river systems in Bulgaria. Nonetheless, Serbia has failed to adopt effective legislative and administrative measures to prevent the harm described, leading to breaches of the Bern Convention.

APPENDIX IV: International and National Procedures

International procedures: As described in Question 5, there have been two completed international procedures related to the Karamanica Mine: (1) theDG ENV complaint; and (2) the Espoo Convention complaint. Engagement with these procedures reflects the European importance of the site and species concerned. Unfortunately, neither procedure has prevented the ongoing breaches of the Bern Convention described in this complaint. As such, this complaint is sufficiently serious to warrant examination at the international level, and the Standing Committee of the Bern Convention is an appropriate forum to address breaches under the Convention.

The following factual findings and recommendations from the Implementation Committee of the Espoo Convention are relevant to this complaint:

a. The Committee found at [57] that the pilot facility "activity continued to operate in breach of its operation licence, notably after the permitted time frame for testing flotation

[14]Dr D. Đorđević, "Ecochemical status of Krajista watercourses," University of Belgrade, Scientific Institute Institute of Chemistry, Technology and Metallurgy Institute of National Importance, Center of Outstanding Values for Chemistry and Environmental Engineering (study unpublished, available in English upon request). Measurements were taken on Aug 13, 2020. Analysis of the study was also made by Prof Dr M. Mihailov, Doc Dr B. Vladkova, Doc DrE.Vlaseva "ДОКЛАД ТЕЖКИ МЕТАЛИ" (2020) (in Bulgarian only).

[15]See Table 2.5 on page 55; Table 2.3 on page 53; Table 2.23 on page 73; and Table 2.6 on page 56.

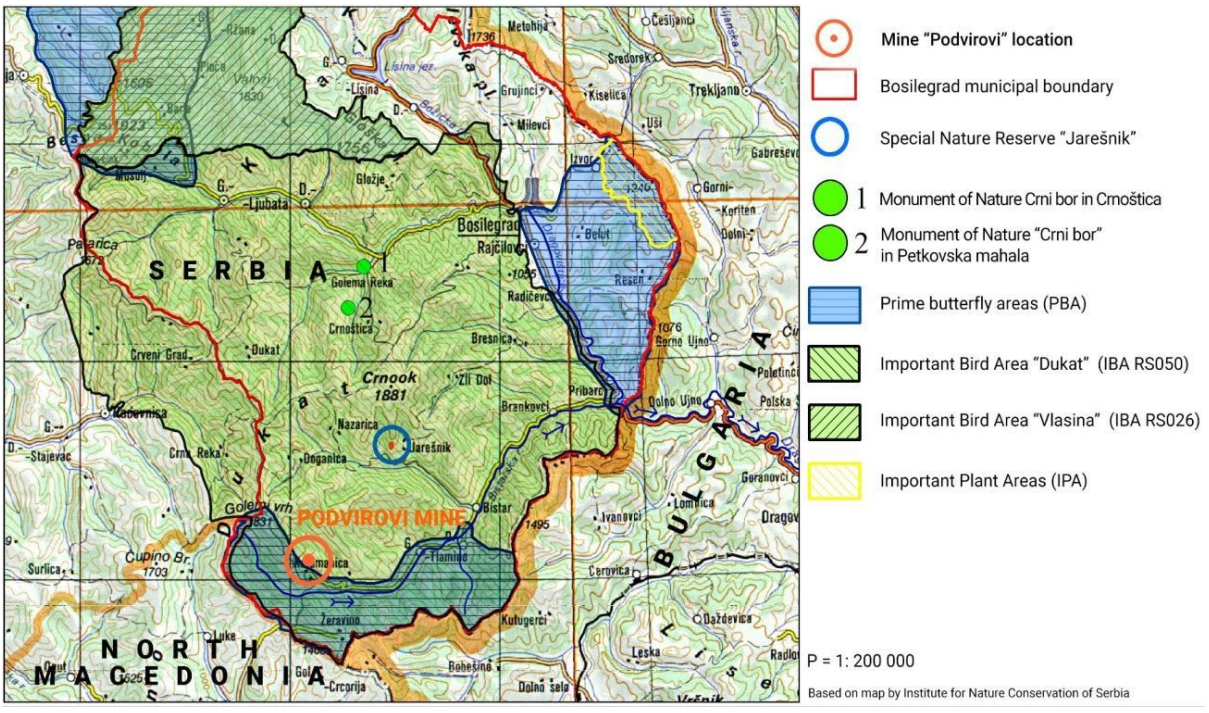
technology had elapsed". This continued operation was deliberate, and "misleading" for affected parties: [56];

b. Serbia failed to cumulatively assess the environmental impacts of the project, and ought to assess such impacts for the expanded mine: [84];
c. The Committee recommended that Serbia ensure that cumulative impacts from the new and existing mining activities are properly taken into account during environmental impact assessment: [86c]. There is no evidence that this has occurred; and
d. Serbia was encouraged to monitor pollution in the Ljubatskaand DragovišticaRiver basins and regularly communicate the results to Bulgaria, with a view to taking all appropriate measures to control any significant adverse transboundary impacts: [86e]. There is no evidence that control measures have been adopted to prevent transboundary impacts of the kind described in this complaint.

Domestic procedures: Since at least 2021, there have been domestic enforcement proceedings connected to the Karamanica Mine. These remedies have proven ineffective, and have been exhausted. The mind continues to operate without any environmental impact assessment, causing the negative effects described in this complaint and visible in Appendix V. The following lists sets out relevant domestic proceedings:

a. **May 13, 2021**: The Ministry of Mining and Energy ("MRE") issued a decision refusing to extend the pilot project's term of operation.
b. **June 2, 2021**: An inspector from the MRE Department of Geological and Mining Inspection, Division for Mining Inspection recommended a ban on further mining works, and on disposal of intermediate product outside of the exploitation field.
c. **June 17, 2021:** A decision was issued by the inspector implementing the recommendations described above at (c): (ref. 310-07-01230/2021-09 06/09/2021)
d. **July 20, 2021**: An appeal was filed by Bosil Metal against the decision.
e. **December 22, 2021**: The Ministry rejected the appeal (ref. 310-07-1230/2021-09).

APPENDIX V: Project Site Map and Visual Documentation of Effects



APPENDIX VI
Impacted Species

Reptiles: Slow worm (*Anguis fragilis)*, Green Lizard (*Lacerta viridis*), Common wall lizard (*Podarcis muralis*), Snake-eyed skink (*Ablepharus kitaibelii)*, Grass snake (*Natrix natrix)*, Dice snake (*Natrix tessellata)*, Aesculapian snake (*Zamenis longissimus)*, Smooth snake (*Coronella austriaca)*, Nose-horned viper (*Vipera ammodytes)*, Adder (*Vipera berus).* **Amphibians:** Yellow-bellied toad, European tree frog, common frog.

Mammals: Northern White-brested hedgehog (*Erinaceus roumanicus)*, European Mole (*Talpa europaea)*, Greater Horseshoe Bat***** (*Rhinolophus ferrumequinum)*, Lesser Horseshoe Bat***** (*Rhinolophus hipposideros)*, Noctule* (*Nyctalus noctula)*, *Barbastelle - Barbastella barbastellus* (Schreber, 1774), Savi's pipistrelle - Hypsugo savii* (Bonaparte, 1837), Schreiber's Bat - Miniopterus schreibersii* (Kuhl, 1819), Greater mouse-eared bat - Myotis myotis* (Borkhausen, 1797)* Brown Hare (*Lepus europaeus)*, Red Squirrel (*Sciurus vulgaris)*, Bank Vole (*Myodes glareolus)*, Common Vole (*Microtus arvalis)*, Yellow-necked Mouse (*Apodemus flavicollis)*, Wood Mouse (*Apodemus sylvaticus)*, Mound-building Mouse (*Mus spicilegus)*, Edible Dormouse (*Glis glis)*, Wolf******(*Canis lupus)*, Red Fox (*Vulpes vulpes)*, Pine Marten (*Martes Martes)*, Badger (*Meles melses)*, Wildcat****** (*Felis silvestris)*, Wild Boar (*Sus scrofa)*, Roe Deer (*Capreolus capreolus)*, Red Deer (*Cervus elaphus). Do*

Fish: Stone Crayfish (*Austropotamobius torrentium*). **Plants**: Green winged orchid (*Orchis morio L.*)

*** Protected under the Convention of the Conservation of Migratory Species of Wild Animals - Bonn Convention, Agreement on the Conservation of Populations of European Bats - EUROBATS[16]**
**** Protected under CITES[17]**

The critically endangered Balkan Lynx

The Balkan Lynx, which is known to reside in the region, is a critically endangered "umbrella" species that has been on the brink of extinction for nearly a century, with total numbers estimated to be fewer than 50. The Balkan lynx is protected by the Bern Convention by Appendix III and is also protected under the CITIES by Appendix II and the EU Habitats and Species Directive by Annexes II and IV

According to what we know so far from the Report on the State of Diversity of the Institute for Biological Research "Siniša Stanković", there are 40 strictly protected and 34 protected bird species on the site, while one (partridge - Perdik perdik) has the status of an endangered species according to the IUCN, and the quail Coturnik coturnik is particularly important according to the Bern Convention

At the local level, there are also several species that need to be protected from danger and disturbance. These are: alpine marmot, small marmot, yellow-bellied toad, European tree frog and common frog. All these species are strictly protected by national law and globally protected as Least Concern. However, in a recent study on the protection and reduction of the number of amphibians in Serbia (Crnobrnja-Isailović and Paunović 2014, in printing), the alpine marmot and the common frog were marked as species of special interest for protection in Serbia, while the yellow-bellied toad and European tree frog suspect that their numbers are declining. P. 144 (Osnovni izveštaj o stanju biološke raznovrsnosti).

List of endangered natural habitat using the EUNIS classification (marine version 2022 & terrestrial version 2021)

Dominant habitat of Beech Woodland (EUNIS Code: G1.6), R2232 - Moeso-Thracian mesophile hay meadows, R567 - Eastern oro-Mediterranean and Balkan tall-herb communities, S35731 - Moesian oriental hornbeam thickets, S35732 - Moesian lilac thickets, T177 - Moesian Fagus forests, T185 - Acidophilus Moesian Fagus forests, T1962 - Helleno-Moesian Quercus frainetto forests, T19641 - Helleno-Moesian Quercus petraea forests, T1E1C3 - Moesian oak-hornbeam forests, T1E322 - Dacio-Moesian hornbeam forests, T1F621 - Moesian Fagus-ash-sycamore ravine forests, T1F622 - Moesian horse-chestnut ravine forests, U29 - Eastern Mediterranean base-rich scree, U3322 - Carpatho-Balkano-Rhodopide campion siliceous cliffs, U3711 - Helleno-Balkanic calcicolous chasmophyte

[16] *Species taxonomic classification,* European Environment Agency, https://eunis.eea.europa.eu/species-taxonomic-browser.jsp?expand=46,4821,2377,2390,2393,2392&genus=Rhinolophus#level_Rhinolophus (last visited Sept. 14, 2022)
[17] Mirjana Drenovak-Ivanovic, *Environmental Impact Assessment in Serbian Legal System: Current Issues and Prospects for Revision*, 3 Belgrad L. Rev. 126 (2016).

communities wetlands, ponds, gorges, and underground springs.

Table 20-4: Initial assessment of interactions between Project activities and environment

	Aspect								Receptor						
	Emissions to air	Noise/vibration	GHG emissions	Water use	Discharges	Land take	Light	Hazardous materials	Air quality	Soils, geology	Water	Flora /fauna	Land use	Health and safety	Landscape
Construction															
Change in land use to mining						✓				✓	✓	✓	✓	✓	
Pit construction	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓		✓	✓
Construction of infrastructure	✓	✓	✓	✓	✓		✓		✓	✓	✓	✓		✓	✓
Road construction					✓					✓	✓	✓			
Operation															
Pits	✓	✓	✓						✓		✓			✓	
Heap leach process								✓						✓	✓
Flotation process			✓	✓	✓			✓			✓	✓			
Water supply				✓							✓	✓		✓	
Dewatering				✓	✓						✓	✓			
Discharges					✓						✓	✓			
Chemical/fuel storage					✓			✓		✓	✓	✓			
Waste management	✓		✓		✓			✓	✓	✓	✓			✓	✓
Employment, procurement														✓	
Major accidents	✓		✓		✓			✓	✓	✓	✓	✓		✓	

Source: Updated Preliminary Economic Assessment for the Timok Gold Project, Serbia- CSA Global Report Nº R302.2019. Effective date: 30 April 2019. Signature Date: 29 August 2019

APPENDIX VII
Additional details on potentially affected species & habitats (Left Table) (Continuation of Question 4)

APPENDIX VIII
Impacts from Mining Activities and Their Effects on Rivers, Groundwater, and Biodiversity

DPM has been present in Serbia since around 2007 and currently hold three exploration licences: Potaj Čuka Tisnica, Umka, and Ždrelo. The Timok Gold Project is based on 2021 Pre-Feasibility study based on deposits within the Potaj Čuka Tisnica licence (the Bigar Hill, Korkan, Korkan West, and Kraku Pester deposits). However, an expansion of the mine has already been planned: the company has conducted drilling explorations on new deposits/"targets" within Potaj Čuka Tisnica licence; in their Second Quarter Report (30 June 2022) DPM announced that they will pursue additional exploration particularly at Čoka Rakita "target," subject to required permits being (re)issued as the initial permites have expired in July 2021[18]. They have also officially announced the potential expansion of the mine further down the line.

As of May 29, 2020, DPM reports that they have performed 1277 drill holes, amounting to 257,884 m of depth (with extensive exploration done since). Unfortunately there is no publicly available data on the impacts of drilling, the legally required maintenance of boreholes and remediation of impacted land, and it is very hard for citizens to monitor them with their own resources. However, impacts have been observed in the field[19].

Here we analyse the impacts of the planned mining techniques:

Heap-leaching: A 36-hectare Heap Leach Facility (HLF) sized to accommodate 20 Mt of oxide and transitional ore will store spent ore and tailings from cyanidation process (if DMP opts for this technique). The potential addition of flotation technique to process sulphide ore will require additional tailing solutions. The proposed use of cyanide can result in both environmental and public health risks, historically resulting in major fish kills, contaminating drinking water supplies, and harmed agricultural lands. There are risks of cyanide seeping into the groundwater and contaminating aquifers, possibly also polluting hydrologically connected neighbouring streams and connected rivers. The heap leaching process includes digging large pits and piling the extracted ore into heaps several hundred feet high, spraying cyanide solution on top so that it trickles down, eventually stripping precious minerals[20]. Cyanide use is partially banned in the EU by some member states, but it is allowed in Serbia. While the Minister of Mining and Energy, Zorana Mihajlovic, said that cyanide leaching for gold extraction was

[18] See DPM map; new deposits are circled red https://www.dundeeprecious.com/English/Operating-Regions/Development-Projects/timok-gold-project/default.aspx

[19] E.g. see drainage from the exploration area in this article by the Ornithological Society of Serbia https://pticesrbije.rs/treba-li-da-bude-rudnik-zlata-na-istraznom-prostoru-potaj-cuka-tisnica-kod-zagubice/

[20] Mineral Policy Center, *Cyanide Leach Mining Packet* (Aug, 2000), https://earthworks.org/assets/uploads/archive/files/publications/Cyanide_Leach_Packet.pdf.

'out of the question' for mining in the Homolje region,[21] DPM has not made statements agreeing to avoid cyanide leaching.

Froth Flotation: Froth flotation recovers gold by separating hydrophobic materials from hydrophilic ones[22]. This can contaminate ground water with trace minerals and contaminants such as lead and arsenic[23].

Dewatering (and Sedimentation Ponds): DPM's report states that "Abstraction of groundwater to supply the Project and the consequent dewatering may affect habitats."[24] The dewatering process, which will occur by the Korkan West and Bigar Hill pits, can cause environmental contamination, geotechnical damage, damage to water features (rivers, lakes, and springs) and water depletion.[25]

(Potentially Acid Generating) Waste: Birds and other wildlife can be poisoned after drinking contaminated water in tailings ponds. Increases in sedimentation or acidity can kill trout, salmon, and other aquatic organisms. Even at very low concentrations, exposure to heavy metals can stunt fish growth.[26] The mineral waste will be stored in waste dumps adjacent to each of the pit areas. In DPM's preliminary economic assessment for the mine, they identified that the environment has naturally elevated concentrations of arsenic and cadmium, which can be mobilised once turned into dust.[27]

Fumes and Gasses (Including Mercury Vapours): Mercury emissions can adversely affect algal growth, crustacean health, fish growth, brain function, and reproduction; and amphibian larval health and survival. It is also known that mercury bioaccumulates in fish, which then poses a threat to any bird or mammal that consumes it, including humans.[28] Mercury vapour is also liable to be absorbed into plants and crops.

Acid Rock Drainage: Acid mine drainage, which has been found in 10% of samples, is not only detrimental to the overall health of the stream because it reduces pH below the acceptable levels for life, it also increases the solubility of the water to highly toxic metals such as chromium, arsenic, mercury, and lead, making it easier for them to enter rivers and streams[29] Acid mine drainage**:** Contamination of streams and rivers by these metals can cause problems downstream in fish, wildlife, and drinking water.[30]

Water pollution: The Timok preliminary report states: "During operations, rivers will be affected by dewatering, diversions and discharges, and permanent infrastructure will overlie several kilometres of upper headwaters reach of the Jagnjilo tributaries."[31] There is number of streams and rivers in the area (Jagnjilo, Bigar, Valja streži, Tisnca, Crna reka, Vrkaluca, Valja Saka, Ogašu Krloši, Valja Mare) part of the catchments of the Zlotska Reka, Mlava, Veliki Timok and Crni Timok rivers which all drain into the internationally protected Danube. The location of the waste rock dumps, the heap leach pad, and the mine pits at the uppermost catchment of streams in the area require diversionary channels to be built to redirect surface water flow around the facilities. The report states: "Discharge of hazardous substances into groundwater is prohibited, and so potential risks to surface water and groundwater quality are high."

Local community impacts: In their preliminary economic assessment for the mine, DPM identifies that

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[21] *Mihajlovic: Gold extraction by cyanide leaching out of question,* Tanjug (Dec. 27, 2021, 15:31), http://www.tanjug.rs/full-view_en.aspx?izb=707443

[22] Warren Taylor, *Advancing flotation process technologies to maximise gold extraction,* WEIR (Sept. 13, 2017), https://www.global.weir/newsroom/news-articles/2017/09/13/advancing-flotation-process-technologies-to-maximise-gold-extraction/#:~:text=A%20flotation%20process%20is%20one,for%20further%20gold%20recovery%20treatment.

[23] *Environmental Impact of Flotation Processing*, Mining Law Reform, http://www.mining-law-reform.info/flotationimpact.htm#:~:text=Depending%20on%20the%20trace%20metals,the%20contaminants%20can%20enter%20groundwater (last visited Sept. 14, 2022).

[24] O'Connor et al., *supra* note 1.

[25] *Timok Project Pre-Feasibility Study*, Dundee Precious Metals (Mar. 30, 2021), https://s27.q4cdn.com/486073686/files/doc_downloads/2021/03/30/Timok-Technical-Report.pdf.

[26] National Research Council, Hardrock Mining of Federal Lands 159 (1999).

[27] Maria O'Connor et al., Updated Preliminary Economic Assessment for the Timok Gold Project, Serbia, CSA Global (Apr. 30, 2019), https://www.miningnewsfee d.com/reports/Timok_8292019_PEA.pdf

[28] Dr. Louisa Esdaile & Dr. Justin Chalker, *The Mercury Problem in Artisanal and Small-Scale Gold Mining* (Feb. 18, 2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5969110.

[29] *Environmental Impacts of Acid Mine Drainage*, PBS, https://rmpbs.pbslearningmedia.org/resource/watsol.sci.ess.water.envimp/environmental-impact-of-acid-mine-drainage/.

[30] *Acid Mine Drainage*, First Nations Environmental Health Innovation Network, https://focs.ca/wp-content/uploads/2012/07/Acid-Mine-Drainage-FNEHIN.pdf.

[31] *Timok Project Pre-Feasibility Study, supra* note 15.

the project's noise and dust production from operational activities might affect people, flora, and fauna in the area. DPM identifies safeguarding surface and groundwater, terrestrial and aquatic biodiversity, and social impacts as key risks.

APPENDIX IX

The Inherent Rights of Nature Argument

Introduction: The Timok Project, if allowed to be opened, would violate the inherent rights of wild flora & fauna species and endangered natural habitats in Serbia. Due to the shortcomings of traditional environmental laws, recognizing & enforcing the Rights of Nature is "necessary" to protect species & their habitats in accordance with the purpose & requirements of the Bern Convention (*see e.g.*, Arts. 4-7).

Background on the Rights of Nature: Serbia has experienced massive losses of natural habitats and wild flora and fauna, as showcased in the recent European Rights of Nature Tribunal on the subject of the devastated rivers of the protected Mountain Kopaonik in Serbia.[32] (Full judges' verdict of the case available upon request.) Environmental declines impact humans, as well, because we are part of Nature. A primary cause of these crises is the legal system's treatment of Nature as mere human property, with only humans and human-made entities possessing even the most basic rights. In turn, the global and Serbian economic systems treat Nature as a resource and commodity, encouraging its exploitation for short-term profits. This fundamentally flawed model has led to the inevitable result of the global degradation of Nature.[33] The Rights of Nature challenges the notion that Nature is mere property and instead acknowledges that natural entities—including ecosystems and plant and animal populations—possess inherent rights, just as humans do.[34]

Rights of Nature and the Bern Convention: The Bern Convention supports consideration of the Rights of Nature. First, the Preamble of the Bern Convention explicitly recognizes the "intrinsic value" of wild flora and fauna ("Recognising that wild flora and fauna constitute a natural heritage of (…) *intrinsic value*").[35] Therefore, the Bern Convention takes an ecocentric, or Earth-centred, perspectives. Legal scholars have posited that "***entities that have value for their own sake*, rather than for the value they provide others, *can have rights***."[20] Therefore, recognizing the Rights of Nature is the natural extension of recognizing Nature's inherent value. We encourage the Secretariat to likewise interpret the Bern Convention in a manner that considers, supports, and/or enforces the Rights of Nature. This is one of the primary purposes of our complaint.

Article 4 of the Bern Convention also supports, if not necessitates, consideration of the Rights of Nature (*see also* Articles 5, 6, 7, 10). Article 4 of the Bern Convention requires Contracting Parties to "take *appropriate* and *necessary* legislative and administrative measures" to conserve the habitat of wild flora and fauna species and endangered natural habitats. As we have already established, Serbia's legislative and administrative measures fail to adequately protect species and their habitats from the proposed Timok Project and, to the contrary, encourage nature's wholesale exploitation. Recognizing and enforcing the Rights of Nature is "appropriate" and "necessary" to protect species and their habitats. It may be impossible to achieve Article 4 in specific and the overarching purpose of the Bern Convention in general without fundamentally addressing root causes of ecological declines, such as by enforcing the Rights of Nature.

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[32] *Balkan Rivers Case*, International Rights of Nature Tribunal, https://www.rightsofnaturetribunal.org/cases/balkans-rivers-case.

[33] Grant Wilson, *Envisioning Nature's Right to a Stable Climate*, 10(1) Sea Grant L. & Pol'y J. 60 (2020), https://heinonline.org/HOL/LandingPage?handle=hein.journals/sglum10&div=9&id=&page=.

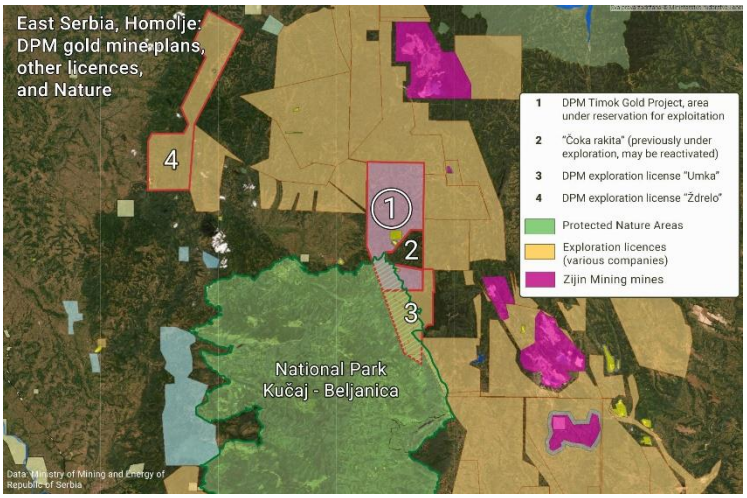
[34] *See generally* Zelle et al., *Earth Law: Emerging Ecocentric Law—A Guide for Practitioners* (2021).

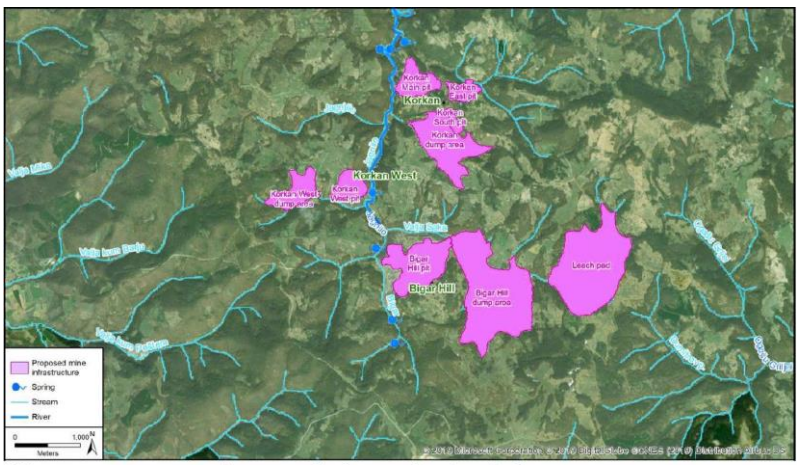
[35] Convention on the Conservation of European Wildlife and Natural Habitats, Sept 19, 1979, https://rm.coe.int/1680078aff. [20] *See* Chapron, Epstein, and López-Bao, *A Rights Revolution for Nature, Science* (2019), citing J. Raz, *The Morality of Freedom* (Clarendon Press, 1986) (emphasis added).

Conclusion: We ask the Secretariat to consider theTimok Gold Project mines in the Homolje region in light of the Rights of Nature. Specifically, we ask that the Rights of Nature be inferred based on the purpose of the Bern Convention and that they be incorporated into Article 4.

More broadly, we ask that you consider the totality of our complaint based upon the Rights of Nature. In making this analysis, note that oftentimes Nature is determined to possess, at minimum, the rights to exist, thrive, and evolve naturally.[36] Additional legal analyses on the Rights of Nature and the Bern Convention available upon request.

APPENDIX X: Maps





Water courses, springs and planned mine infrastructure

Source: Updated Preliminary Economic Assessment for the Timok Gold Project, Serbia- CSA Global Report N° R302.2019. Effective date: 30 April 2019. Signature Date: 29 August 2019

[36] *See e.g.*, UN Harmony with Nature Initiative, http://www.harmonywithnatureun.org/rightsOfNature/. Colombian courts found the rights of ecosystems to protection, conservation, maintenance and restoration. *See id.* Thomas Berry found that nature has at least three rights: the right to be, the right to habitat, and the right to fulfil its role in the ever-renewing processes of the Earth community. See https://www.therightsofnature.org/thomas-berrys-ten-principles-of-jurisprudence/.