

A small yellow and black bird, possibly a tit, is perched on a thin, dark branch. The bird has a black cap and a white breast with a yellow belly. The background is a soft-focus mix of green and yellow leaves, suggesting an autumn setting. The lighting is bright, creating a high-contrast scene.

REPORT

**Biodiversity offsetting and other
problems of the ESIA of Amulsar
gold project in Armenia**

Andrey Kovatchev (kovatchev6@gmail.com)

Elena Tsingarska-Sedefcheva (elena@balkani.org)

Andrey Ralev (alibotush@gmail.com)

Balkani Wildlife Society, Bulgaria

www.balkani.org

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1. Introduction

The Amulsar Gold Project is located in the provinces of Vayots Dzor and Syunik in Southeast Armenia, 6 kilometers from the spa town of Jermuk. The project promoter “Lydian Armenia” has submitted an Environmental and Social Impact Assessment (ESIA) that was approved by the Ministry of Nature Protection (MNP) in mid 2016 and an operation permit was issued. Some Armenian experts argued that the approval of the project was done in violation of Republic of Armenia’s Law on Flora and Law of Fauna as it leads to reduction of the number of red-listed species and also in violation of the Law on Lake Sevan as the catchment basins of Arpa and Vorotan Rivers make up a part of Lake Sevan catchment basin.

Financing for the project was approved by the European Bank of Reconstruction and Development (EBRD) and so it should comply with the Environmental and Social Policy (ESP) of the bank and its 10 Performance Requirements (PR). The International Financial Corporation (IFC) withdraw from financing the project in 2017¹.

An important topic of the ESIA was the establishment of the “Jermuk” National Park (JNP) as a biodiversity offset for the residual impacts of the project. The company promised to invest 5,7 million euros in the establishment and management of the new national park according to a memorandum signed with MNP in December 2016.

The construction of Amulsar Gold Project started in 2017 but has stopped for 6 months since June 2018 when local people, mainly from Jermuk town and Gndevaz village, started blocking the access roads to the mine. Since July 2018 the government of Armenia is conducting additional studies to assess if the company is operating in accordance with Armenian law. In case of negative assessment the operation permit could be annulled.

1 <https://www.business-humanrights.org/en/armenia-environmentalists-urge-govt-private-intl-financial-institutions-to-stop-supporting-amulsar-gold-mine-operated-by-lydian-international-over-health-climate-concerns>

This report is a critical analysis, with regard to the impacts on biodiversity, of the Environmental and Social Impact Assessment (ESIA) of the Amulsar Gold Project. Special attention has been paid to the biodiversity offsetting proposal for creation of “Jermuk” National Park. The Environmental and Social Policy (ESP) of EBRD has been carefully studied in order to assess the compliance of the project with its requirements, as well as to evaluate the need of its change to ensure safeguarding of biodiversity in projects financed by the bank. As ESP requires every project to comply with national legislation, international conventions and EU environmental standards, this report gives details about possible infringements by the Amulsar Gold Project of Armenian Law, the Bern Convention and the EU Habitats Directive.

A preliminary version of the report explaining new circumstances that could require resumption of the ESIA procedure was submitted to the Armenian government in December 2018 by Ecolur, Balkani and CEE Bankwatch Network.

The analysis was prepared by experts of Balkani Wildlife Society (Bulgaria) as requested by and with the support of CEE Bankwatch Network and EcoLur Informational NGO in support of the implementation of Chapter 3 (Environment) of the Comprehensive and Enhanced Partnership Agreement between the European Union and the Republic of Armenia (CEPA)². According to Article 45 of CEPA:

"The Parties shall develop and strengthen their cooperation on environmental issues, thereby contributing to the long-term objective of sustainable development and greening the economy. It is expected that enhanced environmental protection will bring benefits to citizens and businesses in the European Union and in the Republic of Armenia, including through improved public health, preserved natural resources, and increased economic and environmental efficiency, as well as through the use of modern, cleaner technologies contributing to more sustainable production patterns."

2. Methodology

The current report is a critical expert analysis prepared in several stages:

- Study of the biodiversity chapters of the Amulsar Gold Project ESIA including but not limited to chapters 2. Legal Framework, 3. Project Description, 4.10 Environmental and Social Baseline - Biodiversity, 6.11 Potential Impacts and Mitigation Measures - Biodiversity and Ecosystems, 7. Cumulative Impact Assessment, 8. Environmental and Social Management and appendixes on biodiversity 4.10.1-4.10.10, 8.20 Biodiversity Action Plan, 8.21 Biodiversity Management Plan. The methodologies used, the gaps and inconsistencies in the data were evaluated. Preliminary visits to the Vayots Dzor and Syunik provinces were carried on to understand the project context.

Timeframe: 15.07.2018 - 30.09.2018

- Facts finding mission at Amulsar Mountain, proposed Jermuk National Park and Emerald sites in Vayots Dzor and Syunik provinces in Armenia. The experts were divided into three teams and used different research

² <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=JOIN:2017:0036:FIN>

methods depending on the landscape: transects on foot, transects by all-terrain vehicle, stationary observation points. All observed species from Resolution 6 and all habitats from Resolution 4 of the Bern Convention were described with GPS points and photos. All observed and potential impacts from Amulsar Gold Project were also described. Field research was complemented with meetings with Armenian NGOs, biodiversity experts, relevant authorities and local people. Questionnaires about presence of large mammal and bird species were made with local people.

Timeframe: 01.10.2018-06.10.2018

- Collection of complementary data and drafting first report on "New Circumstances Related to the Environmental and Social Impact Assessment (ESIA) of the Amulsar Gold Project in Armenia". The report was based mostly on information from the ESIA as good quality biodiversity studies have been carried out for its preparation, but we discovered serious gaps and inconsistencies in the conclusions and mitigation measures. Complementary information was gathered from the Bern Convention Secretariat and other relevant institutions, scientific data from Armenian and international experts, data from non-governmental organizations and media articles. An additional visit to the project site was organized between 28.10.2018 and 01.11.2018. CEE Bankwatch Network requested from Lydian additional information and received one report on Brown Bear Density in Armenia.

Timeframe: 07.10.2018-07.11.2018

- Preparation of final report on "Biodiversity Offsetting and Other Problems of the ESIA of Amulsar Gold Project in Armenia". Adding to the information from the first report, the Environmental and Social Policy of the EBRD was analyzed, as well as the EU Habitats Directive and rulings of the European Court of Justice. Chapters 4, 5, 6 and 7 of the report are based on the EBRD policy of 2008 and 2014, in which the Bank commits itself to comply with both Armenian and European legislation (the commitment from 2014 is more detailed but similar in substance). Chapters 3 and 8 analyze only the current EBRD policy of 2014. The conclusions of the report summarize our finding regarding the problems with the biodiversity offsetting scheme of Amulsar Gold Project and the need for change of the EBRD policy in order to comply with the Bern Convention and the Habitats Directive.

Timeframe: 08.11.2018-19.12.2018

3 "B. EBRD's commitments", Paragraph 3, Pages 2-3 in "May 2008, Environmental and Social Policy European Bank for Reconstruction and Development (EBRD), Pp. 80."

<https://www.ebrd.com/downloads/research/policies/2008policy.pdf>

4 "B. The EBRD's commitments", Paragraph 7, Page 1 and Appendix 1," EBRD Environmental and Social Exclusion List" Page 8 and Appendix 2, "Category A Projects" Page 10, Paragraph 27 in "May 2014, Environmental and Social Policy European Bank for Reconstruction and Development (EBRD), Pp. 64."

<https://www.ebrd.com/cs/Satellite?c=Content&cid=1395238867768&d=Default&pagename=EBRD%2FContent%2FDownloadDocument>

3. Biodiversity Requirements of the Environmental and Social Policy of EBRD

The Board of Directors of the European Bank for Reconstruction and Development (EBRD) approved the first Environmental Policy of the bank initially in 1992. The policy was updated in 1996, 2003. In 2008 the EBRD approved its first Environmental and Social Policy (ESP), which was up-dated in 2014 and is currently again under revision. All projects financed by EBRD should meet the 10 Performance Requirements (PRs) of the ESP, including PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. This chapter of our report is an analysis of the latest version of the ESP, that has no substantial differences from the 2008 version regarding biodiversity conservation commitments.

In the chapter Legal framework of ESIA “Lydian Armenia” commits to meet the “*International requirements that comprise, amongst others, the IFC Performance Standards and EBRD Performance Requirements*”⁵.

In chapter 6. Potential Impacts and Mitigation Measures of ESIA the authors declare: “*To comply with the requirements of the International Finance Corporation’s Performance Standard 6 (IFC PS6) and the European Bank for Reconstruction and Development’s Performance Requirement 6 (EBRD PR6), a [no net loss] NNL outcome should be achieved if possible, for natural habitats and a “net gain” outcome must be achieved for critical habitat. Compliance with EBRD’s PR6 further requires the Project to follow the intent of EU law with respect to conservation of habitats and species, notably according to the requirements of the EU Habitats Directive.*”⁶. PR6 is mentioned 17 more times in the Biodiversity and Ecosystems part of the chapter.

According to article 6 of ESP “*The EBRD will seek within its mandate to ensure through its environmental and social appraisal and monitoring processes that projects are designed, implemented and operated in compliance with applicable regulatory requirements and good international practice (GIP). Central to this approach is the application of the mitigation hierarchy.*” “*The mitigation hierarchy comprises measures taken to avoid creating environmental or social impacts from the outset of development activities, and where this is not possible, to implement additional measures that would minimise, mitigate and, as a last resort, offset and/or compensate any potential residual adverse impacts.*”

According to article 7 of ESP all financed projects should adopt the “*EU environmental principles, practices and substantive standards*” including regulations, directives and decisions. “*When host country regulations differ from EU substantive environmental standards, projects will be expected to meet whichever is more stringent.*”.

This is very important in the case of Amulsar Gold Project as it should comply with:

- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive)
- Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (EIA Directive)

5 see page 2.1 of ESIA report

6 see page 6.11.1 of ESIA report

But in some cases where Armenian Law is more stringent than EU law, it should comply with the first. This is the case with the Law on Fauna and Law on Flora, which forbid compensation or offsetting measures when species from the Red Book are impacted.

According to article 8 of ESP “*The EBRD will not knowingly finance projects that would contravene country obligations under relevant international treaties and agreements*”. As the Republic of Armenia has ratified the Bern Convention in 2009, EBRD should not finance Amulsar Gold Project if the obligations of RA under this convention are not met.

According to point 14 of ESP “*The EBRD will be precautionary in its approach to the protection, conservation, management and sustainable use of living natural resources and will require relevant projects to include measures to safeguard and, where feasible, enhance ecosystems and the biodiversity they support*”. The precautionary approach means that when impacts are unknown, activities should not be carried on until it is proven that no significant negative impacts could be expected.

EBRD Performance Requirement 6 (PR 6) concerns Biodiversity Conservation and Sustainable Management of Living Natural Resources with main objectives:

- “- *protect and conserve biodiversity using the precautionary approach*
- *adopt the mitigation hierarchy approach, with the aim of achieving no net loss of biodiversity, and where appropriate, a net gain of biodiversity*
- *promote good international practice (GIP) in the sustainable management and use of living natural resources.*”

According to article 7 of PR 6 when potential impacts are not certain the client should “*carry out additional studies and/or monitoring before undertaking project-related activities that could cause irreversible impacts*”. In article 11 the precautionary approach is again mentioned as biodiversity conservation requirement, but also a possibility is foreseen for “*adaptive management practices in which the implementation of mitigation and management measures are responsive to changing conditions and the results of project monitoring throughout the project life cycle*”. According to our understanding the adaptive management approach should only be used in case of reversible impacts. All other impacts, irreversible, should be well know before project implementation. In the case of Amulsar for certain species and habitats this was not achieved and monitoring following the start of construction phase of the project is proposed when there is lack of sufficient knowledge.

According to article 8 of PR 6 “*the assessment process should include consideration of potential landscape level impacts, as well as impacts on the ecological integrity of the ecosystems*”. The methodology used in the ESIA of Amulsar simplifies this task by selecting only a few species and habitats to be evaluated and not the integrity of the ecosystems as a whole.

PR 6 in articles 12 to 18 defines two types of biodiversity features that are particularly irreplaceable or vulnerable and special attention should be paid not to be impacted. “Critical habitats” are the most sensitive and “priority biodiversity features” are of a lower priority level. The following table compares the two features:

	Priority biodiversity feature (PBF)	Critical habitat (CH)
Includes one of the following:	(i) threatened habitats; (ii) vulnerable species; (iii) significant biodiversity features identified by a broad set of	(i) highly threatened or unique ecosystems; (ii) habitats of significant importance to endangered or

	<p>stakeholders or governments (such as Key Biodiversity Areas or Important Bird Areas); and (iv) ecological structure and functions needed to maintain the viability of priority biodiversity features described above.</p>	<p>critically endangered species (according to IUCN or national assessment); (iii) habitats of significant importance to endemic or geographically restricted species; (iv) habitats supporting globally significant migratory or congregatory species; (v) areas associated with key evolutionary processes; or (vi) ecological functions that are vital to maintaining the viability of biodiversity described above.</p>
<p>Project activities should not be implemented:</p>	<p>when there are significant, adverse and irreversible impacts to priority biodiversity features</p>	<p>in areas of critical habitat</p>
<p>Exceptions are permitted only when all of the following conditions are met:</p>	<ol style="list-style-type: none"> 1. There are no feasible alternatives 2. Overall benefits outweigh impacts on biodiversity 3. Stakeholders are consulted 4. Project is permitted under laws, recognizing priority biodiversity features 5. Mitigation measures ensure no net loss of PBF 	<ol style="list-style-type: none"> 1. Same as 1. of PBF 2. Same as 3. of PBF 3. Same as 4. of PBF 4. Does not lead to measurable adverse impact to the CH biodiversity features 5. Leads to net gain for CH 6. Does not lead to net reduction in the population of EN and CR species 7. Long-term monitoring and evaluation of CH is designed
<p>Other requirements:</p>		<ul style="list-style-type: none"> o External experts should assess CH o Ecological integrity or biodiversity importance of CH should not be compromised. o Mitigation strategy described in Biodiversity Management Plan or Biodiversity Action Plan
<p>Requirements in case of biodiversity offsets</p>	<ul style="list-style-type: none"> o Demonstrate through an assessment that the project's significant residual impacts on biodiversity will be adequately mitigated o Hire experts with experience in offset design and implementation 	<p>Same as in PBF</p>

According to the Environmental and Social policy of the EBRD, project activities can be implemented even in critical habitats and can impact irreversibly priority species and habitats. In this case the clients of the bank should demonstrate no net loss to biodiversity features (PBF and CH). This doesn't refer to the ecosystems as a whole but just to a selection of features.

According to articles 19-20 of PR 6, if the project affects protected areas and/or internationally recognized areas (including proposed as such), the client must “*identify and assess potential project-related impacts and apply the mitigation hierarchy so that impacts from the project will not compromise the integrity, conservation objectives and/or biodiversity importance of such an area.*”. If there is a risk for adverse impacts, the PBF and CH rules should apply. Internationally recognized areas include sites identified under conventions or agreements. Proposed Emerald sites according to the Bern Convention are included in this description. Parts of Amulsar Gold Project are located in 2 Emerald sites, and in addition 3 more Emerald sites could be affected because of changes in water quality and/or quantity. The project is also located within the boundaries of a planned "Jermuk" National Park as proposed by WWF Armenia in 2012 feasibility study⁷ (before Lydian proposed the Jermuk NP offset).

4. Noncompliance of Amulsar Project with the Bern Convention

The Bern Convention is both part of the Armenian and European secondary environmental legislation^{8 9}. In its Environmental and Social Policy document, the European Bank for Reconstruction and Development (EBRD) states¹⁰ that it is committed to implementing European secondary legislation and specifically to not finance projects breaching the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)¹¹.

FINDING 4.1.: Missing assessment of the impacts of the Amulsar Gold Project according to the Bern Convention

The “Convention on the Conservation of European Wildlife and Natural Habitats” - Treaty No.104 of the Council of Europe (hereafter referred as Bern Convention) is ratified by Armenia on 14 April 2008 and entered into force on 1 August 2008¹². The Convention is a binding international legal instrument in the field of nature conservation. With Recommendation No. 16 (1989) and Resolution No. 3 (1996) of the Standing Committee of

7 <https://www.ecolur.org/files/uploads/pdf/jermuknationalpark.pdf>

8 Article 216(1) TFEU. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A12012E216>

9 https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104/signatures?p_auth=864D7ApJ

10 “B. The EBRD’s commitments”, point 7, page 1 and Appendix 1,” EBRD Environmental and Social Exclusion List” Page 8. May 2014, Environmental and Social Policy European Bank for Reconstruction and Development (EBRD), Pp. 64.

<https://www.ebrd.com/cs/Satellite?c=Content&cid=1395238867768&d=Default&pagename=EBRD%2FContent%2FDownloadDocument>

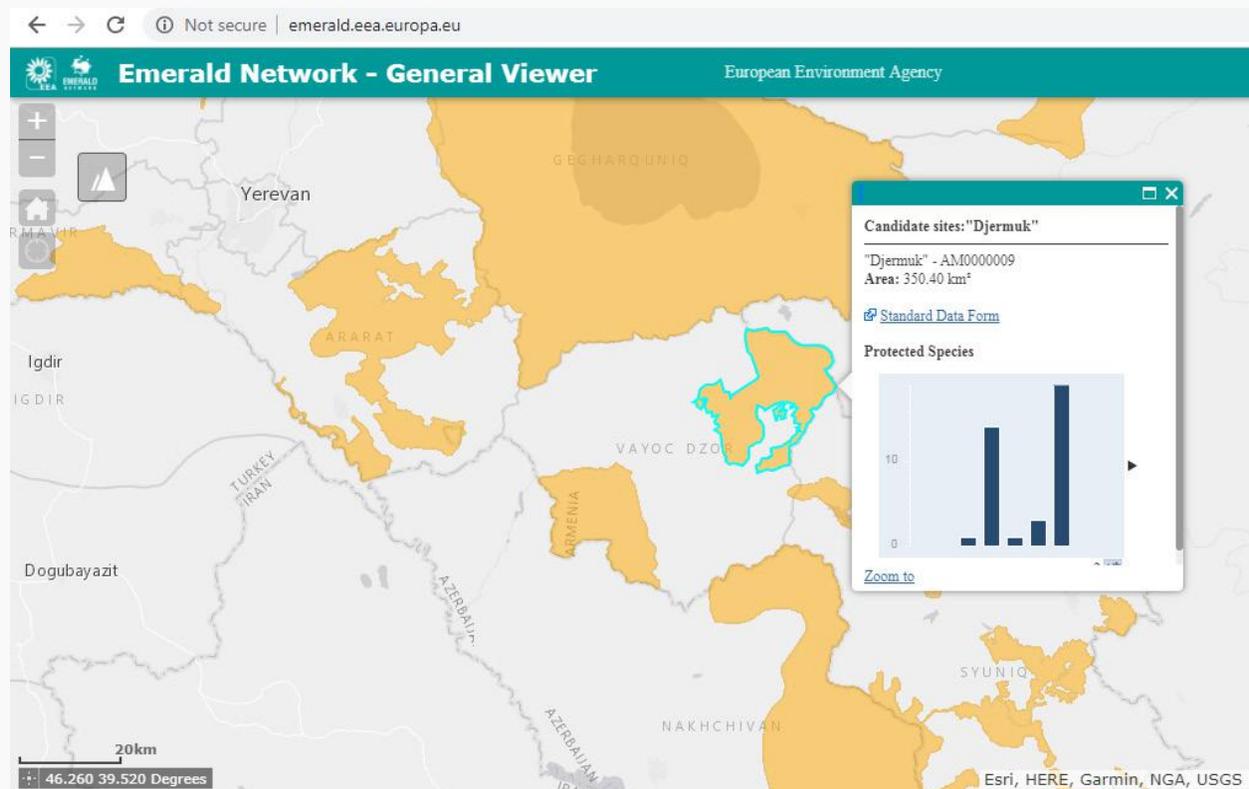
11 Bern, 19/09/1979. Treaty 104. Convention on the Conservation of European Wildlife and Natural Habitats.

https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104/signatures?p_auth=864D7ApJ

12 https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/104/signatures?p_auth=864D7ApJ

the Bern Convention¹³ the development of the EMERALD network began. It is a network of Areas of Special Conservation Interest (ASCIs) designed to conserve endangered natural habitats (listed in Resolution No. 4 (1996) of the Standing Committee of the Convention) and species (listed in Resolution No. 6 (1998) of the Standing Committee of the Convention).

In October 2015 Armenia proposed "Djermuk Area" AM0000009 ASCI site covering 35 015 hectares¹⁴. The following year, in December 2016, Armenia proposed another ASCI site - "Gorhajk Area" AM0000013 ASCI covering 4 056.7 ha¹⁵. Both sites have been proposed after conclusions of Biogeographical seminar for Armenia, Azerbaijan and Georgia held by the Bern Convention in Tbilisi on 27-29 May 2015¹⁶. After the second Biogeographical seminar held in Tbilisi on 8-9 November 2017¹⁷ both sites have received a statute of candidate ASCIs.



"Djermuk Area" candidate site shown online on the Emerald Network Viewer¹⁸

After comparing borders of ASCIs and the planned Amulsar Gold Project as proposed in the Environmental and Social Impact Assessment (ESIA) report from May 17, 2016¹⁹ (see schematic map below) we established that:

13 <https://www.coe.int/en/web/bern-convention/documents1>

14 <http://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=AM0000009&release=2>

15 <http://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=AM0000013&release=2>

16 <https://www.coe.int/en/web/bern-convention/-/emerald-biogeographical-evaluation-seminar-for-armenia-azerbaijan-and-georgia>

17 <https://www.coe.int/en/web/bern-convention/-/emerald-network-evaluation-semin-1>

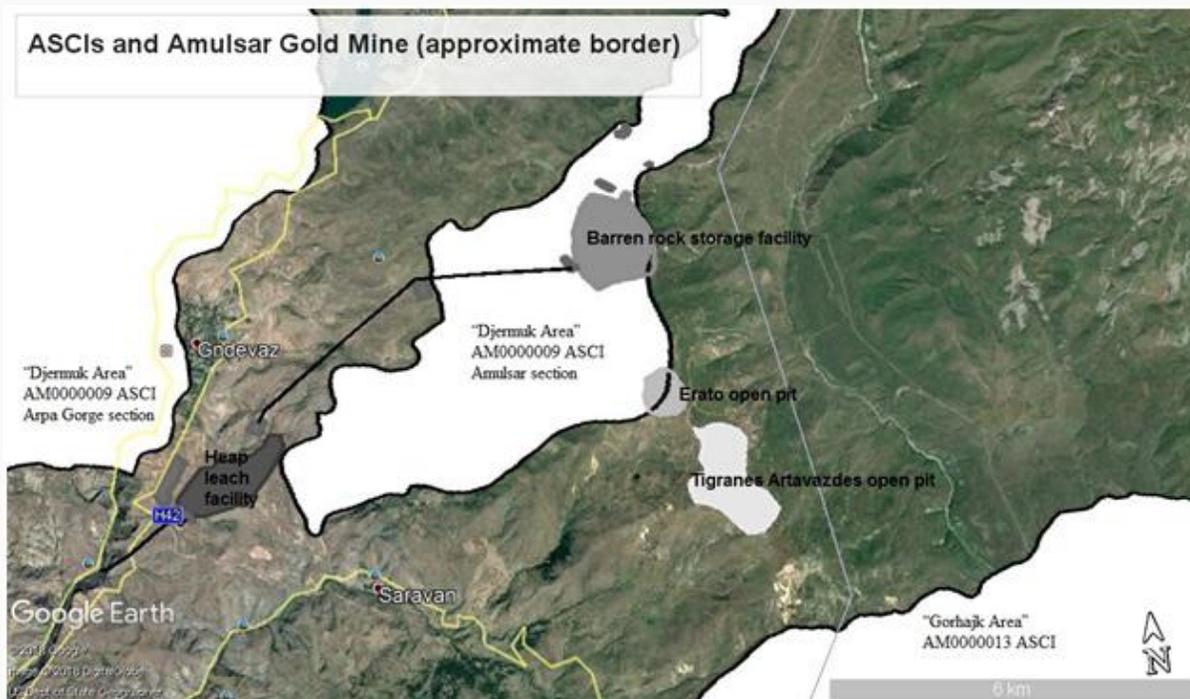
18 <http://emerald.eea.europa.eu/>

Significant part of the planned Amulsar Gold Project is inside the territory of the “Djermuk Area” AM0000009 ASCI. More particularly inside this territory are the following parts of the gold mine project: barren rock storage facility, Erato open pit mine, transportation line/facility. The heap leach facility (HLF) is situated in the immediate vicinity of the “Djermuk Area” AM0000009 ASCI at 50-650 m from the Amulsar section of the site and at 250-550 m from the Arpa Gorge section of the site;

The open pit, storage, transportation and processing facilities of Amulsar project and the “Gorhajak Area” AM0000013 ASCI are not overlapping, but the distance between them is 1550 – 2000 m and negative impacts should not be excluded. Southern part of Amulsar Gold Project (set-aside area) is partially within “Gorhajak Area”.

Additionally, in case of pollution, decrease of water quality or change of hydrological regime of water bodies the Amulsar gold mine could have impact on three more ASCIs: "Gnishik Protected Landscape" AM0000012 (downstream the Arpa river), "Tatev Area" AM0000016 (downstream the Vorotan river) and "Sevan National Park" AM0000002 (from the Kechut reservoir water is diverted into the Sevan Lake)²⁰.

“Djermuk Area” AM0000009 was officially proposed as ASCI more than six months before completion of the ESIA report of the Amulsar Gold Project in May 2016 and the adoption of revised EIA permit in April 2016²¹. “Tatev Area” AM0000016 - eight months before, "Gnishik Protected Landscape" AM0000012 – two and a half years before, "Sevan National Park" AM0000002 - eight years before. The Gorhajak Area” AM0000013 was proposed six months after the completion of the ESIA report and revised EIA permit.



19 The ESIA report: <https://www.lydianinternational.co.uk/projects/amulsar/environmental-and-social-impact-assessment-esia>

<https://www.lydianarmenia.am/index.php?m=publications&lang=eng&p=9>

20 <http://emerald.eea.europa.eu/>

21 Page 1.12, chapter “1.4.1 Armenian EIA” of the ESIA report

The location of the area of Amulsar Gold Project within ASCI and possible impacts on other ASCIs brings important legal consequences as of April 2016, when the revised EIA permit was approved (see reference note 9). According to the Articles 1, 2, 3, 4, 6.b and 9 of the Convention, Paragraphs 1-3 of the Resolution No. 1 (1989), Recommendation No. 14 (1989), Recommendation No. 16 (1989), Resolution No. 3 (1996), Resolution No. 4 (1996), Article 2 and 4 of the Resolution No. 5 (1998), Resolution No. 6 (1998), Paragraph 1 of the Recommendation No. 157 (2011) and Paragraphs 1-2 of the Resolution No. 8 (2012) and the Calendar for the Implementation of the Emerald Network 2011-2020 (2015)²², all of them adopted by the Standing Committee on the ground of article 14, the Republic of Armenia is responsible for the following:

1. Designation of a network of Areas of Special Conservation Interest (ASCIs) called “Emerald Network” according to objective criteria set-up by the Recommendation No. 16 (1989);
2. The candidate ASCIs shall be also designated by the governments according to national legislation or otherwise. For Armenia the completion of all the assessment and designation procedures should have been finalized by 2014;
3. Ensuring that all appropriate and necessary administrative measures are undertaken to ensure the conservation of the habitats of the wild flora and fauna species and endangered natural habitats under protection in the ASCIs (these are all species and natural habitats listed in Resolutions 4 and 6 which are found in the particular ASCI). Armenia in its planning and development policies shall avoid or minimise as far as possible any deterioration of ASCIs. To achieve conservation means the maintenance and the restoration or improvement of the abiotic and biotic features of habitats and where appropriate the control of activities which may indirectly result in their deterioration;
4. In light of above obligations Armenia shall take the necessary protection and conservation measures in order to maintain the ecological characteristics of the candidate Emerald sites (ASCIs);
5. Exceptions to take appropriate and necessary measures to protect the ASCI (Article 9 of the Convention) may be made and justified only in condition that there is no other satisfactory solution, that the exception will not be detrimental to the survival of the population concerned and that there is one of the following circumstances with respect to the decision: it is in the interests of public health and safety, air safety or other overriding public interests; it is aiming to prevent serious damage to crops, livestock, forests, fisheries, water and other forms of property; it is taken for the protection of flora and fauna or for research and education, of repopulation, of reintroduction of species;
6. Armenia also shall identify endangered species on its territory requiring recovery plans and develop and implement such plans;
7. Armenia shall undertake surveillance of the conservation status of species and natural habitats in designated ASCIs and shall inform the Convention Secretariat of any important changes likely to affect negatively in a substantial way the ecological character of the designated ASCIs or the conditions having justified their designation.

Considering all of the above-mentioned provisions and circumstances, we made a critical review of the implementation of the Bern Convention and the Emerald Network concerning the ESIA report on the Amulsar Gold Project (Lydian International, from May 2016, and related to finalizing the EIA procedure according to the Armenian Law. The 2016 ESIA report reflects both the EIA procedure carried out according to national standards and international standards. The EIA procedure was finalized in April 2016 with the revised EIA permit approving the revised EIA report on 28 April 2016 by the Ministry of Nature Protection (MNP). The approval of the EIA was originally granted by the MNP on the 17th of October, 2014, but afterwards the project was amended in 2015

²² <https://www.coe.int/en/web/bern-convention/documents1>
https://pjp-eu.coe.int/documents/1461016/4159207/pa02e_2014_Explanatory_document_relevanttexts_+Emerald.pdf/56a73276-1988-4676-8f44-4e97dd433d85

resulted in the publication, in November 2015, of a new Feasibility Study for the Project²³. The following circumstances were established after the review:

- The Emerald Network, the candidate Emerald sites (ASCIs) affected by the Amulsar Gold Project and the legal basis of the Bern Convention related to the Emerald Network were not mentioned, referred or analyzed in any part of the ESIA report;
- Bern Convention is mentioned particularly as legal act only in one Chapter of the ESIA report –page 2.73, Chapter 2 “Legal Framework” (June 2016, Version 10), sub-chapters 2.2 “International Standards and Guidelines” and 2.2.7 “Voluntary codes and international environmental conventions”. The exact text related to Bern Convention in this chapter is part of “Table 2.8: Participation of the Republic of Armenia in International Conventions to Protect the Environment” and includes the following:

	Name, Place and Date	Convention entered into the force	Signed by RA	Ratified by NA RA	In force for RA	Project Requirements
15.	Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.09.1979)	01.01.1982	2006	26.02.2008	01.08.2008	Taken into consideration in sections on biodiversity (Chapters 4.10 and 6.11)

However, after checking the referred chapters of ESIA report in table 2.8 (chapters 4.10 and 6.11) it is found that this statement of table 2.8 does not reflect the real situation:

- In Chapter 6 “Potential Impacts and Mitigation Measures” (June 2016, Version 10), sub-chapter 6.11 “Biodiversity and ecosystems” there is no reference and mention of the Bern Convention. The same was found for all other ESIA parts analyzing biodiversity issues and sub-chapters included in chapter 6: “6.22 Impact Assessment Summary”.
- In Chapter 4 “Baseline surveys”, sub-chapter 4.10 “Biodiversity” (June 2016, Version 10) there is only one very short reference to the Bern Convention on Page 4.10.74, sub-chapter “4.10.10 Fish Survey and Results” and it states: “None of the species observed during surveys are listed within the Armenian Red Book or the IUCN Red List. Nase Chondrostoma nasus is listed under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) Annex III – ‘species that are in need of protection but may be hunted or otherwise exploited in exceptional instances’. This species is listed as of ‘least concern’ on the IUCN list.”
- The third and last very short reference to the Bern Convention in the ESIA report was found in document attached to Chapter 4 called “Amulsar ecology chiroptera (bat) survey” (August 2014, Lydian Int Ltd) on page 3/4 of Appendix B “Legislation and policy”, point 1.3.1 “EU Habitats Directive”. This

23 See the preface of the “The Amulsar Gold Project. Environmental & Social Impact Assessment. Non-Technical Summary May 2016 (NTS)”, pages 3-4 of the NTS’s chapter “1. Introduction, 1.2 The ESIA” and the Page 1.12 of the ESIA report’s chapter “1. Introduction, 1.4 The ESIA and the Armenian Environmental Impact Assessment”

reference only shortly mentioned the general statement that the Directive 92/43 is adopted as tool for implementation of the Bern Convention in the EU.

- There are no other references to the Bern Convention in the whole ESIA report including all chapters and documents discussing biodiversity issues.

The main conclusions after the review of the ESIA report are:

- The Emerald network and Bern Convention are not given due consideration in the ESIA report and the ESIA report did not provide the responsible authorities in Armenia (Environmental Impact Analysis Center and Ministry of Nature Protection) with information that the project affects directly Emerald Network and adverse impacts could be expected;
- In the ESIA report there is no assessment on the impacts of Amulsar Gold Project on the ecological characteristics of the “Djermuk Area” AM0000009 ASCI and potentially on the “Gorhajok Area” AM0000013, “Gnishik Protected Landscape” AM0000012, “Tatev Area” AM0000016 and “Sevan National Park” AM0000002 ASCIs. Thus achieving the aims and provisions of the Bern Convention and ensuring the conservation of the habitats of the wild flora and fauna species and endangered natural habitats under protection in the ASCIs by taking appropriate and necessary administrative measures was jeopardized;
- Particularly such an assessment is missing for the following habitats and species included in the accepted Standard Data Form of the “Djermuk Area” AM0000009 ASCI and which could be possibly negatively affected from Amulsar Gold Project:
 - Habitats from Resolution No. 4 (1996) - E1.11 Euro-Siberian rock debris swards; E2.3 Mountain hay meadows; E3.3 Sub-mediterranean humid meadows; E3.4 Moist or wet eutropic and mesotrophic grassland; E4.3 Acid alpine and subalpine grassland; E5.4 Moist or wet tall-herb and fern fringes and meadows; F9.1 Riverine scrub; G1.11 Riverine Salix woodland; H1 Terrestrial underground caves, cave systems, passages and waterbodies; H2.3 Temperate-montane acid siliceous screes; H3.1 Acid siliceous inland cliffs.
 - Species from Resolution No. 6 (1998):
 - **Plant species:** 4067 *Echium russicum*.
 - **Invertebrate species:** 6199 *Euplagia quadripunctaria*.
 - **Fish species:** 1130 *Aspius aspius*; 6168 *Luciobarbus comizo*; 1146 *Sabanejewia aurata*.
 - **Bird species:** A229 *Alcedo atthis*; A255 *Anthus campestris*; A224 *Caprimulgus europaeus*; A122 *Crex crex*; A429 *Dendrocopos syriacus*; A379 *Emberiza hortulana*; A338 *Lanius collurio*; A339 *Lanius minor*; A246 *Lullula arborea*; A272 *Luscinia svecica*; A346 *Pyrrhocorax pyrrhocorax*; A307 *Sylvia nisoria*; A397 *Tadorna ferruginea*;
 - **Mammal species:** 1355 *Lutra lutra*; 1361 *Lynx lynx*; 1354 *Ursus arctos*; 1352 *Canis lupus*; 2635 *Vormela peregusna*; 1372 *Capra aegagrus*; 1307 *Myotis blythii*; 1321 *Myotis emarginatus*; 1305 *Rhinolophus euryale*; 1304 *Rhinolophus ferrumequinum*; 1303 *Rhinolophus hipposideros*; 1302 *Rhinolophus mehelyi*.

FINDING 4.2: ESIA report applies methodologies not reflecting the Bern Convention and incompatible with the Emerald Network

ESIA report applies methodologies not reflecting the provisions of the Bern Convention and incompatible with the Emerald Network of ASCIs. Therefore the aims of designation of the “Djermuk Area” AM0000009 ASCI could be jeopardized after the implementation of Amulsar Gold Project. Such problematic methodologies are:

1. **The methodology for defining so called “critical habitat”²⁴.** According to this methodology, existence of Emerald ASCI defined according to Recommendation No. 16 (1989) of the Standing Committee was not related to define an area as “critical habitat”. However according to the Bern Convention, ASCIs are areas that contain an important and/or representative sample of endangered habitat types that and/or contribute substantially to the survival of threatened species or any species listed in Appendices of the Convention. As result all habitats and species listed in the Standard Data Form of “Djermuk Area” AM0000009, with the exception of 1354 *Ursus arctos*, were assessed in the ESIA as not having “critical habitat” in the area of Amulsar Gold Project. This conclusion directly contradicts Bern Convention provisions.
2. **The methodology for assessing the mitigation measures and residual impacts in the ESIA²⁵ contradicts the Bern Convention provisions for the protection of ASCIs.** Mitigation measure should aim minimization of residual impacts. But ESIA provides as main mitigation measures the relocation of species (for mitigation impacts on plant species, snake and lizard species) and setting up a set-aside area (for mitigation impacts on grassland habitats, plant species, bird species and *Ursus arctos*). For species under protection of ASCIs those measures are not mitigation, but in fact compensation measures, because they do not achieve the aim to protect natural habitats and habitats of species *in-situ* (in the ASCIs and in the areas affected by the project). The same conclusion should be made as well for the mitigation measure “restoration of habitats” by planting local species of trees. This measure again does not intend minimizing the impacts on the ASCI’s habitats affected by the project, but intend “restoration” elsewhere and thus do not comply with Bern Convention provisions. Moreover restoration or improvement of the abiotic and biotic features of habitats is an obligation of the competent authorities arising from the provisions of the Bern Convention. As such it could not be accepted even as compensation/offsetting measure by Lydian Armenia.
3. Establishing a new national park (Jermuk National Park) as compensation or offsetting measure also contradicts the Bern Convention. According to the Convention it is the obligation of the government to ensure protection of the whole territory of the “Djermuk Area” AM0000009 ASCI. This could be achieved by declaring a new national park or other type of protection of the same area under Armenian law. As such declaring a new national park also cannot be accepted as compensation or offsetting measure to the impacts of projects located in or having impacts on ASCIs. Moreover the borders of the proposed national park as shown in the ESIA do not cover the whole area of the “Djermuk Area” AM0000009 ASCI and particularly the areas of Amulsar Gold Project are excluded from the proposal which is a violation of the obligations of Republic of Armenia to protect legally all ASCIs. In December 2017 the borders for the new national park were submitted to the Agency of Bioresources of RA (part of the Ministry of Nature Protection). Since then the process for declaring the national park has stopped and even public

24 described in Chapter 3 “Critical Habitat” of the document “Natural and Critical Habitat Assessment for Amulsar, Armenia” part of Chapter 4 “Environmental and Social Impact Assessment”

25 for description of mitigation and compensation/offsetting measures see “Natural and Critical Habitat Assessment for Amulsar, Armenia” and chapter “6.11 Biodiversity and Ecosystems” and Biodiversity Action and Management Plans

discussions with communities over the borders have not been carried on. In the near future it is not expected that Jermuk NP would be declared. Having in mind that construction of Amulsar Gold Project has already started and that any compensation/offsetting measures should be carried on before actual impacts on habitats and species, this is a serious violation of the international commitments of RA.

4. Compensation or offsetting measures contradict Article 9 of the Bern Convention. Article 9 describes the only possible exceptions to the protection of species and habitats in-situ: *"Each Contracting Party may make exceptions from the provisions of Articles 4, 5, 6, 7 and from the prohibition of the use of the means mentioned in Article 8 provided that there is no other satisfactory solution and that the exception will not be detrimental to the survival of the population concerned: – for the protection of flora and fauna; – to prevent serious damage to crops, livestock, forests, fisheries, water and other forms of property; – in the interests of public health and safety, air safety or other overriding public interests; – for the purposes of research and education, of repopulation, of reintroduction and for the necessary breeding; – to permit, under strictly supervised conditions, on a selective basis and to a limited extent, the taking, keeping or other judicious exploitation of certain wild animals and plants in small numbers."* Existence of residual impacts means that the aims of the Bern Convention are not achieved. Ensuring conservation of the habitats of the wild flora and fauna species and endangered natural habitats under protection in the ASCIs and maintaining the ecological characteristics important for them could be jeopardized after project implementation. Application of compensation or offsetting measures do not avoid these consequences as there are no legal grounds for making exceptions from those provisions. ESIA report does not discuss that issue in any part of its content.

FINDING 4.3.: Possible impacts on species and habitats included in Standard Data Form of “Djermuk Area” AM0000009 ASCI²⁶

Details about species and natural habitats included in Standard Data Form of “Djermuk Area” AM0000009 ASCI:

- Habitats from Resolution No. 4 (1996) - all habitats below are listed in the Standard Data Form of “Djermuk Area” AM0000009 ASCI as present in the area. The ESIA report has discussed the natural habitats present in the area of Amulsar Gold Project in several chapters – Chapter 4 “Baseline studies”, sub-chapter 4.10 “Biodiversity”, 4.10.3 “Vegetation Surveys and Results” and Appendix 4.10.3 “Natural and Critical Habitat Assessment”. The ESIA report studied and described the vegetation types according to the Armenian habitat classification. These results do not correspond to the Emerald classification of habitats in Resolution No. 4 (1996) using EUNIS classification and both are not comparable. Therefore ESIA could not be used as reference for presence or absence of the protected under Bern Convention natural habitats on the territory of Amulsar Gold Project. To describe habitats possibly located in and affected by the Amulsar Gold Project we used 2 reference sources:.” Habitats of Armenia” from 2016²⁷ (hereafter referred as HabArm) and “Interpretation manual of the habitats listed in Resolution No. 4

26 <http://natura2000.eea.europa.eu/Emerald/SDF.aspx?site=AM0000009&release=2>

27 G. M. Fayvush, A. S. Aleksanyan, 2016. Habitats of Armenia. National Academy of Sciences of the Republic of Armenia, Institute of Botany. 360 Pp.

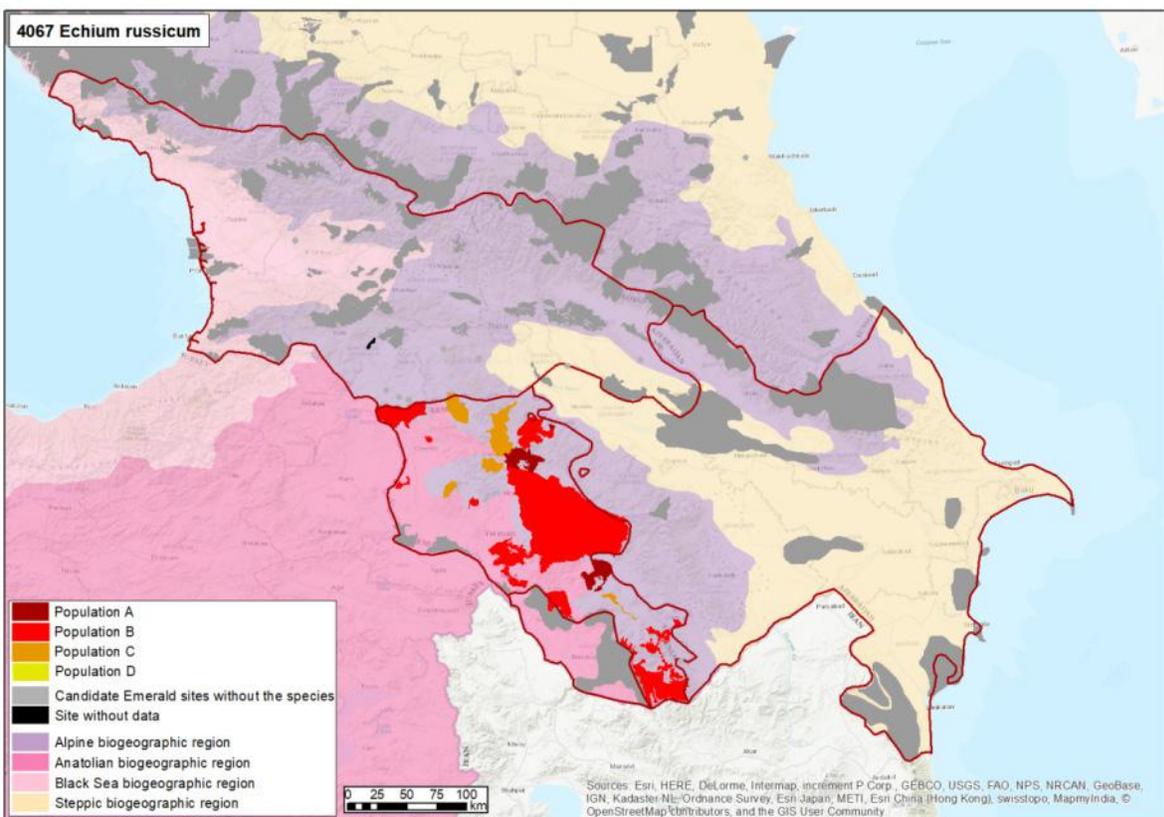
(1996) listing endangered natural habitats requiring specific conservation measures.”²⁸ (hereafter referred as HabBern)

- E1.11 Euro-Siberian rock debris swards - According HabBern this habitat is wide spread through Europe and Black Sea regions in different climates. According HabArm this habitat is common in Armenia in all altitudinal belts on sandy or stony areas with vegetation consisting mainly annuals, succulents and semi- succulents;
- E2.3 Mountain hay meadows – According to HabBern these are rich mesotrophic to eutrophic grasslands of the montane and subalpine levels of higher mountains. According HabArm the habitat is common in Armenia and spread in upper (high) mountain and sub-alpine level between 1900 and 2800 masl.;
- E3.3 Sub-mediterranean humid meadows – According HabBern these are humid meadows rich in clover (*Trifolium spp.*) spread in continental parts and developed above the lowlands but below the montane level. According HabArm it is common in Armenia, but in contrast to Europe where the habitat is mostly spread in lowlands in Armenia the habitat is found from middle mountain to sub-alpine belts;
- E3.4 Moist or wet eutrophic and mesotrophic grassland – According HabBern these are wet eutrophic and mesotrophic grasslands and flood meadows of the boreal and nemoral zones. According HabArm the habitat is common in Armenia and can be found up to upper (high) mountain belt;
- E4.3 Acid alpine and subalpine grassland – According HabBern this grasslands are spread in alpine and subalpine level and are developed over crystalline rocks and other lime-deficient substrates or on decalcified soils of mountains. According HabArm the habitat is common in Armenia and most grasslands in high mountains in their alpine and sub-alpine level and particularly those of volcanic origin are of this type of vegetation;
- E5.4 Moist or wet tall-herb and fern fringes and meadows – According HabBern these are tall-herb and fern vegetation, often dominant along watercourses, in wet meadows and in shade at the edge of woodlands below the montane belt. According HabArm the habitat is common in Armenia up to low mountain level;
- F9.1 Riverine scrub – According HabBern this is a scrub of broad-leaved willows or other riparian shrubs habitats beside rivers not taller than 5 m. According HabArm the habitat is found in Armenia in all altitudinal belts on the banks of rivers and standing water bodies;
- G1.11 Riverine *Salix* woodland – According HabBern these are bush or arborescent formations, lining flowing water and submitted to periodic flooding, developed on recently deposited alluvion. According HabArm the habitat is common in Armenia in up to middle mountain belt;
- H1 Terrestrial underground caves, cave systems, passages and waterbodies – According HabArm the habitat is common in Armenia and in volcanic mountains they are mostly short and not deep;
- H2.3 Temperate-montane acid siliceous screes – According HabBern these are siliceous screes

28 D. Evans (ETC/BD), M. Roekaerts, 31st August 2015. Interpretation manual of the habitats listed in Resolution No. 4 (1996) listing endangered natural habitats requiring specific conservation measures. Third draft version 2015. Strasbourg T-PVS/PA (2015) 9 [pa09e_2015.doc]. 110 Pp.

of high altitudes and cool sites in mountain ranges of the nemoral zone. According HabArm the habitat is common in Armenia and spread from middle mountain to alpine belts;

- H3.1 Acid siliceous inland cliffs – According HabArm it is common in Armenia in all altitudinal belts in volcanic mountains.
- Species from Resolution No. 6 (1998):
 - **Plant species:** 4067 *Echium russicum* - Species has a wide range in Armenia and is designated for protection in almost all ASCIs in the country as shown on map of designated ASCIs for its protection on the page of Biogeographical Seminar from 2017 and conclusions of the seminar. “Djermuk Area” AM0000009 ASCI is one of the 2 most important sites in Armenia for its protection (Population A). Species is not referred or mentioned in the ESIA report and is not included in Red Data Book of Armenia. However suitable habitats (grasslands) are situated everywhere in project area and species should be assessed in ESIA report according to the provisions of the Bern Convention.



- **Invertebrate species:** 6199 *Euplagia quadripunctaria*.
- **Fish species:**
 - 1130 *Aspius aspius*
Found in Arpa river according to report "Support to SHPP-relating Reforms through the Dialogue of Public and RA Nature Protection Ministry for Sustainable Use of River

Ecosystems”²⁹.

- 6168 *Luciobarbus comizo*
Probably technical mistake. Should refer to *Luciobarbus capito*, found in Arpa river according to report "Support to SHPP-relating Reforms through the Dialogue of Public and RA Nature Protection Ministry for Sustainable Use of River Ecosystems”.;
- 1146 *Sabanejewia aurata*

- **Bird species:**

- Common kingfisher (A229 *Alcedo atthis*)
Suitable habitat available along the Arpa river. The river was not assessed during ESIA baseline surveys.
- Tawny pipit (A255 *Anthus campestris*)
Probable breeder according to baseline surveys.
- European nightjar (A224 *Caprimulgus europaeus*)
Probable breeder according to baseline surveys.
- Corncrake (A122 *Crex crex*);
Possible breeder according to baseline surveys.
- Syrian woodpecker (A429 *Dendrocopos syriacus*);
Possible breeder according to baseline surveys.
- Ortolian bunting (A379 *Emberiza hortulana*);
Definite breeder according to baseline surveys.
- Red-backed shrike (A338 *Lanius collurio*);
Definite breeder according to baseline surveys.
- Lesser grey shrike (A339 *Lanius minor*);
Possible breeder according to baseline surveys.
- Woodlark (A246 *Lullula arborea*);
Definite breeder according to baseline surveys.
- Bluethroat (A272 *Luscinia svecica*);
Breeding according to baseline surveys.

29 <https://www.ecolur.org/files/uploads/pdf/dzernarkangleren.pdf>

- Red-billed chough (A346 *Pyrrhocorax pyrrhocorax*);
Definite breeder according to baseline surveys.
- Barred warbler (A307 *Sylvia nisoria*);
Definite breeder according to baseline surveys.
- Ruddy shelduck (A397 *Tadorna ferruginea*);
Definite breeder according to baseline surveys.

- **Mammal species:**

All the species listed below are included in the accepted Standard Data Form of the “Djermuk Area” AM0000009 ASCI, all of them are included in Annex II (animal and plant species of community interest whose conservation requires the designation of special areas of conservation) and in Annex IV (animal and plant species of community interest in need of strict protection) of the Habitats Directive. Some of them are also included in the RA Red Book.

The question arises as to why for species that have the same status under international law as the brown bear (for which survey was undertaken), the investor did not undertake any activities to investigate the impacts over them and the need for certain habitat conditions?

- Grey wolf 1352 *Canis lupus* - included in the accepted Standard Data Form of the “Djermuk” area AM0000009 ASCI; included in Annex II and IV of the Habitat Directive. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, however no further surveys on it were undertaken, using up-to-date, robust methods. Most of the habitats at the site “Djermuk Area” AM0000009 ASCI, in the Amulsar Gold Project are suitable for its inhabitation.
- Bezoar goat 1372 *Capra aegagrus* - included in the accepted Standard Data Form of the “Djermuk” area AM0000009 ASCI, in Annex II and IV of the Habitat Directive, in the RA Red Book. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, however no further surveys on it were undertaken, using up-to-date, robust methods. There are habitats at the site “Djermuk Area” AM0000009 ASCI, in the area of Amulsar Gold Project, that are suitable for its inhabitation. During its field surveys, in early October, 2018, our team recorded presence of Bezoar goats on two different locations, within the borders of the “Djermuk” area AM0000009 ASCI. Adequate surveys and conservation activities of the species are crucial also, because it is main prey base for the critically endangered leopard *Panthera pardus saxicolor*.
- Eurasian otter 1355 *Lutra lutra* - included in the accepted Standard Data Form of the “Djermuk” area AM0000009 ASCI ; included in Annex II and IV of the Habitat Directive, in RA Red Book. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, however no further surveys on it were undertaken, using up-to-date, robust methods.

- Eurasian lynx 1361 *Lynx lynx* - included in the accepted Standard Data Form of the “Djermuk” area AM0000009 ASCI, in Annex II and IV of the Habitat Directive. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, however no further surveys on it were undertaken, using up-to-date, robust methods. Most of the habitats at the site “Djermuk Area” AM0000009 ASCI, in the Amulsar Gold Project are suitable for its inhabitation. Further surveys of the species are needed, using up-to-date, robust methods. It is extremely important to evaluate the places used as corridors, to be stored as such in order to ensure connectivity of species habitats.
- Brown bear 1354 *Ursus arctos*, included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive, in the RA Red Book. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA and particular survey on it has been undertaken. As a result of that survey very high density of the species has been recorded in the study area, which includes the Amulsar Gold Project. The recorded high density (59,4/1000 km²) (Burton et al., 2018³⁰) is an indication that the area is key to the species and it is necessary to take strict measures to conserve its habitats and to ensure its tranquility in the area affected by the Project. The recorded high density is also a precondition for increased movement of individuals between adjacent habitats with optimal conditions. It is extremely important to evaluate the places used as corridors, to be protected as such in order to ensure connectivity of species habitats. No assessment regarding the Emerald sites in Armenia was undertaken. Moreover, the authors of the surveys on brown bear confirm the risks of mining for the population: “*Continued persistence of this flagship species may be threatened by mining, poaching, and other anthropogenic pressures in the region, underscoring the urgent need for strategic conservation planning, impact mitigation, and expanded ecological monitoring within this biodiversity hotspot*” (Burton et al., 2018).
- Marbled polecat 2635 *Vormela peregusna* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, included in Annex II and IV of the Habitat Directive, in the RA Red Book. The species hasn’t been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, however most of the habitats at the site “Djermuk Area” AM0000009 ASCI, in the area of Amulsar Gold Project are suitable for its inhabitation, i.e. mountain meadows, alpine and subalpine grassland, etc. This is confirmed by the RA Red Book: “*Vormela peregusna VU A2c B1b (iii) - occurs in almost all regions of Armenia at 1000-2000 m. The range structure and ecology of the species are absolutely unexplored. Habitats: semi-deserts, arid mountain grasslands, mountain and subalpine meadows. Threats: habitat destruction, cultivation, overgrazing, pesticides and other chemicals.*” Further surveys of the species are needed, using up-to-date, robust methods.

30 https://www.researchgate.net/publication/326357180_Density_and_distribution_of_a_brown_bear_Ursus_arctos_population_within_the_Caucasus_biodiversity_hotspot

- Common bent-wing bat 1310 *Miniopterus schreibersii* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, included in Annex II and IV of the Habitat Directive, in the RA Red Book. The species hasn’t been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA. It is typically found up to 1400 m asl. However, it is known to commute up to 2,600 m asl (IUCN Red List). Further surveys on the species are needed.
- Lesser mouse-eared bat 1307 *Myotis blythii* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, in the so called Regional Study Area (RSA) (Amulsar Ecology Chiroptera Survey, Appendix 4.10.4). However, in that survey, the boundaries of the two study areas LSA and RSA, are not specified with a map. Further surveys of the species are needed.
- Geoffroy's bat 1321 *Myotis emarginatus* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive. The species has been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA, in the so called Regional Study Area (RSA).
- Mediterranean horseshoe bat 1305 *Rhinolophus euryale* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive, in the RA Red Book. The species hasn’t been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA. In the standard data form of the site, the species is described as Rare, so further surveys are needed for its detection and assessing of potential impacts by the Amulsar Gold Project.
- Greater horseshoe bat 1304 *Rhinolophus ferrumequinum* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive. The species hasn’t been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA. In the standard data form of the site, the species is described as Rare, so further surveys are needed for its detection and assessing of potential impacts by the Amulsar Gold Project.
- Lesser horseshoe bat 1303 *Rhinolophus hipposideros* - included in the accepted Standard Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive. The species hasn’t been recorded during the Baseline Biodiversity Surveys 2008 to 2015 within the ESIA. In the standard data forms of the two site, the species is described as Common, so further surveys are needed for its detection and assessing of potential impacts by the Amulsar Gold Project.
- Mehely's horseshoe bat 1302 *Rhinolophus mehelyi* - included in the accepted Standard

Data Form of the “Djermuk area” AM0000009 ASCI, in Annex II and IV of the Habitat Directive, in the RA Red Book. In the standard data form of the site, the species is described as Common, so further surveys are needed for its detection and assessing of potential impacts by the Amulsar Gold Project.

Other species not included in Standard Data Form of the proposed “Djermuk Area” AM0000009 ASCI Emerald site, but protected there according to the results of the Biogeographical seminars

This chapter includes information about species not included in “Djermuk area” AM0000009 ASCI Standard Data Form, but that could have impact from Amulsar Gold Project and requiring protection for one or more of the following reasons:

- Species from Resolution 6 of the Bern Convention that according to scientific data are found in the “Djermuk area” AM0000009 ASCI.
- Species from Resolution 6 of the Bern Convention whose habitats should be protected according to requirements for restoration of their conservation status.
- Species included in Standard Data Forms of other ASCIs

Persian leopard (*Panthera pardus saxicolor*)

The Persian/Caucasian leopard (*Panthera pardus saxicolor*) is not included in the Standard Data Form of the “Djermuk Area” AM0000009 ASCI. The species is listed in Resolution No. 6 (1998) with scientific name *Panthera pardus*. The ESIA report does not find critical habitat in the area of Amulsar Gold Project for the species. However the species is recognized in the RA Red Book as Critically Endangered. According to master thesis of Lilit Simonyan: Study of the Diversity of Large Mammals in Jermuk and Surrounding Areas, Yerevan State University, Faculty of Biology, Department of Zoology, Yerevan, 2016: "*Panthera pardus (Linnaeus, 1758) has been registered as one individual on the top of the mountain in 2014 in autumn*" (page 30).

It is unknown if there is an actual population in the area of “Djermuk Area” AM0000009 ASCI, but it is part of the former range of the leopard and the area is a potential high quality habitat for it (Gavashelishvili & Lukarevskiy, 2008³¹). In the RA Red Book it is written: “*presence of hardly accessible rocky massifs is also a vital requirement, since they allow to hunt on the staple prey, bezoar goats, from ambush and contain numerous shelters*”. The Heap Leach Facility of Amulsar Gold Project is located 250 meters from the Arpa Gorge with hardly accessible rock massifs and important population of bezoar goats. On the 6th of October 2018 we spotted two groups of bezoar goats, with respectively 12 and 8 individuals.

The Republic of Armenia has obligation to develop and implement recovery plans for the leopard. The recovery should be based on the protected under ASCIs potential habitats of the species, part of the former natural range. Moreover, “Strategy for the Conservation of the Leopard in the Caucasus Ecoregion” was adopted by representatives of IUCN Cat Specialist Group and WWF, on a workshop in Tbilisi 30 May - 01 June, 2007³².

31 https://www.researchgate.net/publication/228040273_Modeling_the_habitat_requirements_of_leopard_Panthera_pardus_in_west_and_Central_Asia

32 <https://portals.iucn.org/library/sites/library/files/documents/2007-068.pdf>

According to this strategy, the long-term vision for the conservation of the leopard in the Caucasus ecoregion is: *“Leopards and all wildlife prosper in natural habitats across the Caucasus ecoregion in harmony with people”*. To achieve the vision, the mid-term goal has been defined as: *“Ensure the conservation and sustainable management of viable meta-populations of leopard and wild prey and their habitats and build sustainable coexistence mechanisms with local communities across the Caucasus ecoregion”*. In the ESIA there isn't any discussion on that and there isn't any assessment of possible impact of the project on the potential habitats of the leopard and on the possibilities for future restoration of the leopard in the area.



Arpa Gorge 250 meters from the Heap Leach Facility, 5.10.2018



Bezoar goats in Arpa Gorge, 6.10.2018

Armenian mouflon (*Ovis orientalis gmelinii*)

Armenian mouflon (*Ovis orientalis gmelinii*) is not included in the Standard Data Form of the “Djermuk Area” AM0000009 ASCI. The species is listed in Resolution No. 6 (1998) with scientific name *Ovis orientalis ophion* (*Ovis gmelini ophion*). The ESIA report does not find any critical habitat for the species in the area of Amulsar Gold Project. However, the Armenian mouflon is recognized in the RA Red Book of Armenia as Endangered. According to master thesis of Lilit Simonyan: Study of the Diversity of Large Mammals in Jermuk and Surrounding Areas, Yerevan State University, Faculty of Biology, Department of Zoology, Yerevan, 2016: "*Ovis orientalis* (Gmelin, 1774), once registered on the territory of Sartsali mountain, found rarely in the Mayrats Gorge" (page 26). According to Khorozyan et al. (2009) the species status in the area is uncertain. According to the RA Red Book, besides other areas in the country, its distribution includes also Vayots Dzor Ridge with closest area of distribution 15-25 km away from Amulsar Gold Project infrastructure. According to habitat suitability model developed by WWF experts, there are habitats with high suitability in “Djermuk Area” ASCI and particularly in the area of Amulsar Gold Project. In the “Conservation Strategy for Armenian Mouflon (*Ovis [orientalis] gmelini* Blyth and Bezoar Goat (*Capra aegagrus* Erxleben) in Armenia” supported by World Wide Fund for Nature (WWF) and Critical Ecosystem Partnership Fund (CEPF), it is stressed that the principal conservation actions on these species should include preservation and restoration of suitable habitats, as well as enforcement of legislative and preventive measures to control mining and infrastructure development. Additionally, the mouflon is a prey species for the critically endangered leopard (Sharbafi et al., 2016³³) and as such more in depth research, monitoring and conservation activities for the species are needed.

Birds protected in Bern Convention breeding in the Amulsar Gold Project area.

According to baseline surveys of ESIA not less than 13 species of birds from Resolution 6 of the Bern Convention were registered as breeding. As such they should be included in the Standard Data Form of “Djermuk Area” AM0000009 ASCI and impacts from the project assessed. Their habitats should be treated as critical habitat, but this has been done only for the lesser kestrel (*Falco naumanni*). For the other 12 species no specific measures were proposed:

1. Lammergeier/Bearded vulture (*Gypaetus barbatus*): definite breeding proved in Arpa gorge and use of project area during breeding season
2. Egyptian vulture (*Neophron percnopterus*): definite breeding in Arpa gorge and use of project area during breeding season
3. Golden eagle (*Aquila chrysaetos*): probable breeding of several pairs
4. Lesser spotted eagle (*Aquila pomarina*): probable breeding
5. Booted eagle (*Hieraetus pennatus*): definite breeding
6. Short-toed eagle (*Circaetus gallicus*): probable breeding
7. European honey buzzard (*Pernis apivorus*): possible breeding in adjacent areas and using of project area during breeding season
8. Long-legged buzzard (*Buteo rufinus*): definite breeding

33 https://www.researchgate.net/publication/294882409_Prey_of_the_Persian_leopard_Panthera_pardus_saxicolor_in_a_mixed_forest_steppe_landscape_in_north_eastern_Iran_Mammalia_Felidae

9. Montagu's harrier (*Circus pygargus*): definite breeding
10. Peregrine falcon (*Falco peregrinus*): probable breeding
11. Lesser kestrel (*Falco naumanni*): definite breeding in south Amulsar mountain and using of project area for feeding
12. Eagle owl (*Bubo bubo*): possible breeding
13. Greater short-toed lark (*Calandrella brachydactyla*): probable breeding



Bearded vulture (*Gypaetus barbatus*) on nest in Arpa Gorge, November 2018

Armenian steppe viper and blotched snake

The reptile species Armenian steppe viper *Vipera eriwanensis* (synonym *Vipera ursinii eriwanensis*, *Vipera ursinii*) and blotched snake/Eastern four-lined rat snake *Elaphe sauromates* (synonym *Elaphe quatorlineata sauromates*, *Elaphe quatorlineata*) are not included the Standard Data Form of the “Djermuk Area” AM0000009 ASCI. The ESIA does not find critical habitat for these species in the area of Amulsar Gold Project. However the final conclusion of the Bern Convention Biogeographical seminar (Tbilisi, November 2017)³⁴ is that both species should be included in the list of ASCIs in Armenia because they were excluded for taxonomical reasons (*Vipera ursinii* and *Elaphe quatorlineata* were split into several species). In the ESIA (Chapter 4) there are clear evidences that the area of Amulsar Gold Project and the “Djermuk Area” AM0000009 ASCI are habitat of these species. During our field trip we found Armenian steppe viper both in “Djermuk Area” and “Gorhajn Area”.

34 <https://rm.coe.int/detailed-final-conclusions-on-the-representation-of-animal-species-fro/1680779ed7>



Armenian steppe viper (*Vipera eriwanensis*) killed on road, 3.10.2018, Amulsar mountain

In such circumstances all provisions of the Bern Convention for protecting the habitats of *Vipera eriwanensis* and *Elaphe quatuorlineata* in the ASCI “Djermuk Area” AM0000009 are in force.

1298 *Vipera eriwanensis* (synonym *Vipera ursinii eriwanensis*) – Species is common in the whole area of Amulsar Gold Mine and was found from 1600 to 2600 masl. (from Heap Leach Facility to the top of the ridge)³⁵. The species is listed in Resolution No. 6 (1998) with scientific name *Vipera ursinii* and therefore ASCIs should be designated for its protection. The conclusions of the Bern Convention Biogeographical seminar held on 8-9 November 2017 is “Insufficiency Minor/Correction of Data - to put species back in database”³⁶. Consequently species should be included in the Standard Data Base of “Djermuk Area” AM0000009 ASCI and assessed in ESIA report according to the provisions of the Bern Convention;

1279 *Elaphe quatuorlineata* (synonym *Elaphe quatorlineata sauromates*, *Elaphe sauromates*) - Species is found east of the town Gndevaz³⁷. On pages 8-9 of the appendix to ESIA Chapter 4³⁸ the following is pointed out about the species: “A few additional species were found during this survey or in surveys of the proposed Jermuk National Park ... but away from areas directly affected by mining. None of these species are locally or globally threatened and they are not discussed further”. The first argument to exclude species from ESIA assessment –location is outside the areas directly affected is not justified. The same suitable habitats

35 see pages 13-14 of the appendix to ESIA report Chapter 4 named “Survey of reptiles and amphibians at Amulsar (Armenia). Final Report. November 2015

36 <https://rm.coe.int/detailed-final-conclusions-on-the-representation-of-animal-species-fro/1680779ed7>

37 see an appendix to ESIA report Chapter 4 “Baseline surveys” named “Species of Fauna Recorded in Baseline Biodiversity Surveys 2008 to 2015”

38 named “Survey of reptiles and amphibians at Amulsar (Armenia). Final Report. November 2015”

(pastures, the same altitude) are found in the project area and the locality is in close vicinity. The second argument for lack of conservation status is also not correct. The species is listed in Resolution No. 6 (1998) with scientific name *Elaphe quatorlineata* and therefore ASCIs should be designated for its protection. The conclusions of the Bern Convention Biogeographical seminar held on 8-9 November 2017 is "Insufficiency Minor/Correction of Data - to put species back in database". Consequently species should be included in the Standard Data Base of "Djermuk Area" AM0000009 ASCI and assessed in ESIA report according to the provisions of the Bern Convention.

5. Noncompliance of Amulsar Project with the Habitats and Birds Directives

As stated in the previous chapter, the EBRD in its Environmental and Social Policy committed itself to implement European secondary legislation³⁹ - the EU Directives and the European Court of Justice (ECJ) rulings.

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)⁴⁰ transposes the Bern Convention in the European Union secondary legislation⁴¹. The Habitats Directive subsequently set up in Articles 1 to 7 the NATURA 2000 network – its aims, designation, conservation and management. NATURA 2000 network includes also Special Protected Areas (SPAs) designated according to the Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (Birds Directive)⁴². NATURA 2000 sites are therefore considered as the contribution from EU Member States to the Pan-European Emerald Network of the Bern Convention. The two networks and requirements of the Bern Convention and Habitats Directive on habitats protection are fully compatible and use the same methodology and legal protection tools⁴³. The preamble and the articles 1 to 7 of the Habitats Directive transpose the requirements of the Bern Convention for protection of natural habitats and habitats of species and for establishing a coherent ecological network of protected areas. According to Article 7 of the Habitats Directive the SPAs designated under Article 4.1 of the Birds Directive are protected according to the regime of Articles 6.2 to 6.4 of the Habitats Directive. Therefore here in this report the protection of bird species in proposed "Djermuk Area" AM0000009 ASCI Emerald site is regarded in view of the provisions of Articles 6.2 to 6.4 of the Habitats Directive.

As a result of the EBRD's commitment to implement secondary EU legislation on issues related to this project, it follows that in this case it is necessary to apply the requirements of the Habitats Directive, Birds Directive and

39 "B. The EBRD's commitments", point 7, page 1. Environmental and Social Policy European Bank for Reconstruction and Development (EBRD), Pp. 64.

<https://www.ebrd.com/cs/Satellite?c=Content&cid=1395238867768&d=Default&pagename=EBRD%2FContent%2FDownloadDocument>

40 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A31992L0043>

41 Page I – 4525, Par. 34. 15 December 2005. Opinion of Advocate General Kokott. Case C-221/04, Commission of the European Communities v Kingdom of Spain. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62004CC0221&from=GA>

42 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0147>

43 Yaffa Epstein, 2014. The Habitats Directive and Bern Convention: Synergy and Dysfunction in Public International and EU Law, Georgetown International Environmental Law Review (GIELR), Vol. 26, No. 2, 2014 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2254785

related ECJ rulings on the protection of the proposed “Djermuk Area” AM0000009 ASCI Emerald site and this area to be considered as a proposed NATURA 2000 site.

Therefore all conclusions and findings related to the implementation of the Bern Convention (Chapter 4 of this report) and to protection of the proposed “Djermuk Area” AM0000009 ASCI Emerald site also apply to this chapter.

However, the **Habitats Directive and related ECJ rulings are more elaborated and detailed than the Bern Convention** and in other hand the geographical scope of the Bern Convention is wider, for example the habitats and species protected under the ecological network.

In tables below the natural habitats and habitats of species protected in potential “Djermuk Area” AM0000009 ASCI are given (from Resolutions 4 and 6 of the Bern Convention) and analyzed for compliance with the Annex 1 and 2 of the Habitats Directive respectively and Annex 1 of the Birds Directive respectively. From all listed habitats and species the ESIA report made a certain assessment of impacts only for Brown Bear (*Ursus arctos*) and even for this species the assessment disregard the potential “Djermuk Area” AM0000009 ASCI and requirements for its protection arising from the Bern Convention and related to the requirements of the Habitats Directive.

Habitats (relation to Annex 1 of the Habitats Directive (HD)):

Emerald Code	Emerald Name	HD code	HD name	Relation Emerald-HD
E1.11	Euro-Siberian rock debris swards	6110	Rupicolous calcareous or basophilic grasslands of the <i>Alyssosedion albi</i>	Same
E2.3	Mountain hay meadows	6520	Mountain hay meadows	Same
E3.3	Sub-mediterranean humid meadows	6540	Sub-Mediterranean grasslands of the <i>Molinio-Hordeion secalini</i>	Same
E3.4	Moist or wet eutropic and mesotrophic grassland	6440	Alluvial meadows of river valleys of the <i>Cnidion dubii</i>	Same
E4.3	Acid alpine and subalpine grassland	6150	Siliceous alpine and boreal grasslands	Includes
		6170	Alpine and subalpine calcareous grasslands	
		6230	Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	
		62D0	Oro-Moesian acidophilous grasslands	
E5.4	Moist or wet tall-herb and fern fringes and meadows	3280	Constantly flowing Mediterranean rivers with <i>Paspalo-Agrostidion</i> species and hanging curtains of <i>Salix</i> and <i>Populus alba</i>	Includes
		6430	Hydrophilous tall herb fringe communities of plains and of the	

			montane to alpine levels	
F9.1	Riverine scrub	3230	3230 Alpine rivers and their ligneous vegetation with <i>Myricaria germanica</i>	Includes
		3240	Alpine rivers and their ligneous vegetation with <i>Salix elaeagnos</i>	
G1.11	Riverine <i>Salix</i> woodland	3240	Alpine rivers and their ligneous vegetation with <i>Salix elaeagnos</i> (tree dominated stands)	Includes
		91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i> , <i>Alnion incanae</i> , <i>Salicion albae</i>)	
		92A0	<i>Salix alba</i> and <i>Populus alba</i> galleries	
H1	Terrestrial underground caves, cave systems, passages and water bodies	8310	Caves not open to the public	Includes
		H1.4	Lava tubes is included in 8320 Fields of lava and natural excavations	
H2.3	Temperate-montane acid siliceous screes	8110	Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>)	Includes
		8150	Medio-European upland siliceous screes	
H3.1	Acid siliceous inland cliffs	8220	Siliceous rocky slopes with chasmophytic vegetation	Same

Species (relation to Annex 2 of the Habitats Directive (HD)):

Name	Included in Annex 2 HD “+”	Priority species “**”
<i>Echium russicum</i>	+	
<i>Euplagia quadripunctaria</i>	+	
<i>Aspius aspius</i>	+	
<i>Luciobarbus comizo</i>	+ (as <i>Barbus comiza</i>)	
<i>Sabanejewia aurata</i>	+	
<i>Vipera ursinii</i> (<i>Vipera ursinii eriwanensis</i> , <i>Vipera eriwanensis</i>)	+ (as <i>Vipera ursinii</i>)	
<i>Elaphe quatorlineata</i> (<i>Elaphe quatorlineata sauromates</i> , <i>Elaphe sauromates</i>)	+ (as <i>Elaphe quatorlineata</i>)	
<i>Lutra lutra</i>	+	
<i>Panthera pardus</i> (<i>Panthera pardus saxicolor</i>)	-	
<i>Lynx lynx</i>	+	
<i>Ursus arctos</i>	+	*

<i>Canis lupus</i>	+	*
<i>Vormela peregusna</i>	+	
<i>Capra aegagrus</i>	+	
<i>Ovis orientalis ophion (Ovis gmelini ophion, Ovis orientalis gmelinii)</i>	-	
<i>Myotis blythii</i>	+	
<i>Myotis emarginatus</i>	+	
<i>Rhinolophus euryale</i>	+	
<i>Rhinolophus ferrumequinum</i>	+	
<i>Rhinolophus hipposideros</i>	+	
<i>Rhinolophus mehelyi</i>	+	

Species (relation to Annex 2 of the Birds Directive (BD)):

Name	Included in Annex 1 BD “+”
<i>Gypaetus barbatus</i>	+
<i>Neophron percnopterus</i>	+
<i>Aquila chrysaetos</i>	+
<i>Aquila pomarina</i>	+
<i>Hieraetus pennatus</i>	+
<i>Circaetus gallicus</i>	+
<i>Pernis apivorus</i>	+
<i>Buteo rufinus</i>	+
<i>Circus pygargus</i>	+
<i>Falco peregrines</i>	+
<i>Falco naumanni</i>	+
<i>Bubo bubo</i>	+
<i>Calandrella brachydactyla</i>	+
<i>Alcedo atthis</i>	+
<i>Anthus campestris</i>	+
<i>Caprimulgus europaeus</i>	+
<i>Crex crex</i>	+
<i>Dendrocopos syriacus</i>	+
<i>Emberiza hortulana</i>	+
<i>Lanius collurio</i>	+
<i>Lanius minor</i>	+
<i>Lullula arborea</i>	+
<i>Luscinia svecica</i>	+
<i>Pyrrhocorax pyrrhocorax</i>	+
<i>Sylvia nisoria</i>	+
<i>Tadorna ferruginea</i>	+

The most important additional provisions of the Habitats Directive relevant to this project (Articles 6.2, 6.3 and 6.4) are described here below.

FINDING 5.1.: Violation of Article 6.2 of the Habitats Directive because of possible deterioration of the proposed “Djermuk Area” AM0000009 ASCI Emerald site

Article 6.2 of the Habitats Directive requires avoiding the deterioration of natural habitats and the habitats of species as well as significant disturbance of the species in special areas of conservation (NATURA 2000 sites).

This strict protection regime of Article 6.2 should be applied both for the fully designated sites (so called Special Areas of Conservation - SACs) and for proposed NATURA 2000 sites (proposed to or adopted by the European Commission Sites of Community Importance - SCIs).

According to Article 4.5 of the Habitats Directive as soon as a site is placed on the list of SCIs referred to in the third subparagraph of paragraph 2 it shall be subject to Article 6 (2), (3) and (4). The NATURA 2000 sites become SCIs after a procedure laid down in articles 4.1 and 4.2 of the Habitats Directive and more particularly after their adoption by the European Commission as SCIs (Article 4.2, 3 sub-paragraph) and following the process of biogeographical seminars (procedure established according the Article 4.2, 1st sub-paragraph selecting the draft list of SCIs).

The Djermuk Area AM0000009 ASCI Emerald site is in a stage to be adopted as draft ASCI, because it was adopted after the relevant biogeographical seminar. This stage is corresponding to the list of draft SCIs according to Article 4.2, 1st sub-paragraph of the Habitats Directive. When the draft Djermuk Area AM0000009 ASCI will be adopted by Bern Convention as ASCI, this stage will correspond to Article 4.5 of the Habitats Directive.

According to the decisions of the ECJ the protective regime of the Article 6(2) should be applied to all potential SCIs even before their adoption as draft SCIs – to the proposed by countries SCIs and even earlier (see Case C 141/14). The number of ECJ judgments has found that legal requirement: Dragaggi and Others (C 117/03, paragraphs 25-29)⁴⁴; Bund Naturschutz in Bayern and Others (C 244/05, paragraphs 35- 47 and final conclusions)⁴⁵; Commission v Bulgaria in Kaliakra case (Case C 141/14, paragraphs 48-62 and final conclusions)⁴⁶.

According to the cited provisions and decisions of the European Court of Justice (ECJ) the Article 6.2 of the Habitats Directive is applied since the earliest stage of scientific qualification of the future NATURA 2000 site. The trigger for violation of Art. 6.2 relates to the probability or risk that authorization of a project could have significant species disturbance and/or deterioration of the habitat⁴⁷. This requirements of Art. 6.2 of the Habitats Directive comply with the requirements of the Bern Convention laid down in the Paragraph 1 of the Recommendation No. 157 (2011)⁴⁸.

Chapter 4 of this report outlines the risks of deterioration of natural habitats and disturbance of species subject to conservation in the proposed Djermuk Area AM0000009 ASCI Emerald site, which means that the approved design is in conflict with the requirements of Article 6.2 of the Habitats Directive.

44 <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-117/03>

45 <http://curia.europa.eu/juris/liste.jsf?language=en&num=c-244/05>

46 <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-141/14>

47 see Case C 141/14 of the ECJ (the most recent judgment on Art. 6.2), paragraphs 51, 52, 55 and 58

48 Paragraph 1: “Contracting Parties: Take the necessary protection and conservation measures in order to maintain the ecological characteristics of the candidate Emerald sites”; <https://rm.coe.int/168074669c>

FINDING 5.2. Violation of Articles 6.3. and 6.4. of the Habitats Directive

This part will briefly examine the legal requirements and application of Articles 6.3 and 6.4 of the Habitats Directive related to this case.

Article 6.3 requires that any project likely to have a significant effect on the NATURA 2000 sites, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. The article also requires that the competent national authorities shall agree to the project only after having ascertained that it will not adversely affect the integrity of the site concerned.

Article 6.4 provides possible exception from Article 6.3 only in cases of imperative reasons of overriding public interest and if there is absence of alternative solutions for achieving the declared aims of the associated to the project overriding interest. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations of overriding public interest which may be raised are those relating to human health or public safety, or to beneficial consequences of primary importance for the environment. The Article 6.4 requires that in cases of justified exception taken on these grounds countries shall take all compensatory measures necessary to ensure that the overall coherence of NATURA 2000 is protected.

As stated before, the specific assessment procedure under Articles 6.3 and 6.4 is required after approval of the zone as SCI, corresponding to the approval of the proposed "Djermuk Area" AM0000009 as ASCI.

The requirement under Articles 6.3 and 6.4 of the Habitats Directive to carry out specific Appropriate Assessment is not present as a requirement of the Bern Convention (see Chapter 4 of this report). The Bern Convention sets up only general aims and requirements which should be achieved by the protection of ASCIs. However, the Amulsar Project was approved following an EIA procedure (see FINDING 4.1. of this report) and the project promoter developed an Environmental and Social Impact Assessment (ESIA) report from May 17, 2016⁴⁹ aiming further financing from EBRD. Taking into account the commitment of EBRD to comply with the EU legislation, the EIA/ESIA of Amulsar Project should apply principles, practices and substantive standards of Articles 6.3 and 6.4 of the Habitats Directive and here we will point out those relevant to the case:

- The first important legal standard is that the EIA/ESIA should carry out deep assessment of all natural habitats and species protected in the proposed Djermuk Area AM0000009 ASCI for which significant negative impact arising from project implementation could not be excluded (this issue was discussed in FINDING 4.1. of this report)
- The project could be implemented only if its residual impacts do not affect adversely the site and its integrity in light and for the purposes of preservation of the favorable conservation status of habitats and species protected in the site (C-127/02, Waddenvereniging and Vogelbeschermingsvereniging, paragraphs 57 and 58)⁵⁰
- The protective measures provided in a project which are aimed at compensating the negative effects of the project on a NATURA 2000 site cannot be taken into account in the assessment of the implications of the project provided in Article 6(3) and to justify minimizing the residual effects of the project. If the measures provided for in a project are not aimed either at avoiding or reducing the significant adverse effects for the protected in the site habitats and species caused by the project, rather, they tend to compensate *post factum* residual effects, such measures could not be accepted as measures fulfilling the

49 The ESIA report: <https://www.lydianinternational.co.uk/projects/amulsar/environmental-and-social-impact-assessment-esia>

<https://www.lydianarmenia.am/index.php?m=publications&lang=eng&p=9>

50 <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-127/02>

obligations under Article 6.3 to avoid adverse impacts. Such measures could be undertaken as compensation and offsetting measures only in cases where exceptions are made according the article 6.4 of the Habitats Directive (corresponding to article 9 of the Bern Convention) and aiming particularly to maintain the overall coherence of ecological network (Case C-521/12 Briels and Others, paragraphs 29-35 and 38-39⁵¹). This issue was discussed in Point 2 and 4, FINDING 4.2. of this report.

- In Point 4, FINDING 4.2. of this report was discussed the fact that the Amulsar Project does not meet the requirements of Article 9 of the Bern Convention laying down conditions for possible exceptions from habitat protection requirements of Articles 4, 5, 6, 7 of the Convention. The same is true according the Article 6.4 of the Habitats Directive – “overriding public interest” must be both “public” and “overriding”, which means that it must be of such an importance that it can be weighed up against the directive’s objective of the conservation of natural habitats and wild fauna and flora. If priority natural habitat type and/or a priority species are adversely affected and residual impacts exist (such species is for example Brown Bear *Ursus arctos*), the only considerations which may be raised, under the second subparagraph of Article 6(4) of Directive 92/43, are those relating to human health or public safety (Case C-182/10 Solvay and Others, paragraphs 71 – 79⁵²; Case C-43/10 Nomarchiaki Aftodioikisi Aitoloakarnanias and Others, paragraphs 120 –128⁵³). Amulsar Project does not comply with those conditions.
- **Compensation measures should be taken before the impacts appear in order to maintain effectively the coherence of ecological network** (Case C-239/04 Commission v Portugal, paragraph 35⁵⁴; C-258/11, Sweetman and Others, paragraph 35⁵⁵; Case C-304/05, Commission v Italy, paragraph 83⁵⁶; Case C-404/09 Commission v Spain, paragraph 109⁵⁷; Case C-43/10 Nomarchiaki Aftodioikisi Aitoloakarnanias and Others, paragraphs 130 –132⁵⁸). If exception is made, because of proved “overriding public interest” this procedure should follow Article 6.3 assessment and the effectiveness of the compensation measures undertaken should be assessed against the conservation objectives of the site and the adverse impact and residual effects established during the assessment. The compensation measures (and so called “mitigation measures” which are in fact compensation once) provided in the ESIA report on Amulsar Project does not meet any of these requirements.

FINDING 5.3.: Disregard of Articles 1 to 7 and Annexes I, II and III of the Habitats Directive in the ESIA Report

The ESIA report fully disregards Articles 1 to 7 and Annexes I, II and III of the Habitats Directive which set out the objectives, designation, conservation and managing the European ecological network NATURA 2000 and thus protecting endangered natural habitats and species habitats (for the EU member states NATURA 2000 network is considered as Emerald Network under the Bern Convention). The Habitats Directive is cited and referred to in the ESIA report only occasionally and only in conjunction with Articles 12 to 16 and Annex IV defining the protection of protected species. Below we give such quotes from the ESIA:

51 <http://curia.europa.eu/juris/liste.jsf?num=C-521/12>

52 <http://curia.europa.eu/juris/liste.jsf?num=C-182/10&language=EN>

53 <http://curia.europa.eu/juris/liste.jsf?num=C-43/10&language=EN>

54 <http://curia.europa.eu/juris/liste.jsf?language=en&num=c-239/04>

55 <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-258/11>

56 <http://curia.europa.eu/juris/liste.jsf?language=en&jur=C,T,F&num=C-304/05&td=ALL>

57 <http://curia.europa.eu/juris/liste.jsf?language=en&num=C-404/09>

58 <http://curia.europa.eu/juris/liste.jsf?num=C-43/10&language=EN>

- Page 4.10.31: “In Armenia the Lynx is “thought to be a common species, especially in some protected areas but the population trend is unknown” (IUCN, 2015) and few surveys have been carried out. Numbers are unlikely to be high. Although classified as Least Concern by IUCN, it is listed in Annex IV of the EU Habitats Directive, which means that degradation of its habitat is prohibited under EU law. This is of significance to the Project because of its commitment to comply with the EBRD PRs - which assume compliance with EU law. It was photographed in five squares during the Brown Bear survey, including three times at Arshak (June 20, July 24 and July 31 2015).”
- Page 4.10.32: “The Brown Bear (*Ursus arctos*) is a protected species in Armenia and is included in the national Red Data Book with a status of Vulnerable. Although classified as Least Concern by IUCN, it is listed in Annex IV of the EU Habitats Directive, which means that degradation of its habitat is prohibited under EU law. This is of significance to the Project because of its commitment to comply with the EBRD PR - which assume compliance with EU law.”
- 4.10.33: “Based on these findings, the Project-affected area is determined to be critical habitat for Brown Bear in relation to EBRD PR6 and its reference to the EU Habitats Directive.”
- 4.10.41: “Although classified as Least Concern by IUCN, and listed as Vulnerable in the RA Red Book, Brown Bear is considered to be a trigger species for critical habitat due to its status as an Annex IV species of the EU Habitats Directive, with which the Project has committed to comply in accordance with its intended adherence to the requirements of EBRD’s PR6. Under the EU Habitats Directive, degradation of brown bear’s resting or breeding habitat is prohibited. As IFC’s PS do not require adherence to the EU Habitats Directive, this species does not trigger critical habitat requirements under PS6.”

6. Noncompliance of Amulsar Project with Armenian Law

According to article 7 of ESP of EBRD “When host country regulations differ from EU substantive environmental standards, projects will be expected to meet whichever is more stringent.”.

In the case of Amulsar Gold Project several Armenian legal acts are more stringent than EU law as described by two members of the working group to investigate the mining operations in Armenia created by Prime Minister Nikol Pashinyan in July 2018. The first assignment of the group included investigating whether Amulsar meets Armenia’s legal requirements and whether it has considerable environmental risks.

In his “Expert Opinion on Biodiversity, its Conservation and Biodiversity Offset in EIA and Appendixes of Amulsar Gold Quartzite Deposit in the Republic of Armenia” Karen Manvelyan, Director of WWF-Armenia, emphasizes on the following texts of the RA legislation, according to which the Amulsar Gold Project is in noncompliance with the Armenian legislation:

- **RA Law on Fauna**

Article 17 of the RA Law on Fauna stipulates: "All the objects of fauna are subject to legal protection in the Republic of Armenia. Economic, constructional and social activities envisaged for provision of security of fauna objects and their habitat, as well as the continuity of their existence, will be implemented in accordance with procedures defined by the Republic of Armenia."

Article 18 of the RA Law on Fauna stipulates: "The users of natural resources, who harm the species mentioned in the Red Book of the Republic of Armenia during economic or other activities, must undertake measures for their

protection. Any activity that will result in the decrease of the quantity of animal species registered in the Red Book of the Republic of Armenia or will **deteriorate their habitat** is prohibited."

- **RA Law on Flora**

Article 17 of the RA Law on Flora stipulates: "*Those land users who have species of plants registered in the Red Book of the Republic of Armenia growing on their plots must undertake measures for the protection of such plants in a manner defined by Republic of Armenia Law. Any activity that will result in the decrease of the quantity of plant species registered in the Red Book of the Republic of Armenia or will **spoil their habitat** is prohibited.*"

Article 18 of the RA Law on Flora stipulates: "*All the objects of flora are subject to legal protection in the Republic of Armenia.*"

- **RA Mining Code**

Article 26 of the RA Mining Code stipulates the grounds for the prohibition of mining: "*The use of separate subsoil allotments shall be prohibited in a manner prescribed by Republic of Armenia Law aiming to ensure national security, protection of human life and health, historical and cultural values or nature and the environment, if the land plot on the claimed subsoil allotment:*

- 1) *Has cemeteries on it*
- 2) *Accommodates natural, historical or cultural monuments*
- 3) *Accommodates **plants or animal settlements registered in the Red Book of Armenia**, or if it is on migration routes of animals.*"

In her "Conclusion on Amulsar Gold Quartzite Deposit" Nazeli Vardanyan, environmental lawyer, writes about violation of other acts

- **RA Law on Lake Sevan**

According to Article 3 of the law Kechout and Spandaryan reservoirs, the catchment basins of Arpa and Vorotan Rivers make up a part of Lake Sevan catchment basin.

Article 10 of the same law says, "*1. Any type of activity in central, direct impact and indirect impact zones that has a dangerous impact on Lake Sevan ecosystem is prohibited.*

2. Prohibited activities in the direct impact zone are:

- a) use of ecologically harmful technologies producing wastewater,*
- b) production, use, and storage of radioactive substances and wastes, as well as ecologically hazardous or **toxic substances**;*
- c) deployment of enterprises dealing with **ore processing**."*

Vardanyan also affirms: "*According to Clause 6 of Chapter 4 of "Territorial Mapping of Catchment Basin of Lake Sevan" endorsed by governmental resolution N 746-N on 18.07.2013, "Borders of the catchment basin of Spandaryan reservoir are fixed, as well as the 3000-meter-long horizontal stripe stretching from the axis of Vorotan-Sevan tunnel as the immediate impact zone of the catchment basin of Lake Sevan."* Nevertheless, this provision of the resolution has been violated by the company, as the significant part of the bottomholes has been located in the 3000-meter-long horizontal stripe (buffer zone), which is a serious threat of pollution for Lake Sevan."

It is clear that RA Law on Fauna and Law on Flora do not foresee exceptions (compensation or offsetting measures) to the norms of protection of habitats of species listed in the RA Red Book. With 10 species assessed as Endangered or Critically Endangered and 37 species assessed as Vulnerable or Data Deficient, whose habitats

could be deteriorated, the approval of the Amulsar Gold Project was in violation of Armenian Law and subsequently of Article 7 of the EBRD Environmental and Social Policy.

7. Conclusions: Amulsar Project - Negative Example of Biodiversity Offsetting

The Amulsar Gold Project experts admit in the Environmental and Social Impact Assessment (ESIA) that there will be residual impacts of the project activities on biodiversity and propose offsetting these impacts outside of the project area. The Ministry of Nature Protection agreed with the proposal of Lydian Armenia biodiversity offsetting to be achieved by establishing a new “Jermuk” National Park - bordering from the north and the west of the Amulsar Gold Project. In the Natural and Critical Habitat Assessment⁵⁹, part of the ESIA, it is written: “*The Project proposes to achieve NNL (no net loss) of natural habitat through the establishment of a new Jermuk National Park*”. In 2014 the Armenian Government adopted “State Program on Strategy, Preservation and Use of Specially Protected Areas in the Republic of Armenia”, according to which in 2017-2020 “Jermuk” National Park shall be established⁶⁰.

On December 12th 2016 a memorandum of understanding was signed between the RA Ministry of Nature Protection and “Lydian Armenia” intended to establish “Jermuk” National Park. The company’s Executive Director Hayk Aloyan stated that 5.7 million USD will be input in “Jermuk” National Park project within 5 years.⁶¹

After analyzing the ESIA report and appendices we conclude that the proposal to establish “Jermuk” National Park is a very negative example of biodiversity offsetting. The simplification of the task to demonstrate “no net loss” has gone to extremes in the case of Amulsar Gold Project. First by not assessing impacts on all biodiversity features and on “Djermuk Area” Emerald site. Second, by doing a wrong selection of priority biodiversity features and critical habitats. And third, by wrong assessment of how the measures will lead to “no net loss”.

We describe 11 habitats and 76 species protected according to RA Red Book, IUCN Red List, Bern Convention and/or EU Habitats and Birds Directives, based on data mostly from the ESIA report, but also from the Standard Data Form of the “Djermuk Area” Emerald site, scientific articles and reports and our own observations. They are summarized in table “Protected Habitats and Species with Possible Impacts from Amulsar Gold Project” (see Annex). Out of these only 2 habitats and 8 species are with effective measures in the ESIA. This means that for them the measures are on time, specific and planned in accordance with the requirements of the Bern Convention, Habitats Directive and Armenian Law. For additional 2 habitats and 12 species ineffective measures are proposed in the ESIA - either just like unspecified intentions (Ex.: tree planting to compensate loss of natural habitat of Northern goshawk, lesser-spotted eagle, booted eagle⁶²) or as measures not complying with Bern Convention, Habitats Directive and/or Armenian Law (Ex.: prescribed fire in planned national park to compensate loss of habitat for reptiles in the Heap Leach Facility). For 7 habitats and 56 species there are no measures at all proposed in the ESIA.

59 <https://www.lydianarmenia.am/resources/mainFiles/pdf/3ae459afe9af2bfbdfab7f919a3debb1.pdf>

60 <https://www.ecolur.org/en/news/mining/amulsar-redlisted-animals-to-be-fallen-under-heavy-machinery-photos/8517/>

61 <http://www.mnp.am/en/post/1892>

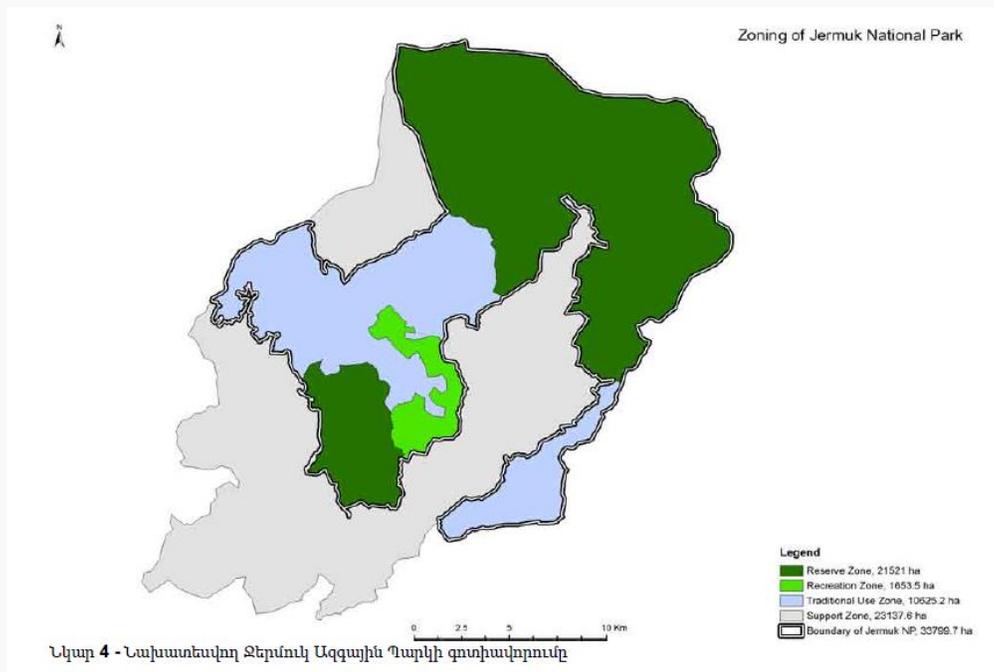
62 Table 6.11.10 in Natural and Critical Habitat Assessment, ESIA of Amulsar

Using biodiversity offsetting measures in other areas to compensate for permanent loss of key biodiversity in the project area is risky, with unpredictable results and illegal according to environmental law in many countries (incl. Armenia) and international conventions (incl. Bern Convention). The case of declaring “Jermuk” National Park as an offset for impacts of the Amulsar Gold Project demonstrates the need to prohibit biodiversity offsetting as instrument for approval of projects that would otherwise be unacceptable.

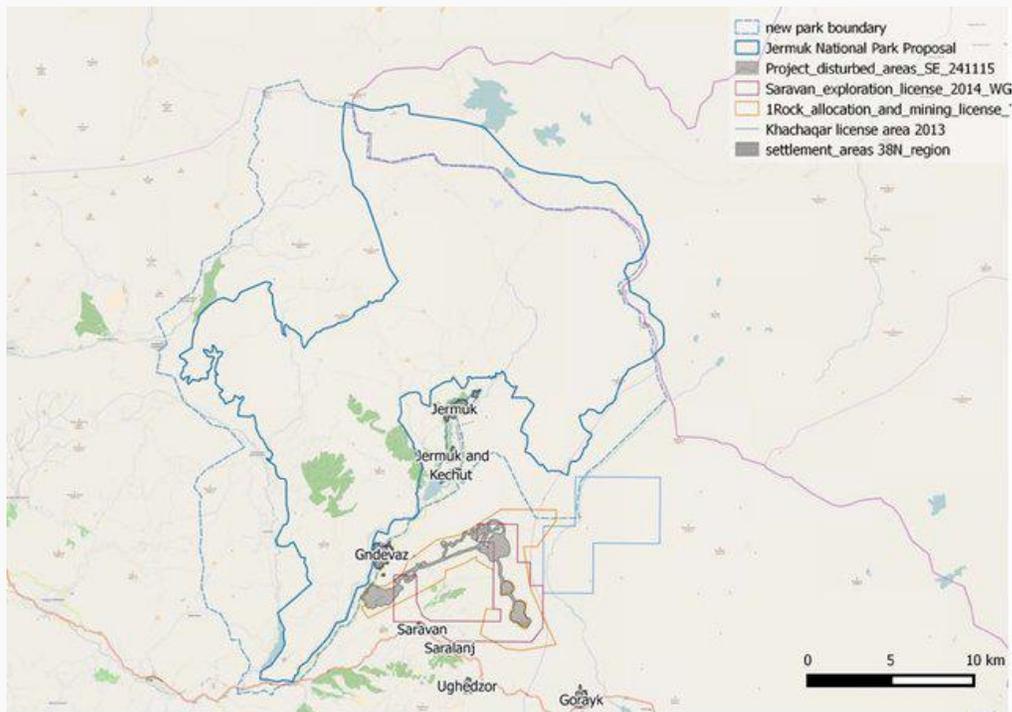
We summarize the most important circumstances that support this conclusion:

1. The ESIA report does not comply with the requirements of Art. 4 of the Bern Convention and Art. 6 of the Habitats Directive and does not assess the impacts on the proposed "Djermuk Area" AM0000009 ASCI (Emerald) site, which also includes a lack of assessment of the majority of natural habitats and species that are protected in the area.
2. The ESIA report recommends the implementation of measures, which are violating the requirements of Art. 9 of the Bern Convention and Art. 6.3 and 6.4 of the Habitats Directive. As analyzed in the previous chapters compensation/offsetting measures can only be applied as exceptions for projects with “overriding public interest”. The extraction of gold by a private company does not meet the requirements for exceptions from the requirements for the conservation of areas of the European Ecological Network (Emerald).
3. Most of the mitigation measures proposed by the ESIA report are *de facto* also compensatory measures because they do not aim reducing impacts arising from the project on natural habitats and species within the Emerald network. Thus, they also do not meet the requirements of Art. 4 of the Bern Convention and Art. 6 of the Habitats Directive.
4. Most of the planned compensatory/offsetting measures (together with so called “mitigation” measures) are not planned to preserve the coherence of the European Ecological Network (Emerald) and to preserve the conservation status of natural habitats and species adversely affected by the project. They are planned for some other positive gains for certain species, but are not aiming to achieve the aims and provisions of the Bern Convention and Habitats Directive. The main reason for that is again lack of any assessment of the impacts on proposed "Djermuk Area" AM0000009 ASCI (Emerald) site. There is lack of evaluation of the effectiveness of the measures to preserve the coherence of the Emerald Network and to preserve the conservation status of natural habitats and species adversely affected by the project.
5. The proposed as a compensatory / offsetting measure to establish a national park partially on the territory of the ASCI (Emerald) site will prevent Armenia from fulfilling its national designation obligations to legally protect the entire ASCI (Emerald) site. The proposed boundaries of “Jermuk” National Park were changed to exclude all areas of Amulsar Gold Project after signing the memorandum between “Lydian Armenia” and Ministry of Nature Protection. The initial boundaries proposed in 2012 by WWF in a feasibility study for JNP⁶³ were identical with “Djermuk Area” Emerald site and included significant part of Amulsar Gold Project (barren rock storage facility, Erato open pit mine, transportation line/facility).

63 <https://www.ecolur.org/files/uploads/pdf/jermuknationalpark.pdf>



Boundaries of planned "Jermuk" National Park as proposed in 2012



Boundaries of planned "Jermuk" National Park as shown in ESIA report 2016

The protection of the proposed Emerald site is an obligation of the Armenian Government and under the Bern Convention and therefore cannot be referred as an offsetting/ compensatory measure for impacts by a private project on the coherence of the European ecological network "Emerald" and on the integrity of the ASCI (Emerald) site. This also contradicts the requirements of the Habitats Directive.

6. "Jermuk" National Park was not declared before the start of construction of the mining facilities and as by December 2018 the declaration process is stopped. After 7 months of preparation work (June-December 2017) the new proposed boundaries of JNP were submitted to the RA Bioresource Management Agency and since then the necessary steps for declaration or public consultations have not moved forward. There is a conflict with the establishment of the park from users of substantial parts of the park (For ex. Herher Open Woodland Sanctuary is managed by Armenian businessman and politician Gagik Tsarukyan). The park will not be declared in the next years but the impact on some biodiversity features of Amulsar is already irreversible. This is a violation of the Habitats Directive. As described in Chapter 5, compensation measures should be taken before the impacts appear in order to maintain effectively the coherence of the ecological network (Emerald Network in the case of Armenia).

7. Declaring "Jermuk" National Park, with boundaries modified to exclude Amulsar Gold Project, will not have a significant added value to ecosystems conservation. 27375 hectares (274 km²) of the area of the planned park⁶⁴ are already protected in three protected areas according to Armenian law:

- Jermuk Hydrological Sanctuary (17371 hectares)
- Herher Open Woodland Sanctuary (6139 hectares)
- Jermuk Forest Sanctuary (3865 hectares)

On September 17th 2009 the statute of Jermuk Hydrological Sanctuary and the current regimes were approved⁶⁵. The main objectives of the sanctuary are conservation of the water balance and regime of the upper Arpa river catchment, protection of flora, fauna and their habitats, protection of species included in RA Red Book, creation of preconditions for cognitive tourism. There are a broad list of prohibitions that prove that big part of the proposed JNP is already well protected since 2009. In the territory of the sanctuary it is forbidden:

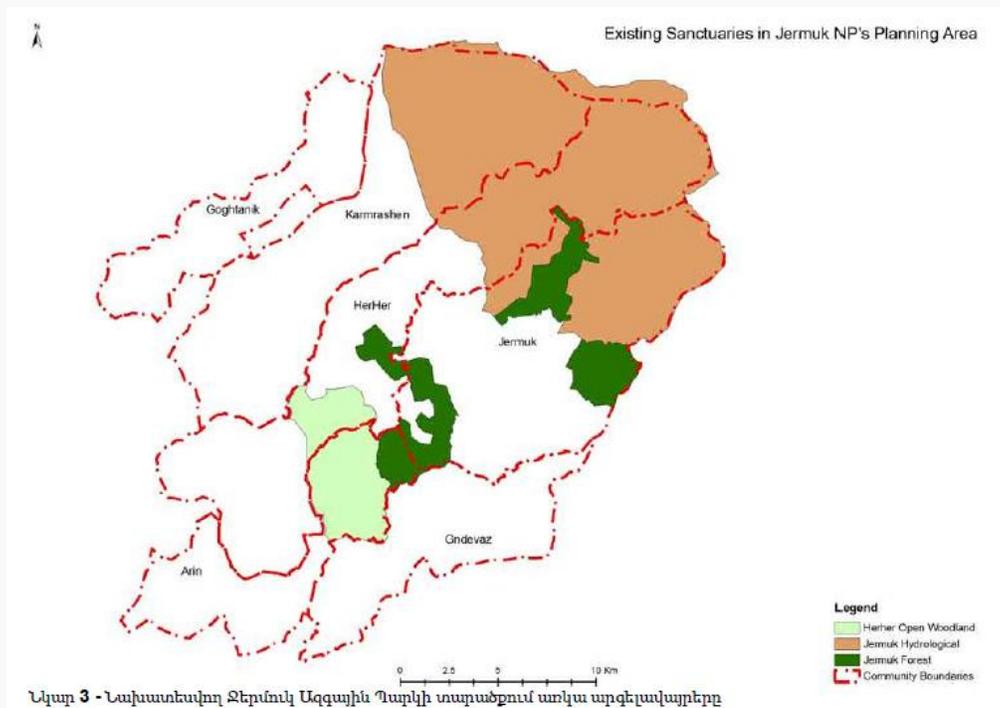
- Construction of artificial ponds, hydropower plants, water extraction and changes in water regime and water quality
- Use of pesticides and mineral fertilizers, storage of harmful substances and waste
- Mineral processing facilities
- Any activities that may threaten the stability of the ecosystem in the area, the protection of the flora and fauna, the protection of scientific or historical-cultural value, as well as activities that cause the change of the river hydrological regime.

In the territory it is allowed:

- Measures to prevent changes in water balance
- Fight against diseases
- Cognitive tourism, sleeping in tents, visitors' services, education and training, amateur and sport fishing
- Scientific studies and monitoring of biodiversity
- Agricultural production by ecologically clean methods, use of organic fertilizers
- Wild animals and plants reproduction.

64 Please note that according to Armenian law national parks are not strict protected areas as parks IUCN category II. In some national parks in the country there are settlements, house and road construction, logging, etc.

65 <http://www.arlis.am/DocumentView.aspx?DocID=59643>



8. Many of the measures proposed in the ESIA report are likely to lead to null effect or even additional / cumulative direct negative effect on the conservation status of natural habitats or species protected in the ASCI (Emerald) Site. Assessment of this effect is lacking due to the already mentioned overall lack of impact assessment on the ASCI (Emerald) site. Offsetting methodology in ESIA and Natural and Critical Habitat Assessment is not complying with Good International Practice (GIP) as defined in PR6 of EBRD. This led to underestimating the impacts of the project.

The baseline studies⁶⁶ were not detailed enough to assess all protected habitats and species. Natural habitats were not described following EUNIS or other internationally recognized classification. The table to calculate the impact on habitats was done with wrong assumptions. 1805 ha were calculated in the "Natural and Critical Habitat Assessment" (NCHA)⁶⁷, but impacts to vegetation surrounding the open pits was taken into account only 500 to 1000 meters in radius and only by decreasing the quality with one class. The matrix for biodiversity distinctiveness and habitat condition is not made according to internationally recognized methodology. The habitat impact units (HIU) are an invention of the authors of the assessment. It is not clear how the authors assessed that conditions of 5 out of 9 habitats (including montane meadows, meadow steppe, sub-alpine meadow, etc.) as "moderate".

In "Offset Options" it is assumed that by declaring a new national park and prohibiting the grazing in pastures will offset biodiversity loss in Amulsar. In offset calculation trading up of habitats is allowed - offsetting the loss of one habitat by improving the conditions of other.

In table 6.11.10 of the ESIA⁶⁸ offsetting of residual impacts for species is discussed. Many of the proposed measures are ineffective:

66 <https://www.lydianarmenia.am/resources/mainFiles/pdf/3801f6c8baf18eafd811a5092b762fd1.pdf>

67 <https://www.lydianarmenia.am/resources/mainFiles/pdf/3ae459afe9af2bfbdfab7f919a3debb1.pdf>

68 <https://www.lydianarmenia.am/resources/mainFiles/pdf/a9138c15297e75305e2072b23a4349eb.pdf>

- Setting nest boxes for lesser kestrel in JNP after destroying feeding habitat at Amulsar. The species doesn't nest far from human settlements or buildings, so the measure is irrelevant for the proposed JNP.
- Expanding a natural lake in JNP in order to create breeding habitat for ruddy shelduck and relocating herders camps away from the lake. This would destroy the natural wetland and would create social problems with very little chance that the species will adapt to the artificial lake.
- Installing a "vulture restaurant" to compensate possible impacts on the only 2 vulture nests in the area. The Egyptian and bearded vulture nests are in vicinity to the Heap Leach Facility and could be disturbed during construction and operation of the Amulsar Project. In case of cyanide spill or other pollution vultures could die feeding on dead animals.
- Prescribed fire, mowing and forest thinning in Herher State Open Woodland Sanctuary to improve habitats for 3 species of reptiles, as well as short-toed eagle and white-throated robin. These measures first are illegal and second destroy the natural habitat. Prescribed fire will even kill many reptiles!
- Restrictions to grazing are proposed to benefit birds of prey (Montagu's harrier, steppe eagle, golden eagle). There is scientific proof that lack of grazing has the opposite effect because of population decrease of rodents and other prey species.

The ESIA focus its detailed surveys on only one species of plant (*Potentilla porphyrantha*) and only one species of animal (*Ursus arctos*). Authors of ESIA prove that habitats of the Project area are key habitats for the brown bear. With further studies the same could be proven for other large mammals.

Authors of the Survey on Brown Bear⁶⁹ prove the importance of Amulsar mountain, as critical habitat for the brown bear. On Pages 5 and 36 of the interim report from October 2015, it is written: "Numerous observations and photographs confirm that the southern slopes of Amulsar are critical habitat for the species, with frequent records and use for breeding." and "... the southern slopes of Amulsar are critical habitat for the species." The study also reveals that the area of Amulsar Gold project (squares 22 and 23 of the grid used) is one of the areas, most intensively used by bears. Page 36: "In 2015, this area was visited by at least five different bears (one female with two cubs, an adult male, and one sub-adult) and three caves were found that were regularly used ..."

For a highly mobile species as the brown bear, which requires large territories, it means the whole Amulsar mountain is of high importance. The southern slopes, which are envisaged for a "set-aside" are a very small area for the species' needs. Moreover, in the conditions of the open habitats as Amulsar, bears need larger areas to find food. Shortly, southern slopes of Amulsar alone, cannot be a sufficient habitat for the brown bear in the area.

There is no way, in the frame of this short-term study of bears in the area, to determine to what extent the population of this species will be negatively affected. More caution is needed as the following genetic data is available. A study, published in 2017 (Salomashkina et al., 2017⁷⁰) indicates that the brown bear population from southern Armenia differs genetically from the populations in Greater Caucasus, European part of Russia and European populations. The study also assumes that there are carriers of maternal lineages among brown bears of Armenia that do not belong to the "Iranian" clade, either. Another study (Calvignac et al., 2009⁷¹) shows that "*U. a. syriacus* in captivity still harbour haplotypes closely linked to those found in ancient individuals". All those

69 <https://www.lydianarmenia.am/resources/mainFiles/pdf/e31a998f52aef6c713020128c271d62d.pdf>

70 Genetic Variability of Brown Bear (*Ursus arctos* L., 1758)

https://www.researchgate.net/publication/312527754_Genetic_Variability_of_Brown_Bear_Ursus_arctos_L_1758

71 Genetic diversity of endangered brown bear (*Ursus arctos*) populations at the crossroads of Europe, Asia and Africa <http://www.ourspolaire.org/images/2009Genetic-diversity-of-endangered-brown.pdf>

findings strongly point to the need of further studies of the genetic identity of the brown bear in Southern Armenia, before its population is harmed in any way further.

Last but not least, the ESIA was completed and presented with “Interim report” of the bear survey, but not with a final one, although on page 4.10.29. of ESIA it is written: “*Genetic testing of the hair samples will be completed in April 2016 and will be used together with the photographs to estimate the number, gender and age of bears.*”. Obviously, this hasn’t been done in the scope of the ESIA. Instead of a final report on the subject to be added to the ESIA, our team found a publication in the Journal of Mammalogy with the final results of the study (Burton et al., 2018⁷²). The results in this publication only prove that the Amulsar mountain should be included in the "Jermuk" National Park as core area for brown bear.

In the Natural and Critical Habitat Assessment the measures to improve the pastures by restrictions to grazing are the main calculation for offsetting biodiversity loss at Amulsar. These measures are based on wrong statements and assumptions: “*Surveys conducted by WWF Armenia of the proposed National Park and those conducted by Lydian/Geoteam in 2015 confirm that there are extensive areas of pasture that are currently in poor condition through overgrazing which could be included in a conservation management programme as well as areas of woodland and “shrubland” that is also degraded.*” This contradicts the feasibility study made by WWF Armenia where there is no single word about overgrazing, as well as the own finding by the ESIA experts: “*the land cover study undertaken by WAI showed that modified areas constituted 2.5% of the mapped area of 287 km².*”.

We conducted 6 transects in the planned JNP and didn't find any signs of overgrazing. Moreover, the traditional transhumance pastoralism that is being practiced has maintained the summer pastures above Jermuk in favorable conservation status and is probably one of the reasons for a healthy population of vultures in Armenia. Restrictions to grazing would certainly be a risk for the populations of some bird species.



Pastures in favorable conservation status in planned "Jermuk" National Park

72 Density and distribution of a brown bear (*Ursus arctos*) population within the Caucasus biodiversity hotspot https://www.researchgate.net/publication/326357180_Density_and_distribution_of_a_brown_bear_Ursus_arctos_population_within_the_Caucasus_biodiversity_hotspot

In a similar way the assumption that woodland and "scrubland" in proposed JNP are degraded is untrue. The field surveys we conducted show that there is no recent logging in the forests as they are part of state sanctuaries and there is a great variety of tree and shrub species and grass undergrowth. Unspecified intentions for planting of trees and scrubs could not be considered as an offset or other measures as proposed in the NCHA (for brown bear or bezoar goat).

Moreover many species of conservation importance were not assessed at all (and no measures were planned for them), even though thanks to the camera traps, chosen as one of the techniques for the bear study, some were recorded as well. These are Bezoar goat, Lynx and Grey wolf. However, those recordings were accidental. No particular studies, with species-relevant methodology were planned for other species with conservation status. Even after recording the three above mentioned species, no steps were undertaken for further collection of data in the frames of the ESIA.

The wolf *Canis lupus* (Appendix II and IV of the EU Habitat Directive * (priority species), Appendix II of the Bern Convention) was also recorded in the Amulsar Gold Project area. No further studies on the importance of those habitats for the species were undertaken. As size and habitats the area of Amulsar Mts. envisaged to be disturbed by the Project is suitable for occupancy by a wolf pack. If this is the fact, a whole family of this species is going to be expelled from its home-range. Assessment on this is necessary to be done before the area and its habitats are destroyed by project works.

The lynx *Lynx lynx* (Annex II and IV of the Habitat Directive) was also recorder on Amulsar by the camera traps set for the brown bear study. However, although authors of the ESIA admit that the species is of conservation importance and its trends are unknown (Page 4.10.31), no further studies on it and its habitat needs in the project area were conducted. The statement written in table 6.11.6 “...*Amulsar is not considered to provide breeding habitat.*” is not based on scientific data.

On page 4.10.28 of the ESIA Chapter 4.10_Biodiversity, point 4.10.4. “Mammal Surveys and Results” no word is found about the marbled polecat *Vormela peregusna*. The species is included in the IUCN Red List as VU with decreasing population worldwide, in Annex II and IV of the habitat Directive and in the RA Red Book. It is included in the Standard data form of “Djermuk Area” AM0000009 ASCI site. The habitats on Amulsar Mts. are suitable for this polecat. It is definite that more comprehensive study on this species eventual presence and the importance of Amulsar habitats for it, is needed.

[Annex – Protected species and habitats](#)



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