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Feedback on the biodiversity and biodiversity offsets presented in the EIA of the Armenian Amulsar gold mine project and its annexes

1. The area of the Amulsar gold deposit has species of animals and plants registered in the Red Book of Armenia. Open-pit mining and the operation of its adjacent structures will lead to the loss or at the minimum deterioration of the habitat for those species thus inevitably reducing their numbers. This is in direct contradiction with the following provisions of the Republic of Armenia Mining Code, RA Law on Fauna, and RA Law on Flora:

a) 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.

b) 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 spoil their habitat is prohibited.

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c) 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.

2. Annex 11 on the EIA, biodiversity studies and biodiversity offsetting measures have not adequately addressed a number of species registered in the Red Book of the Republic of Armenia

Eurasian otter (*Lutra lutra*) and **Transcaucasian water shrew** (*Neomys schelkovnikovi*) can be spotted in the basins of Arpa and Vorotan rivers. The shrew can inhabit small rivers and brooks.

Not enough research has been done about the potential impacts of the exploitation of the mine on the habitats and the quantity of **Bezoar goat** (*Capra aegagrus*) on the left bank of River Arpa.

The area might also be a habitat for the Syrian spadefoot (*Pelobates syriacus*), which has not been adequately explored.

Open-pit mining will completely destroy the habitats for the following species of **snakes** spotted in the area: Armenian Viper (*Montivipera raddei*), Transcaucasian ratsnake (*Zamenis hohenackeri*), Armenian steppe viper (*Vipera (Peliias) eriwanensis*), and European cat snake (*Telescopus fallax*). These animals will not be able to move to other habitats and their populations in the area will be eliminated due to the operation of heavy machinery, construction, etc. The measures for the offsets of the biodiversity do not foresee any activities pertaining to the noted species.

The **avifauna** of the area to be impacted by the operation of the mine is very rich. It includes 137 species of birds, 30 of which are registered in the Red Book of Armenia. Annex 11 on offsets only mentions 14 species. It states, “Special attention has been paid to the considerations required for the populations of brown bears and birds...” (page 17-18). However, Table 2 only lists one species – the lesser kestrel (*Falco naumanni*) – and as an offset for it proposes only a monitoring with a budget of 200,000 USD. There are no offsets foreseen for other bird species registered in the Red Book of Armenia.

According to the same annex, “**No significant residual effects are anticipated** on the populations of other species which has to do with either the fact that **they are located outside the impact zone of the project or they are capable of withstanding the anticipated effects.**” The phrase “significant effects” is abstract, the phrase “outside the impact zone” contradicts with the facts mentioned in Annex 3 and 4, and there is no specific factual grounds for the claim about “withstanding anticipated effects” for any bird species.

In addition to the EIA document, its Annex 3 and 4 have also been reviewed along with the Natural and Critical Habitat Assessment for Amulsar, Armenia report (Jo Treweek, Pete Carey, Peter Adriaens and Bill Butcher, 2016) /henceforth referred to as NCHAA/.

In Annex 3 and 4 and in NCHAA, the quantities of migratory bird species and nesting birds (quantities of species and individual numbers) are compared with the data received in Batumi, Georgia and with the global populations or accumulation of species (page 6, 33 of Annex 3 and page 30-31 of NCHAA). Although such comparisons can generally be useful, they are inadequate/futile for the case of the Amulsar mine because they create a misleading view on the significance of that area for bird species globally. Whereas, the acquired data should be considered on the national level, in which case the losses of the avifauna resulting from the mine operation will be substantial. The significance of the populations of those species and the potential effects on the national level should be the main highlights.

At the same time, assessments, analyses and conclusions in the documents have been done according to individual species, while in order to have an overall picture and evaluate the negative impacts, the entire complex of all species and their populations should be assessed, including the individual numbers of all species that would be extinct from the impacted areas.

Page 32 of NCHAA notes that the Armenian population of the Egyptian vulture (*Neophron percnopterus*) is 50-55 pairs. This number has no factual basis and also ignores the number mentioned in the Armenian Red Book – 40-60 nesting pairs. Such numbers without any factual basis are written for other bird species as well.

It is not clear why an assessment has been carried out only for birds of prey, while other endangered species of birds in the Amulsar area that are registered in the Red Book of Armenia.

The above-mentioned Annex 3 and Annex 4 as well as NCHAA have served as basis for the EIA. Therefore, the same inaccuracies, shortcomings and contradictions can be said of pages 248-249, 619-620 and tables 5.7.2 and 5.7.6 of the EIA document. For instance, the document states that a nesting pair of vultures spends less than 20% of its time on searching for food in the impacted area and thus that area is not that important for the species /page 645/. This claim has no scientific justification whatsoever.

The EIA also repeats another misleading claim, according to which, “Land use changes and violations pertinent to the Project will impact different bird species, however, **since many of them are mobile and capable of adapting, they will be able to move to alternative areas,**” /Table 5.7.7 and 5.7.8/. This is a baseless and unrealistic claim because there are no such things as empty “alternative areas.” If there are nearby areas conducive to that particular species, then they are already occupied by the same species. If the nesting pair will be forced to leave the area due to the elimination of its habitat, then it is very likely that the pair can be deemed lost on the national level.

Some of the tables, i.e. Table 5.7.10, 5.7.11 and 5.7.14, list unrealistic and in some cases irrelevant proposals regarding conservation activities for the species. This can be seen in other parts of the document as well (page 645-647).

Overall, a poor research has been done on a number of species of national importance registered in the Red Book of Armenia, the significance of the Amulsar project area for birds on the national level has been underestimated, the negative impact of the project has been seriously underestimated (or not estimated at all) for many species and no measures have been proposed for offsetting their losses. Data received from the research is often misinterpreted and both the reports and the EIA have not used or have ignored published scientific data on various species. Proposed measures for the conservation of impacted species

require serious expert discussions. Therefore, measures proposed in the biodiversity offsetting program are incomplete and need to be discussed and reconsidered.

From the biodiversity perspective the impacted areas should not be viewed according to separate species but as a whole, as one ecosystem or habitat.

3. There are some shortcomings and inaccuracies in the **biodiversity offsetting strategy**, which stem from the aforementioned misinterpretations or incomplete research of biodiversity.

The document states that “the purpose of biodiversity offsets is to avoid **any loss** of biodiversity on the ground, and it is preferable to provide **an increase in the balance** in terms of the composition of species, structure of habitats, operation of habitats and human impacts, and cultural values related to biodiversity.” It also states that “there are large and diverse subalpine and mountain meadows on Mount Amulsar, which according to the criteria defined in KS6/KP6 are considered a natural habitat. The project will leave **permanent and irreversible impacts** on those habitats that occupy an area of at least 500 hectares.”

Obviously, it is impossible to ensure no losses of biodiversity in the case of open-pit mining because the natural habitat in that area will be completely destroyed. At the same time, any offsetting measure, including the establishment of the Jermuk National Park or the restoration of any other degraded area will never recreate the national habitats with their specific biodiversity and complex links between species that will suffer “permanent and irreversible impacts” as a result of the project.

In addition to the establishment of the Jermuk National Park, the offsetting strategy talks of other conservation activities only for the brown bear and the lesser kestrel with those activities largely being monitoring measures. The creation of the national park and the aforementioned additional activities are clearly inadequate in terms of damage to be caused to the biodiversity of the area and offsetting the losses.

Setting up a national park is a good initiative but it may not offset the loss of the biodiversity of the Amulsar project area.

The distribution of funds allocated for the establishment and operation of the national park needs to be reviewed as there are no projects for communities’ development of the buffer zone of the national park. The amount allocated for the establishment of the national park is an exaggerated number, while the funds foreseen for the maintenance and specific conservation/restoration activities are very small. This will lead to the ineffective operation of the national park and the incomplete conservation of the biodiversity. Operation cost of the park should be estimated again and be foreseen for at least 10 years. Although, it is preferable to have this done for a longer period – for up to 25 years.

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