



Environmental Information and Training Center

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Ref. No 30/08.06.2010

To:

Balkan Mineral and Mining EAD
67 26 Bacho Kiro St., floor 3 Sofia 1000

CC:

Ministry of Environment and Waters
22 Maria Luisa Blvd. Sofia 1000

Dear Sirs,

This letter by the undersigned organizations and associations elaborates on our letter Ref. No 29/07.06.2010 regarding **our requirements to the scope of the Compatibility Assessment Report** on the Subject Matter and the Purpose of Protected Areas for the Investment Project of Balkan Mineral and Mining EAD for Mining and Processing of Gold Ore from Ada Tepe Prospect, Khan Krum Deposit, Krumovgrad Municipality. We also recommend the use of the new Manual on Natura 2000 and the Mining Industry prepared by the Environmental Directorate General, which is finalized and will soon be made officially available.

Contact Person: dpopov@bankwatch.org mobile: 0886 818 794

Sincerely,

Daniel Popov
Member of the
Managing Board of the EITC

Requirements to the scope of the Compatibility assessment

1. Project impact: assess the following impact factors together with the associated Project components:

A. Direct destruction or damage to populations and habitats within the Project site.

- Project components: all areas where human activities will take place should be clearly outlined, including
- Assessment of impact magnitude – size of the habitats which will be included in the minesite, size of the [flora and fauna] population, percentage of the affected populations and habitats at a national, regional and local level.
- Impact scope within the minesite
- Impact duration – at the construction stage and the operation stage, and after closure.
- Possible mitigation measures – decrease the minesite area; design out of natural habitats and habitats of species.

B. Direct destruction or damage to habitats or damage to populations within the local transport [facilities] – access road to the minesite, together with the road perimeter (perimeter of impact on animal species directly associated with the size of the individual territory).

- Project components: all areas/territories to be specified when planned for roads construction, together with the road perimeter area.
- Assessment of impact magnitude – size of habitats and size of populations within the road area and those directly impacted by the construction perimeter; percentage of impacted populations on national, regional and local level.
- Scope of impact within the road and road perimeter area.
- Impact duration – at the construction stage and the operation stage, and after closure.
- Possible impact mitigation measures – use existing roads, reduce the footprint of any new construction.

B. Deaths of individual animals by the minesite or by the road – reasons for traffic within individual [animal's] territory, seasonal migrations or traffic between various key habitats (winter time dens, areas used for reproduction, areas used for feeding), and migrations to new territories.

- Project components: identify on the site and overlay on a map all activities which may result in death of individual [animal] such as equipment operation and traffic, local fires, any preparatory works on the land, high-risk facilities etc. Calculate road traffic rate and prepare forecast of animal deaths and impact on populations.

- Assessment of impact magnitude – size of habitats and size of populations within the minesite perimeter area the road according to the characteristic of the impacted species; percentage of impacted populations on national, regional and local level.
- Scope of impact within the minesite, the road and their perimeter areas (impact perimeter associated with animal species and directly related to the size of the individual territory).
- Impact duration – at the construction stage and the operation stage.
- Possible impact mitigation measures: fence the site off and the road if required, prior to commencement of construction works; move all individual [animals] beyond the fence (that cannot be a legitimate measure to reduce impact in terms of certain percentage of a directly damaged population), reduce and optimize (group rides) the number of vehicle rides per day; train and supervise drivers to pick up and move aside any animals crossing/walking the road. .

D. Fragmentation of animal habitats – obstructions to seasonal migrations or traffic between various key habitats (wintertime dens, areas used for reproduction, areas used for feeding); fragmentation of [animal] routes /biocorridors for migration to new territories OR formation of small, isolated and inadequate areas of habitats/populations.

- Project components: all facilities, anthropogenically altered territories and areas of equipment traffic.
- Assessment of impact magnitude – size of habitats and size of impacted populations within the small, isolated and inadequate areas (part of habitats); percentage of impacted populations at a national, regional and local level.
- Scope of impact within the minesite, the road and their perimeter areas (impact perimeter associated with animal species and directly related to the size of the individual territory).
- Impact duration – at the construction stage and the operation stage.
- Possible mitigation measures – decrease the minesite footprint; design out of biocorridoes and ecotones of species.

E. Chemical impact beyond the site footprint as a result of reagents haulage and storage.

- Project components: biological and physical properties of reagents, toxicity, chemical reactions, behavior in the environment (decomposition, immobilization, mobilization, accumulation in food chains), transition/transfer routes, hauled volumes and haulage frequency, storage, environmental risks in case of accident(s) and Risk Mitigation and Emergency Response Plan for cases of transport accidents.
- Assessment of impact magnitude – size of potentially impacted habitats and size if impacted population under highest impact magnitude in case of accident and percentage of impacted populations and habitats.

- Scope of impact: all water catchment areas and water bodies under the worst scenario – accidental release of potentially highest volume and highest distance range of contamination (affected rivers or their catchment areas, floods within the minesite). Directly dependent on chemicals' quantity and behavior in the environment.
- Impact duration – at the operation stage.
- Possible mitigation measures – decrease the minesite area; design out of biocorridoes and ecotones of species.

F. Other chemical pollution types

- Project components: dust to be generated by blasting (magnitude, frequency), vehicle traffic (traffic frequency, weight of vehicles and loads) and by the TMF surface. Chemical properties (rock, explosives, tailings and tailing components).
- Assessment of impact magnitude – size of potentially impacted habitats and size if impacted population at highest impact magnitude and percentage of impacted populations and habitats.
- Scope of impact: site and operations perimeter according to the magnitude of anticipated dust pollution and dust chemical properties.
- Impact duration – at the operation stage.
- Possible impact mitigation measures: apply moisture and water to surface areas (TMF, roadways, blast rock), use safer explosives and processing agents.

G. Chemical pollution by waste products.

- Project components – concentration of reagents in tailings; concentration levels of other substances and pollutants, including heavy metals; tailings pH. Biological and physical properties of substances in the tailings; toxicity levels, chemical reactions, behavior in the TMF and the environment (decomposition, immobilization, mobilization, accumulation in food chains). Long-term behavior in the TMF and tailings properties following minesite closure. Emergency spillway risk in case of individual storm event. Environmental risks in case of industrial accident(s) and Risk Mitigation and Emergency Response Plan
- Assessment of impact magnitude – area of potentially impacted habitats and size of impacted population, and percentage of impacted populations and habitats.
- Scope of impact: Krumovitsa River and Arda River downstream to discharge point into the water reservoir. (impact on rivers or their water catchment areas, floods within the minesite). Directly dependent on chemicals' quantity and behavior in the environment.
- Impact duration – at the operation stage and after closure.

- Possible impact mitigation measures: insulation systems for the tailings and any seepage water; use technologies involving reagents with the lowest toxicity level and quickly degradable reagents; apply lime treatment of tailings and measures to increase the pH level above 7.

2. Eviction of animal species – human presence, noise pollution.

- Project components – all processes involved in the operation, blasting, noise etc.
- Assessment of impact magnitude – size of potentially impacted habitats and size of impacted population, and percentage of impacted populations and habitats.
- Scope: according to the impact intensity and behavioral profile of species.
- Impact duration – at the construction and operation stages.
- Possible impact mitigation measures: set/keep operations away from species' habitats, reduce noise levels.

2.1. Impact assessment, magnitude and importance

Assess all types of impact in terms of their negative effect on the conservation status of species and habitats. For that purpose, apply the definitions in the Habitats Directive as well as the Manual of Identifying Favorable Conservation Status (FCS Manual) published on <http://www.natura2000.biodiversity.bg/>.

Assess all impact factors in view of protecting the integrity of protected areas and the NATURA 2000 network: assess against the following conservation levels (in connection with Appendix 1 of the Directive on Environmental Liability):

- National level - percentage of impacted habitats (area size) if data is available – populations within the country and the biogeographical region.
- Regional level - percentage of impacted habitats (area size) and percentage of impacted populations within the Eastern Rhodopes Protected Area.
- Local level - percentage of impacted habitats (area size) and percentage of impacted populations within the Krumovgrad portion (as part of the constituency land of the municipality) of the Eastern Rhodopes Protected Area. The Investor may choose to apply a more restrictive and highly biological approach and define local landscape units (which is the approach chosen by Germany).

2.2. Habitats and species

A. 91 HA Oak forests - Cerris oak (*Quercus cerris*) and Italian oak (*Quercus frainetto*)

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Death of individual animals (typical species) by the minesite or by the roadways; D. Fragmentation of animal habitats (typical species in the particular habitat); E. Other types of chemical

pollution (dust pollution); H. Eviction of common animal species (in the particular habitat) – human presence, noise pollution.

- Parameters of favorable conservation status to be assessed: Parameter 1.1. Habitat size; Parameter 2.4. Forests in the old age phase (impact on old forests over the felling cycle of favorable conservation status); Parameter: condition of typical species.
- For typical species: use the following: *Lucanus cervus*, *Rosalia alpina*, *Morimus asper funereus*, *Cerambyx cerdo*, *Myotis bechsteinii*, *Testudo hermanni*, *Elaphe longissima*, *Lacerta praticola*, *Lullula arborea*, *Caprimulgus europaeus*, *Pernis apivorus*, *Dendrocopos syriacus*, *Dendrocopos medius*, *Picus canus*, *Dryocopus martius* etc. according to data about the regional fauna.
- Reference areas: use the forest habitat layer (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form; use the template form for the regional level (area).
- Actual impact area and typical species condition: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the vegetation period. Describe/prove habitat types by phytosociological descriptions and lists of identified typical species bound to the respective mapping units.

B. 5210 Prickly juniper (*Juniperus oxycedrus*) bushes

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Death of individual animals (typical species) by the minesite or by the roadways; D. Fragmentation of animal habitats (typical species in the particular habitat); E. Other types of chemical pollution (dust pollution); H. Eviction of typical animal species (in the particular habitat) – human presence, noise pollution.
- Parameters of favorable conservation status to be assessed: Parameter 1.1. Habitat size; Parameter: condition of typical species.
- For typical species: use the following: *Testudo hermanni*, *Testudo graeca*, *Hippolais olivetorum*, *Emberiza hortulana*, *Lanius collurio*, *Lanius minor*, *Sylvia nisoria* etc. according to data about the regional fauna.
- Reference areas: use the forest habitat layer (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form; use the template form for the regional level (area).
- Actual impact area and typical species condition: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the vegetation period. Describe/prove habitat types by phytosociological descriptions and lists of identified typical species bound to the respective mapping units.

C. 6220 Dry pasture and shrub-steppe with annual species

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Death of individual animals (typical species) by the minesite or by the roadways; D. Fragmentation of animal habitats (typical species in the particular habitat); E. Other types of chemical pollution (dust pollution); H. Eviction of typical animal species (in the particular habitat) – human presence, noise pollution.
- Parameters of favorable conservation status to be assessed: Parameter 1.1. Habitat size; Parameter: condition of typical species.
- For typical species: use the following: *Testudo hermanni*, *Testudo graeca*, *Hippolais olivetorum*, *Emberiza hortulana*, *Lanius collurio*, *Lanius minor*, *Sylvia nisoria*, *Melanocorypha calandra*, *Calandrella brachydactyla*, *Anthus campestris* etc. according to data about the regional fauna
- Reference areas: use the grassland habitats model (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form; use the template form for the regional level (area).
- Actual impact area and typical species condition: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the vegetation period. Describe/prove habitat types by phytosociological descriptions and lists of identified typical species bound to the respective mapping units.

C. 6510 Low-land hay meadows

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Death of individual animals (typical species) by the minesite or by the roadways; D. Fragmentation of animal habitats (typical species in the particular habitat); E. Other types of chemical pollution (dust pollution); H. Eviction of typical animal species (in the particular habitat) – human presence, noise pollution.
- Parameters of favorable conservation status to be assessed: Parameter 1.1. Habitat size; Parameter: condition of typical species.
- For typical species: use the following: *Testudo hermanni*, *Testudo graeca*, *Melanocorypha calandra*, *Calandrella brachydactyla*, *Anthus campestris* etc. according to data about the regional fauna.
- Reference areas: use the grassland habitats model (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form; use the template form for the regional level (area).

- Actual impact area and typical species condition: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the vegetation period. Describe/prove habitat types by phytosociological descriptions and lists of identified typical species bound to the respective mapping units.

D: *Lucanus cervus*, *Rosalia alpina*, *Morimus asper funereus*, *Cerambyx cerdo*

- Relevant impact: A. Direct destruction of or damage to populations and habitats within the project site; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Fragmentation of animal habitats; D. other types of chemical pollution (dust pollution);
- Parameters of favorable conservation status to be assessed: Parameter 1.1. – Number of identified colonies; Parameter 2.1. – Total size of potential habitats; Parameter 2.2. Size of high-quality habitats – forests in the old-age phase; Parameter 4.3. Construction development in known colony habitats or another change of forest purpose
- Reference areas: for known colony habitats, use the maps prepared on the basis of KORINE Land Cover and used in the process of database entries for NATURA 2000 and or Compatibility Assessment Report; collect new and/or additional information and process with the mapping methods provided in the the Manual of Identifying Favorable Conservation Status (FCS Manual). For the size of suitable habitats, use the Model of Suitable Forest Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form.
- Condition of populations and habitats of species within the project site area: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the active period. Clearly indicate and describe identification and reporting method and collected field data.

E.: *Dioszeghyana schmidtii*, *Eriogaster catax*, *Euphydryas aurinia*, *Callimorpha quadripunctaria*

- Relevant impact: A. Direct destruction or damage to populations and habitats within the project site; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Fragmentation of animal habitats (common/typical animal species); D. other types of chemical pollution (dust pollution);
- Parameters of favorable conservation status to be assessed: Parameter 1.1. – Number of identified colonies; Parameter 2.1. Size of suitable habitats of the identified colonies, Parameter 4.6. Conservation of the nature of grass areas
- Reference areas: for known colony's habitats, use the maps prepared on the basis of KORINE Land Cover and used in the process of database entries for NATURA 2000 and or Compatibility Assessment Report; collect new and/or additional information and process with the mapping methods provided in the FCS Manual.

- Condition of populations and habitats of species within the project site area: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the active period. Clearly indicate and describe identification and reporting method and collected field data.

F.: *Unio crassus* и *Austropotamobius torrentium*

- Relevant impact: E. Chemical impact beyond the site footprint as a result of reagents haulage and storage; G. Chemical pollution by waste products (only for *Unio crassus*).
- Parameters of favorable conservation status to be assessed: Parameter 1.1. – Number of identified colonies; Parameter: condition of typical species. Parameter 2.1. Length of suitable habitats in the identified colonies, Parameter 2.2. – Total length of potential habitats; Parameter 4.3. Pollution – abrupt/chronic
- Reference areas: for known colony's habitats, use the maps used in the process of database entries for NATURA 2000 and or Compatibility Assessment Report, collect new and/or additional information and process with the mapping methods provided in the the FCS Manual. For the size of suitable habitats, use the Model of Suitable Forest Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form.
- Define the scope of potential impact – include the entire length of Krumovitsa River and Arda River to the water reservoir at Kumovitsa River (only for *Unio crassus*), as well as all rivers where pollution could be expected as a result of haulage, according to the likelihood of toxic chemical substances contaminate the river and spread down the river.
- Condition of populations and habitats of species within the project site area: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the active period. Clearly indicate and describe identification and reporting method and collected field data.

G: *Testudo hermanni* and *Testudo graeca*

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats and population within the local transport [routes]; C. Death of individual animals by the minesite or by the roadways; D. Fragmentation of animal habitats; E. Other types of chemical pollution (dust pollution);
- Parameters of favorable conservation status to be assessed: Parameter 1.1. – Population; Parameter 2.1. Total size of suitable habitats in the area, Parameter 2.2. – Area size of sparse forests and bushes, meadows and abandoned agricultural land with trees and bushes.
- Reference areas: For the size of suitable habitats and the size of populations, use the Model of Suitable Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form. For the size of key habitats (par. 2.2.), and additionally for the size of all habitats, use the algorithm for those habitats provided in the

FCS Manual and data about the earth cover in the Protected Area (Corine, or Cadastre information).

- Define the scope of potential impact – include areas around the project site and access roadways in terms of direct destruction and damage; in terms of deaths and impact perimeter, take in mind the most recent unpublished data about seasonal migration of *Testudo hermanni* within more than 1km in the Rhodope Mountain; in terms of dust emissions - according to the impact area forecast.
- Condition of populations and habitats of species within the project site area: identify by field studies, prepare maps, min. 1:5 000 scale and descriptions within the active period. Clearly indicate and describe identification and reporting method and collected field data.

H.: *Vormela peregusna*

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats and population within the local transport [routes]; C. Death of individual animals by the minesite or by the roadways; D. Fragmentation of animal habitats; E. Other types of chemical pollution (dust pollution); 3. Eviction of animal species
- Parameters of favorable conservation status to be assessed: Parameter 1.1. Number of colonies; Parameter 2.1. Total size of suitable habitats in the area.
- Reference areas: For the size of suitable habitats and the size of populations, use the Model of Suitable Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form.
- Define the scope of potential impact – include areas around the project site and access roadways in terms of direct destruction and damage; in terms of eviction, use either available literature or best available experts; in terms of dust emissions - according to the impact area forecast.
- Condition of populations and habitats of species within the project site area: The density of this species is often low and therefore difficult to identify. As a minimum, prepare a map of suitable habitats, min. 1:5 000 scale, with the mapping methods provided in the Manual of Identifying Favorable Conservation Status (FCS Manual).

I.: *Lutra lutra*

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats within the local transport [routes]; C. Death of individual animals (typical species) by the minesite or by the roadways; D. Fragmentation of animal habitats (typical species in the particular habitat); E. Chemical impact beyond the site footprint as a result of reagents haulage and storage; F. Chemical pollution by waste products; H. Eviction of animal species

- Parameters of favorable conservation status to be assessed: Parameter 1.1. Relative number; Parameter 2.3. Length of river sections, man-made canals and size of bank areas suitable for otters; Parameter 3.1. Places suitable for shelters and dens.
- Reference areas: For the size of suitable habitats under Parameter 2.3 and the size of populations, use the Model of Suitable Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form.
- Define the scope of potential impact – include areas around the project site and access roadways in terms direct destruction and damage; in terms of eviction, use a 200m perimeter, as detailed in the FCS Manual; in terms of chemical pollution, include the entire watershed of Krumovitsa Arda to the water reservoir at Krumovitsa River, as well as all rivers where pollution could be expected as a result of haulage, according to the likelihood of toxic chemical substances contaminate the river and spread down the river.
- Condition of populations and habitats of species within the project site area: determine the population in the Krumovitsa watershed within the identifies impact area either by designated studies or by using the density value assumed in the Model. Prepare a map of habitats, min. 1:5 000 scale, with the mapping methods provided in the the FCS Manual.

J. *Canis lupus*

- Relevant impact: A. Direct destruction or damage to habitats within the minesite; B. Direct destruction of or damage to habitats and population within the local transport [routes]; C. Death of individual animals by the minesite or by the roadways; D. Fragmentation of animal habitats; H. Eviction of animal species
- Parameters of favorable conservation status to be assessed: Parameter 1.1. Number of individuals; Parameter 2.1. Total size of suitable non-fragmented habitats. Parameter 2.2. Habitats suitable for dens; Parameter 2.3. Size of inaccessible forest basins
- Reference areas: For the size of suitable habitats, including key habitats, use the Model of Suitable Habitats (we can provide upon request) which was used in the process of filling out the NATURA 2000 template form. To assess the population, use extrapolated values from the models.
- Define the scope of potential impact – include areas around the project site and access roadways in terms direct destruction and damage; in terms of eviction apply min.1,000m analogically to the boundaries of populated areas of 100 to 1,000 residents.
- Condition of populations and habitats of species within the project site area: This species has large individual territories compared to the project footprint area, and therefore it may be irrelevant to determine a directly impacted population. Map potential habitats in the impact area, according to FCS Manual. Assess impact population based on the habitats' capacity.

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