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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

36th meeting
Strasbourg, 15-18 November 2016

Other complaints

**Possible threat to
“Svaneti 1” Candidate Emerald Site (GE0000012)
from Nenskra Hydro Power Plant development
(Georgia)**

- COMPLAINT FORM -

*Document prepared by
the Association Green Alternative, Georgia*

**Convention on the Conservation of
European Wildlife
and Natural Habitats**



COMPLAINT FORM

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

Georgian Government violates Article 4, point 1 and 2, Article 5 and Article 6 of the Bern Convention by giving permission to build Nenskra Hydropower Project (HPP) and destroying significant protected habitats and species from Resolution No. 4 (1996) and Resolution No. 6 (1998) of the Standing Committee situated in Emerald Site GE0000012 "Svaneti 1" as adopted at the Biogeographical Seminar held between 27th and 29th of May 2015. Moreover Georgian Government disregarded procedures for evaluation of sufficiency of proposed ASCIs as adopted by the Standing Committee in 2013 (T-PVS/PA (2013) 13), when in January 2016 excluded from Emerald Site GE0000012 "Svaneti 1" all territories part of Nenskra HPP. The Nenskra HPP foresees damming the Nenskra river 5.5 kilometers upstream from the village of Tita (Chuberi community). To increase the reservoir's volume, a 12.4 km long tunnel should divert water from the Nakra river on the other side of the mountain close to the village of Nakra. A 15.1 km long tunnel should bring the water from Nenskra dam to the powerhouse, thus leaving about 35 km of Nenskra and Nakra rivers with almost no water. New roads and settlements will facilitate human access to the higher Caucasus Mountains. All this planned facilities are located in "Svaneti 1" ASCI as adopted at the biogeographical seminar in May 2015, but excluded from it January 2016 by the government.

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

Habitats (with information of EUNIS codes and area affected):

Caucasian Fagus forests (G1.6H, 500 ha affected), Riverine scrub (F9.1, 17,5 ha affected), Continental humid meadows (E3.46, 165 ha) (see Appendix 1)

Montane river gravel habitats (C3.552, 16 ha), Unvegetated river gravel banks (C3.62, 60 ha), Moist or wet tall-herb and fern fringes and meadows (C5.4, 30 ha), Ponto-Caucasian montane Alnus galleries (G1.127, 150 ha), Euxinian ravine forests (G1.A47, 6 ha), Nordmann's fir forests (G3.173, 280 ha)

Species (with information of population affected):

Eurasian Otter (*Lutra lutra*, >15% of population in Svaneti), Eurasian Lynx (*Lynx lynx*, 7-10% of population in Svaneti), Brown Bear (*Ursus arctus*, 4-6% of population in Svaneti), Leopard (*Panthera pardus*, Endangered subspecies, last individuals in Western Caucasus threatened), Bechstein's Bat (*Myotis bechsteinii*), Western Tur (*Capra caucasica*, Endangered species, >15% of population in Svaneti and >3% of world population)

Booted Eagle (*Hieraaetus pennatus*, 1-2 pairs affected), Caucasian Snowcock (*Tetraogallus caucasicus*, 2-3% of population in Svaneti), Caucasian Grouse (*Lyrurus mlokosiewiczzi*, up to 1.5% of population in Georgia), Green Sandpiper (*Tringa ochropus*, possibly only breeding population in Georgia), Red-breasted Flycatcher (*Ficedula parva*, 50-100 pairs), Caucasus Chiffchaff (*Phylloscopus lorenzii*, hundreds of pairs), Green Leaf-warbler (*Phylloscopus nitidus*, hundreds of pairs), 17 other endemic sub-species of birds

Trout (*Salmo sp.*, best areas of Nenskra and Nakra rivers), other fish species (special surveys needed)

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

Impact on habitats:

- Direct destruction by flooding at the dam site (4 km long reservoir), roads, transmission lines and other infrastructure construction, waste disposal, construction material extraction. Total: more than 500 ha. Affected habitats: all

- Deterioration of habitats due to change of hydrological regime. Total: habitats along 30 km of rivers Nenskra and Nakra. Affected habitats: Riverine scrub, Continental humid meadows, Montane river gravel habitats, Unvegetated river gravelbanks, Moist or wet tall-herb, Ponto-Caucasian montaneAlnus galleries

- Deterioration of habitats due to change in local climate. Total: 500 ha. Affected habitats: Caucasian Fagus forests, Nordmann's fir forests

Impact on species:

- Direct destruction of breeding habitats: Booted Eagle, Eurasian Otter, Eurasian Lynx, Brown Bear, Bechstein's Bat, Green Sandpiper, passerine birds

- Direct destruction of wintering habitats: Brown Bear, Western Tur, Caucasian Snowcock, Caucasian Grouse

- Deterioration of habitats due to change in hydrological regime: Eurasian Otter, Green Sandpiper, passerine birds, *Salmo sp.* and other species of fish

- Fragmentation of habitats due to dam and reservoir: *Salmo sp.* and other species of fish

- Direct impact on the species population due to disturbance and increased poaching, because of the enhanced permeability of the habitat. New roads will be constructed and existing ones will be

rehabilitated. All roads will be maintained all-year-round. Permanent human presence associated with the project: 500-600 people during construction for 4.5 years, 50-60 people during operation. Because of lack of real control on poaching in Georgia officers working at such places are the most active poachers. Affected species: Leopard, Eurasian Lynx, Brown Bear, Western Tur, Caucasian Snowcock, Caucasian Grouse.

- Deterioration of habitat due to avoidance after road construction close to the key habitats: same as above.

- Cumulative effects of other hydropower plants Enguri, Khudoni, etc.: all species and habitats

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

The whole project area falls into the adopted Emerald site GE0000012 "Svaneti 1". The first compilation - Nov. 2010, adoption as ASCI Tbilisi on 27- 29th of May 2015 (bio-geographical seminar). According to our field observations 9 habitats from Res.4 are well presented in project area (see App. 1). From them only 3 are listed in the standard data form. According to the final conclusions of the bio-geographical seminar 2 habitats are assessed with IN MAJ, 6 IN MIN and 1 CD – the need of the completion of the standard data form of this ASCI is obvious. 3 species of mammals from Res. 6 are listed in the standard data form and are assessed as SUF for the Alpine region in Georgia during the biogeographical seminar. In January 2016 the Georgian Government amended borders of the site GE0000012 "Svaneti 1" and significantly reduced its area to 37 930 ha – more than 5 times less than its initial size. The whole project area is excluded from the site. The Res. 4 habitats assessed with IN MAJ and IN MIN are excluded and also key habitats of the 3 species of mammals already evaluated during the seminar are excluded. Such amendment of the site borders violates the procedures performed according the document T-PVS/PA (2013) 13 of the Standing Committee and makes them meaningless.

The area also is part of Important Bird Area 012 "Svaneti".

The Western Tur is Endangered species in the IUCN Red Data Book.

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

Nenskra project is submitted for financing by EBRD, EIB, ADB, KDB but not yet approved.

Requirements to the investor integrated in the positive ecological ruling, but not followed.

Assessment of mudflow hazard and protective measures in Nakra as identified in the Upper Svaneti Adaptation Strategy to the Climate Change in 2014

Upper Nenskra and Nakra valleys are part of the planned National park and protected landscape of Zemo Svaneti

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

In May 2015 upon a request of the Ministry of Environment and Natural Resources of Georgia a review of Nenskra HEP ESIA Study was commissioned and released by a German consultant. The review recommended „a substantial revision of the Study[...], aiming at the permission requirements in Georgia“. No substantial changes were made to the ESIA at a later point prior the permitting process.

By the end of 2015, the project received positive ecological ruling and construction permit based on the Environmental and Social Impact Assessment. The ESIA however did not comply with international financial institutions' standards, hence supplementary studies were commissioned and are pending as of October 2016. New road construction and geological surveys were under way in June-August 2016.

The Georgian government has not assessed the cumulative impacts of all the planned hydro installations on the Enguri watershed and the Upper Svaneti region.

The local Svan communities are not informed by the investors about the effects of the project. Poor public hearing process. Protest from local were done in 2016 and some people were arrested. Svans fear forced resettlement, loss of traditional livelihood (agriculture, animal grazing, forestry, fishing) and risk of natural hazards. Nakra village is threatened by landslide. NGOs and activist groups from all Georgia are reacting against the project.

Appendix I
REPORT ON THE HABITATS AND SPECIES AFFECTED BY THE
NENSKRA HYDROPOWER PROJECT

A. Affected Emerald habitats (species listed in Resolution No. 4 (1996) of the Standing Committee) described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1” and affected negatively by the project development.

1. EUNIS code G1.6H - Caucasian Fagus forests. English name: Caucasian beech forests. Species: Beech (*Fagus orientalis*), beech-hornbeam (*Carpinus betulus*) and beech-fir (*Abies nordmanniana*) forests of the Caucasus. Other species: *Rhododendron ponticum*, *Vaccinium arctostaphylos*, *Acer laetum*, *Ruscus colchicus*, *Galanthus bortkewitschianus*, *Cephalanthera damasonium*, *Colchicum umbrosum*, *Taxus baccata*. Included in a Resolution 4 habitat type at a higher level with EUNIS code G1.6 [Fagus] woodland .

According to the standard data form in site Svaneti 1 the habitat has representativity B, relative surface A, conservation C and global assessment C. During the biogeographical seminar the habitat is reported as having relative surface A and noted as possible need of correction of data in final conclusions. According to our observations some of data in the standard data form are not correct. Particularly in the area affected by the Nenskra Hydropower Project stands of old growth forests predominate in habitat G1.6H. That means that assessment of representativity should be A, the conservation also A, and taking into account the relative surface and the fact that the site protects endemic to Caucasus sub-type of the habitat, the global assessment should be A.

The expected impact of the project will be significant related to direct destruction due to road and dam construction and especially flooding after the dam construction. The direct destruction of the habitat will occupy an area of about 200 ha, which is about 7 % of the total area of the habitat in the site. About 300 ha more could be affected by changes in local climate and hydrological conditions in Nenskra and Nakra river valleys.



2. EUNIS code F9.1 - Riverine scrub. Included in a Resolution 4 as a habitat type. Description: Scrub of broad-leaved willows, e.g. *Salix pentandra*, beside rivers. Also scrub of *Alnus* spp. and narrow-leaved willows, e.g. *Salix elaeagnos*, where these are less than 5 m tall. Riverside scrub of *Hippophae rhamnoides* and *Myricaria germanica*. Excludes riversides dominated by taller narrow-leaved willows *Salix alba*, *Salix purpurea*, *Salix viminalis* which are considered as a forest habitat (G1.1). Species: *Salix pentandra*, *Salix elaeagnos*, *Frangula alnus*, *Hippophae rhamnoides*, *Myricaria germanica*. Includes 2 habitats from EU Habitats Directive Annex I: 3230 Alpine rivers and their ligneous vegetation with *Myricaria germanica* and 3240 Alpine rivers and their ligneous vegetation with *Salix elaeagnos*.

According to the standard data form in site Svaneti 1 the habitat has representativity C, relative surface B, conservation B and global assessment C. During the biogeographical seminar the habitat is reported as having relative surface B. According to our observations some of data in the standard data form are not correct. Particularly in the planned site for Nenskra dam along with other rivers in Svaneti where stands of the habitats are in good condition. That means that assessment of representativity should be B, the conservation A and the global assessment should be B.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will occupy an area of 2,5 ha of the habitat. In addition about 15 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime and continuous drying of the river bed of Nenskra and Nakra rivers. Altogether the project will affect 17,5 ha of the habitat, which is about 10 % of the total area of the habitat in the site.



3. EUNIS code E3.46 : Continental humid meadows. Description: Meadows of moderately to very nutrient-rich, alluvial or fertilised, non-saline, wet or damp soils in the steppe and wooded steppe zones of Eurasia and their areas of influence. Depending on the degree of wetness and substrate type dominants in wet sites are *Molinia caerulea* or *Carex gracilis*; physiognomy of hygromesophile meadows is formed especially by *Deschampsia cespitosa*, *Juncus inflexus* and *Mentha longifolia*; in mesophile and moderately moist conditions on alluvial sediments *Agropyron repens* or *Festuca pratensis* dominate. Included in a Resolution 4 habitat type at a higher level with EUNIS code E3.4 Moist or wet eutrophic and mesotrophic grassland.

According to the standard data form in site Svaneti 1 the habitat has representativity B, relative surface B, conservation B and global assessment C. During the biogeographical seminar habitat is not reported for site Svaneti 1! The conclusion of the biogeographical seminar is "Insufficient Minor" – habitat should be noted on sites already proposed for other habitats/species.

Our observation is that habitat is well presented in the area affected by the project, by highly representative stands and some of data in the standard data form in site Svaneti 1 seems to be not correct. Particularly the assessment of representativity should be B, the conservation also A and the global assessment should be B.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 15 ha habitats. In addition about 150 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime, drying the river and destroyed natural flooding regime . Altogether the project will affect 165 ha of the habitat, which is about 3 % of the total area of the habitat in the site.



B. Affected Emerald habitats (species listed in Resolution No. 4 (1996) of the Standing Committee) not-described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1” and not reported for the site during the bio-geographical seminar for the region, but presented in the area and significantly negatively affected by the project development.

4. EUNIS C3.552 - Montane river gravel habitats. Description: Open or closed assemblies of herbaceous or suffrutescent pioneering plants, colonizing, within the montane or submontane levels, gravel beds of streams with an alpine, summer-high, flow regime, born in high mountains of the Alpine system. Included in a Resolution 4 habitat type at a higher level with EUNIS code C3.55 : Sparsely vegetated river gravel banks. Includes 1 habitat from EU Habitats Directive Annex I: 3220 Alpine rivers and the herbaceous vegetation along their banks.

The conclusion of the bio-geographical seminar is "Insufficient Major or Minor" – no sites proposed at present -a major effort to designate sites for the habitat is needed.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 16 ha habitats. In addition about 120 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime, drying the river and destroyed natural flooding regime . All together project will affect 136 ha of the habitat, which is about 8 % of the total area of the habitat in the site.



5. EUNIS C3.62 - Unvegetated river gravel banks. Included in a Resolution 4 as a habitat type. Description: unvegetated deposit beds of streams formed of pebbles, gravels, boulders or a mixture of gravels and finer sediments, occupying the edges of the stream, forming islands in the channel or supporting the arms and rivulets constituting the stream, together with their associated animal communities. Corresponding habitats with pioneer or ephemeral vascular vegetation are included in unit C3.55 and their succession leads to willow woodland (G1.11).

The conclusion of the bio-geographical seminar is "Insufficient Major" – no sites proposed at present - a major effort to designate sites for habitat is needed.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 10 ha habitats. In addition about 50 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime,

drying the river and destroyed natural flooding regime. All together project will affect 60 ha of the habitat, which is about 4 % of the total area of the habitat in the site.



6. EUNIS code E5.414 Continental river bank tall-herb communities dominated by *Filipendula* and EUNIS code E5.423 Continental tall-herb communities of humid meadows are included in a Resolution 4 habitat type at a higher level with EUNIS code C5.4 - Moist or wet tall-herb and fern fringes and meadows. Description: Tall-herb and fern vegetation of the nemoral and boreal zones, including stands of tall herbs on hills and mountains below the montane level. Tall herbs are often dominant along watercourses, in wet meadows and in shade at the edge of woodlands. Species of first sub-type are *Filipendula ulmaria*, *Aegopodium podagraria*, *Chaerophyllum hirsutum*, *Urtica dioica*, *Mentha longifolia*, *Angelica sylvestris*, *Caltha palustris*, *Crepis paludosa*, *Epilobium hirsutum*, *Geranium palustre* and of second sub-type are *Filipendula ulmaria* is dominant here, *Crepis paludosa*, *Iris sibirica*, *Lythrum salicaria*, *Geranium palustre* . Includes 1 habitat from EU Habitats Directive Annex I: 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels.

The conclusion of the bio-geographical seminar is "Insufficient Major" – no sites proposed at present - a major effort to designate sites for habitat is needed.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 5 ha habitats. In addition about 30 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime, drying the river and destroyed natural flooding regime . All together project will affect 30 ha of the habitat, which is about 4 % of the total area of the habitat in the site.



7. EUNIS code G1.127 - Ponto-Caucasian montane *Alnus* galleries. English name: Ponto-Caucasian montane alder galleries. Description: Riverside and lakeside alder galleries and cordons of the Pontic Range and the Caucasus system, with *Alnus subcordata*, *Alnus barbata* or *Alnus incana*. Included in a Resolution 4 habitat type at a higher level with EUNIS code G1.12 : Boreo-alpine riparian galleries.

The conclusion of the bio-geographical seminar is "Insufficient Minor" – no additional sites required but habitat should be noted on sites already proposed for other habitats/species.

In the area planned to be flooded by Nenskra dam there is an extensive *Alnus barbata* gallery. Below the dam and the Nakra catchment most of the Nenskra and Nakra rivers have representative stands of the habitat with very old *Alnus barbata* trees. The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 60 ha habitats. In addition about 90 ha of the habitat will be affected during the exploitation of the project from negatively affected hydrological regime, drying the river and destroyed natural flooding regime. Altogether the project will affect 150 ha of the habitat, which is about 12 % of the total area of the habitat in the site.



8. EUNIS code G1.A47 - Euxinian ravine forests. Description: Ravine forests of the Pontic Range, the Caucasus, Crimea, the Hyrcanic region. Cool, moist forests with a varied tree layer, especially species of *Acer*, *Tilia* and *Fraxinus* of variable dominance, most often on steep slopes. They are of considerable biohistorical and biogeographical importance, as examples of the mixed forests of the Atlantic period, preserved in stations inaccessible to beech domination. Included in a Resolution 4 habitat type at a higher level with EUNIS code G1.A4: ravine and slope woodland. Includes 1 habitat from EU Habitats Directive Annex I: 9180 *Tilio-Acerion* forests of slopes, screes and ravines.

The conclusion of the bio-geographical seminar is "Insufficient Major or Minor" – no sites proposed at present -a major effort to designate sites for habitat is needed.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 6 ha habitats.

9. EUNIS code G3.173 - Nordmann's fir forests. Description: *Abies nordmanniana*-dominated forests of the Caucasus and of the eastern Pontic Range. Included in a Resolution 4 habitat type at a higher level with EUNIS code G3.17 Balkano-Pontic *Abies* forests.

The conclusion of the bio-geographical seminar is "Insufficient Minor" – no additional sites required but habitat should be noted on sites already proposed for other habitats/species.

The expected impact of the project will be significant related to direct destruction due to flooding from dam construction and will destroy 80 ha habitats, which is about 2 % of the total area of the habitat in the site. Additional 200 ha could be affected in the long term by change in the local climate.



C. Affected Emerald mammals (species listed in Resolution No. 6 (1998) of the Standing Committee) described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1” and affected negatively by the project development.

Eurasian Otter (*Lutra lutra*)

The species is assessed with population B in the Emerald site GE0000012 Svaneti. According to the authors of the Environmental and Social Impact Assessment of Nenskra Hydropower Project: "habitats of Otter (*Lutra lutra*) have been observed in the vicinity of the confluence of Tskhvamdiri River and its downstream flow. Especially large number of this specie has been recorded within the area adjacent to Tita village". Taking into account this information at least 20 km of the best habitat of the species at Nenskra river will be deteriorated. The project would leave less than 10% of the water of the river, changing completely its hydrological regime and it will become unsuitable for the species. This will affect more than 15% of the population in the Emerald site.

The conclusion of the bio-geographical seminar is "Insufficient" – regional insufficiency, for Svaneti region network is sufficient.

Eurasian Lynx (*Lynx lynx*)

The species is found all year round in the project area. One interviewed person from Nakra has seen Lynx kitten in the area. The dam site provides perfect den sites at rocky habitats. The species is assessed with population B in the Emerald site GE0000012 Svaneti.

Authors of the Environmental and Social Impact Assessment of Nenskra Hydropower Project claim, that "injuries of domestic animals by wolves (*Canis lupus*) or lynx (*Lynx lynx*) have not been recorded over the past years, which indicates that these species are not represented in the project area of influence". This is not true as local people do not report any kills by predators, as it takes more than a month for the state to react and compensation is not paid. 8 out of 8 interviewed people from Chuberi and Nakra know about killed domestic animals by predators.

Direct destruction of habitats, increased disturbance and poaching will affect the population in the upper Nenskra and Nakra valleys, our estimation is for 7-10% of the population in Svaneti.

The conclusion of the bio-geographical seminar is "Sufficient".

Brown Bear (*Ursus arctus*)

The species is found all year round in the project area. 7 out of 8 interviewed local people from Chuberi and Nakra communities have seen bears. The old-growth forests on steep slopes in the Nenskra dam site provide priority habitat for the species and perfect den sites. It is assessed with population B in the proposed Emerald site GE0000012 Svaneti. The authors of the ESIA have not done enough efforts to evaluate the local population. Their conclusion that the species, that can easily walk 20 km, is not present in the area is ridiculous, as they affirm that "Traces and droppings of Brown Bear (*Ursus arctos*) have been recorded downstream of the confluence of Nenskra and Nakra rivers, on the slopes of the left bank, approximately in the distance of 4 km from reservoir pool elevation zone."

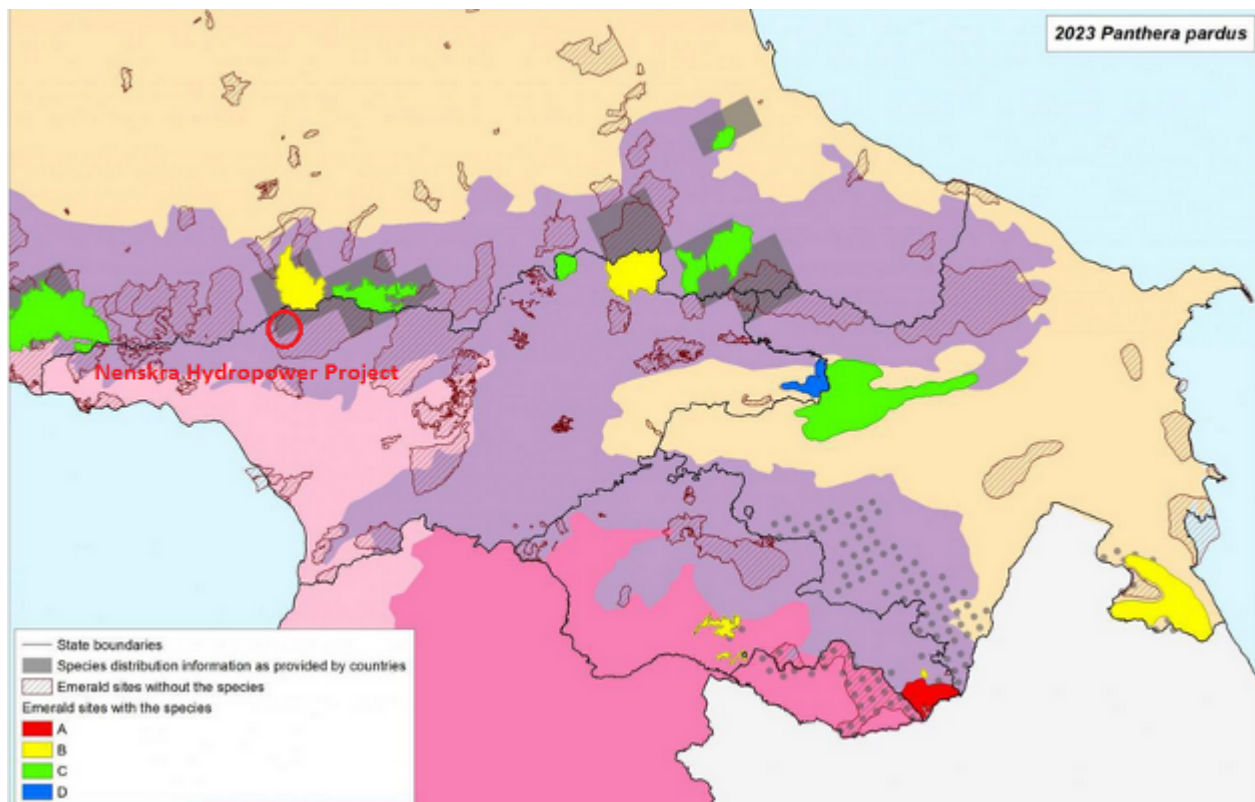
Direct destruction of habitats, increased disturbance and poaching will affect the population in the upper Nenskra and Nakra valleys, our estimation is for 4-6% of the population in Svaneti.

The conclusion of the bio-geographical seminar is "Sufficient".

D. Affected Emerald mammals (species listed in Resolution No. 6 (1998) of the Standing Committee) not-described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1” and not reported for the site during the bio-geographical seminar for the region, but presented in the area and significantly negatively affected by the project development.

Leopard (*Panthera pardus*):

According to data provided by the Russian Federation - the Leopard is present in the Great Caucasus just north of the construction site of Nenskra Hydropower Project:



Emerald sites have been proposed for its protection north of the Russia-Georgia border, but none in Georgia. This is a clear case of insufficiency of the Emerald network in the country¹. Interviews with local hunters and shepherds from Nakra and Chuberi communities made in October 2016 show that the species is present in the upper Nenskra and Nakra valleys. At least one individual was found dead by avalanche, there was one sighting of a Leopard feeding on Tur carcass and another chasing Tur. According to interviews with local people there is a stable population of Western Tur (*Capra caucasica*), roe deer (*Capreolus capreolus*) and other prey of the Leopard in the Nenskra and Nakra river valleys. With a huge home range size of the species it is clear that the species is present in the area of the Nenskra Hydropower Project.

The subspecies Persian Leopard (**P. p. saxicolor**) was assessed by IUCN as Endangered (EN C2a(i)) with a population of 800-1,000 individuals (Khorozyan 2008). The Mediterranean regional assessment is Critically Endangered C2a(i). There are fewer than 250 mature individuals in the region, each subpopulation is <50 and is completely isolated (from each other and from populations outside the assessment region). The regional population is undergoing continuing decline².

¹ [Emerald Biogeographical Seminar for Armenia, Azerbaijan and Georgia](#)

² Jdeidi, T., Masseti, M., Nader, I., de Smet, K. & Cuzin, F. 2010. *Panthera pardus*. The IUCN Red List of Threatened Species 2010: e.T15954A5328595.

In West Asia, small leopard subpopulations are threatened primarily by habitat fragmentation, killing in defence of livestock, and poaching for trade (Habibi 2004, Breitenmoser *et al.* 2006, Breitenmoser *et al.* 2007). The status of the species in Svaneti is unclear, but some of the few Leopards remaining in the Western Caucasus could be threaten after the construction of the Nenskra Hydropower Project by disturbance, poaching and disappearing of the main prey species - Western Tur.

The conclusion of the bio-geographical seminar is "Sufficient" – our opinion that for Svaneti region in Georgia, Alpine biogeographical region, the final conclusion should be “Scientific reserve”.

Bechstein's Bat (*Myotis bechsteinii*)

The species was not registered by the authors of the ESIA of Nenska Hydropower Project but it is very likely to found in the old-growth beech forests to be flooded by the dam if special surveys are made.

A rare species that occurs at low densities and has specific habitat requirements. Its population is fragmented and its sedentary habits mean that it does not colonize new areas easily. There is very little information on population trends, but it is suspected that the species is declining as a result of the loss and degradation of specific types of old-growth woodland.³ However the species is found in quite few locations compared to its potential habitat in the Alpine Region and such limited distribution is rather result of poor knowledge than to habitat degradation and total population and distribution decline.

The conclusion of the bio-geographical seminar is "Sufficient" – our opinion that for Svaneti region in Georgia, Alpine biogeographical region, final conclusion should be “Scientific reserve”.

E. Other mammals with conservation status presented in the area and significantly negatively affected by the project development.

Western Tur (*Capra caucasica*)

This species is not listed in Resolution No. 6 (1998) of the Standing Committee, but is listed as Endangered species in the IUCN Red Data Book. The species is well known to all local people from Chuberi and Nakra communities. There is a stable population in the higher area of Nenskra and Nakra valleys around rocky habitats. In winter months the species descends to lower altitudes below tree line.

This species is endemic to the western part of the Great Caucasus Mountains in Georgia and Russia. Listed as Endangered because of a serious population decline, estimated to be more than 50% over the last three generations. Its range stretches in a narrow stripe from Tchugush Mountain massif (approximately 44°N, 39°45'E) to the Balkar Cherek River headwaters on the north slope and Inguri River headwaters on the south slope (appr. 43°N, 42°50'E), just east of the Mount Elbrus massif (Dinnik, 1910; Heptner *et al.*, 1961; Kotov, 1966; Tsalkin, 1955; Vereshchagin, 1959). The present length of the range hardly exceeds 250 km. The distribution reaches its maximal width near Mount Elbrus - up to 70 km (including the Nenskra and Nakra valleys). Thus, the range of the West Caucasian tur is the smallest one among all the genus **Capra**.

During the region's harsh winters, tur concentrate on sunny slopes, with 30 to 80% of the animals staying below timberline. Poaching is probably the most significant cause of the recently observed serious declines. Livestock grazing results in competition for resources, especially with domestic sheep and goats. The species is also impacted by habitat loss and degradation (Weinberg *et al.*, 1997).

The total world population was given at 5,000-6,000 animals by Weinberg (2004), and might now be lower. Approximately 1,000 tur live in Svaneti region in Georgia (NACRES, 2006).⁴

Our estimation is that at least 150 animals live in the Nenskra and Nakra valleys, but the numbers could be much higher. The construction of the Nenskra Project could threaten 3-4% of the world population by poaching, disturbance and destruction of winter habitats!

³ Paunović, M. 2016. *Myotis bechsteinii*. The IUCN Red List of Threatened Species 2016: e.T14123A22053752.

⁴ Weinberg, P. 2008. *Capra caucasica*. The IUCN Red List of Threatened Species 2008: e.T3794A10088217. <http://dx.doi.org/10.2305/IUCN.UK.2008.RLTS.T3794A10088217.en>

F. Affected Emerald birds (species listed in Resolution No. 6 (1998) of the Standing Committee) described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1” and affected negatively by the project development.

Booted Eagle (*Hieraaetus pennatus*)

One adult (dark phase) was registered on 06.06.2016 west of the school in Chuberi. One adult (light phase) was registered on 11.06.2016 at the Khudoni dam site, west of Khaishi (see attached photo). The area of the project is suitable for several pairs of the species. 1-2 pairs could be breeding in the area to be flooded by the dam. The Booted Eagle is assessed with population D in the proposed Emerald site GE0000012 Svaneti, but our opinion is that this assessment is underestimated.



G. Affected Emerald birds (species listed in Resolution No. 6 (1998) of the Standing Committee) not-described in Standard data form of the Emerald SITE GE0000012 “Svaneti 1”, but presented in the area and significantly negatively affected by the project development.

Red-breasted Flycatcher (*Ficedula parva*)

During the fact finding mission on Nenskra Project one breeding pair was registered on 08.06.2016 south of the Nenskra dam site and 5 more pairs on 15.06.2016 in old-growth beech forest west of Nakra village



50 to 100 pairs possibly inhabit the area affected by the project. The area that could be flooded by Nenskra Dam is suitable for 10 to 20 pairs. The species is missing from the Emerald Data Standard Form for Svaneti 1.

Caucasus Chiffchaff (*Phylloscopus lorenzii*)

One of the target species for declaring Important Bird Area 012 Svaneti. Endemic to the Caucasian Mountain. On 09-10.06.2016 five pairs were registered in the Nakra River valley:



On 11.06.2016 two more in the Enguri River valley close to Khaishi. The area to be flooded by the Nenskra dam possibly holds several dozens of pairs.

H. Other birds with conservation status presented in the area and significantly negatively affected by the project development (endemic or threatened).

Caucasian Snowcock (*Tetraogallus caucasicus*)

Healthy population in the Nenskra and Nakra river valleys. According to local people - easy to spot above tree line. In winter descends to lower altitudes, including the dam site. One of the target species for declaring Important Bird Area 012 Svaneti. Endemic to the Greater Caucasus - Russia, Georgia and Azerbaijan. Poaching is a major threat in Svaneti. 2-3% of the population in Svaneti could be affected by the project.

Caucasian Grouse (*Lyrurus mlokosiewiczzi*)

This species is not listed in Resolution No. 6 (1998) of the Standing Committee, but is listed as Near Threatened species in the IUCN Red Data Book. Healthy population in the Nenskra and Nakra river valleys. On 10.06.2016 at 2100 masl a lek site was registered at the river Nakra with 8 displaying males.



The species is regularly poached but some lek sites have more than 30 males according to local people. The population of Nenskra and Nakra valleys is possibly more than 200 calling males. More than 5% of the population in Svaneti could be affected. One of the target species for declaring Important Bird Area 012 Svaneti.

This species is endemic to the Greater and Lesser Caucasus mountains, where there are thought to be some 34,500-76,500 individuals spread between Russia (1,500-3,500 calling males), Georgia (7,551-15,759 calling males), Turkey (1,500-2,800 calling males), Armenia (200-400 calling males), Azerbaijan (700-3,000 calling males). It has been classified as Near Threatened by IUCN owing to

declines that are projected to occur owing to road construction for tourism development. Although population trends in parts of the species's range are unclear, the overall rate of decline is projected to increase owing to increased hunting, grazing and wood cutting, as well as habitat fragmentation; it almost meets the requirements for listing as threatened under criterion A3cde.⁵

Green Sandpiper (*Tringa ochropus*)

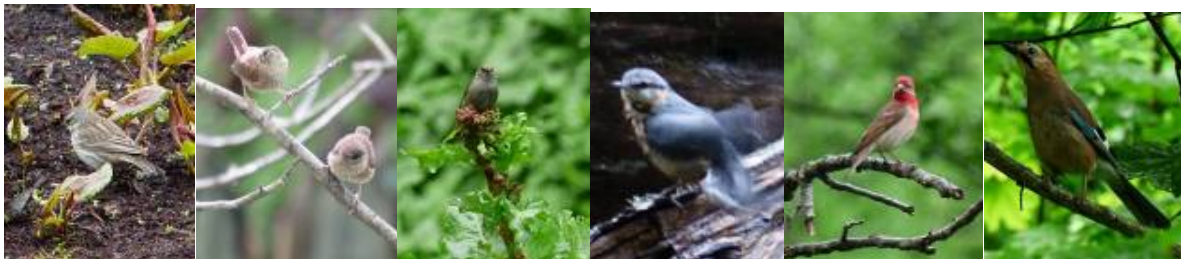
On 10.06.2016 an adult was registered feeding at the banks of the Nakra River:



This locality is outside the known breeding area of the species.⁶ If a breeding population is proven in the project area it could be the first for Georgia.

Other endemic subspecies of birds:

The Nenskra Hydropower Project will affect many other endemic to the Caucasus sub-species of birds (registered in June 2016), including: *Picoides minor colchicus*, *Picoides major tenuirostris*, *Anthus spinoletta coutellii*, *Troglodytes troglodytes hyrcanus*, *Cinclus cinclus caucasicus*, *Prunella modularis obscura*, *Erithacus rubecula caucasicus*, *Sylvia atricapilla dammholzi*, *Aegithalos caudatus major*, *Parus ater michalowskii*, *Sitta europaea caucasica*, *Certhia familiaris caucasica*, *Carpodacus erythrinus kubanensis*, *Carpodacus rubicilla rubicilla*, *Pyrrhula pyrrhula rossikovi*, *Garrulus glandarius krynicki*:



⁵ BirdLife International. 2015. *Lyrurus mlokosiewiczi*. The IUCN Red List of Threatened Species 2015: e.T22679483A83918212. <http://dx.doi.org/10.2305/IUCN.UK.2015-4.RLTS.T22679483A83918212.en>.

⁶ <http://maps.iucnredlist.org/map.html?id=22693243>