



ESIA Albania Annex 11.4 – Sensitivity Criteria

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1 SENSITIVITY CRITERIA

1.1 Habitats

Table 1-1 Habitat sensitivity / vulnerability Criteria

| Criterion |
|---|
| <i>Conservation and Designated Area Status</i> |
| <p>1. Designated Status</p> <p>The listing of the habitat within the Annexes of the Habitats Directive or under the Bern Convention.</p> <p>EU Priority Habitats – Habitats listed under Annex I of the Habitats Directive and for which countries within the EU must designate key areas;</p> <p>Bern Convention Habitats – Habitats listed under the Bern Convention as being of priority and which are present in Albania;</p> <p>European Habitats – Habitats which are non-priority but which occur within Europe and are listed within the EU Habitats Interpretation Manual (2007) and are of a natural or semi-natural origin;</p> |
| <i>Ecosystem Structure and Function</i> |
| <p>2. Naturalness</p> <p>The 'naturalness' of the habitat must be assessed. Modified environments are environments in which human activity has modified the area's primary ecological functions, for example, through fishing or the introduction of alien species.</p> <p>Note: This determines the extent to which a habitat is 'natural' or 'modified', in accordance with EBRD's PR6.</p> |
| <p>3. Fragility</p> <p>The fragility and sensitivity of the habitat and its ability to recover (either naturally or with assistance) from disturbance, including invasion by alien species must be assessed.</p> |
| <p>4. Representativeness</p> <p>The extent to which the habitat is considered to be an excellent example of important natural or semi-natural vegetation types in terms of the flora communities (and their associated fauna) that it contains.</p> |
| <p>5. Structure and Function</p> <p>The extent to which the habitat provides an important structure or serves an important function. This includes: comprising an ecological corridor between other isolated habitats of ecological importance; importance in the context of faunal migrations; or importance in the context of lifecycles (breeding, nursery or feeding grounds).</p> |
| <p>6. Species Association - Reliance</p> <p>The extent to which the habitat contains and is relied upon by concentrations of species that are: endemic or restricted range; nationally or locally rare (particularly Red Book species or those protected under national or international legislation or listed by IUCN (see <i>Table 1-2</i> for species)); keystone species, upon which other species may be reliant for their survival; suffering serious reduction nationally or locally; at the edge of their ranges; present in notably large populations; unique assemblages of species associated with key evolutionary processes; or uncommon or threatened in a wider context.</p> <p>If the species have been evaluated by IUCN the following rankings should be applied (see <i>Table 2</i> for species))</p> <p>For Flora (Vangjeli et al., 1995) and Fauna (REC, 1997; Misja, 2006) respective Albania Red Books have been referred to for National status of species.</p> |
| <p>7. Diversity</p> <p>The diversity of the habitats and their individual species richness and diversity (including genetic diversity) are important. In general, the greater the total number of species recorded, the greater the conservation interest of the area.</p> |

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1.2 Species

Species importance is assessed according to accepted criteria such as rarity and the extent to which they are under threat. The importance of species to wider ecological communities and the ecosystem (*e.g.* predator/prey relationships) is also considered, and the degree of protection of species under Albanian and international legislation is also taken into account. *Table 1-2* presents some criteria for deciding on the importance of individual species. IUCN categorisation at a global and national level was used as the primary method to identify priority species where appropriate. For reference to IUCN status for species see **Error! Reference source not found.**

Where regional Mediterranean IUCN Red Lists were available for fish (Smith, *et al.*, 2006), mammals (Temple and Cuttelod, 2009), amphibians and reptiles (Cox, *et al.*, 2006), these regional Red List categories were used as they give much more specific detail on the threat level to species within the Mediterranean and Eurasia. IUCN threat categories are fully adopted by Albanian law and are reflected in the national Red Data Book of animals (REC, 1997; Misja, 2006) and plant species (Vangjeli, *et al.*, 1995).

Table 1-2 Species sensitivity / vulnerability Criteria

| Importance: | Low | Medium | High |
|---------------------|--|--|---|
| Criteria | | | |
| Protection status | Not protected or listed. Introduced or alien species. | <ul style="list-style-type: none"> Listed as Vulnerable (VU), Conservation Dependant (CD), Near Threatened (NT) or Least Concern (LC) on Global IUCN Red List. Nationally Protected Species; Annex III species listed on the Bern Convention; Listed as VU, NT, LC, in the Red Data Book of Albania; Species either listed as Data Deficient (DD), or Not Evaluated (NE) at a Global or National level for which Conservation is likely to be required. | <ul style="list-style-type: none"> Listed as Critically Endangered (CR) or Endangered (EN) on either Global IUCN list or on National Red List; Decreasing number of species listed as VU or lower in the Albania Red Data Book. Listed as Rare, Threatened or Endangered by IUCN. Annex I, II species listed on the Bern Convention; Annex II, IV species listed on the EU Habitats Directive; Annex I listed species of the Birds Directive. |
| Conservation Status | Common / abundant | <ul style="list-style-type: none"> A species common globally but rare in Albania. Rare or population in decline. Locally endemic or locally distinct subpopulations. At the limits of its range. Species subject to an active management programme. Groups that have been or are under active scientific study. | <ul style="list-style-type: none"> Protected as above. |
| Genetic Diversity | High Genetic Diversity as numerous in number with highly interconnected populations. | <ul style="list-style-type: none"> A species that has limited connectivity between populations; A species that has only a moderate or small population size; Species with low fecundity. | <ul style="list-style-type: none"> Species with limited or no connectivity between populations; Populations are low in number; Species has very low fecundity and produces minimal number of young which remain dependant for a number of years. |

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| Importance: | Low | Medium | High |
|------------------------|--------------------------------------|---|--|
| Ecosystem Functioning: | Not critical to ecosystem functions. | One of several species playing a role in ecosystem functions. | Critical (keystone species (1) or ecosystem engineer (2) to ecosystem functions. |

Note:

(1) A keystone species is a species that plays a critical role in maintaining the structure of an ecological community and whose impact on the community is greater than would be expected based on its relative abundance or total biomass.

(2) A species that modifies the resource availability for other members of the community through modification of the habitat.

Table 1-3 The IUCN Red List Categories

The International Union for the Conservation of Nature (IUCN) List of Threatened Species (the IUCN Red List)

is a widely recognised, global approach for evaluating the conservation status of plant and animal species. It provides taxonomic, conservation status and distribution information on taxa that are facing a high risk of global extinction.

Species are categorised as:

- ***Critically Endangered (CR):** A taxon is Critically Endangered when it is considered to be facing an extremely high risk of extinction in the wild;
- ***Endangered (EN):** A taxon is Endangered when it is considered to be facing a very high risk of extinction in the wild;
- ***Vulnerable (VU):** A taxon is Vulnerable it is considered to be facing a high risk of extinction in the wild;
- **Near Threatened (NT):** A taxon is Near Threatened when it was evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying or is likely to qualify for a threatened category in the near future;
- **Least Concern (LC):** A taxon is Least Concern when it was evaluated against the criteria and does not qualify for the higher categories. Widespread and abundant taxa are included in this category. Also referred to as **(LR)**;
- Other categories including Conservation Dependant **(CD)**, Data Deficient **(DD)** and Not Evaluated **(NE)** are also referred to although these categories are not of key importance when making evaluations of species for this Project .

Note: Sub-categories for CR, EN and VU have not been fully listed in this document and the IUCN Red List Categories and Criteria (Version 3.1) (IUCN, 2001) should be referred to for further details.

All *ed status (CR, EN, VU) are grouped as Threatened when referring to species (as given for all Species Richness tables in Section 6.7.1).

Source: IUCN Red List Categories and Criteria (Version 3.1) (2001)

In some cases both international and national threat status of the species are the same, but in most of cases, the international and national threat status differs from each other.

Protection of species of wild fauna and flora in the Republic of Albania is regulated by a number of laws, bylaws and regulations, some of the most important of which are:

- Law on the Protection of Biodiversity (no. 9587, dated 20.07.2006);
- Law on the Protection of Wild Fauna and Hunting (no. 7875, dated 23.11.1994) amended by the Law no. 9219, dated 08.04.2004 and
- Law no.9867, dated 31.01.2008 “On rules and procedures for International Trade of Endangered Species of Wild Fauna and Flora”.

As a country that is aiming to enter EU and being in compliance with the EU environmental regulations, the European protection status of the wild fauna species' standing in the Bern Convention is considered. Based on the philosophy of the Convention, protection of biodiversity needs to be based on 2 principles: (1) protection of target species of fauna or flora and (2)

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protection of complete habitats. Based on this approach a series of Annexes are integrated into the Convention:

- Annex 1: Species of flora strictly protected;
- Annex 2: Species of fauna strictly protected;
- Annex 3: Protected fauna species (which can be exploited if the population level permits); and
- Annex 4: Prohibited means and methods of killing, capture and other forms of exploitation.

For this study, note is made where species are listed in the above Annexes to the Bern Convention.

In addition, species protection in relation to the Habitats Directive (for mammals, reptiles, amphibians and invertebrates) and under the Birds Directive (for bird species) has also been given to be consistent with other sections of the pipeline route which pass through Italy and Greece.

Protection under the Habitats Directive is as follows:

- Annex II: Species of community interest whose conservation requires the designation of Special Areas of Conservation.
- Annex IV: Species of community interest in need of strict protection
- Annex V: Species of interest whose taking in the wild and exploitation may be subject to management measures.

Of these Annexes II and IV are the key in relation to species protection and in evaluating species in a European context.

Protection under the Birds Directive is as follows:

- Annex I: Birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. As appropriate, Special Protection Areas are to be established to assist conservation measures.
- Annex IIa: Birds which may potentially be hunted under national legislation within the geographical land and sea area to which the Directive applies.
- Annex IIb: Birds which may potentially be hunted under national legislation only within certain specified Member States.

Of these, Annexes I is the key one in relation to species protection and evaluation of species importance in a European context.

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In summary, for species from all the above evaluation criteria in both the terrestrial and aquatic environment, and for the future impact assessment species will be classed as:

- High Priority Species - Species listed either nationally or internationally under (Critically Endangered or Endangered), listed under Annex 1 or 2 of the Bern Convention or on Habitats Directive (Annex II and IV) or the Birds Directive (Annex I)
- Medium Priority Species - Species listed as Vulnerable, Conservation Dependant, Near Threatened, Least Concern or Data Deficient or nationally protected, listed under Annex 3 of the Bern Convention or listed above under any national protection; and

Magnitude Criteria for Species:

The Magnitude of impact is a combination of several factors, including:

- the spatial extent over which the impact is experienced;
- the extent to which habitat relied upon by the species is impacted (as evaluated under 'Habitats' above);
- the population or proportion thereof affected;
- the duration of the impact and/or the extent to which it is repeated;
- the magnitude of the aspect (noise, light, number of vehicle movements);
- the size of the footprint in the context of the wider range over which a species lives;
- the scale of change induced eg to water quality; and
- the extent to which a new physical or chemical feature is introduced to the environment, eg. the size of a structure or the toxicity of a chemical.

Criteria that have been used to assess the magnitude of ecological impacts (based on Duinker and Beanlands, 1986) are presented below.

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Box 1-1 Magnitude Criteria

- A **Large Magnitude Impact** affects an entire population or species in sufficient magnitude to cause a decline in abundance and /or change in distribution beyond which natural recruitment (reproduction, immigration from unaffected areas) will not return that population or species, or any population or species dependent upon it, to its former level within several generations*. A large magnitude impact to a species may also adversely affect the integrity of a site, habitat or ecosystem. A large magnitude secondary impact may also affect a subsistence or commercial resource use (eg fisheries) to the degree that the well-being of the user is affected over a long term.
- A **Medium Magnitude Impact** affects a portion of a population and may bring about a change in abundance and / or distribution over one or more generations*, but does not threaten the integrity of that population or any population dependent on it. A medium magnitude impact may also affect the ecological functioning of a site, habitat or ecosystem but without adversely affecting its overall integrity. The size of the consequence is also important. A medium magnitude impact multiplied over a wide area will be regarded as large. A short term effect upon the well being of resource users may also constitute a secondary medium impact.
- A **Small Magnitude Impact** affects a specific group of localised individuals within a population over a short time period (one generation ⁽¹⁾ or less), but does not affect other trophic levels or the population itself.

⁽¹⁾These are generations of the animal/plant species under consideration not human generations.

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