Threat Analysis and Proposed Solutions for Elekdag Wildlife Development Area

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ABSTRACT

Natural Wildlife Development Area is a protection status declared in accordance with the Land Hunting Act No. 4915. Within this scope, there are 80 Wildlife Development Areas in our country. The aim of this study was to observe possible threats in the Elekdag wildlife development area and to suggest solutions for the area. Elekdag Wildlife Development Area is located in Kastamonu province within the boundaries of Tasköprü county. The administrative responsibility of Elekdag Wildlife Development Area belongs to the General Directorate of National Parks and Nature Conservation, which is affiliated to the Ministry of Environment and Forestry, Kastamonu Provincial Environment and Forestry Directorate. As a result of the study, it was found that the wildlife habitats for deer populations (target species) and water resources in the area are at risk. The identification of the risks on habitats and biological resources and proposed solutions have great importance on ecosystem integrity of the protected area. Therefore, we proposed some solutions to eliminate these risks. The most important factor is the arranging on-site management to ensure sustainable protection-use balance.

Key words: Threat Analysis, Wildlife Development Area, Wildlife, Conservation, Biodiversity, Elekdag, Kastamonu.

INTRODUCTION

Wildlife is a term which includes animal species, fungi, plants and other organisms living in the wild without human influence on an ecosystem. Therefore, protection, planning and development of wildlife are required to be evaluated with all components of the ecosystem.1 Wildlife populations are rapidly decreasing day by day. The purpose of harvesting natural resources for industry production and urbanization by human activities, causing the habitat destruction.2 Particularly, the destruction has increased in the last 200 years. As a result of this, many animals have become extinct or endangered.3,22 Land and marine mammals are the most common endangered species in the extinction status which has been formally evaluated in the International Union for Conservation of Nature (IUCN) red list.4,5 Governments and non-governmental organizations have been developed rules, regulations and strategies in order to conserve natural resources.5 Therefore, wildlife management organizations play an important role by securing a future for nature conservation and wildlife. In addition to that, human activities pose significant threat to population level, destruction and degradation of wildlife and its habitat.5,23-26 Many protected area have been declared for sustainable biodiversity and environment in all over the world. The Anatolia is one of the most important regions of the world in terms of fauna and many endemic species, have been the scene of various civilizations for thousands of years. Turkey is located at three different plant geographical regions (Euro-Siberian, Mediterranean and Iran-Turan) as a bridge and junction point in terms of biodiversity as well as historical and social aspects.7,8 Turkey thus has a great wealth in both fauna and flora. Turkey...
is also a home to three of 37 different flora regions of the World being a meeting point of different plant geographies is the increasing the importance of this botanic wealth.\(^5\)

Important nature areas of Turkey due to biological diversity are generally protected by different protection statues. Some of these protection statues are based on the national legislation and some of them are based on international contracts. Today, there are many protected areas (e.g. National parks, nature parks, wildlife development areas and etc.) with different types of management carried out by seperated institutions in Turkey. The game and wildlife in Turkey is being managed by General Directorate of Nature Conservation and National Parks under the Ministry of Forestry and Water Affairs. The Turkish Constitution, laws, regulations, and international conventions such as Paris, Ramsar, Bern, Washington (CITES), Barcelona, Combatting Desertification, and Biological Diversity provide the legal framework for nature conservation, sustainable resource use and management. The Forest Law coded 6831 enacted in 1956, National Parks Law coded 2873 enacted in 1983, and Land Hunting Law coded 4915 enacted in 2003 authorizes Ministry of Forestry and Water Affairs for conservation, improvement, and sustainable management of forests, wildlife resources, and biodiversity.\(^9\)

Wildlife Development Area is a protection status declared in accordance with the Land Hunting Act No. 4915 in Turkey. According to this law, Wildlife Development Area is defined as “Fields in which hunting and wildlife are protected, developed, game animals are placed, measures are taken to improve the living environment, and hunting can be carried out within the framework of special hunting plan if necessary”.\(^10\)

In Turkey, there are 81 Wildlife Development Areas.\(^11\)

Kastamonu is a home to 4 of 81 Wildlife Development Areas (WDA) in Turkey with a position to enclose the elements of the Euro-Siberian phyto-geographical region and rich diversity in terms of flora and fauna.\(^12\)

Management plans for the areas which is important for wildlife, and threat analysis for sustainable management are filling a crucial gap for the management plans. Therefore, this is one the first study showing threat analysis for wildlife development areas in Turkey. Our study defines potential threats for Elekdag wildlife development area which is located in Kastamonu.

**MATERIALS AND METHODS**

**Study Area:** Elekdag Wildlife Development Area is located in Kastamonu province and within the bounda-

**RESULTS**

Threat ranking based on average threat scores, main protection targets, in order of declining importance, were: 1- protection of deer populations and habitats, 2- conservation of mixed forests, 3- preservation of water resource (Table 1).

Zoning is very important in order to maintain the sustainable management in Wildlife areas. Due to data obtained from Elekdag WDA, percentage of the zones were given in Table 2.
Table 1: Definitions of threats used in the Elekdag threat assessment

| Aim of Protection: Conserving deer populations and their habitats | Pressure: Decreasing population |
|---|---|---|
| **Source of Pressure** | **Proposals** |
| 1. Inadequate awareness of biodiversity, forests and wildlife protection and lack of education | 2. Poaching by the local people | 3. Old fashioned forest management plans |
| 4. Wild dogs | 5. Unauthorized and unplanned cattle grazing in forested areas | 6. Habitat degradation |
| **Aim of Protection: Preserving Pure Coniferous and Mixed Coniferous Forests** | **Pressure: Effects of humans and animals** |
| **Source of Pressure** | **Proposals** |
| 1. Forest villager’s firewood needs | 2. Inadequate awareness of biodiversity, protection of forests and lack of education | 3. Old fashioned forest management plans |
| 4. Unauthorized and unplanned cattle grazing in forested areas | 5. Habitat degradation |
| **Aim of Protection: Preservation of water resources** | **Pressure: Intensive and unplanned consumption of natural spring waters, Contamination of water resources, Erosion** |
| **Source of Pressure** | **Proposals** |
| Inadequate awareness of biodiversity, lack of education | Unconscious water use of local people | Using pesticides and fertilizer |
| **Proposals** | **Raising awareness of the interest groups about the importance of water** | **Monitoring the pollution of the water resources in the area** |
| Education in schools about global warming and water | Encouraging the use of ecological agriculture and modern irrigation techniques | Regulating water use |
CONCLUSION
Lack of knowledge and non-awareness about conserving wildlife habitats regarding the nature of threats were found the major threat for the area. 68%,48 of WDA is considered as Strict protected area. The results of zoning shows that majority of the area is potencially under risk of habitat destruction. In addition to understanding complex ecological systems, removing the threats, resource use, agriculture, water diversion, and construction, often requires understanding and addressing interrelated economic and social factors.21

Although fact that most of the forest management plans are made with Ecosystem based and Multi-Purpose Planning Technique, biological diversity is not completely reflected in the plans. For this reason, the basic forestry practices are still being implemented. This situation has significant risks on biodiversity. The red deer (Cervus elaphus) has a good population in suitable habitat areas. The protection of these species is crucial for a healthy continuation of wildlife and sustainability. In addition, there are also important clean water sources on the field. The identification of the threats and pressures on these resources, and also identification of strategies and actions to address these pressures and threats are important in the management of protected areas.25

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CONFLICT OF INTEREST
None

ABBREVIATION USED

REFERENCES

Table 2: Zone percentages of Kastamonu Elekdag WDA

<table>
<thead>
<tr>
<th>ZONE OF ELEKDAĞ WDA</th>
<th>Acreage(“)</th>
<th>Total percentage of area(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Conservation Zone</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Strict Protected Area</td>
<td>2900.82</td>
<td>68.48</td>
</tr>
<tr>
<td>Sustainable Use Area</td>
<td>890.62</td>
<td>21.02</td>
</tr>
<tr>
<td>Controlled Use Zone</td>
<td>444.89</td>
<td>10.50</td>
</tr>
<tr>
<td>TOTAL</td>
<td>4236.33</td>
<td>100</td>
</tr>
</tbody>
</table>

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SUMMARY

• The study determines potential threats and proposing solutions for Elekdag WDA located in Kastamonu.
• Most of threats occurs as a result of human activities.
• Determining the threats and pressures and identification of strategies for threats are important in the management of protected areas.
• True conservation can only be possible by increasing awareness of people about conserving wildlife habitats.

PICTORIAL ABSTRACT

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