

HUNTING ANIMALS OF THE BUKHARA REGION AND ISSUES OF THEIR RATIONAL USE

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Abstract

The wide and sometimes irrational use of the animal world for hunting and the existing problems in the management of hunting farms in many ways become the reason for the extinction or reduction of the number of species, and sometimes the animal becomes a rare or endangered species. The study of these issues and the development of recommendations for their solution is of scientific and practical importance in the protection and sustainable use of animals, optimizing the management of hunting farms and improving the economic and social well-being of violence.

Introduction

Wild animals in Uzbekistan, including in the Bukhara region, are used mainly for hunting purposes. In this region, there are currently only amateur hunting. More profitable commercial hunting developed only in 1960-1970. The conducted biotechnical activities and the management of hunting farms do not meet modern requirements. The profitability of hunting farms is currently at a low level. We have identified these problems hinder the development of hunting tourism and negatively affect the protection of hunting species of animals and their habitat. In the study, the species composition of the hunting species of the

Bukhara region was determined, the environment of them identified the species that make up the basis of the animals that were harvested, the anthropogenic factors (barconry, animal husbandry, grazing of vegetation and others) and the degree of their impact on hunting species were determined. On the basis of mathematical calculation, the economic efficiency of hunting farms has been determined. Practical recommendations for solving problems related to the rational use and protection of hunting species of animals have been developed.

For each region, the species composition of animals belonging to hunting and the volume of their prey is different and this is due to the zoogeographic features and the specifics of hunting. Therefore, scientific approaches to compiling a list of hunting species and hunting management have scientific and practical importance in the aspect of rational use and protection of the animal world.

In Uzbekistan, hunting for 150 species of vertebrates (except for fish) is allowed. Of these, during the study period (2010-2019), 110 species were identified that are found in the Bukhara region (table 1).

Table 1

Taxonomic analysis of the fauna of game animals of the Bukhara region

Classification	Divisions	Family	Number of species
<i>Amphibia</i>	<i>Anura</i>	<i>Ranidae</i>	1
<i>Reptilia</i>	<i>Squamata</i>	<i>Gekkonidae</i>	4
		<i>Lacertidae</i>	4
		<i>Colubridae</i>	6
		<i>Viperidae</i>	1

Aves	<i>Pelecaniformes</i>	<i>Phalacrocoracidae</i>	1
	<i>Anseriformes</i>	<i>Anatidae</i>	19
	<i>Galliformes</i>	<i>Phasianidae</i>	4
	<i>Gruiformes</i>	<i>Rallidae</i>	3
	<i>Charadriiformes</i>	<i>Burhinidae</i>	1
		<i>Charadriidae</i>	13
		<i>Recurvirostridae</i>	2
		<i>Haematopodidae</i>	1
		<i>Scolopacidae</i>	21
		<i>Glareolidae</i>	2
	<i>Columbiformes</i>	<i>Pteroclididae</i>	1
		<i>Columbidae</i>	3
	<i>Passeriformes</i>	<i>Sturnidae</i>	3
		<i>Corvidae</i>	7
Mammalia	<i>Lagomorpha</i>	<i>Leporidae</i>	1
	<i>Rodentia</i>	<i>Sciuridae</i>	3
		<i>Myocastoridae</i>	1
		<i>Criceidae</i>	1
		<i>Canidae</i>	3
		<i>Mustelidae</i>	1

	<i>Carnivora</i>	<i>Felidae</i>	2
	<i>Artiodactyla</i>	<i>Suidae</i>	1
Totally	13	27	110

Currently, there are 5 farms in the Bukhara region that are engaged in the production of animals. During the period of ecological research, it was revealed that in these hunting farms, the outward diversity of hunting species is almost the same, but the indicators of population density in the area are highly variable. This trend is explained by the same ecological location (the territories of all farms overlook the lakes and their coastal territories) of these farms, their area size and the degree of adherence to anthropogenic load.

Have been found that 13 species of animals are officially hunted in the hunting grounds of the Bukhara region (*Sus scrofa*, *Meles meles*, *Lepus capensis*, *Vulpes vulpes*, *Canis aureus*, *Anser anser*, *Netta rufina*, *Aythya ferina*, *Anas platyrhynchos*, *Anas crecca*, *Fulica atra*, *Phalacrocorax carbo*, *Pterocles orientalis*) and representatives of the reptile and amphibian classes are not found among them. It was found that illegal hunting is carried out for 11 species (*Gazella subgutturoza*, *Canis lupus*, *Felis libyca*, *Ondatra zibethicus*, *Phasianus colchicus*, *Pterocles orientalis*, *Columba livia*, *Merops superciliosus*, *Eryx miliaris*, *Varanus griseus*, *Agrionemys horsfieldi*). There are 4 types of environments (*Gazella subgutturoza*, *Eryx miliaris*, *Varanus griseus*, *Agrionemys horsfieldi*) included in the "Red Book" of Uzbekistan (2020). A significant amount of prey was noted in the class of birds (duck (6720), *Fulica atra* (1983), *Anser anser* (1978), on the contrary, the share of mammals in the volume of prey is very low (*Sus scrofa*, *Vulpes vulpes* u *Canis aureus*) and is only 6-7 heads per year.

In terms of the average annual volume of animal production in the Karakyr hunting sector, it has a high rate (6829; 48%), insignificant production (447; 3%) is noted in the Karakul forest-hunting farm (figure).

This specificity of farms is explained by the ecological state of hunting farms, especially by fluctuations in the water regime of water bodies.

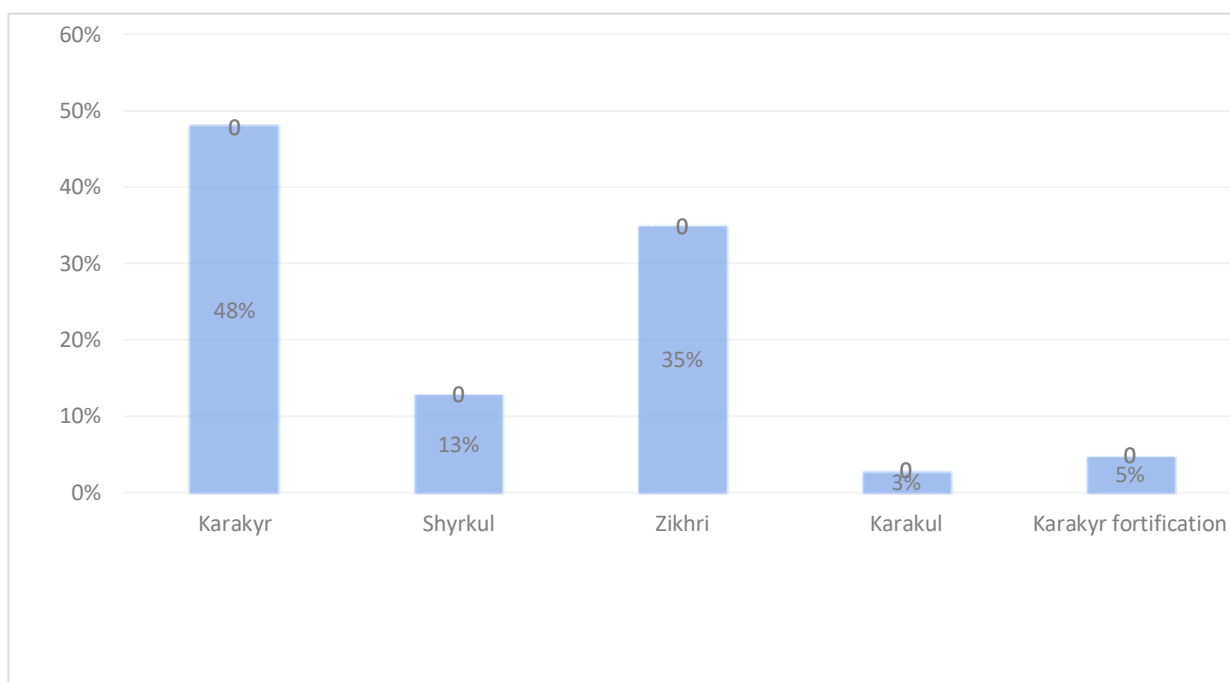


Figure 1: Average annual production of animals in the context of hunting farms (%)

Have been identified and analyzed anthropogenic factors negatively affecting hunting species and their habitat. The degree of influence of the factor is determined in the scoring system, based on the study of their consequences (Table 2). In terms of the degree of impact, illegal hunting, vegetation grazing and livestock farming are the most negative factors.

Table 2

The degree of impact of anthropogenic factors on hunting species of animals

Views	Types of anthropogenic factors and the degree of their impact (in points)
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	Illegal hunting (poaching)	Agriculture	Livestock	Loss of vegetation	Recreation	Instability of the Hydro mode	Geo-prospecting and communication	Total set of impact
Waterfowl bird species	2	1	1	2	1	3	0	10
<i>Pterocles orientalis</i>	1	2	2	2	0	1	1	9
<i>Sus scrofa</i>	3	0	2	3	1	2	1	11
<i>Meles meles</i>	3	1	2	2	0	1	1	10
<i>Lepus capensis</i>	1	1	3	3	0	0	2	10
<i>Vulpes vulpes</i>	0	0	1	2	0	0	2	5
<i>Canis aureus</i>	0	0	1	2	0	0	2	5
<i>Felis libyca</i>	0	0	3	2	0	0	0	5
Total set of impact	10	5	15	18	2	7	9	

Conclusions

As a result of the review, have been developed the following recommendations:

- in hunting farms, conduct a biotechnical event aimed at restoring the number and reproduction of *Sus scrofa* and *Meles meles*;
- to hang the economic efficiency of hunting farms by creating appropriate conditions for the organization of hunting tourism;

- regulate the abundance of *Vulpes vulpes* and *Canis aureus* to prevent their negative impacts on hunting species and the environment;
- by means of acclimatization of *Myocastor coypus* and *Mustela lutreola*, as well as an increase in the number of *Ondatra zibethicus* in hunting farms, to organize new hunts;
- public control is an effective tool for reducing the negative impact of anthropogenic factors on the territories of hunting farms;

Practical recommendations on the rational use of hunting species of animals, increasing the productivity and economic efficiency of hunting farms have been introduced into the practice of the Bukhara territorial branch of the Sports Association of Hunters and Fishers of Uzbekistan. The results contributed to the establishment of an acceptable quota for the capture of certain species, the organization of biotechnical measures aimed at improving the efficiency of the protection of hunting species.

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