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N. Abdimutalip, E. Ibragimova, D. Ibragimova

A. Yasawi International Kazakh-Turkish University, Turkestan, Kazakhstan.
E-mail: nurlibek.abdimutalip@ayu.edu.kz

CONSERVATION AND RESTORATION OF BIODIVERSITY OF FLORA AND FAUNA ON THE TERRITORY OF THE TURKESTAN REGION

Abstract. This scientific work takes into account the development of activities in the field of protection and sustainable use of biological diversity, which includes a wide range of measures for the protection of habitats and species in the natural environment, as well as the formation of an integrated system of specially protected natural areas. To create an integrated system of planning activities for the protection of biological diversity, assistance for the conservation and sustainable use of biological diversity.

Key words: biological diversity, habitat, conservation, ecosystem, fauna, population, reserve.

The problem of reducing biodiversity is often used to draw attention to environmental problems. It can be closely related to the health of ecosystems (for example, the loss of only one species can be manifested very differently - from the extinction of the species to the complete collapse of the ecosystem itself) and the health of mankind (food derived from natural products and raw materials for the preparation of medicines). Today, as never before, there is a great threat to the existence of species and ecosystems. The disappearance of species caused by human activities continues at a threatening rate, as the present rate of extinction of species is the highest for the last 60 million years, since the disappearance of dinosaurs. According to the forecasts of studies conducted under the auspices of the United Nations, about 25% of the existing mammal species and about 12% of bird species should disappearin the next 30 years.Some scientists believe that due to the destruction several tens of thousands of species of tropical rain forests die out and disappear in the near future. In connection with the above facts, "Convention on Biological Diversity" was adoptedin 1992. At the beginning of the twentieth century, the scientific community of Europe compelled governments to pay attention to the problem of preserving at least small areas of fauna. Then in all countries of the world reserves began to be created.In the world practice, there are cases when the creation of reserves on the contrary accelerated the extinction of the species. As the Turanian tiger disappeared from the face of the earth for 34 years after the opening of the TigrovayaBalka reserve, the leopard in the territory of the Caucasian reserve disappeared for 24 years. In these cases, the animals persisted for some time outside the reserves. The time of existence of an endangered species has reduced the isolation of the reserved space. This same isolation can influence in another way, for example, such a danger as inbreeding. Due to this, the Przewalski horse was killed in the French reserve. However, the other side is also known: if the species is not restricted in the settlement space, the bioligical species can begin its population even with a dozen individuals. Only five individuals of muskrats brought to Europe gave rise to the population. Grizzly bears lived in the Yellowstone National Park. They have not disappeared, but scientists have noticed that for five generations, bears began to noticeably shrink. It is possible to draw an analogy: island forms of biospeciesare always smaller than continental forms. For example, dwarf species of the rhino, buffaloare knownon the islands of the Sunda archipelago,while even dwarf species of African fauna on the Mediterranean islands, [1-2].

Aim of the work is "Development of methods for preserving the diversity of natural biosystems of the Turkestan region at a level ensuring their sustainable existence and sustainable use, as well as the conservation of biodiversity of domesticated and cultivated forms of living organisms and human balanced natural and cultural complexes at the level providing for the development of an efficient economy and formation of an optimal environment for sustainable livelihoods".

In the process of biodiversity development there is a mixture of local native flora with planting of introduced species. For example, there are more than 90 imported plant species in Moscow. In general, the flora of cities has hundreds of species: in Kazan - 914, in Poznan - 551, in Birmingham - 547. In Voronezh, there are 780 species of plants. It now becomes apparent that the conservation of biodiversity is possible only if the ecosystem is preserved. Thus, it is necessary to care of maintenance of habitats of animals and the plants, close to natural conditions. This corresponds to the model of the "ecological framework" of urbanized areas, which should be guided in assessing the state of natural components [3]. Natural complexes included in the ecological framework of the urbanized territory should serve as reserves for large colonies of birds and mammal communities.Artificial planting and surrounding area, natural ecosystems should be connected with the core of the framework by "green corridors", this gives the whole system a holistic character and increases its stability. To restore these links - the "green corridors" - it is necessary to change some rules for caring for greenery: not to mow the grass before flowering, not to burn leaf litter, exclude the anxiety factor for animals by night illumination, restore roadside green zones and similar measures. It is necessary to restore local species of vegetation and protect the remaining natural areas that cannot be replaced by artificial plantations, which do not provide shelter and forage resources for settling animals [4]. In large cities in Europe over the past 300 years, the increase in the number of species of flowering plants due to introductions exceeds their level of disappearance [5]. In the process of aviary breeding during repatriation, the press by specialized predators is small, and the quantity and availability of feed is much higher. There the average life expectancy of birds and mammals grows, the success of reproduction during the season decreases, but the role of caring for the offspring and its survival increase, thereby the population size increases [6]. The scientific novelty of the project is the complex conduct of ecological monitoring of the current state of biodiversity of the region under investigation in solving problems of conservation and restoration of species of living organisms. The research work of this project is aimed at maintaining the biodiversity of the Turkestan region, preserving the evolutionarily formed natural environment, improving the ecological situation, introducing species whose numbers are being reduced due to their inordinate exploitation, creating a genetic database, preserving in-situ populations of domestic animals and crops, maintaining local populations in the initial conditions of occurrence and formation of rare species, breeds or forms.

Conservation of biodiversity by conserving populations in the case of a minimal viable population (MVP) for a particular species in a specific habitat is the best alternative, with 99% chance of remaining for 1000 years, despite the predicted impact of demographic, natural and accidental genetic disasters. One of the best examples of the definition of MVP refers to the populations of 120 snow sheep (Oviscanadensis), living in the deserts of the southwest of the United States. Some of these populations were observed for 70 years. The study led to striking results. It turned out that 100% of populations numbering less than 50 animals died out within 50 years, while practically all populations including more than 100 individuals survived for the whole period. To create new populations of animals and plants, a basic approach is used, for example, the reintroduction program provides for the release of captive-born or trapped animals in the area of their historic range where this species no longer occurs. The goal of the program for the reintroduction of gray wolves into the Yellowstone National Park in 1995 was to restore the balance between predators and herbivores that existed in this region before human intervention. In order to use their genetically fixed adaptation to a particular environment, animals are usually released at or near the place where they or their ancestors were caught. And sometimes animals are released in other places within their range. This has to be done when creating a new protected area, if the existing population is facing a new threat and cannot normally exist in its current location, or when there are natural or artificial barriers to the natural spread of the species. The best strategy for long-term protection of biological diversity is to conserve natural communities and populations in the wild, i.e., in situ conservation. If the population is too small to survive the only way to prevent species extinction is to maintain a view under artificial conditions under the supervision of a person. This strategy is called ex situ. There are