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National and International Conservation of Biological Diversity in Terms of Administrative Law “Sample of Turkey”

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Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/66846>

Abstract

Living beings in nature spend their lives within a certain environment. The most significant threat on the diversity of living beings on earth results mainly from human beings, who have the potential to manipulate the environment in which they live. The maintenance of the components of biodiversity is possible with a consistent and an effective legal protection. For this reason, various local, regional, and international arrangements have been made. Possessing a high rate of endemism in terms of plants and other creatures, Turkey also has a rich biodiversity. This study, on the basis of basic institutions of Turkish Administrative Law, investigates the legal regulations towards protecting biodiversity in Turkey in relation to international law, and the contributions of these regulations to the conservation of biodiversity. In this respect, the study further explores the public service dimension of biodiversity, law enforcement authorities in the scope of protection precautions and sanctions, the inadequacies of the existing arrangements, and the amendments to be made in the rule of law in Turkey and in international contracts towards providing the maintenance of biodiversity. Moreover, the activities to encourage private law people's and nongovernmental organizations' activities for developing biodiversity will be presented.

Keywords: Biodiversity, administrative sanctions, penal sanctions, legal protection, legislation, environment

1. Introduction

Earth could contain nearly 1 trillion species, with only one-thousandth of 1% now identified, according to the results of a new study [1]. The earth has encountered with an unprecedented loss of biodiversity in recent years. Species' extinction rates are now around 100 times higher

than those shown in fossil records and are projected to accelerate. Presumably one-tenth of bird species on earth, approximately one-fourth of mammals, and 70% of plant species are in danger of extinction. The net loss of forests has slowed substantially; however, each year a forest area larger than Zimbabwe has been disappearing since 2000. Coastal and marine ecosystems are greatly affected by human activities. Inland water species have decreased by 50% and marine and land species have decreased by 30%. Special bird species in certain habitats, coastal bird populations in the whole world, the range of forests and sea grasses, and the situation of coral reefs have been getting worse in each year. One-fourth of world plants are in danger of extinction. The existence of vertebrates has decreased at a rate of one-third in the last 30 years [2].

Nearly 12,000 plant species, 2750 of which are endemic, live in the whole Europe. Man-made damage on biodiversity in Europe is far more than in other continents. At the species level, 42% of Europe's native mammals, 43% of birds, 45% of butterflies, 30% of amphibians, 45% of reptiles, and 52% of freshwater fish are threatened with extinction [3].

Surrounded by three seas, shaped with high mountains and possessing approximately 200 natural lakes, Turkey has a surface area of 779,452 square kilometers. The country is at the crossroads of three plant geographies, the origin and diversity and cultivation center of many plant species, and a migratory route. The ecosystems of wetland areas in the country follow tropical forests in terms of biodiversity. There are nearly 9000 plant species in Turkey, almost 3000 of which are endemic [4]. Being at the ninth row in Europe in terms of biodiversity, Turkey has a great wealth in both flora and fauna. The country is home to three of 37 different flora regions of the world. Being located on the meeting point of these three different plant geographies is the most significant reason of this botanic wealth. As the plant taxon has 34% of endemic type, Turkey constitutes one of the most significant plant diversity centers in the world. Endemic plant types are narrow range on a global scale, 70% of which is hung by thread according to red list criteria and some species are unfortunately extinct today.

Wetland areas are of vital importance for migratory birds and many water bird species. As Turkey is located on bird migratory routes, it has an important position for many bird species. It boasts 80,000 animal species. The country is also a very rich in terms of continental, aquatic, and marine invertebrates and 252 of 694 fish species are in the red list of International Union for Conservation of Nature and Natural Resources (IUCN). About 61% of inland water fish are endemic. There are 164 amphibian and reptile species in Turkey, 10 amphibian and 17 reptile types of which are endemic. Among 476 bird species in the country, three of them are critically endangered, five of them are endangered, eight of them are delicate, and 17 of them can get into danger while among 169 mammals, nine of them are endemic, 15 of them are endangered, and 11 of them could be endangered [5]. To illustrate, Anatolian Leopard (*Panthera pardus tulliana*) which used to live only in Turkey and Indian Elephant (*Elephas maximus*), Caucasian ox (*Bison bonasus caucasicus*), Asian lion (*Panthera leo persica*), cheetah (*Acinonyx jubatus raddei*) and tiger (*Panthera tigris*) which used to be found in Anatolia are completely extinct [6].

On earth, apart from natural selection, the most significant threat on biodiversity is man-made. The reasons can be as the following; increasing demand towards biological sources as a result of increasing population, economic development and overconsumption, using improper technologies, the increase in international trade, the failure of markets in understanding the real

value of biodiversity, and the failure of governments in finding out and solving problems about overusing of biological resources, migration, and mobility [7].

Climate change and invasive alien species pose a threat in the acceleration of habitat and species losses. Industrialization, global warming, outrageous utilization of natural resources [8], and overhunting speed up this period. Unless these threats are overcome, biodiversity worldwide will decrease to an unprecedented level soon [9].

Social, economic, and environmental problems cause the decrease and even the extinction of biodiversity in many regions of Turkey. Due to factors such as industrial development, agricultural activities, and urbanization, natural habitats of species are destroyed. In this process, some misapplications such as cutting off wild fruit trees in the mountains by forestry administration also take place [10].

In terms of precautions to be taken about preventing the decrease of biodiversity and providing conservation, the state has both advantages and disadvantages, since the property of areas where many living beings in the country live, that is, coasts, seas, forests, mountains, and almost all lakes, belongs to state [11]. As these areas belong to the state and no ownership problems will be faced, the precautions to be taken will be implemented easier and faster results will be obtained. However, the political will governing the country should be determined in order for the public services to be successful [12]. It is because public properties are less preserved than private properties, and sometimes the property of these areas is transferred to the people who have occupied these properties and has built settlement on these areas and actually use them. In the scope of this study, the legislations towards protecting biodiversity in the world and in Turkey will be comparatively examined, entities in charge of the protection of biodiversity in Turkey, the duties of these entities, the decisions of supreme courts about protection, judicial decisions, their contributions to the protection, and the deficiencies in the legislation in Turkey will be examined.

2. The definition of biodiversity

Biodiversity is the variety of life on earth—comprising ecosystems, species, and genes [13]. Biodiversity, which is used to represent genetic diversity and the diversity of habitats (natural living area) along with the species diversity of the living beings on earth, is one of the most significant conditions for protecting natural balance [14]. Biodiversity is the indicator of a healthy environment and the abilities of ecosystems to maintain life support processes necessary for the welfare of humanity. It consists of three components; genetic diversity, which is hereditary and determines the physical and biochemical features of existence; species diversity which means mutual reproducing of a group of organisms genetically similar and naming species from this reproducing; and ecosystem diversity comprising of inanimate beings such as plants, animals, soil, water, air, and minerals [15].

On the second article of Convention on Biological Diversity (CBD), biological diversity is defined as the diversity among living organisms from all resources including land, sea, and other water ecosystems and the ecologic complexes being a part of these ecosystems.

The definition also covers the diversity within the species themselves and among themselves and ecosystem diversity.

Briefly, biological diversity states local and common global diversities of every kind of organisms among themselves and with each other, including genetic diversity, and states genetic differences in relation to the environmental conditions (ecosystems) that they are a part of [16].

3. Regulations towards protecting biological diversity

It is seen that first regulations towards protecting living beings in nature are about protecting living beings of economic importance. It is observed that these protection rules starting from eighteenth century have expanded to a wide range, comprising also species that do not have economic value today.

Today, there are more than 300 multilateral environmental conventions and nearly 30% of them are entirely or partially related to biodiversity [17]. Most of these conventions aim at protecting specific kinds and habitats/ecosystems or lands and in arranging particular activities. Moreover, while some of the conventions about biodiversity are international, most of them are regional. When the formation and development of CBD, which was opened for signature at Rio Conference in 1992, is considered, it is seen that the studies of International Union for Conservation of Nature and Natural Resources (IUCN), United Nations Environment Programme (UNEP) and other nongovernmental organizations have a significant role in the formation of these conventions. For the purpose of preparing a convention, Convention on Biological Diversity was negotiated at 10 separate intergovernmental negotiations. These negotiations, the first of which began in the late 1988, lasted until May 1992 and finally the convention was signed [18].

3.1. Regulations in the Turkish law concerning the conservation of biodiversity

There are many regulations in Turkish law about the direct and indirect protection of biodiversity. It can be said that the origins of these regulations can be traced back to the last 50–60 years. Although the title of the legislation about protection is not directly under the name of conservation of biodiversity in essence, it can be said that the regulations essentially serve to the protection. However, legislation about conservation does not directly contain every single part of biodiversity in today's context; and regulations are seen to be related to certain topics. The Constitution is at the qualification of the top legal norm in almost all countries in the world. It is the same for Turkey as well. According to the Turkish Constitution, the effectiveness of international conventions comes at the second rank after the constitution text. However, as conservation of biodiversity is shaped mostly with international conventions in Turkey and in the world, international conventions are examined under a separate title from the national law regulations in the study.

3.1.1. *The view of Turkish Constitution to biodiversity*

The Constitution is the most supreme legal norm in Turkey regarding the hierarchy among legal regulations. It is followed by international conventions, enactments, delegated

legislations, regulations and by-laws, respectively. There are no direct provisions for protecting biodiversity in 1982 Constitution Act.

The Article 56th of the Constitution states that "everyone has the right of living in a balanced and healthy environment; and developing environment, protecting environmental health and preventing environmental pollution, and that it is the duty of the state and the citizens alike to maintain it."

Environmental right, defined as a separate right since 1970s, is a part in Turkish Constitution, too. This right, the subject of which is human beings, animals and plants, inanimate organisms in relation to human beings and other living beings and ecosystem arranging the relations between living beings and inanimate organisms, is directly related to the conservation of biodiversity.

Environment is composed of elements free to individuals such as air, water, soil, fauna, flora, and cultural environment [19]. Environmental right, being a balanced and coherent right creating a kind of property right on the common wealth of humanity, turns into actualization of freedoms and entity condition by constituting a common area and reconciliation environment for other freedoms [20]. This right and duty cannot be separated from each other. The right holder is under the duty of not destroying the environment and taking action against those who destroy the environment, and has the right of making formal requests from the state, being informed about the changes around, taking part in the decisions around and petitioning. Providing everyone with a life on humanly conditions is in the core of this right [21].

We can say that environmental right is the closest regulation that can be linked to biodiversity in Turkish Constitution. As the Environmental Law is regulated by the Constitution's "Social and Economic Rights and Duties," the state will carry out its duties in the scope of this article to the extent of the sufficiency of financial resources defined by the 65th article. That the environmental right is included in Constitution does not give subjective public rights to people that they can demand through judicial remedy [22, 23].

Evaluating biological diversity in the scope of environmental right is insufficient. The significance of the concept explained above necessitates a separate and special regulation. Therefore, it can be said that biological diversity should be subjected to a separate regulation by getting it out of environmental right scope. Yet, the idea of public welfare existing in conservation of biodiversity should become an independent phenomenon and get out of environment-oriented public welfare approaches. It is because protecting biodiversity and activities carried out in that way involves public welfare itself [24].

Moreover, it must be stated that some provisions of Constitution indirectly serve to the conservation of biological diversity. It is clear that provisions which are indirectly related to the protection of biodiversity such as the 168th article of Constitution that natural wealth and sources are ensured and in the possession of state, 169th and 170th articles about the protection and development of forests and protecting forest villagers, 35th article that the right of property which is accepted as a right for everyone that cannot be used against the benefit of society, 57th article about right to housing, 63rd article about protecting history, culture and nature entities, and even 17th article which states that works having risk to human health can be accepted as violation for right to life, 45th article about protecting meadows and pastures,

43rd article about making use of coasts, and 44th article about fight against erosion are also significant in terms of protecting biodiversity.

As it is seen, Turkish law has set forth liabilities for both state and individuals by including regulations to reach this aim although it does not regulate the protection of biodiversity as an independent provision. These regulations have great significance in guaranteeing biological diversity.

The regulation at the 63rd article as “State provides protection of history, culture and nature entities and takes supportive and encouraging precautions to reach this aim” can be shown as another regulation contributing to the conservation of biodiversity [14].

3.1.2. Other regulations toward the conservation of biodiversity

The most secure way of protecting biodiversity is possible by making regulations in Constitution and international conventions. The Constitutional Law is the top norm in Turkish law in the hierarchy of legal rules itself. According to the current constitution, international conventions are at the equal level with laws, following the Constitution, and have the effectiveness of legal power. International conventions become a norm of national law after they are accepted in due form. In the study, the conservation of biodiversity will be examined first in international conventions and then in regulations in national law.

3.2. Conservation of biodiversity in international conventions

The boundaries of states founded by human communities and habitats and boundaries of nonhuman living beings are not always the same. Moreover, the effects of some activities human beings carry out in their countries do not only affect their own countries but also cause harm to their neighbors and sometimes even the whole world. Therefore, protection of nature and biodiversity is not a simple issue to be left to only the initiative of states, and global regulations must be carried out in order to take immediate and efficient results in stopping destruction and protecting biodiversity. As the loss of biodiversity comes up as a global environment problem and precautions foreseen by states at national law systems are not adequate by themselves, regional and global cooperation have become inevitable [14].

It is seen in protection of nature and biodiversity conventions, as is in many other international conventions, that states can make regulations on natural resources independent from other states, which underlines the principle of domination. Problems related to this principle becomes more apparent with the regulations and usages concerning lakes, rivers, forests, international waters, and even atmosphere that form common borders of states. Signatory countries, which are the natural extension of this principle, always have the power of suspending the provisions of the convention and resiling. The principle that comprises the states' cooperation on conventions about nature without causing harm to other state, avoiding damage, consultation and meeting in good faith is a good neighborhood principle. The principle of protection, which is continuously emphasized on nature and environment conventions, providing the protection of flora and fauna; the sustainable improvement principle that necessitates taking required precautions for protecting environment in plans that are made to carry out economic improvement, and sometimes the principle of common heritage of humanity are emphasized on international conventions [16].

Legal arrangements on protection of forests are known to have existed in France in the tenth century, while it was in the eleventh and twelfth centuries that such arrangements were made in Germany. The first restrictive provisions regarding forests in the UK are about hunting [25].

As the forests started to disappear at the end of eighteenth century, it was realized that the forests should be protected. In most of the European countries, legal arrangements on the protection of forests were made in the nineteenth and twentieth centuries.

Territories of Turkey have hosted many civilizations such as Egyptians, Sumerians, Hittites, Phrygians, Lydians, Persians, Seljuks, Ottomans, but these territories were deforested by the mentioned civilizations. In the Ottoman Empire, the initial arrangements regarding the forests were composed of ordinances and edicts showing the solutions for some problems. The forests had been haphazardly utilized in Ottoman Empire by the nineteenth century, but deforestation was limited, thanks to the people's religious sentiments, manners, and customs. The first arrangement regarding forests was made in Land Code of 1858, and in 1869 Forest Regulation was enacted. Unauthorized tree-cutting, debarking, collecting stones, soil, fresh and dry leaves without permission, unauthorized grazing and setting fires in the forest were prohibited by the regulation [26].

The first international agreements towards protecting biodiversity were made in the eighteenth century in order to end hunting of some species of economically precious living beings in open seas in an order and prevent extinction of migratory fish because of overhunting, In 1900, The Convention for the Preservation of Wild Animals, Birds and Fish in Africa was accepted in order to prevent the extinction of some species like lions and zebras in Africa, which had been under colonial domination of European states. This convention can be said to be the first protection agreement with regional quality [16].

In 1950, European states accepted the International Convention for the Protection of Birds and in 1951, The International Plant Protection Convention was accepted. Many regulations that aim directly and indirectly at protection of biodiversity were made within European community and between other countries. While some of the conventions concerning biodiversity are international global, many of them are at regional scale. Today, there are more than 300 multilateral environmental conventions and the majority of them aim at protecting particular species and ecosystems or areas and arranging specific activities. In some international conventions, monitoring and reporting mechanisms towards adaptation to convention provisions are envisaged. Such mechanisms foreseen in convention provisions provide both better adaptation to the convention and seeing the violations against the convention better.

In Turkey, when we look at the place of international conventions in norms, it is seen that "international conventions that are implemented in order are statutory" according to the 90th article of Constitution. The last subarticle provision of the 90th article of Constitution does not envisage a special transformation procedure for the conventions to bring forth provisions in national law [27]. Therefore, international conventions are in the same class with laws in norms hierarchy [22, 28]. However, in the 90th article of Constitution which regulates international conventions, it is stated that especially when the provisions of international conventions concerning basic rights and freedoms contradict with laws, the provision of international convention will be applied. Moreover, prosecuting to Supreme Court for the cancellation of

international conventions is not possible whereas it is possible to prosecute in order to cancel laws. Therefore, it is more important to regulate any subject with international convention for the effect of the content of the subject and rules in Turkey. We observe that regulations about a subject that concern not only a specific region but also the whole world are mostly arranged with international conventions; and regulations made in national laws of states are made after the acceptance of international letters. In spite of that, we see that especially developed countries sometimes resist signing letters accepted by international community. When we look at the subject from the perspective of Turkey, it is seen that extra regulations in national law are made after a regulation concerning international society has been made.

Before international conventions on biodiversity, some regulations have been made in Turkey. However, these regulations are for the protection of either a specific subject or a specific kind. Moreover, many of these regulations are not even at the power of a law. Therefore, it is very important to organize regulations about biodiversity or any kinds of subjects on international letters. Although states have the rights of sovereignty in international relationships, they cannot resist international repressions, and promise that they will obey liabilities envisaged in these letters some time later. The attitude of the USA about Kyoto Protocol can be shown as an example.

Some international regulations actively contributing to the conservation of biodiversity are as follows: Turkey is not a counterparty to some conventions as is the case with The Convention on the Conservation of Migratory Species of Wild Animals, also known as the 1979 Bonn Convention. The Convention on Wetlands of International Importance, also known as 1971 Ramsar Convention, came into effect on May 17, 1994 in Turkey. The Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as 1973 Washington Convention (CITES), came into operation on December 22, 1996. Convention on the Conservation of European Wildlife and Natural Habitats, that is 1979 Bern Convention, came into operation on February 20, 1984 after confirmed by Cabinet Decree. 1992 Convention on Biological Diversity (CBD), the basic objective of which is to provide the protection and sustainable use of biologic and genetic resources, came into operation on December 27, 1996.

Convention on the Protection of the Black Sea Against Pollution, in which Turkey is a counterparty, and Biodiversity and Landscape Conservation Protocol on this basis, Convention concerning the Protection of the World Cultural and Natural Heritage (Paris Convention), European Landscape Convention, The Convention for the Protection of the Mediterranean Sea Against Pollution (The Barcelona Convention), the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities, The Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) and Additional Protocols, International Plant Protection Convention, The International Treaty on Plant Genetic Resources for Food and Agriculture, and International Convention for the Protection of Bird and European Cultural Convention can be shown as conventions including direct or indirect provisions about biological diversity.

Among the prominent legal regulations constituted by European Union about protection of biological diversity are Endangered Species Act, The Directive on the Conservation of Wild Birds, Wild Birds Directive and Council Directive on the Conservation of Natural Habitats

and of Wild Fauna and Flora, that is, Fauna-Flora-Habitat Directive (FFH). Along with these regulations, European Union became a part of the following conventions by signing Bern Convention, Bonn Convention, and Convention on Biodiversity (**Table 1**).

Convention on Wetlands of International Importance (Ramsar Convention)
Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington Convention) (CITES)
Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
Convention on Biological Diversity (CBD)
Convention on the Protection of the Black Sea Against Pollution
Convention concerning the Protection of the World Cultural and Natural Heritage (Paris Convention)
European Landscape Convention
Convention for the Protection of the Mediterranean Sea Against Pollution (The Barcelona Convention)
Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean
The Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) and Additional Protocols
International Plant Protection Convention
International Convention for the Protection of Bird and European Cultural Convention
Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources and Activities
Biodiversity and Landscape Conservation Protocol
Protocol on Special Protection Areas in Mediterranean Sea and Biological Diversity
Cartagena Biosafety Protocol
International Treaty on Plant Genetic Resources for Food and Agriculture
International Agreement on Plant Genetic Sources for Food and Agriculture

Table 1. Legal regulations implemented in Turkey for the protection of biodiversity.

From these conventions, Ramsar aims at particular habitats, Paris aims at particular areas, CITES aims at particular activities and Bonn aims at particular species [17]. It is not possible to say that all of these conventions do not provide the same protection result for biodiversity. For instance, it is possible to meet with ideas claiming that Rio Convention integrates and damages international environment law and policy and international economical law and innovation law [29, 30].

When we look at international regulations such as 1972 Stockholm Declaration, 1982 World Charter for Nature and 1992 Rio Declaration, it is observed that applying these regulations on national law systems are perpetually emphasized. In some international regulations, states are demanded to develop a protection policy and implementation strategy and in some conventions, it is demanded that some units should be founded in order to apply liabilities effectively, penalize violations, and control the application of convention texts [16]. Turkey, which is assessed among developing countries, tries to contribute to the protection with its financial means by being a counterparty to the conventions on protection from the beginning.

3.2.1. *Protection of biodiversity according to the Convention on Biological Diversity (CBD)*

The foundations of conservation of biodiversity in international law was laid with the formulation of a program in World Conservation Strategy in 1980 and biodiversity was first given place as a legal principle in the report of World Commission on Environment and Development in 1987.

The Convention on Biodiversity, besides being an international convention, privately regulates the issue of biodiversity and provides a forum by bringing the countries and groups having various benefits and expectations close together, and approaches in an ecologic perspective to innovation by contacting between the usage of environment and resources, between protection and forestry, and between fishing and agriculture [31].

The independence right of states on their natural resources and the operating right of these resources through their own environmental policies are identified with the Convention. Although this regulation is appropriate for international law, shaping the convention on common heritage of humanity would be a more suitable approach.

Future targets and means were tried to be revealed with Strategic Plan for Biodiversity 2011–2020 and the Aichi Targets, accepted on the 10th Conference of the Parties in 2010, may be being the most significant progression after the convention was accepted. The scope of 2020 targets was expanded and not only a scientific point of view but also the benefits of biodiversity to ecosystem and its social benefits were taken into consideration. Moreover, commercial fishing was included and some precautions such as removing economical subventions damaging biodiversity were taken. Relatively more concrete and scheduled targets were determined [32].

However, that the target of 2010 Conference of Parties was deprived of clarity, that it advanced very little from a general intention although defined a date and that it could not bring to an end can be problems concerning the target [32]. As the 2020 targets are not binding, they do not strengthen current liabilities of Convention on Biodiversity but are seem far applicable means for states. CBD should focus on applications encouraging especially national and local concrete results more than developing policies [33]. Biodiversity should be brought forward innovation and strategies for reducing poverty. It should be integrated in all sector policies, especially economics and trade policies [7]. The relation between trade and biodiversity should be founded more tangibly, the knowledge, invention, and practices of native and local communities in relation to genetics resources should be protected, accessing to genetics sources and illegal disposition of genetics sources should be analyzed. Problems that biodiversity is face to face in international area seem hard to solve, especially because of the locations of developed and developing countries concerning the relation of biodiversity with trade, intellectual property right, transfer of technology, and environmental problems [18].

3.2.2. *Turkey's fulfilling of liabilities generating from the convention*

In Turkey, after the acceptance of Convention on Biodiversity in 1992, either with the scope of the convention or with other international or regional conventions that Turkey is a counterparty, topics about biodiversity took part in the sectors of environment and agriculture in development plans, policies through sustainable protection, development and gaining economic value were put forth, necessary precautions were determined, action plans were prepared, and targets, priorities and means were tried to be identified by means of these plans [34].

Plans such as the Strategic Action Plan for the Rehabilitation and Protection of the Black Sea (1996), Mediterranean Action Plan, National Plan for In-Situ Conservation of Plant Genetic Diversity in Turkey (1997), National Environmental Strategy and Action Plan (1998), Turkey's National Biodiversity Strategy and Action Plan (2001) are basic documents in terms of policies and implementations about this topic [9]. On these action plans, the main focus was on the protection of inland waters, coastal and marine ecosystems and agriculture and forest ecosystems, and especially the protection of endangered species and endemic species. However, putting these action plans into practice completely was not possible because of the lack of resources, due to the fact that existing resources could not be transferred to appropriate places in time, lack of coordination and integration between development program and protection program, and because of infrastructure problems. Since Turkey's National Biological Diversity Strategy and Action Plan (NBSAP) has not been accepted by relevant institutions yet, it does not carry a binding quality [35].

That the court decisions have not been applied properly creates anxiety in public opinion and that civil society has not been counseled sufficiently are deficiencies stated in European Commission 2015 Progress Report of Turkey. It is also stated that Turkey has not sent bilateral conventions draft concerning cross-border cooperation about Environmental Impact Assessment to related countries and provisions about access to information, civil participation and access to judgment on environmental issues that have been established with the United Nations Economic Commission for Europe (UNECE) Aarhus Convention have not been harmonized with Strategic Environmental Assessment Directive (SEA) [36].

National Biodiversity Strategy and Action Plan in Turkey was prepared in 2007 in order to fulfill liabilities in the scope of the UN Convention on Biological Diversity, to put into practice applications compatible with the regulations of European Union on nature protection scope and to reach protection and sustainable usage targets by embracing biological diversity in our country with an extensive and holistic approach. However, it is emphasized in progress report that framework legislation about nature protection, national biodiversity strategy, and action plan have not been accepted yet. It is stated that regulations permitting reconstruction in wetland areas, forests, and natural protected areas are not compatible with EU acquis. Draft Nature and Biodiversity Conservation Law is requested to be harmonized with EU acquis. As abolishing current National Parks Law is envisaged with relevant draft law, it is stated that accepting related implementation legislation in time is of great importance in order to avoid any legal gaps. Potential Natura 2000 areas should be determined and hydroelectric investments, especially in areas of high nature value, should be compatible with environmental legislation.

Studies concerning biological diversity are maintained through projects supported with international institutions and credits in Turkey. Turkey is assessed among developing countries within the scope of CBD. With this status, Turkey can receive grant support on the basis of project about the application of the convention from Global Environment Facility (GEF), the financial mechanism of the convention [37].

Gene Bank was established in 1936 for the first time in Turkey under Ankara University. Seed samples of plant genetic resources of the country started to be protected in National Seed Gene Bank, which was established in 1972 under the organization of the institute affiliated to the Ministry of Agriculture and Rural Affairs. National collection is composed of area races, wild and herbaceous relatives, and other wild plant species with economic importance, and

endemic plant species. Moreover, seeds of the plants collected within the scope of national and international projects have been taken under protection in the National Gene Bank. There are almost 70,000 materials in gene banks belonging to approximately 2700 species. About 20,000 of the mentioned materials belong to 2221 wild species. Also there are very much research about propagation and using of endemic or endangered plant species [38].

Seed stands which have trees with higher qualities in terms of their character, located in a certain geographical area and subject to a special management and operation for seed production, aim at obtaining high-quality seeds whose source is known. The number of seed stands is 339 for 27 species. Gene protection forests are natural stands which are selected and managed with the aim of protecting genetic diversity of a species in its natural habitat (*in situ*). There are 214 gene protection forests in 28 species. There are also a lot of scientific researches about the genetic diversity in Turkey [39, 40].

Forest Trees and Seeds Improvement Research Directorate affiliated to Ministry of Forestry and Water Affairs carries out *ex situ* protection for forest trees. One hundred and sixty-nine seed gardens from eight species, 35 seed plantation from 19 species and 13 clone parks from five species have been built until now.

The areas where the wild animals live naturally are taken under protection. Some species are produced in such areas. There are 80 Wild Life Development Sites in Turkey. Fifty-two mammals and 415 bird species have been taken under protection by Land Hunting Law. Protection work is carried out within the scope of a project for the species in danger of extinction such as Anatolian mouflon (*Ovis gmelinii anatolica*), black vulture (*Aegypius monachus*), The great bustard (*Otis tarda*), Caucasian grouse (*Tetrao mlokosiewiczi*), Gazelle (*Gazella subgutturosa*), red deer (*Cervus elaphus*) and hermit ibis (*Geronticus eremita*). In addition, the habitat of Mediterranean monk seals and particularly spawning area of sea turtles have been protected through special environment conservation areas, which contributes to the protection of biological diversity.

3.3. Regulations concerning conservation of biodiversity in Turkish National Law

The first samples of legislative regulations about protection of natural life and environment were encountered in Babylon and Egyptian laws before Christian Era [41]. There is some information about the fact that nature conservation areas were established by Old Egypt laws. First arrangements about forestry date back as early as 400 B.C. in China. Almost 2000 years ago some arrangements were made in India and Sri Lanka with regard to management of forest resources, tree-cutting and taking hunting under control. Some measures were taken by the Romans with the aim of preventing deforestation [42].

In the administration of Prime Ministry, Ministry of Culture and Tourism, Ministry of Environment and Urbanization and Ministry of Forestry and Water Affairs are the responsible ministries for the protection of the biodiversity in Turkey. There are many legislative regulations in Turkey for conservation on biodiversity. Taking the inventory of biodiversity has been started and the data has been put into service on the database named Noah's Ark within Ministry of Forest and Water Management, which undertakes the most significant task on the protection of biodiversity. Noah's Ark Biological Diversity Database established under the supervision of Ministry of Forestry and Water Affairs is the internet-based national biological

diversity database which is open to public access and consolidates the observation data on biogeography of Turkey where one can search by "species," "habitats" and "areas." This database allows any individual and institution-citizens, nongovernmental organizations, scientists and researchers willing to contribute to nature conservation of Turkey- to use, to enter data and to make searches. All observation data entered are accepted to the Database. However, the data are recorded in the system if approved in line with the decisions of Expert Groups and Scientific Consultation Board. Noah's Ark Biological Diversity Database groups the individual users in terms of whether they can enter data and see data. The users may be promoted to the higher user groups provided that they increase reliability percent of the biological diversity data approved by the System Administrator [43].

Some regulations in the legislation about conservation on biodiversity and provisions on these regulations are briefly as the following: The 181–184th acts of Turkish Criminal Law embody crimes against environment. According to this, emitting wastes deliberately to soil, water, or air thus damaging the environment is considered a crime and the penalties are increased in the event of committing these events with wastes causing the emergence of illnesses hard to cure for human beings and animals, the atrophy of reproduction ability and the change on natural features of animals and plants. There are some other special legal regulations.

It is possible to encounter provisions about conservation on biodiversity in 1956 Forest Law about forests, constituting one of the habitats of wild life and endemic plants. On the 25th Act of the law, in sum, the following statement is involved: "General Directorate of Forestry assigns forests and forest areas to the use of science, protects the nature, meets various sports and relaxation needs of the society, enables touristic activities, and separates, organizes, directs and in case of need, manages forests and forest areas as national parks, nature parks, natural monuments, nature conservation areas and forest recreation areas." On the 14th Act of Forestry Law, some conservation precautions towards saving forests are included, as well [44].

Concerning the protection of biodiversity, on the 9/a act of Environmental Law, it is stated that protection of biodiversity and ecosystem, constituting the natural environment, is fundamental and the essentials of the protection and usage of biodiversity will be determined by taking the opinions of local administrations, universities, nongovernmental organizations, and other related institutions. On the 9/d act of the law, it is stated that, with the purpose of conservation on biodiversity, "the Cabinet is authorized to determine and declare soil and water areas which are sensitive to environmental pollution and deterioration, possessing an ecological importance on the country and world scale, as Special Environmental Protection Area, and specify the protection and usage essentials to be applied on these areas and determine the ministry which will prepare and implement the plans and projects, in order for making necessary arrangements to secure the transference of biodiversity, natural resources and cultural resources to the next generations." On the 9/f act of the law, the following provision is included "In order to maintain the sustainability of biodiversity, the protection of endangered species and rare plant and animals is essential and it is prohibited to make them an issue of trade against legislation."

Another important arrangement about biodiversity is Land Hunting Law. Wild life protection and development areas defined at the 11th and 12th subarticles of the 2nd article of the law carries special importance in terms of our topic. While wild life protection areas are places where

necessary habitats having wild life values are absolutely protected together with plant and animal species and their continuity is provided, wild life development areas are places where game and wild animals and wild life are protected, developed, game animals are settled and habitat healing precautions are taken. In the 4th article about the protection of these areas, the following provisions are included: "In wildlife protection and development areas, wildlife cannot be destroyed, ecosystem cannot be ruined, institutions that can have negative effect on these areas cannot be permitted even out of wildlife protection and development areas and reproduction stations, the wastes of current institutions cannot be released without refining, no construction or institution can be founded except from those defined in approved plans and easement cannot be established. If needed, additional prohibitions can be implemented by the Ministry. No prohibitions can be implemented by other state institutions and organizations without the approval of the Ministry." It is also stated in this article that natural habitats enabling the feeding, sheltering, reproduction, and protection of game and wild animals cannot be poisoned, wetland areas cannot be polluted or drained, and their natural structures cannot be changed [45].

Another regulation about biodiversity is National Parks Law the number of which is 2873. In the 1st article of the law, it is pointed out that the purpose of the law is to choose and determine national parks, nature parks, natural monuments, and nature protection areas possessing the values at the national and international levels in Turkey, to arrange the essentials concerning to protect, develop, and manage them without damaging the features and characters. What is important in providing sustainable utilization of National Parks is doing studies that cause the least harm to the natural structure of the area [46]. In this law, four different protection statutes are envisaged under the names of national park, natural park, nature area, and nature protection area and special protection provisions that will be valid in areas of this statute are included at the 14th article. According to this, in the places in the scope of this law, (a) natural and ecological balance and natural ecosystem value cannot be damaged, (b) wildlife cannot be destroyed, (c) any kinds of intervention that causes or may cause to lose or change the features of these areas, and tasks and operations that would create soil, water and air pollution and similar environmental problems cannot be performed, (d) production of any kinds of forest products that would destroy natural balance, hunting, and grazing cannot be performed, (e) as far as there are no indispensable and exact obligation for public welfare, except from structures and institutions indicated in approved plans and institutions necessary for defense system to be needed by general staff, no structures or institutions can be founded or managed under no circumstances or can be settled apart from existing residential areas in these areas." When we have a look at regulations and applications about national parks in the world, it is seen that areas declared as national parks are protected originally as far as possible and there is hardly any human interference. However, in our country such activities as mining, touristic institutions etc., are allowed and these areas cannot be protected properly [47].

Another regulation comprising provisions about the conservation of biodiversity is Animal Protection Law. According to the 4/e subarticle of the law, "it is essential to protect endangered species and their habitats." Moreover, the following statements are included at the 8th article "Any kinds of interference to exterminate an animal generation is forbidden. Apart from medical purposes, giving an animal hormone or medicine in the form and dosage that would make it contrary to its kind and ecological features, doping it with various substances and changing the behaviors and physical features of animals typical to them with artificial methods are forbidden.

It is stated in the 2/b article of Law on the Organization and Duties of Forestry and Water Affairs that the identifying, directing, protection, development, managing, and ensuring being managed of national parks, nature parks, natural monuments, nature protection areas, recreation areas in forests and biodiversity, game and wildlife areas are among the duties of the Ministry.

Another regulation involving provisions about the conservation of biodiversity is Law on Conservation of Cultural and Natural Property. Regulations about the protection of cultural and natural properties are related to real estate, moveable estate, cultural assets, natural assets, or only the protection of plant or animal species [48]. Cultural and natural assets are the wealth of the whole humanity [49]. In the regulations about the protection of cultural and natural assets, natural and unnatural regulations are acknowledged in the same category.

Some duties of General Directorate of Cultural and Natural Heritage founded for protecting natural properties are as the following: (a) determining the methods and essentials for registration, approval, and announcement of national parks, nature parks, natural monuments, nature protection areas, wetland areas and similar areas that have the statute of protection and register the borders of these areas. (b) Determining the methods and essentials about the identification, registration, approval, modification and announcement of nature properties, natural protected areas, and special environment protection areas and identification and registration of the borders of these areas and management and providing to be managed. (c) Determining the resolutions towards the usage and structuring of national parks, nature parks, natural monuments, nature protection areas, natural protected areas, wetland areas, special environment protection areas and other areas having similar protection statutes, and making, modifying, applying landscape, general plan and implementing development plan in every kind and scale. (Item 13/A)

There are many directives in Turkey concerning the conservation of biodiversity, along with constitutional and legal regulations. Some of these directives are related to the implementation of provisions emerging from Turkey's international conventions while others are made in order to apply these laws and identify ordered tasks. The most significant ones of these directives are the following: Directive through the Implementation of Convention on International Trade in Endangered Species of Wild Fauna and Flora, National Parks Regulation, Wetlands Protection Legislation, Regulation on Protecting Habitats of Game and Wild Animals, Regulations about Game and Wild Animals and Keeping, Producing and Trading their Products, Regulation about the Foundation, Management and Control Essentials and Methods of Hunting Grounds, Regulation about the Protection and Development of Wild Life Areas, Regulation about Duties, Working Essentials and Methods of Central Hunting Commission and Province and District Hunting Commissions, Regulation about Collecting, Saving and Using Plant Genetic Resources, Regulation about Recording Plant Diversity, Regulation about Producing, Picking up and Exporting of Natural Flower Bulb, Regulation about Protection of Animal Genes Resources and Regulation about the Welfare of Farm Animals.

In Turkey, the genes belonging to the plant and animal species have been taken under protection by Seed Growing Law, Biosafety Law, Animal Improvement Law, By-law on Protection and Sustainable Use of Fisheries Genetic Sources, By-law on Protection and Sustainable Use of Pet Genetic Resources, By-law on Genetically Modified Organisms and Their Products, and By-law on Collecting, Keeping and Use of Plant Genetic Sources.

Apart from the above agreements, Turkey is a party to the Protocol on Special Protection Areas in Mediterranean Sea and Biological Diversity, Cartagena Biosafety Protocol, International Agreement on Plant Genetic Sources for Food and Agriculture (**Table 2**).

Law	Directive
Turkish Criminal Law	
Forest Law	
Land Hunting Law	Regulation about Duties, Working Essentials and Methods of Central Hunting Commission and Province and District Hunting Commissions
	Regulation about the Foundation, Management and Control Essentials and Methods of Hunting Grounds
	Regulations about Game and Wild Animals and Keeping, Producing and Trading their Products
	Regulation on Protecting Habitats of Game and Wild Animals
	Regulation about the Protection and Development of Wild Life Areas
Environmental Law	Wetlands Protection Legislation
National Parks Law	National Parks Regulation
Animal Protection Law	
Law on Conservation of Cultural and Natural Property	
Law on the Organization and Duties of Forestry and Water Affairs	
Seed Growing Law	Regulation about Producing, Picking up and Exporting of Natural Flower Bulb
	Regulation about Recording Plant Diversity
Biosafety Law	Regulation about Genetically Modified Organisms and Their Products, By-law on Collecting, Keeping and Use of Plant Genetic Sources
	Regulation about Collecting, Saving and Using Plant Genetic Resources
	Directive through the Implementation of Convention on International Trade in Endangered Species of Wild Fauna and Flora
	Regulation about Protection of Animal Genes Resources and Regulation about the Welfare of Farm Animals
	Regulation about Protection and Sustainable Use of Pet Genetic Resources
	Regulation about Protection and Sustainable Use of Fisheries Genetic Sources

Table 2. Regulations under Turkish national laws and directives concerning conservation of biodiversity.

In Turkey, there are no regulation that has been made just for this aim and directly for the conservation of biodiversity in constitutional and legal regulations. The Environment Protection and Biodiversity Conservation Act draft was accepted in 2011 after having been negotiated by related Parliament Commissions but the draft could not become a law. It is aimed with the draft to protect biodiversity and natural values of our country with national and international importance in land, coast, water, and sea areas and to specify the statutes of protected areas again transparently and apprehensively. Moreover, it was envisaged to found National Biodiversity Board and local biodiversity boards in order to enable the protection of nature and biodiversity and to found Nature Conservation Science Panel in order to provide leading scientific support to the Ministry of Environment and Forests. The draft, possessing great significance as it is directly for biodiversity, was criticized with the changes it brings and problems it will generate. It was stated that the draft which separates protection of cultural assets from protection of nature assets, would create jurisdictional dispute and this would pave the way for using nature and cultural assets more defenseless [50]. National Biodiversity Panel is authorized with revising previously announced decisions about natural protected areas with the provisional article of the draft. Thus, previous decisions about protected areas can become open to changes and natural areas that become strict preservation zones can be gone out of conservation [51]. Moreover, it is pointed out that the draft brings regulations that make "usage" as the aim under the protection-usage balance and it is emphasized that this will destroy the most important values of our country. It is asserted that the draft is against 1982 Constitutional Law and international conventions like the Convention on Biodiversity that we are a party of [52].

However, some changes mentioned in the draft were put into practice through some legislative decrees accepted later. The effects of newly ensured legal and institutional changes in terms of biodiversity are still being argued [35]. It is asserted that environment cannot be managed as is required with the new environment management layout envisaged to be founded with the legislative decree number 636 and any kinds of environmental values can be plundered more easily than previous terms.

4. Efforts by nongovernmental institutions concerning biodiversity

It is seen that nongovernmental organization's, too, attended activities for the protection of natural life after the First World War. In 1922, International Committee for Bird Preservation was founded by American ornithologists. Again in the USA, The American Committee for International Wild Life Protection was founded and International Office for the Protection of Nature (IOPN) was founded in 1934 with the support of Dutch environmentalists. Especially after the Second World War, activities for the protection of environment and nature accelerated through United Nations and subinstitutions supported by it, and they became topics that world public opinion was interested in. In 1948, The International Union for Conservation of Nature (IUCN) was founded. Man and the Biosphere Programme was initiated in 1971 as a result of studies started by UNESCO about the protection of environment and species. United Nations Environment Programme (UNEP) was founded within United Nations [16].

In the 1970s, nongovernmental institutions actively joined the preparation and application stages of conventions and the institutional identities such as the secretariat and administrative infrastructure originated in order to control the implementation of conventions. In the following years, the role of nongovernmental institutions gradually increased. The Rio Conference held in 1992 can be said to be the work of nongovernmental organizations.

It is observed that international institutions having functions and responsibilities about various dimensions of biodiversity have come to the forefront at CBD negotiations. United Nations Environment Programme (UNEP), which promotes the beginning of negotiations, played an important role as the Secretariat, and the UN Food and Agriculture Organization (FAO), which is directly related to the use of genetic sources and have already had regulations about this topic, actively participated in the process. The International Union for Conservation of Nature and Natural Resources (IUCN), which is an environmental organization, has played an active role in the emerging and shaping of the convention. FAO and IUCN prepared and presented their own draft contracts during the negotiations. World Wildlife Fund (WWF), one of the nongovernmental organizations, took part in almost all negotiations. Other nongovernmental organizations such as World Conservation Monitoring Center, World Resources Institute, Genetic Resources Action International (GRAIN), and Greenpeace joined some of the meetings and contributed to the process by providing data and documents [53, 54].

There are many nongovernmental organizations in Turkey serving to the protection of nature, environment, animals, plants; in other words, the biodiversity. According to the legal order in force, finite number principle is valid for juristic persons; and associations, charitable foundations, and cooperatives can be regarded as private law persons by the legal order. It should be stated that professional associations and unions contribute to the conservation of nature and biodiversity in Turkey as well. It is observed that these associations sometimes take more part than political parties in revealing the activities damaging biodiversity and informing public opinion. They contribute to the political parties in raising their opinions and policies about nature and in developing these policies [21].

Charity foundations and associations which carry out works about nature and biodiversity in Turkey and are generally known by everyone are the following: Turkish Nature Protection Association, The Foresters' Association of Turkey, Society of Environment and Natural Life Protection, Turkish Foundation for Combating Soil Erosion for Reforestation and the Protection of Natural Habitats.

It can be said that the contributions of these nongovernmental organizations are sometimes more than the state institutions. It is because while the units in the administrative hierarchy have to obey the decisions taken by the political will, nongovernmental organizations do not have such an obligation. Therefore, they can do more objective studies.

The public officers cannot generally act objectively in the face of any damages in nature regarding violation of biological diversity, they avoid negative reports and are concerned about these negative situations having a media coverage. Therefore, world public opinion is not informed of harmful acts on the living creatures until after it becomes an environmental catastrophe which the state cannot overcome alone or it is put on the agenda by the other states. However, public opinion is informed of mentioned violations thanks to the nongovernmental organizations

which operate on biological diversity-related issues in national and international area. In Turkey, national nongovernmental organizations such as Association for Stray and Street Animals, Federation of Animal Rights, Foundation for Protection and Promotion of Environment and Cultural Values as well as international nongovernmental organizations such as Greenpeace contribute to protection of nature and biological diversity.

In Turkey, charitable foundations and associations benefit from exemption from tax when their activities are identified to be for public welfare. Nongovernmental organizations are deprived of financial possibilities. Therefore, their activities should be supported. The participation of public in the nongovernmental organizations' legal and administrative decisions about biodiversity should be enabled and access to the actual data about the topic to be participated should be provided in a reasonable time. At the 13th and 14th items of CBD, the participation of public to the preparation process of Environmental Impact Assessment (EIA) and to be informed are obligatory. However, the authorization of nongovernmental organizations by convention organizations, enabling them to give information about applications against the convention in the country by giving financial support and providing petition right will contribute to the applicability of the convention.

5. Conservation of biodiversity through judicial means

It is no doubt that every step towards conservation of biodiversity, if well intentioned, is absolutely precious. However, violations against these regulations should be controlled by judicial positions in order to protect both regulations accepted in national law, the international conventions and acquisitions gained as a result of activities performed by nongovernmental organizations for conservation of biodiversity and to provide continuity of these studies. There are many social order rules in everyday life to keep people out of unrecognized activities. However, among these rules, the state just applies sanction in the event of violation of legal rules. Biological diversity is protected in Turkey thanks to the protection mechanisms included in national law rules and international agreements. Law enforcement authorities often impose fines in the event of a violation. However, the objections raised against the fines imposed by the law enforcement authorities are inspected by the courts, and any violation causing a severe damage is punished by the penal courts as a result of the lawsuits filed by the public prosecutor on behalf of the public.

5.1. The inspection of conservation of biodiversity by international judicial bodies

It is observed that international judiciary bodies do not propose directly an independent conservation regime like Turkey about biodiversity but assess this topic with the protection of the environment. Problems emerging about biodiversity and environment are mostly subjected to judgement call. It is because while the states accept conventions about environment, they do not accept the authority of UN Court of Justice and it is viewed that they feel desire to find a solution to problems about this topic with an arbitrator [55]. In 1982, for the first time in the world, the subject was brought to international arbitral tribunal in order to solve the controversy between the USA and England about seal fur hunting in North Pacific and

a protection regime was proposed by the court. About international trans boundary rivers, Lake Lanoux Arbitration between Spain and France and Gut Dam Arbitration between the USA and Canada are samples for other arbitral awards. [16]. After 1990s, there were increase in cases about environment in UN Court of Justice. The dam project claimed to harm the environment, pulp mill project built on the river, whale hunting in the Antarctic and road construction project by the river are among the cases that the court handles. An increase was recorded in the cases handled in International Permanent Court of Arbitration in the same years. Apart from these courts with general power, some special authority courts such as World Trade Organization Dispute Settlement Court, The Court of Justice of the EU and The International Tribunal for the Law of the Sea referred partly or completely to basic principles of environmental law in the cases they handled [16].

In Turkey, for the solution of any legal conflict, instead of going to law, it is possible to apply to arbitration boards where the parties reach an agreement provided that the subject matter is not related to public order. However, arbitration cannot be recourse in any matter where the parties cannot dispose freely.

International arbitration is applied to the conflicts which has the element of foreignness in the legal relation and for which the place of arbitration is Turkey. As for international arbitration, arbitration is not referred for any matter which the parties cannot dispose freely and for which they settle or make an agreement; arbitrator(s) do not make a decision in such cases.

The conflicts about any act damaging biological diversity and those prohibited in environment law are related to public order in Turkey, referring to arbitration for such matters is not possible. Consequently, as for any legal problem where Turkey is one of the parties, there is no ruling made by any arbitrator until today.

5.2. The inspection of the conservation of biodiversity by national judicial bodies

In Turkey, cases about the protection of biodiversity are handled in constitutional jurisdiction and administrative justice. Administrative fine is implemented by law enforcement authorities many times in order to protect biodiversity. Administrative sanctions implemented for the protection of biodiversity can be through administrative fine, confiscation, transference of ownership to the public, decision of demolition, closing of the workplace, and disqualifying from the profession and performing art. These are the general sanction types that can be implemented by the administration. However, sanctions about the violation against biodiversity are not limited to them. Penalty of imprisonment related to violations about biodiversity are sentenced by judicial justice. They can be aligned as administrative fine and penalty of imprisonment [56]. For instance, in the event of leaving waste that causes harm to the environment, penalty of imprisonment is sentenced to those doing the activity by judicial courts. When the implementations of law enforcement authorities are observed, 23,000 Euros compensation is demanded from a person in the event of hunting an Anatolian wild sheep without permission and also administrative fine is adjudicated. In the event that some species are harmed, the legal sanctions will be more severely imposed. Poaching is a major threat to many species existing in Turkey [57]. Sanctions are given to many people to prevent many species from poaching especially species which have the status EN (Endangered) or extinct.

Anatolian wild sheep (*Ovis orientalis anatolica*), with a limited population in eastern Turkey, with an isolated population in south-central Turkey, phylogenetically belong to a subspecies of Asian mouflon (*Ovis orientalis*) and is good an example to this [58].

Conservation of biodiversity is mostly examined in the adjudication and appeal controls of Constitutional Jurisdiction or Council of State. There are not any decisions directly about biodiversity in the decisions of Constitutional Court. However, in the cases concerning the cancellation of regulations about control area of the court or in forming cancellation or denial justification, conventions about biodiversity are taken as a reference, and regulations to ruin biodiversity or damaging to protection are cancelled.

It is observed in the decisions of Constitutional Court that the environment and biodiversity are generally considered together. The court decided to the cancellation of the regulation that makes alteration in the Environment Law with its 15.1.2009 date and no E: 2006/99 K: 2009/9 decision by indicating that search operations out of the scope of Environmental Impact Assessment (EIA) may cause differences on biodiversity and nature, these differences may have long-term impacts, it carries risks for the environment and in order to take away and prevent the existing risks in search operations EIA should be envisaged, and it is the requirement of the liability of environment protection given to the state at the 56th article of Constitutional Law.

In another decision dated 3.7.2014 and numbered E: 2013/89 K: 2014/116, the Constitutional Court decided that turning back to previous stages by stopping the production and management of a public investment project, the planning and decision phases of which have passed according to the appropriateness of the investment to the environment and production and management stages have started, does not contribute to the identification of environmental effect beforehand and to take precautions if it has negative effects on the environment. It is also decided that if an investment which has begun production causes harm to the environment, the state's liability to control the investment and to apply sanctions continues, even public investments in the scope of exemption has begun employment, production and management, in other words, even it has been carried out with significant financial resources and has begun to contribute to the economy. With the contributions of these investments to the economic and social life in mind, they can be the object of serious sanctions such as stopping their activities if they cause harm to the environment. However, giving up their productions and management will create more negative effects than the environmental effect that is possible to be removed. In conclusion, it is decided that it is not necessary to take EIA Report for these kinds of investments and it does not constitute an immoderate intervention to the right of living in a healthy, balanced environment [59].

The inspection on the conservation of biodiversity is mostly performed by administrative jurisdiction. In Turkey, there is a separation between civil and criminal jurisdiction and administrative jurisdiction, as is in Germany and France. As being trial courts, administrative jurisdiction becomes general authorized courts and works as council of state appellate courts except from specific cases. It is viewed that court decisions towards the conservation of biodiversity in Turkey do not date back a lot but decisions in this sense have begun to be given especially for the last 5 years. In legal precedents of state council concerning the topic, it is seen that administrative jurisdiction is very sensitive about the protection of biodiversity and has contributed significantly to the conservation. It is deduced that legislation and enforcement take subjective decisions with

mostly political vote concerns and political future concerns of politicians while jurisdiction can evaluate the case independently and objectively [21]. When the precedents of state council are examined, it is observed that the most significant task belongs to Ministry of Forestry and Water Affairs. It is viewed that while constituting the administrative structure of the ministry and opening organizations in the provinces, the structuring is formed by taking the genetic resources and biodiversity into consideration, and organization against it is illegal. The decision of 10th Circuit of State Council dated 10.02.2016 and numbered E: 2012/349, K: 2016/667.

In another decision of 10th Circuit of State Council dated 13.10.2015 and numbered E: 2011/7033 K: 2015/4313, the request of cancellation of declaring a dam lake which possesses natural landscape in terms of sheltering, feeding, and living conditions of wild animals as wildlife development area was refused so as to enable the conservation and rehabilitation of biodiversity.

In another decision dated 17.02.2014 and numbered E.2009/1713, K. 2014/895, 10th Circuit of State Council refused the Cabinet Decree about removing the nature area protection status of Yumurtalık Lagoon, which enables better conservation status and determining it as a national park, which enables poorer protection on the grounds that the area is among the most significant wetland areas of our country in terms of biological diversity, the area is turned into a lower-level protection status with the Cabinet Decree at issue and the established process is against the international conventions that our country is a party of.

In another decision dated 22.06.2011 and numbered E. 2011/5290, K.2011/266, 14th Circuit of State Council decided that it was wrong to announce bird sanctuary in Çamaltı Salt Field, which was accepted as the first degree of protected area by the Ministry and had scientific and cultural significance with rich biological diversity, as Coastal Zone Tourism Center on the grounds that the area in question should be included to the List of Wetlands of International Importance because of its biological diversity, the area could lose the constructive functions of natural areas in the ecosystem because of the activities in the scope of tourism center, and sand dunes, coast flora and natural Mediterranean flora just behind could be damaged along with wetland areas as a result of tourism activities, the applications were opposite the nature protection criteria. Moreover, the court states in its decision that the case should be evaluated together with its environment as a part of the whole instead of being alone, in order to protect the environment for the public welfare.

In another decision dated 10.6.1997 and numbered E. 1996/5259 K. 1997/2806, 6th Circuit of State Council decided that an area which shelters 308 bird species, is rich in flora-fauna and biologic diversity and forms a natural residential area in terms of regional recreation should be protected from pollution reasoning from unauthorized structuring and domestic waste, and natural balance and texture should not be destroyed.

6. Discussion

CBD distinguishes itself from both previous international conventions on biodiversity and international conventions of its time as it has the objective of sustainable use and fair sharing of the benefits obtained from genetic sources along with its objective of conservation of biodiversity.

Since the Rio Conference where the convention was opened for signature, processes causing losses in biodiversity have increasingly continued and problems in the implementation of the Convention have not been overcome. As it is seen with the targets put forth at the 10th Conference of the Parties, the efforts of developing the Convention for shaping the future continue at the normative level but when reaching the targets is taken into consideration, the decisions of the Conference of Parties are viewed as less concrete, less organized, and less applicable.

The Convention just imposes obligation on declaration, information exchange, and consultation to the possible activities for the negative impact on the biodiversity on places which are not dependent on national judiciary of states. However, it can be said that this regulation is quite imprecise. Yet, it is seen that the provisions of the convention are not implemented even in this state and the states do not make bilateral, regional, or multilateral agreements appropriate for general collaboration. The provisions of the convention should be revised in this sense and sanctions should be imposed in case of breaking the convention provisions. Compensation should be the first and foremost sanction, not the last, to be imposed.

In the conventions concerning the conservation of nature and biodiversity, the principle of common heritage of humanity, which developed countries insistently oppose, should be used instead of the principle of domination of states on natural resources. This principle means the fair and peaceful usage of natural resources without causing any harm to the environment, by taking into consideration the needs of the overall international community.

Although it is viewed that biological studies on biodiversity are carried out in Turkey through many legislative regulations and institutions, increase in conservation studies in specific regions are provided through national and international projects and the case of international provisions are tried to be met, it is not possible to say that biodiversity can be completely protected and the devastation can be prevented.

In Turkey, industrial premises are more common in certain places, and the people constantly migrate from rural areas which are rich in biological diversity to the cities. This is an advantage for the creatures living in the nature and in need of protection, and today there are still many virgin areas with high variety of creatures. However, in the works such as construction of the roads, airports, industrial premises, etc., which are built for development of the country, any act that may jeopardize biological diversity should not be allowed. Nevertheless, considering the decisions made on this issue and the judicial decisions made as a result of relevant lawsuits, it is likely to see that importance of biological diversity is not clearly understood by the government and the Supreme Court.

When provisions in Turkish law towards the conservation of biodiversity are assessed as a whole, it is observed that a great majority of legislations are based on international conventions. Legislative regulations in national law are seen to be located discursively in different legal texts. There are many legislative regulations about biodiversity in Turkey and the aforementioned legislation is tried to be adjusted according to Turkey's national and international provisions with the amendments. However, the legislation is insufficient in meeting the protection needs of biodiversity because of the disorders or deficiencies of legislative regulations. When the legislation about biodiversity is observed, it is viewed that there are gaps in some topics while there are implementation and sanction deficiencies in some other topics.

There is not a special legislative regulation in Turkey that regulates the subject of conservation on nature and biodiversity. It is seen that legal regulations in legislation about the conservation of biodiversity are attached to different legal letters later and are disconnected to each other, they are insufficient in meeting the biodiversity protection needs and they are deprived of dissuasive sanctions that would guarantee their effectiveness. That there are not dissuasive sanctions is an obstacle for the application, or sanctions that are envisaged for some crimes do not have the implementation capability.

Regulating the conservation of biodiversity with different laws and carrying out precautions concerning conservation by different institutions cause conflict of duties and problems in the implementation of laws. In terms of organizational structure, coordination problem takes an important place as many different institutions are assigned. As different units are assigned in implementing sanctions envisaged in the conventions and laws, a law enforcement officer authorized to prevent a violation do not take any action when he encounters violations that he is not authorized. Moreover, the number of law enforcement officers in charge of conservation is rather limited in Turkey. As Günes and his colleagues mentioned [60], in a nature conservation law to be prepared, regulating thoroughly the features concerning protection of biodiversity and precautions to be taken about conservation contribute significantly to the protection of biodiversity.

In Turkey, environmental sources having different functions are used intensively because of the crowded population. As Belkayalı and her colleagues mentioned in their studies [61], even the activities performed in protected natural areas, although they seem to be nature friendly activities, the area where the activities are performed is inevitable to be under effect. The effects are felt in all source values of the protected natural area. The level of the impact differs depending on the sensibility of source value, the type of the activity, the intensity and time of usage. At this point, the continuity of resources and productions and services presented to the benefit of community gain significance. Hence, in recent years, the concept of sustainable development has drawn the attention as a concept which emphasizes the need of protection of environmental needs and to keep the environmental quality at a reasonable level. Therefore, as Belkayalı and her colleagues stated in their studies [8], identifying the affected resource value, permitting the usage of the resource value according to the sensibility level and following it are quite significant for enabling the sustainability.

As Belkayalı and Kesimoğlu stated in their studies [62], presenting participatory approach in studies carried out in protected areas where biodiversity is large and including the local people in the process are significant for the protection of resource values in the area. It is stated in previous studies about this subject that including local people to the process is significant in enabling the sustainability and protecting resource values, accordingly.

In developing countries, providing participation, and freedom for expression and proclaiming scientific studies correspondingly, presenting impartial reports of governmental organizations are quite difficult. Therefore, nongovernmental organizations comprised people who act in accordance with convention aims and who are specialists in their fields should be authorized by convention bodies and information report should be required from these institutions at least twice a year. Thus, independent reports that do not liable to state hierarchy can be obtained out of formal state bodies.

While providing developing countries with financial support, the awareness of the public should be raised, strict rules should be implemented in the usage of guidance services and the control of the application should be provided.

"It is obvious that protecting public properties such as coasts, mountains which compose the area of biodiversity is very important in terms of convention on biodiversity, as well." It is because the majority of living beings that have to be protected are on public properties. It is both an advantage and disadvantage. It is because conservation of biodiversity can be neglected while state investments such as airport, road on public properties are planned and, occasionally unauthorized structuring becomes legitimate with amnesty laws enacted from time to time. The precautions to be taken by state about the protection of biodiversity will have the opportunity of being implemented on public properties easily when compared with the private property areas. It is because the implementation of some precautions to be taken in the private property would necessitate to limit some rights that the property right holds in itself.

7. Conclusion

In order to provide the conservation of biodiversity effectively, along with legal sanctions, political and commercial sanction mechanisms should be formed with provisions to be attached to the convention so as to prevent activities of party countries against the convention. In order to enable the implementation of CBD, nongovernmental organizations authorized in party countries to the convention and the staff working there should be financially supported by convention bodies and semester reports should be required from these organizations. Including the nongovernmental organizations that may be founded for performing any legal activity will contribute to protection of biological diversity. In Turkey, the arrangements on environment are not subject to unilateral arrangement by the government, and participation of the citizens in the decisions is encouraged to some extent. Legal arrangements made regarding the participation of the area stakeholders in the decisions made provide improvement to a certain extent.

A special regulation handling the protection of nature and biodiversity in Turkey should be performed urgently. With the regulation, the decisions to be taken about the protection of nature and biodiversity and the implementation authority of these decisions should be given to a single organization and each law enforcement officers should be assigned to identify the activities against the protection of biodiversity and to take legal actions about criminals.

Protection net of Natura 2000 which is regarded as the heart of EU Nature Conservation Legislation, taking a key role on the prevention of the loss of biodiversity, should be identified in Turkey as immediate as possible and the objectives and targets defined in action plans towards the convention of biodiversity should be taken into consideration by not only a single organization but also by all public and private organizations. As protecting the biodiversity by just the State is not possible, participant approach should be performed in decisions to be taken about the protection of biodiversity and public should be included in the process. The public should also be trained and their awareness should be raised about conservation.

The legal regulations adopted to ensure the implementation of the convention in domestic law should refrain from including exceptions which are in compatible with the provisions of the contract; besides, political and administrative units should be made to comply with the court decisions.

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