

# NATIONAL REPORT ON BIOLOGICAL DIVERSITY

Ministry of Environment and Natural Resources Protection of Georgia

1999

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## 1. INTRODUCTION

Convention on Biological diversity was presented for signing in 1992 at the United Nations Conference on Environment and Development (UNCED). The convention entered into force in December 29, 1993.

Georgia acceded to the Convention on Biological Diversity in April of 1994.

The ratification was formal recognition of the new opportunities offered by the Convention for the conservation and sustainable use of significantly rich biodiversity, for closer international co-operation, and for pursuing the integration of biodiversity objectives within national sectoral policies.

Countries acceded to the Convention are obliged:

1) Develop National Strategy, Plans and Programs for the Conservation and Sustainable use of Biodiversity, Integrate them into relevant Sectoral and Intersectoral Plans, Programs, Policy;

2) Identify and provide monitoring on biodiversity important components, in particular:

a) ecosystems and habitats rich with biodiversity, endemic and endangered species; some untouched ecosystems and habitats; ecosystems with great value from social, economic, scientific and cultural point of view; ecosystems important to migratory species; ecosystems with some representative and unique features; connected with main evolutionary and other biological processes.

b) species and co-associations under threat; wild ancestors of present cultural species; species important from medical, agricultural and economic point of view; species important for social, scientific or cultural aspects; species significant for the protection and maintenance of biodiversity; species considered as indicator species.

c) described genomes and genes of social, scientific and economic importance.

3) Create protected areas system and ensure sustainable development of adjacent areas; take measures to restore degraded ecosystems and endangered species; establish proper legal basis for the protection of endangered species, take measures to regulate, restrict and control of risk connected to dissemination of genetically modified organisms; prevent introduction of alien species; provide impact assessment of projects on biodiversity while conducting ecological expertise.

Implementation of the Biodiversity Convention on the National level as well as other relevant International Conventions should be ensured by the national legislation.

Since the Convention has been ratified the biodiversity issues became an important part of National Environmental Policy. Step by step Georgia elaborated and adopted new legal requirements, signed and ratified biodiversity related International Conventions (CITES, Ramsar, Convention on Migratory Species). Following to modern standards two new National Parks were established: Borjomi-Kharagauli National Park and Kolkheti National Park, first of which is already operating. "Biodiversity Country Study" and "Biodiversity Strategy and Action Plan" were finalized. Protected Areas Development Project is underway with support of World Bank and GEF.

The Convention provides protection of traditional knowledge of local population which is important for biodiversity conservation and benefit sharing arising from use of such knowledge, as well as the availability of genetic resources and ecologically safe technologies.

## **2. BASIC DATA ON GEOGRAPHY AND BIODIVERSITY OF GEORGIA**

Georgia is a mountainous country, covering 69,7 thousands km<sup>2</sup> with a population of 5,5 million people and is situated between the south slope of the Caucasus Mountains, the east coast of the Black Sea and the northern edge of the Turkish Anatolia plain.

Georgia is characterized by a complex relief. Hypsometric marks graduate from 0 at the Black Sea coast to 5068 m (Peak Skhara). Main orographic units are: Caucasian highland, Georgian lowlands, Lesser Caucasian highland and South Georgian volcanic highland.

There can be defined two major climatic regions: humid sub-tropical and sub-tropical continental transient to marine climate. Within the last one there can be defined some sub-regions: South-West Asian Highland dry sub-tropical gradually transient to temperate humid sub-region. Within these regions and sub-regions there in its turn can be defined also some different climatic districts.

25 075 rivers are in total in Georgia with the common length 54 768 km. Major river of East Georgia is river Mtkvari which falls into the Kaspian Sea. Major river of West Georgia is river Rioni, which flows into the Black Sea. Other larger rivers are: Enguri, Kodori, Chorokhi, etc. West Georgian rivers flow to the Black Sea.

850 lakes are in Georgia, though common surface does not exceed 170 km<sup>2</sup>. Major lakes are: Paravani (37 km<sup>2</sup>), Kartsakhi (26,6km<sup>2</sup>), and Paliastomi (17,3 km<sup>2</sup>).

Forests cover 40% of the country (2, 8 million ha). The varied terrain and climatic conditions contribute to diversity of ecosystems and species. The principal landscapes of the Caucasus include foothill and mountain forests and subalpine meadows of Greater and Lesser Caucasus, humid lowland forests of Western Georgia, and the arid steppe and deserts of eastern Georgia.

There are 4 major bio-geographical regions: Eastern Mediterranean, Northern Boreal, Iranian-Turanic and Colchic. Complexities of the relief lead to some geographical and ecological isolation of ecosystems. Significant difference between climatic conditions of West and East Georgia caused lead to difference between ecosystems. Besides that ecosystems are changing by altitudes. 5 main vertical zones can be defined in West Georgia: forest (from sea level to 1900 m), sub-alpine (1900-2500 m), alpine (2500-3100), sub-nival (3100-3600 m) and nival (over 3600 m). In East Georgia we can distinguish 7 zones: semi-arid, dry vally and arid light forests (150-600 m), forest (600-1900 m), sub-alpine (1900-2500 m), alpine (2500-3000 m), sub-nival (3000-3500 m), and nival (over 3 500 m).

In Georgia we can find a very significant and unique ecosystem in terms of biodiversity as turfaries, Colchic polydominant forests with evergreen undergrowth, sub-alpine forests, floodplain forests, alpine medows, caves and mountain narrow gorges, coniferous, deciduous, and arid light forests, steppes, etc. It should be noted that Colchheti represents one of the refugiums of tertiary flora species. There are found 88 plant species of tertiary period.

Anthropogenic factors influenced significantly Georgian ecosystems. Plant cover of forests and semi-arid foothills is essentially decreased. There appeared meadows succeeded some forest areas, or artificialy planted areas. There is an invert correlation between population density and less modified ecosystems.

Natural and harmonius historic-cultural landscapes are mainly concentrated on Caucasian slopes (North zone), Lesser Caucasian slopes, and river Iori plateau (Southern zone), as well as Colchheti lowland area at the edge of the Black Sea coast (Western zone). Significant natural units (lakes, boggs, floodplains, carst caves, some paleontological, geomorphological objects, different landscapes with agrobiodiversity, etc.) are scattered also on developed and quite modified areas between the mentioned zones. Tsivgomboriand Likhi ridges, as well as Alazani, Iori and other rivers are still serving as natural corridors.

### 3. RARE AND ENDANGERED SPECIES

Georgian flora is distinguished by its biological diversity. It should be noted that the number of only vascular plants species is up to 4 500. It is very important to note high endemism of Georgian flora. About 400 of flora species are endemic species for Georgia and about 600 – are endemic for Caucasus. About 9% of total number of species distributed in Georgia is endemic species that is higher than in many European and Asian countries. West Georgia is especially rich with endemic species, in particular, Bzipi, Gagra, Egrisi, and Racha ridges and Caucasian highland. Level of endemism and floristic peculiarities are increasing with altitude – in sub-alpine, alpine, sub-nival and nival zones the endemism is higher. Many species of Georgian flora have economic value; many of them represent wild ancestors of cultural species.

161 species are included in Red Book of Rare and Endangered Species of Georgia, though assessment data are not comprehensive and need to be adjusted according to the IUCN criteria.

Georgian botanists divide the endangered species by following categories:

- 1) Nearly extinct species. 10 species, including *Cicer*, *Ulmus georgica*, *Populus transcaucasicus*.
- 2) Species under threat of rapid extinction. Around 50 species belong to this category, including *Pteridium*, *Betula megrelica*, *Trapa colchica*, *Dioskorea caucasica*.
- 3) Rare species category to which belong up to 140 species, including *Pinus pithyusa*, *Anthemis saguramika*, *Pseudovesikaria digitata*.
- 4) Species of very populations. Up to 140 species belong to this category, including *Ephedra distachya*, *Pachyphragma macrophyllum* da *Capparis spinosa*.

Georgian flora is under high influence of anthropogenic press. Different aquatic and terrestrial habitats are degraded and lost; environmental pollution is essential; economically important species are overused, etc.

Invertebrates of Georgia are less studied, except some species of nematodes, gastropods and crustaceans. For all invertebrate species the IUCN category DD can be applied. Among the endemic species there should be noted *Dendrobaena faucium*, *Eophila pseudonematogena*, *Eiseniella colchidica*, and *Oxychilus mingrelicus*, which represent Colkhetti endemic species. Such endemic species as *Helix buchi* was included into Red Book of the USSR.

For the most of fish species of Georgia conservation status is not defined. Black Sea Salmon and Atlantic Surgeon are included into IUCN Red List. Among fresh water species *Barbus mursa*, *Barbus barbus*, *Varicorhinus capoeta*, which are endemic species and have economic value. An alien species Crucian carp is widely distributed in Georgian water bodies.

Among 4 species of amphibians included in Georgian Red Book, 2 species *Triturus vittatus ophryticus* and *Pelodytes caucasicus* are not under threat any more. *Pelobates syriacus* is for the time being under threat of extinction. In the IUCN Red List Caucasian salamander is assessed as being at Low Risk within the whole areal.

The number of reptile species is reducing. Decreasing of reptile diversity in Georgia is notable most of all in the South-East region of the country. Main reasons of decreasing are habitat degradation and habitat loss.

There are about 300 bird species in Georgia, a remarkably high diversity for such a small country. Half of the bird species are migratory species included into the Appendixes of the Bonn Convention (AEWA). 12 species are listed in the IUCN Red List, from which 52 are endangered, 8 are critically endangered. Some species are regulated as the hunting species. Colkhети Lowland and Javakheti Plateau Lakes are the most important places for migratory bird species.

79 small mammal species are distributed in Georgia. Insectivores – 10 species, bats – 29 species, rodents – 39 species and hare species 1 species. It should be noted that 15 species of the small mammals are not assessed at all, 30 of them can be assessed according to IUCN categories as DD, 22 species – as being at low risk, 5 – as vulnerable, 7 – as endangered.

There 30 species of large mammal species in Georgia, which includes carnivores, ungulates and cetaceans. Until XX century these species were widely distributed in Georgia. Starting from 1930, number of large mammals is significantly reduced due to heavy anthropogenic pressure. Both species of tur, bezoar goat, chamois, and deer populations are significantly decreased. Goittered gazelle is totally disappeared, Eurasian lynx can be found only in strictly protected areas and in nook places.

Among general reasons and explanations, it should be noted first of all a very hard heritage that was left after USSR regime. Totally unacceptable policy in the field of natural resources management and low environmental awareness lead to degradation of biodiversity and environment in general.

Over use of biological resources, unregulated hunting, smuggling, forest cut, non-rational use of plant resources have a very strong impact on biodiversity. Areal fragmentation and separation of populations into small sub-populations are quite common phenomenon in Georgia. This is a very significant factor for the most of mammal species. Even in case of the best designing of a protected areas system, many of significant species and habitats remain beyond its borders. Isolation of protected areas seems to be inevitable, because of already existing urban developments and the planned construction of the TRASECA pipeline. In such situation, synchronizing of *ex-situ* and *in-situ* measures seems to be reasonable.

Taxon	Number of species distributed in Georgia	Endemis species	Species included into the Red List of Georgia
Fungi	6420		
Plants			
Lichens	737		5
Moss	665		5
Fresh water algae			
Marine algae	1897		
	116		
Higher plants	4200-4500	380	161
Filices	70		3
Gymnosperm	16		5
Angiosperm	>4000		153
Fauna			
Mammals			total 17
Small	70	19	
Large	30		
Birds	300		35
Reptiles	52	18	6
Amphibians	13	3	4
Pisces			total 1
Fresh water	84	15	
Marine	66		
Invertebrates			
Soil nematodes	143		



Gastropods	110		
Molluscs			
Insects			65 species were included in the Red List of USSR
Lepidopterans	500		
Apoidea	298	15	

Source: Materials of Biodiversity Program of Georgia, 1996.

Note: Red Book of Georgia is edited in 1982. It is quite out-dated and does not reflect actual state of Georgian flora and fauna. At the time being a new Red List of Georgia is under development.

#### 4. DEVELOPMENT OF PROTECTED AREAS SYSTEM

Area of 169 000 ha (about 2,4% of total territory of the country) is protected as strictly reserved area. Protection level is corresponding with the IUCN I category. Besides that there were existing 5 hunting farms with total area of 58 000 ha (0,8% of total area). Later these areas were assigned status of managed reserves that corresponds to the IUCN category IV. Strict Nature Reserves and Managed Reserves are managed by Directorates at places. At National level they are managed by State Department of Protected Areas. Below is given a list of reserved areas.

Reserved area	Area (ha)	Date of Establishment	
AlgeTi	6 400	1965	
Akhmenta			
Babaneururi	770	1960	
Batsara	3 042	1935	
Tusheti	12 485	1980	
Ajamati	4 848	1935	
Borjomi	17 948	1935	
Bichvinta-Musera			
Bichvinta	1 461	1935	
Musera	2300	1934	

vashlovani	8 034	1935	
Kintrishi	13 893	1959	
Lagodekhi	17 818	1912	
Liakhvi	6 388	1977	
Ritsa	17 200	1930	
Saguramo	5 241	1946	
Marimjvari	1040	1935	
Sataplia	300	1935	
Colkheti	554	1935	
Psou-Gumista			
Pskhu	27 333	1978	
Gumista	13 400	1976	
Skurcha	85	1971	
Kazbegi	8 707	1976	
Gardabani	1957	3315	
Korugi	1958	2068	
Iori	1965	1336	
Chachuni	1965	5200	
Katsoburi	1964	295	

During Soviet time wild nature areas were protected in a specific way. As it was mentioned above, there were established only strictly protected reserves, which were isolated from social areas. It is without doubt, that this contributed a lot to the protection of environment and maintaining of wild nature areas for future. However, it is evident now, that there should be established a new system, which would be connected and interact with socio-economic aspects of country development.

There should be noted at least 2 very significant reasons in favor of need to establish a new protected areas system:

- considering small territory of Georgia, at present it is very complicated to “remove” areas (relatively large) from the socio-economic space of the country; in other words - successful protection of the ecosystem balance and

the representative biodiversity of high mountain, mountain forest or plain ecosystems cannot be achieved only by means of strict protection (IUCN Category I);

- at the end of XX Century, in the light of the deficit of nature areas, relatively untouched by human activities, those, who are willing to, should be given an opportunity to establish direct contact with wild areas; i.e. it is necessary to establish such more or less “mild” protected areas, where tourism is permitted; which in its turn, gives an incentive to the socio-economic development of the country/region.

Relatively mild protection regime, which simultaneously ensures protection of wild areas and moderates tourist activities, first of all is a feature of a National Park Category (IUCN Category II). In 1990-1991, first scheme of developing spatial structure of National Parks in Georgia was elaborated, which laid foundation of further planning activities. The first major objective of this program was the assistance to the establishment of 7 National Parks in Georgia.

Due to permanent lack of State budget and existing practices of financing Environmental issues from State Budget, development of the Protected Areas System depends mainly on willingness of international donor organizations. For the present time, there are two funded projects for the establishment of National Parks:

### **Borjomi-Kharagauli National Park**

First National Park complied with the international standards was established in 1995. Borjomi-Kharagauli NP was established in accordance with the Order of the Cabinet of Ministers of Georgia and with financial support of the Government of Germany. In 1998 the KfW allocated a grant to finance the establishment of the Borjomi-Kharagauli National Park.

Region has a high potential for tourism and good experience of tourism management. Total area of BKNP is 68000 ha (1% of total territory of Georgia). It is one of the biggest NP in Europe.

Beside of Management Plan for NP territory itself there is prepared Comprehensive Management Plan for the NP's Support Zone development, which includes maintaining of different economical activities to reduce pressure on NP.

This region is important for the following reasons:

- It is a conjunction area of 4 bio-geographic units (Colchic, Caucasian, West Asian and Minor Asian regions), that provides a unique biodiversity of the region.

- A quite well protected area – Borjomi Strict Protected Reserve existed for over a half of century provided some really untouched areas of wild nature.
- The region has quite high touristic and recreational potential and tradition of hosting tourists.

Borjomi-Kharagauli National Park covers over 68 000 ha, that consists about 1% of total area of the country. It is one of the biggest parks in Europe.

Management Plan of the Borjomi-Kharagauli National Park is developed in accordance with a new concept on Establishment of Protected Areas that means not only creation of wide infrastructure of the Protected Area, proper equipment, staff trainings, etc., but also special attention to the adjusting and supporting zones of the National Park. In such zones certain measures for sustainable social and economic development should be conducted. To ensure the reduction of economic activities of local population on the protected area, there should be conducted certain measures stimulating sustainable social and economic development.

### **Kolkheti Protected Areas**

**Kolkheti National Park** was established in 1999 by “Law on Creation and Management of Kolkheti Protected Areas” Funded by GEF/World Bank. Protected Areas established under the above mentioned Law: Kolkheti National Park (44 313 ha), Kobuleti Reserve (331 25 ha), and Kobuleti Managed Reserve (438 75 ha).

KNP consists of territories, which were included by the decision of Georgian Parliament into International Ramsar Sites. Kolkheti National Park include 5 miles wide marine area, Central Kolkheti Area (Anaklia-Churia, Nabada, and Imnati wetlands) i.e. areas declared by the Decision of the Parliament of Georgia in 1996 as Wetland Area of International Importance (Ramsar site). Kobuleti Reserve is located close to the Black Sea coast, near town Kobuleti. It represents a part of Kolkheti Protected Areas complex, and it is also designated as a Ramsar site. These territories represent refugium for Quaternary species of Kolkheti flora, also a habitat for many species of migratory and waterfowl birds. These territories presently are under threat because of different anthropogenic factors (agriculture, illegal cutting and hunting, fishing, mining, drainage of marshes for agricultural purpose, etc).

Guidelines for the Management of Kolkheti Protected Areas were developed by the Conservation Program of WWF within the framework of Integrated Coastal Zone Management Program in 1994 with support of GEF and WB. These guidelines will serve as the basis for development of comprehensive Management Plan of Kolkheti Protected Areas.

### **Wetlands of International Importance**

According to Law of Georgia on Protected Areas System, some other categories of Protected Areas can be established – Biosphere Reserve, World Heritage Area and Wetlands of International Importance. In 1996 Georgia acceded to the Ramsar Convention, according to which there were designated territories of international importance:

- 1) Central Kolkheti Wetlands: area of 33 710 ha, located in central part of the Black Sea coastal zone, close to Rioni river estuary and covers Khobi and Lanchkhuti administrative districts. It includes Churia, Nabada, and Pichoba-Paliastomi wetlands, Paliastomi Lake, adjacent areas and marine area.
- 2) Marsh Ispani II, with area of 513 ha is located in Adjara Autonomous Republic in 1 km from the coastal line, near town Kobuleti.

There are some project preparation activities for the East Georgia's Protected Areas funded by GEF/World Bank.

## **5. LEGAL FRAMEWORK FOR BIODIVERSITY PROTECTION (NETIONAL LEGISLATION, INTERNATIONAL; TREATIES AND AGREEMENTS)**

According to Article 37 of the Constitution of Georgia: “Each person has a right to live in healthy environment.. (para 3) and for present and future generations State is responsible to ensure environmental protection and sustainable use of natural resources” (para 4).

Georgia has ratified a number of environmental conventions, which according to the Constitution of Georgia have advantage over national legislation, if they are not in contradiction with the Constitution of Georgia.

*Table 1*

No	Convention	Date of Ratification (Signatories)
1	Convention on Biological Diversity	31, August, 1994
2	Convention on International Trade in Endangered Species of Wild Fauna and Flora	12, August, 1996
3	Convention on Wetlands	30, April, 1996
4	Convention on the Conservation of Migratory Species of Wild Animals	11, February, 2000
5	Convention on Combat on Desertification	23, June, 1999

At the same time Georgia has signed agreements in the field of Environmental Protection with different countries:

- Agreement between Government of Armenia and Government of Georgia, Erevan, 19 May, 1997.
- Agreement between Government of Azerbaijan and Government of Georgia, Baku, 18 February, 1997.
- Agreement between Government of Turkey and Government of Georgia, Tbilisi, 14 July, 1997.
- Agreement between Government of Ukraine and Government of Georgia, Tbilisi, 31 August, 1996.
- Agreement between Government of Greece and Government of Georgia, Athene, 16 September, 1997.
- Memorandum of Understanding between Government of Uzbekistan and Government of Georgia, Tashkent, 4 September 1995.
- Memorandum of Understanding between Government of Kazakhstan and Government of Georgia, Amaaty, 17 September, 1996.

For implementation of the above mentioned provisions of the Constitution, International Conventions and Agreements, Parliament of Georgia in 1996 has adopted “Law on Environmental Protection” which serves as the bases for the preparation of different Environmental Laws and Regulations.

Within years of 1995-99 Georgia’s Parliament has adopted 22 environmental laws and regulations:

Table 2 *Georgian laws relating to environment*

No	Law	Date of Adoption
1	Administrative Violation Code	1984
2	Law on Soil Protection	1994
3	Law on Plant Protection	1994
4	Law on Transit and Import of Hazardous Waste	1995
5	Law on Protected Areas System	1996
6	Law on Mineral Resources	1996
7	Law on State Environmental Assessment	1996
8	Law on Environmental Permit	1996
9	Law on Environmental Protection	1996
10	Wildlife Act	1996
11	Marine Code	1997
12	Tax Code	1997

13	Civil Code	1997
14	Law on Local self-government	1997
15	Law on Water	1997
16	Law on Hazardous Chemical Substances	1998
17	Law on Nuclear and Radiation Safety	1998
18	Law on sea Area of Georgia	1998
19	Law on pesticides and Chemicals	1998
20	Law on Creation and Management of Kolkheti Protected Areas	1998
21	Law on Compensation of Damage from Hazardous Substances	1999
22	Forest Code	1999
23	Criminal Code	1999

According to the Agreements signed with Azerbaijan and Armenia, parties are obliged to cooperate for the protection of migratory species and trans-boundary ecosystems. The Agreement with Armenia envisages also establishment of a trans-boundary protected area (Article 4, 6, 7).

With the purpose to comply with the above mentioned articles of the Constitution and provisions of the International Treaties, the Parliament of Georgia in 1996 adopted a Law on Environment Protection, thus created a legal base for developing a number of different regulations in the field of environmental protection.

22 regulations were adopted in the field of environmental protection and use of natural resources by the Parliament of 1995-1999. 17 regulations were submitted for adoption by the Parliament Committee on Environment Protection and Natural Resources, while 5 regulations were submitted by Presidential initiative.

According to active legislation all types of nature use are subject to payment. The system of licensees and permits regulate the obligatory fees. This kind of system should hopefully minimize illegal exploitation of natural resources. The mentioned laws provide for the first time in Georgia the establishment of inter-sectoral councils, which shall take final decision on issuing of licenses, or any other problematic issue. Former Soviet legislation did not have any analogues of such councils. This renovation would exclude the possibility of a single-handed decision.

Georgian environmental legislation provides access to existing information and public involvement in the decision making process.

### **Law on Protected Areas System**

Law on Protected Areas System was adopted in 1996 and creates a legal basis for the development of Protected Areas System which meets the the international standards. The Law defines following categories (IUCN categories are indicated in brackets);

1. State reserve (IV)
2. National Park (II)
3. Nature monument (III)
4. Managed reserve (I)
5. Protected landscape (V)
6. Multipurpose use area (VI).

Besides the national categories, it is applicable for Georgia to establish categories for the protected areas included into the international network: Biosphere Reserve, World Heritage Area, and Wetland of International Importance. According to the Law, main core area of a State Reserve, National Park, or World Heritage Area is only a State property. Other forms of ownership are allowed only for the territories of multipurpose use and for natural resources within protected landscape areas. Planning of Protected Areas is an integral part of the country development strategy. Management plans for protected areas should be adopted by the President of Georgia.

Legislation defines also a body responsible for the management of protected areas at different levels: State policy of the establishment, operation and management of the protected areas system, as well as coordination of activities and control is the competence of the Ministry of Environment and Natural Resources Protection. The State Department of Protected Areas, Reserves and Hunting Farms is responsible for the management of protected areas, development of management plans, etc. Local bodies responsible for the protected areas management are the Administration of the Protected Area and the Advisory Council.

The legislation defines a procedure for the establishment of a new protected area as well as for changing of borders of the existing one. It also defines legal aspects of financing from different sources that creates possibility of operating of some of the protected areas independently from the State budget.



Legislation defines also allowed activities within different categories of protected areas. It should be noted that the Law does not define the assessment criteria for the establishment of a new protected area, or guidelines for elaboration of proper management plans. Hence, the Law needs to be properly revised.

### **Law on Establishment and Management of the Kolkheti Protected Areas**

The Law on Establishment and Management of the Kolkheti Protected Areas is in force since 1 January, 1999. According to the Law the following protected areas categories were established: Kolkheti National Park (44 313 ha), Kobuleti State Reserve (331, 25 ha) Kobuleti Managed Reserve (438, 75 ha), Kolkheti and Kobuleti Multipurpose Use Areas.

The Law defines in details territorial and operation arrangements, management, status, and use of natural resources within the limits of the protected areas. Defines activities allowed at the protected areas, mechanisms of control and surveillance.

### **Law of Georgia on Fauna**

Law of Georgia on Fauna is in force since 1 September, 1997. It regulates interaction between governmental bodies and physical and legal persons in the field of protection and use of wild fauna. According to this law, wild fauna is the State property. The law provides for the protection the wild fauna species, as well as their natural habitats, migration routs, breeding areas. It also ensures sustainable use of wild fauna and creates legal base for *in situ* and *ex situ* conservation measures.

According to the Law there are two types of use of wild fauna:

General use, that means use of wild fauna for esthetic, recreational, and other similar purposes, without taking the wild fauna elements from the wild. General use is free of charge.

Special use is connected with taking wild fauna elements from natural environment, for instance, fishing, hunting, collection, etc. Ministry of Environment and Natural Resources Protection compiles lists of species and standards and issues licenses for special use. Sporting and amateur hunting is allowed only within specially designated areas – hunting farms, except for bird migratory species. The hunting farms can be established by physical as well as legal persons. Licenses for establishment of the hunting farms are to be issued by the Ministry of Environment and Natural Resources Protection.

Besides the above mentioned Law, the protection of species and their habitats outside the protected areas is provided by the Law on Environmental Permits and the Law on State Ecological Expertise. According to these laws a permit for any kind of activities should be issued after EIA and State Ecological Expertise procedures. If the EIA or State Ecological Expertise reveals any possible impact on biodiversity, it can turn to be a base for: a) refusal to conduct the mentioned activity in case of irreversible negative impact, or b) issuing a permit with certain conditions ensuring appropriate scale of activities relevant to the given situation, in case if the mentioned activities do not have irreversible impact on biodiversity and it is possible to conduct certain measures to mitigate the negative impact. The mitigation measures are: protection of natural habitat of the species, conservation measures for plant and animal species, protection of migration routes, special regime of works to avoid disturbance of given species and their habitats. Such measures should ensure, for instance, minimal disturbance of species during reproduction period. While conducting biotechnology measures, no invasive species should be introduced. Adequate measures should be conducted by the initiator of the activities. Control and monitoring of these activities is to be conducted by the State environmental bodies within their competence.

The above mentioned measures are to be defined at the expert level. There are no any standards or basic requirements. Besides that, EIA report of any activity project contains a chapter 'Restoration of the environment after completing of the activities', which should be revised during the expertise and the final decision is to be taken upon consideration of this component.

Restoration of the environment can cover: re-cultivation of the land plot, restoration of plant cover, restoration of damaged landscape according to visual or other parameters, remediation of polluted area, etc. EIA report contains also description of existing state of environment. There should be described state of environment at the initial stage, and based on this information and monitoring data after completing of the activities, duration of rehabilitation works is to be defined ensuring that the initial stage is reached.

During the last years the most acute problem is illegal forest cuts and legal and illegal export of timber. This precipitated the adoption of several Laws by the Parliament of Georgia that lead to cardinal changes in the field of forest resources protection and management. In June, 1999, the Parliament of Georgia adopted Forest Code of Georgia, which essentially differs from the previous one. One of the most important differences is allowance of all forms of property. Actually, this provision can enter into force only after adoption of the relevant law, which should be developed until 2001. According to the Code the competence of authorities and local self-government bodies of Georgian Autonomous Republics in the field of management of the State

Forest Fund is significantly increased. The Code clearly reflects the rights of public representatives in the forest and forest planning. There are provisions ensuring publication and public discussion of forest management projects. According to the Forest Code, forest use at the Forest Fund territory is conducted only on the base of relevant permit (license, agreement, or ticket), which is issued by the State Forest Department of Georgia on the base of forest management documents. Provisions of the Law on Environmental Permits are legally binding for all forest management projects.

Forest Fund categories are revised and updated by the Forest Code of Georgia (Fig 1). Forest wood production limit is increased in terms of slope tilt angle, from 30° to 35° and consequently forest areas allowed for economic use is also significantly increased. Besides the use of forest fund resources, the Forest Code regulates also legal issues of forest maintenance, protection and restoration.

From the point of view of a number of specialists and NGOs, the management system of forest resources defined by the Forest Code of Georgia does not comply with sustainable development principles. It mainly is oriented to exploitation of the forest resources that would lead to biodiversity degradation and losses.

Besides the Forest Code, the wild plant resources use is regulated by the Regulation on 'Rules and Provisions on Obtaining of Licenses for Plant Resources Use in Georgia' approved by the Ordinance #64, of January 28, 1997 of the President of Georgia. However, this Regulation needs to be brought in compliance with the Forest Code of Georgia.

In July 17, 1998, the Parliament of Georgia adopted Decision on 'Protection of Public Gardens, Parks, and Green Zones of Populated Areas of Georgia', which prohibits any construction activities within the mentioned areas. However, the issue of protection and maintenance of green zones in urban areas is still problematic in Georgia.

The Ministry of Environment and Natural Resources of Georgia and NGO working in the field of Biological Farms 'ELKANA' developed 'Draft Law on State Regulation in the Field of Current Biotechnologies'. The draft law mainly regulates legal relationship between governmental bodies and physical and legal persons: a) While conducting activities in the field of bio-technology; b) while ensuring safety during the use of necessary current bio-technology equipment; c) while releasing trans-genetic organisms into the environment; and d) while using the products received from trans-genetic organisms, or any similar ones.

The Draft Law aims at the protection of population and biodiversity of Georgia from the possible threats caused by use of current bio-technology methods and the development of legal basis for conducting activities in the field of current bio-technology.

Now the work on ensuring compliance of the Draft Law with the Biosafety Protocol is underway.

With the aim to apply a principle of pay nature use, a fee for natural resources use was established in 1996. With this purposes some new articles have been added to the 'Tax Code of Georgia' (Chapter X), due to which the standing trees timber, flora and fauna resources taken from the Forest Fund become subject to taxation. Fee amounts for the use of above mentioned resources are to be defined according to current market prices and should be paid according to actual amount of the resources taken from the environment. Limits of taking from the wild of natural resources are indicated in the license on natural resources use. Fixed fee is established for taking from the wild of migratory bird species and comprises 5 GEL for each issued license. Market prise is to be approved by the Ministry of Economy on the base of recommendation of the Inter-agency Council on Resource Use.

#### *Responsibility for the violation of Environmental Legislation*

Responsibility for the violation of Environmental Legislation is defined by the General Administrative and Criminal Codexes of Georgia. Provisions of VII Chapter of the General Administrative Code define administrative violations in the field of Environment Protection and Nature Use together with fines indicated for different violations. According to Article 40 of the Code, a law-breaker should also compensate the damage caused. In case of illegal taking of species included into the Red List of Georgia the damage is calculated according to fees defined in the Tax Code on the use of natural resources, which represents certain percent of market value of the guven resource and accordingly is less than the market price of the resource.

Chapter X of the Criminal Code of Georgia is fully dedicated to the responsibilities for violations of rules of natural resources use. Activities considered as violation as well as the relevant penalties are to be defined according to this Code. Fines or different terms of imprisonment are envisaged for violation of environment protection rules, pollution or drainage of water bodies, discharge of harmful substances into the sea, caused in mass destruction of flora and fauna species (Articles 287, 292, 293). Illegal hunting, illegal taking of fish, or other aquatic living organisms are also considered as violation. Severity of punishment is increasing if these actions are conducted in State Reserves or in Managed Reserves during prohibited period and at prohibited areas, or if the Red List species are concerned. Destruction of habitats of the Red List or

endangered species, illegal cutting of plant species, damage or destruction of forests or plantations, violations of protected area regime resulted in significant damage cause criminal liability. The mentioned activities are subject to different penalties, such as imprisonment, fines, deprivation of right to occupy certain positions or to conduct certain activities. The last two penalties can be assigned as the main, as an additional punishment. Court should define penalties in accordance with the committed crime and welfare of the violator.

For the time being there is certain legal base for the implementation of provisions of International Environmental Treaties, to provide biodiversity conservation and sustainable use of biological resources. Agreements signed in the field of environment protection with neighboring countries create certain base for biodiversity conservation at regional level. In spite of some basic changes taken place in legislation during last years, the environmental legislation of Georgia needs further development and improvement. Full implementation of even existing legislation is not still achieved. National legislation for the implementation of CITES requirements and provisions is not still developed. Draft Law on Red List and Red Book of Georgia and Draft Law on Flora are under development. However, the existing legislation in the fields of agriculture, transport and land use do not take into account the requirements of international environmental conventions and often contradict environmental legislation that creates significant hindrances for its enforcement. Significant should be done to provide harmonization and compliance of existing regulations with international treaties.

## 6. NATIONAL AND INTERNATIONAL BIODIVERSITY PROGRAMMES

### *Restoration of Sturgeon Populations at the Black Sea Coast of Georgia*

Project was prepared by the Biodiversity Conservation Department of the Ministry of Environment in 1998. Project was funded by State Budget. There are five species of Sturgeons in Georgia (*Acipenser sturio*, *Acipenser guldenstadti*, *Huso huso*, *Acipenser stellatus*, and *Acipenser nudiventris*). *Acipenser sturio* is included in the CITES II Appendix and the Red Data Book of Georgia where we can find *Acipenser guldenstadti* as well. All these species are endangered. From the beginning of 1960 fishing of Sturgeons in Georgia was stopped due to extremely reduced population. Project is implemented by the Institute of Environmental Protection of MoE.

At first stage of the program (1998) a fish farm of about 40 ha was rehabilitated, including incubator and other different technical premises. At second stage (1998), the experiment on Kolkhic sturgeon was conducted in Geguti Center. Over 100 000 of

fingerlings were received with size of 12-15 cm and weight of 5-6 grams, which were released into river Rioni. For the experiment there were caught 8 producers which were later released back. The experiment was fully filmed. At the same time the relevant scientific work was conducting. The scientists were studying ecology and biology of different populations, differences and similarities in features, dynamics, and natural reproduction cycles. At third stage (2000) it is planned to establish a scientific unit in town Poti and complete the Gegutri experiment.

### **TACIS Black Sea Biodiversity Project**

Since 1998 in the framework of TACIS Black Sea Environmental Program a Project on Support of Batumi Regional Center for the Protection of the Black Sea Biodiversity (ENVRUS 9602) has been conducting. The Batumi Black Sea Biodiversity Regional Center was designated as the implementation agency.

The TACIS Black Sea Environmental Program covers three coastal states: Georgia, Ukraine, and Russia and assists the countries to meet the requirements of the Black Sea Strategy and Action Plan. It is planned: a) to develop biodiversity conservation regional strategy; b) to prepare Red Book of endangered species for the Black Sea region; c) to prepare the Protocol on Biodiversity and Landscape Protection of the Bucharest Convention; d) to conduct regular monitoring on biodiversity; e) to collect biodiversity data using existing literature; f) to raise public awareness.

Sub-contractor of TACIS in implementation of the project is British company Halkrow.

Within the framework of the project 5 working groups have been created in Batumi Biodiversity Protection Regional Center: marine, wetland areas, public participation, GIS, and biodiversity protection groups, which will develop related parts for the regional biodiversity strategy. Besides technical support itself, seminars and training courses have been conducted for local specialists. Certain investigations have been made in the fields of marine and wetland eco-systems biodiversity. The project will last for one year more.

### **Borjomi-Kharagauli National Park**

Project is funded by German Government according to Georgian-German Intergovernmental Agreement. Implementing agency - WWF Georgia

With certain efforts of the Ministry of Environment and Natural Resources Protection of Georgia and support of the Government of Germany, in 1998 KfW (Reconstruction Credit Institute of Germany) allocated a grant for the establishment

of Borjomi-Kharagauli National Park and the relevant agreement was signed between the governments of Georgia and Germany.

Within the framework of cooperation in the field of environment and natural resources and to fulfill the obligations, a Coordination Council under the Ministry of Environment and Natural Resources Protection of Georgia has been established. Its main goal is to support necessary measures for efficient operation of Borjomi-Kharagauli National Park.

Program on the development of the National Park consists of three main components:

1. Development of infrastructure. For this component 2,261,100 DM were allocated. Responsible unit for the implementation of this component is the State Department of Protected Areas, Reserves and Hunting Farms. Consultancy work is to be carried out by WWF.

2. Education and Training – 1,700,000 DM; Within this component the personnel of the National Park should be trained in Georgia, as well as abroad, and acquainted with modern principles of the management of protected areas, wild nature protection, working with visitors, etc. Regular meetings with local population are being conducted within frames of the program to inform people on the aims and particular activities connected to the development of the National Park and Support Zone. Besides that there are conducted trainings and seminars for journalists, forestry specialists and other interested professional groups. Special works are conducted with the local NGOs and educational organizations to support them in capacity building. High amount of printed and visual material is being produced for visitors, etc. Implementation of this component is the responsibility of WWF.

3. Support Zone Development – 2,739,000 DM. The component envisages financial support for the social-economic development projects in Borjomi-Kharagauli region (Adigeni, Akhaltsikhe, Borjomi, Kharagauli, and Bagdadi districts). International Consulting Company GOPA developed a report, which envisaged:

- a) To define priority measures for rehabilitation of support zone infrastructure in 5 districts and after defining to report on feasibility of their implementation.
- b) To define priority measures for supporting economic development of the region.

To carry out these parallel investigations the analysis of current state was previously conducted and interim report was developed.

## **Integrated Coastal Zone Management Project**

GEF-World Bank and Dutch Government. 7,6 Million USD from which 1,3 million is grant, 4,4 million is loan. Project is managed by local PIU.

Integrated Coastal Zone Management Project is underway since May 1999. The Center of Integrated Coastal Zone Management (located in Tbilisi) created under the Ministry of Environment and Natural Resources Protection provides supervision over the implementation of the project. The Integrated Coastal Zone Management Project is the initiative of the Ministry of Environment and Natural Resources Protection of Georgia within the framework of the Black Sea Environment Program (BSEP). The project is dedicated to develop adequate management mechanisms which would enable to deal with the existing problems in coastal regions of the country, especially in Kolkheti Wetlands of International Importance. Main goals of the project are:

- Increase Black Sea resources management capacity in Georgia in the context of sustainable environment and social development.
- Biodiversity conservation within the Black Sea coastal wetlands of international importance via establishment of Kolkheti National Park and Kobuleti Reserve.

Project has five components:

1. Institutional strengthening for the Integrated Coastal Zone Management;
2. Creation of Kolkheti National Park and Kobuleti State Reserve;
3. Creation of Environmental monitoring and information system;
4. Coastal Erosion Study;
5. National Oil Spill Contingency Planning

Project duration is five and a half years. It is financed from different sources: 1-3 components are financed through the credit of International Development Association (IDA) with 4,4 USD and a grant from Global Environmental Facility (GEF) with 1,3 USD. Contribution of the Government of Georgia to this project is 0.9 million USD. 4 and 5 component is financed by the Government of Netherlands (1, 15 million USD).

Aim of the component 2 is to improve protection and management of endangered wetland habitats and forests of Kolkheti coastal regions, as well as to integrate conservation goals of these protected areas into the wider management aims of the Integrated Coastal Zone Management project. Support will be ensured for: a) conservation of Kolkheti region biodiversity through the protection, management and rehabilitation of the unique plant cover; b) infrastructure necessary for developing



appropriate tourism and for protection of biodiversity in the region; c) improving monitoring on the effectiveness of biodiversity conservation activities and enhancing of applied research; d) protection of spawning areas of fish, that is necessary for the protection and sustainable use of marine and fresh waters biodiversity; e) biodiversity rehabilitation measures in agriculture.

The complete project will provide developed and implemented management plans for the Kolkheti National Park and Kobuleti Reserve. The management plans will include particular measures for the protection and management of biodiversity of the Kolkheti National Park and Kobuleti Reserve, as well as rehabilitation measures for degraded habitats and monitoring on illegal hunting and forest cuttings. The management plans will serve as an instrument for integration of biodiversity protection measures into the territorial development needs, such as, for instance, ecotourism.

For the time being the Integrated Coastal Zone Management Center starts selecting a consulting company, which should prepare the management plan for Kolkheti National Park.

### **Georgia Protected Area Development Project**

The World Bank (WB) and Global Environmental Facility (GEF)

About 9 million USD, Grant.

Project components:

1. Planning of possible Protected Areas in Georgia;
2. Creation of Protected Areas in East Georgia;
3. Institutional strengthening of the State Department for Protected Areas;
4. Biodiversity Monitoring and Research;
5. International Cooperation;

The project is under development. The project was initiated by the Ministry of Environment and Natural Resources Protection, the State Department of Protected Areas, Reserves, and Hunting Farms, and NGOs. It aims at development of properly structured protected areas system connected with ecological corridors; integration of activities on natural resources use and maintenance of biological diversity within the territories of protected areas and their surroundings; institutional strengthening of organizations responsible for protected areas management; support for scientific research and monitoring on endangered fauna and flora species, as of indicators of ecosystem viability; support for regional and international cooperation for maintaining biological diversity of Caucasus. The main partner of the project is

National Parks Service of the USA. To support the program, One World Journeys, Epson, and Washington Post sponsored preparation of a web site in the internet.

Main components of the project:

- 1) Planning of protected areas, ensuring development of a project on systemic planning of the protected areas of Georgia and elaboration of a management plan for a perspective protected area in one of the most important regions, Central Caucasus (Svaneti, Racha-Lechkhumi).
- 2) Establishment of a priority protected area in East Georgia. This component provides the establishment of Tusheti National Park and Protected Landscape, Vashlovani National Park, and development of Lagodekhi Reserve.
- 3) Support for institutional strengthening. It includes reorganization of the State Department of Reserves, Protected Areas, and Hunting Farms, modern equipment for the Department, introducing of newest technologies, professional development of the staff.
- 4) Biodiversity monitoring and scientific research. The component would facilitate obtaining additional scientific information within the framework of the project.
- 5) International cooperation. The component ensures development of trans-boundary cooperation action plan for managing protected areas.

The project duration is 6 years. It is preceded by 9 months preparatory stage, during which there should be conducted certain preliminary works, preparation of Draft Law on the Establishment of Tusheti and Vashlovani National Parks, Lagodekhi Reserve, and Multipurpose Use Areas, as well as preparation of a full investment packet.

For the implementation of this program, Georgia and IBRD signed the Agreement in August 12 of 1998. With the aim to comply the taken responsibilities, the Protected Areas Development Center has been established. The Center should coordinate, manage, lead and implement the project. The Center is to be governed by the Board of Trustees. NGO Protected Area Program of Georgia (GRAP) is responsible for planning of Tusheti, Lagodekhi and Vashlovani Protected Areas. Separate studies for the program will be conducted by Georgian scientists and NGO NACRES and GORBI.

### **National Forest Sector Development Program**

World Bank, Government of Japan. Approximate cost: 30 million USD. Partly Grant. Project aims to improve legal bases, institutional strengthening, preparation of sustainable forest management plans, support of private sector involved for forest harvesting activities, etc. Project was ratified by Georgian Parliament.

Transition from centralized planning system in the field of Forestry towards free market economy is an especially hard task for Georgia, taking into account, that during last years the problems of illegal cuttings and legal and illegal export of wood from Georgia become especially acute.

In 1997 with support of WB Institutional Development Fund, the Georgian Government established a special group which developed State Forestry Strategy. The State Forestry Department prepared State Program on Rehabilitation and Further Development of Forestry Field for 1998-2005, though taking into account current economic situation in the country, implementation of the set objectives seem not be realistic.

On the mentioned background, the WB and UN FAO Investment Fund supported work on National Forest Sector Development Project. The WB considers forest ecosystem conservation in the Caucasus mountain regions as an integral part of the Forestry Development Project. Hence, the WB/GEF supported in parallel regime initiation of the project Georgian Protected Areas System Development, which was described above. Actually, these two project should be implemented in parallel, especially in a so called 'laboratory zone', which covers 4 districts of the Caucasus Ridge (Ambrolauri, Lentekhi, Oni, and Tsageri). With support of the grant of the Government of Japan, certain work in the 'laboratory zone' on the development of forest management model plans and land use and are already done.

Outcome of the preparatory stage is the developed National Forest Sector Development Program. Based on this program, the WB Program on Georgian Forestry Development has been prepared. Taking into account that Forestry in Georgia is one of the complex sectors and it is almost impossible to make any prognosis, the project has been implemented in 3 stages. Each stage can be considered as a separate autonomus project. At first, preparatory stage of the project it was planned: institutional strengthening of the State Forestry Department; development of management plans for land use and forest use in the laboratory zone; improvement of legal base; assessment of economic value of Georgian forests, including not only timber resources, but also recreational, touristic, soil protective and water saving aspects, as well as non-timber resources. To implement this first preparatory stage,

Georgia will presumably receive a credit of 1 million USD. This credit agreement is waiting for ratification by the Parliament.

## **7. INSTITUTIONAL ARRANGEMENT OF BIODIVERSITY PROTECTION FIELD**

Significant changes took place during the recent period in institutional organization of the biodiversity protection field. The Ministry of Environment and Natural Resources of Georgia is the main state agency responsible for regulation of environmental issues and sustainable use of natural resources. The Ministry coordinates international relations and cooperation between state, scientific and public organizations in the field of Environment. According to active national environmental legislation, the Ministry of Environment Protection and Natural Resources of Georgia:

- Approves quotas for natural resources use;
- Approves license issue procedures and issues licenses;
- Ensures the establishment of data base on natural resources use and its operation;
- Provides for state register of natural resources;
- Maintain Red List and Red Book of Georgia;
- Provides for Environmental Monitoring System;
- Provides for state control on protection of environment and natural resources.

A structural unit of the Ministry of Environment and Natural Resources Protection, the Biodiversity Protection Department is responsible for enforcement of the state policy and state management on sustainable use of biological resources, as well as for fulfillment of international obligations.

Biodiversity Protection Department:

1. On the basis of active regulations and decision taken by Expert Council issues licenses for use of living natural resources, on establishment of hunting farms and on hunting, on fishing in Black Sea Georgian waters and inland water bodies; undertakes control on compliance with license provisions.
2. Issues certificates and permits import, export, re-export and transit for international trade of wild fauna and flora species included into the Annexes of CITES.
3. Coordinates genofond rehabilitation and reserve maintenance for rare and endangered species of flora and fauna species.
4. Undertakes control on keeping regimes defined by relevant legislation in protected areas.

5. Take part within its competence in development of regulations and target programs.
6. Takes part in organizing floristries and provides consistency of development plans for forestry management.

With the aim of implementation of the above mentioned tasks the following divisions were established within the Department: Plant Cover Protection Division, Forest Protection Division, Fauna Species Protection Division, Fish Stock Division, Protected Areas Division and International Conventions Service.

Some other units under the Ministry of Environment and Natural Resources Protection also take part in regulating biodiversity conservation and sustainable use of natural resources:

Department of Environmental Permits and State Ecological Expertise (sub-unit of the Ministry of Environment and Natural Resources Protection of Georgia), responsible for issuing of environmental permits and organizing of state ecological expertise. It is also responsible for ensuring of compliance with procedures defined by laws and regulations and for ensuring the proper normative and methodological provisions of the state ecological expertise.

Environment Protection Institute (organization established under the Ministry of Environment), which works on: rehabilitation of rare and endangered species and scientific research in the field of biodiversity conservation.

Marine Ecology and Fishery Institute (organization established under the Ministry of Environment) main working field of which is scientific research of aquatic biodiversity.

Environmental Monitoring Center (organization established under the Ministry of Environment), main task of which is to organize and develop the state environmental monitoring system.

Black Sea Protection Conventional Inspection, undertakes control on natural resources use at Georgian continental shelf, in territorial waters and exclusive economic zone.

Territorial bodies of the Ministry of Environment and Natural Resources Protection are responsible for the control on regional level, *inter alia*, Ministries of Environment and Natural Resources Protection of Ajara and Abkhazia Autonomous Republics and 12 regional departments.

State Forestry Department is the main governmental structure in the field of forestry in Georgia. Head of department is accountable to the President of Georgia and his position is equal to a position of Minister. The Department is financed by the State budget. The State Forestry Department was responsible for industrial fishery, as well as forest protection and control on forest resources use. After adoption of a new Forest Code, the function of conducting economic activities was revoked from the Forestry Department and was passed to commercial organizations. Within the competence of the Forestry Department remain only policy, forest use planning and regulation, as well as forest management, regulation of export issues, and some other functions.

In the field of Forest Fund protection and rehabilitation of forests, the Department develops and implements state strategy, undertakes state control and supervision with consent or together with the Ministry of Environment and Natural Resources Protection and the State Department of Protected Areas, Reserves, and Hunting Farms.

Forestry Departments of the Autonomous Republic of Abkhazia and AR of Adjara which include 12 forestries and 54 district forestries are under the State Forestry Department.

State Department of Protected Areas, Reserves and Hunting Farms is the governmental body of the Executive Authorities. It is accountable directly to the President of Georgia and is financed from the State budget. The Department undertakes management of the Protected Areas of Georgia, controls the established regime, conducts measures for protection, planning, maintenance and rehabilitation, as well as monitoring and scientific research, and develops the relevant register. The Department coordinates all activities of the local and international organizations connected to the protected areas in Georgia.

Directories of the protected areas are under the Department of Protected Areas, Reserves and Hunting Farms.

Ministry of Agriculture is responsible for land protection and rational use, as well as restoration of soil fertility, protection and re-novation of genofond of the domestic animals and cultural plants and, quarantine service, and control on seed and planting material quality. Some other governmental bodies share the responsibility on the use of biological resources.

Main Department of Ecological Police of the Ministry of Internal Affairs of Georgia is responsible first of all for the protection of forests and green cover against illegal use, as well as the protection against illegal fishery and hunting.

State Department of Border Defence is responsible for the control on illegal fishing activities in exclusive economic zone and continental shelf and pollution of the Sea.

Institutional mechanism for biodiversity conservation and sustainable use of natural resources in Georgia is more or less developed, though some overlaps and gaps can be found in functions of different governmental bodies. This mostly concerns control on use of biological resources. Duplication and overlapping of functions lead to inefficient expenditure of financial, technical and human resources. Due to scarce budget, lack of qualified specialists, and weak technical basis, the above mentioned bodies cannot properly perform their obligations.

## 8. NGOs IMPORTANCE FOR BIODIVERSITY CONSERVATION

Role of NGO's in the field of environment, particularly in Biodiversity Conservation in Georgia was significantly increased for last years. Besides public awareness which was one of the main directions of the NGOs activities, they started preparation of some important projects for Biodiversity Monitoring and Conservation (see Table below). For the present time there are several NGOs focused mainly on Biodiversity issues like WWF Georgia, Noah's Arc for the Conservation and Rehabilitation of Endangered Species (NACRES), Georgian Center for Conservation of Wildlife (GCCW), and Biological Farms Association ELKANA. NGOs are getting involved more and more in the decision-making process.

Programmes/Projects	NGO	Donor organization
<b>Biodiversity Research and Monitoring</b>		
Study for Predator Birds in Georgia	GCCW	North-West Group of Predator Birds, UK
Study for <i>Gypaetus barbatus</i>	GCCW	USA National Scientific Board
Georgia-Azerbaijan ornithology inventory for Bacu –Supsa Oil pipeline	GCCW	Fund “Horizonti”
Fauna inventory and	GCCW	Fund Open Society

Photography		Georgia/World Bank
Bear population assessment in Georgia	NACRES	WWCU
Ornithology inventory and monitoring principles for Supsa Oil terminal and Bacu-Supsa Pipeline	GCCW	Georgian pipeline Company
Endangered Mammals monitoring in Georgia's Protected areas	NACRES	WWF, Switzerland
Wildlife Regional study	NACRES	M'cartures Fund
Study on population	NACRES	FFI, UK
Biodiversity study for Caucasus ecoregion	WWF Russia and Georgia	M'cartures Fund
Georgia medicinal plant Data base	Cuna-georgica	MISEREOR,GTZ, WWF UK, WWF International
west Georgia biodiversity conservation	Georgia Greens	Swiss Government
<b>Biodiversity Conservation</b>		
Protected areas programme	WWF	
Borjomi-Kharagauli national park	WWF	GTZ/KFW
Borjomi-Kharagauli national park infrastructure and education programme	WWF	GTZ/KFW
East Georgia Protected areas management plan	WWF	
Management plan for regional park "Mtirala"	WWF	
eastern Caucasus protected areas network/system	WWF Russia and Georgia offices	
Arid and semi-arid ecosystem conservation in Caucasus	NACRES	UNEP/GEF
Javakheti valley wetland	NACRES	Ramsar Small Grants programme



conservation		
Photolibrary of Georgia Ramsar sites and wetlands	NACRES	World Bank
Wolf Restoking	NACRES	Swiss Fund
Georgia agrobiodiversity conservation and restoration	“Dika”- Georgia Society for Agrobiodiversity Conservation	RENOVABIS,Germany
<b>Environmental Awareness Increase</b>		
Ecological education regional centers	WWF	
Ecological education center at the Ministry of Education	WWF	
publication of environmental magazine “Environment and Development”	WWF	
Summer ecotraining center in Atskuri	WWF	
Monthly newspaper “Khanchali”	GCCW	Fund “Horizonti” and WWF
Black sea ecoeducation project	GCCW, Assotiation “Poseidon”	TACIS/International Water Studies
Support of ecogardening and production of vegetables	Cuna Georgica	
Publication of “Natura Caucasica”	Cuna Georgica	
Propagation and use of medicinal plants	Cuna Georgica	
Publication of newspaper of “Black Sea Cost”	Society of Geography and Assotiation “Aety”	World Bank, Tacis Black sea programme
<b>Sustainable use of natural resources</b>		

Village Shenaqo project	WWF	WWF Swiss and Germany
Aquaculture development at Black Sea region	Poseidon	GEF/BSEP
Fisibility report on fisherie and fish proceeding at Georgia cost	Poseidon	Georgia Pipeline Company
Fir distribution, fir seeds genetical aspects and potential of their cultivation in West Europe	Cuna Georgica	
Improvement of use of medicinal plants in georgia	Cuna Georgica	
Household gardening protection in Georgia	Cuna Georgica	MISEREOR