

AN ECOREGIONAL CONSERVATION PLAN FOR THE CAUCASUS

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Abbreviations Used in the Text

BMZ	Bundesministerium für wirtschaftliche Zusammenarbeit (German Ministry for Cooperation and Development)
CABS	Center for Applied Biodiversity Science
CCA	Community Conservation Areas
CEPF	Critical Ecosystems Partnership Fund
CI	Conservation International
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CR	Wildlife Corridor
ECP	Ecoregion Conservation Plan
EIA	Environmental impact assessment
EU	European Union
FFI	Fauna & Flora International
FLR	Forest Landscape Restoration
GEF	Global Environmental Facility GEF's Focal Points Contact person or organization for Global Environmental Facility
HCVF	High Conservation Value Forest
IBA	Important Bird Area
ISAR	Initiative for Social Action and Renewal in Eurasia
IUCN	International Union for the Conservation of Nature and Natural Resources, World Conservation Union
KfW	KfW Bankengruppe (KfW banking group) - German Credit Bank for Reconstruction (Kreditanstalt für Wiederaufbau)
MAB	UNESCO's Programme on Man and the Biosphere
NGO	Non-governmental organization
NORAD	Norwegian Agency for Development Cooperation
PCA	Priority Conservation Area (Priority Area)
RAPPAM	Rapid Assessment and Prioritization of Protected Area Management
TACIS	Tacis Programme for grant-financed technical assistance to twelve countries of Eastern Europe and Central Asia
TRACECA	Transport Corridor Europe-Caucasus-Asia
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNEP	United Nations Environmental Programme
USAID	United States Agency for International Development
WWF	World Wide Fund for Nature

EXECUTIVE SUMMARY

The Caucasus Ecoregion covers a total area of 580,000 km² and consists of six countries – Armenia, Azerbaijan, Georgia, the North Caucasus part of the Russian Federation, northeastern Turkey, and part of northwestern Iran. One of the most biologically rich regions on Earth, the Caucasus is ranked among the planet's 25 most diverse and endangered hotspots. The Caucasus is one of WWF's Global 200 vulnerable Ecoregions, identified as globally outstanding for biodiversity. The Caucasus has been named a large herbivore hotspot by WWF's Large Herbivore Initiative. The 2003 IUCN Red List identifies 50 species of globally threatened animals and one globally endangered plant in the Caucasus. The Caucasus Mountains harbor a wealth of highly sought-after medicinal and decorative plants, as well as unique relic and endemic plant communities. Yet biodiversity in the Caucasus is being lost at an alarming rate due to unsustainable logging, overgrazing, poaching, infrastructure development, and pollution. Immediate actions and long-term Ecoregion-based conservation strategies are required to halt the destruction and guarantee protection of this globally important center of biodiversity.

The Biological and Socio-Economic Assessments, Biodiversity Vision, and Ecoregion Conservation Plan (ECP) herein are the outcomes of a series of stakeholder workshops held from 2000-2003, combined with background reports and assessments coordinated by the WWF Caucasus Programme Office (WWF-Caucasus). More than 140 experts from the six countries participated in preparation of the Ecoregion Conservation Plan representing a variety of scientific, governmental, and non-governmental organizations. Existing conservation strategies and investment portfolios, such as those prepared with support from the MacArthur Foundation, the German Bank for Reconstruction and Development (KfW), and the Critical Ecosystem Partnership Fund (CEPF), were incorporated into this Ecoregion Conservation Plan.

The purpose of the Ecoregion Conservation Plan is to create a roadmap for conserving the rich biodiversity of the Caucasus Ecoregion. Conservation groups working in the region will benefit from the ECP in order to better plan their activities, avoid duplication of efforts, and ensure long-term support for conservation programs. The ECP outlines a vision and long-term goals for biodiversity conservation in the Caucasus Ecoregion, which will be achieved through implementation of a concrete set of short- and medium-term actions. Four priority biomes – forest, freshwater, marine, and high mountain – contain the bulk of the biodiversity in the Ecoregion and are subject to the greatest threats. Therefore, these biomes were selected as priorities for conservation. Within these biomes, 26 focal species and 56 Priority Conservation Areas (PCAs) were determined to help further focus conservation efforts. Additionally, 60 important corridors were delineated to ensure connectivity of PCAs for migrating species.

There are three categories of actions within each biome: conservation, management, and restoration. A variety of mechanisms will be used to achieve these goals, from creating networks of protected areas and linking corridors (Econets), to delineating High Conservation Value Forests (HCVF), to building public awareness and promoting sustainable ecotourism.

Nine stakeholder workshops were carried out to review the assessments and elaborate long-term goals for biodiversity conservation in the Caucasus Ecoregion. Drafts of the ECP were discussed and revised during the stakeholder meeting (Tbilisi, Georgia, December 2003), at the first and second meetings of Ecoregional Council for Biodiversity Conservation and Sustainable Use in the Caucasus (Tbilisi, May 2004; March 2005), and at WWF Ecoregional Team meetings (Tbilisi, December 2003; Baku, Azerbaijan, May 2004; Tbilisi, October 2004). Representatives of governmental organizations, NGOs, scientists, and experts from the countries of the Ecoregion and abroad also reviewed the ECP.

Part 1 of the ECP provides an overview of the biological significance of the Caucasus Ecoregion, threats to biodiversity, and conclusions of recent biological and socio-economic surveys. Part 2 describes the methods used in determining Priority Conservation Areas and summarizes the vision and long-term goals for conserving biodiversity in the Ecoregion. Part 3 outlines the short- and medium-term actions necessary to preserve priority ecosystems and focal species and achieve the long-term biodiversity vision.

Most of the six countries in the Caucasus Ecoregion have become, or are in the processes of becoming, signatories to international conventions related to the conservation of biodiversity. In doing so, they have signaled their commitment to conserve biodiversity, use their natural resources wisely, control illegal wildlife trade, protect migratory species, and designate some of their most significant natural and cultural sites as a heritage for the world's peoples.

With its ecosystem (biome)-based approach and its emphasis on capacity-building, stakeholder participation, benefit sharing and education, the ECP provides a tool for governments of the Caucasus region to effectively implement

international conventions, especially the Convention on Biological Diversity and its 2010 Biodiversity Target. Holistic, ecoregional measures will enhance existing national efforts and ensure their long-term sustainability, through addressing such issues as comprehensive representation of ecosystems within protected areas, harmonising legislation, promoting transboundary cooperation, and coordinating research and monitoring across the region.



PART I. BIOLOGICAL AND SOCIO-ECONOMIC ASSESSMENTS OF THE CAUCASUS ECOREGION

1. Overview and Conclusions of the Biological Assessments

The Caucasus Ecoregion, historically interpreted as the isthmus between the Black and Caspian seas, covers a total area of 580,000 km², and spans six countries (Map 1 – Administrative Map of the Caucasus Ecoregion). The Greater Caucasus Mountain Range with its lofty peaks forms a formidable barrier between the northern and southern parts of the Caucasus Ecoregion. The North Caucasus includes the Russian republics of Adygeya, Karachayevo-Cherkessiya, Kabardino-Balkariya, Northern Osetiya, Ingushetiya, Chechnya, and Dagestan, and parts of the Krasnodar and Stavropol provinces. The area to the south of the Greater Caucasus Range – known as the South Caucasus – includes all of Armenia, Azerbaijan, Georgia, as well as northeastern Turkey and part of northwestern Iran.

From 2000-2003, experts from the six countries of the Caucasus Ecoregion took part in a project funded by the MacArthur Foundation, KfW, and CEPF to assess the biological significance and state of biodiversity of the Caucasus Ecoregion. Nine stakeholder workshops were carried out to review the assessments and elaborate long-term goals for biodiversity conservation in the Caucasus Ecoregion. This overview is a summary of those assessments, drawing out the most important aspects, which provided a foundation for determining Priority Conservation Areas, focal species, and elaborating the Ecoregion Conservation Plan.

1.1. Global Significance

One of the most biologically rich regions on Earth, the Caucasus is ranked among the planet's 25 most diverse and endangered hotspots by Conservation International (CI) and Critical Ecosystem Partnership Fund (CEPF). The Caucasus is one of WWF's Global 200 vulnerable Ecoregions, identified as globally outstanding for biodiversity. The Caucasus has been named a large herbivore hotspot by WWF's Large Herbivore Initiative. Eleven species of large herbivores, as well as five large carnivores, are found over a relatively small area. The 2003 IUCN Red List identifies 50 species of globally threatened animals and one globally endangered plant in the Caucasus. The Caucasus Mountains harbor a wealth of highly sought-after medicinal and decorative plants, as well as unique relic and endemic plant communities.

The Caucasus is a hotspot of plant and animal diversity and endemism. Located at a biological crossroads, species from Central and Northern Europe, Central Asia and the Middle East, and North Africa mingle with endemics found nowhere else. Over 6,500 species of vascular plants are found in the Caucasus. At least a quarter of the plants is found nowhere else on Earth – the highest level of endemism in the Temperate Zone of the Northern Hemisphere. One-third of the endemic plants in the Caucasus Ecoregion is thought to have originated in the Greater Caucasus Range. Seventeen endemic plant genera thrive in the Caucasus, nine of which are associated with high mountain communities. Plant associations from the Tertiary period have been preserved in the Colchic and Hyrcanic refugia – centers of plant endemism.

At least 153 mammals inhabit the Caucasus; one-fifth of these is endemic to the region. As many as 400 species of birds are found in the Caucasus, four of which are endemics. The coasts of the Black and Caspian seas are important stopover sites for millions of migrating birds, flying over the isthmus each spring and autumn between their summer and winter homes. Twenty-two of the 77 reptiles in the Caucasus are endemic to the region. Fourteen species of amphibians are found here, of which four are endemics. More than 200 species of fish inhabit the rivers and seas of the Caucasus, over a third of which are found nowhere else.

The Caucasus is also a globally significant center of cultural diversity, where a multitude of ethnic groups, languages, and religions intermingle over a relatively small area.

1.2. Physical and Biological Characteristics of the Caucasus Ecoregion

1.2.1. Landscape Features

Mountains cover approximately 65 percent of the Caucasus Ecoregion, while plains and lowlands cover the remaining 35 percent. The North Caucasus Plain occupies the isthmus of the North Caucasus. Caucasus mountain country lies to the south, which is broken up into the Greater Caucasus Mountain Range, the wide Transcaucasian

Depression, the Lesser Caucasus Mountain Chain, the Southern Highlands, and the Talish-Western Alborz Mountains.

The **North Caucasus Plain** is bordered by the Kuma-Manych River Depression to the North, a channel that used to connect the Azov and the Caspian seas. The Stavropol Plateau rises above the plains to a height of 50 to 800 meters, along with a group of island-like mountains near the city of Mineralnye Vody, which reach 1,000 to 1,400 meters above sea level (Beshtau, Mashuk, and others). The Caspian Sea borders the North Caucasus Plain to the East, where the shoreline lies 28 meters below global sea level. The North Caucasus Plain is located entirely within the Russian Federation.

The **Greater Caucasus Mountain Range** extends across the Ecoregion from the northwest to the southeast for nearly 1,500 kilometers. The highest peaks in the region are located in this range. The Greater Caucasus Range is often divided into three smaller segments: the Western, Central, and Eastern Greater Caucasus. Elbrus and Kazbek Peaks are the major landmarks between these segments. The highest peaks (more than 5,000 meters above sea level) are located in the Central Caucasus: Elbrus (5,642 m), DykhTau (5,203 m), Shkhara (5,068 m), and Kazbek (5,033 m). The tallest peak in the Western Caucasus is Dombay Ulgen (4,046 m); the peaks here are slightly lower than the highest peaks in Eastern Caucasus – Tebulosmta (4,493 m) and Bazar Dyuzi (4,466 m). The Greater Caucasus Mountain Range extends across parts of Russia, Georgia, and Azerbaijan.

The **Transcaucasian Depression** is located between the Greater and Lesser Caucasus mountain chains. Low ridges separate the Kolkheti Lowland in the western portion of the Depression and the Kura River Valley in the eastern portion. The Transcaucasian Depression includes parts of Georgia and Azerbaijan.

The **Lesser Caucasus Mountain Chain** and the Dogu Karadeniz (Pontic) Mountains border the Southern Highlands from the north, east, and west. The largest ridges of the Lesser Caucasus extend in a horseshoe formation, bending to the northeast. There is no single divide here, as in the Greater Caucasus Range, and absolute elevations are significantly lower. The highest point in the Lesser Caucasus is Gyamysh Peak (3,724 m). Depressions of varying size lie between the ranges of the Lesser Caucasus. The Lesser Caucasus Mountain Chain extends across Georgia, Turkey, Armenia, Azerbaijan, and into Iran. The Dogu Karadeniz Mountains, with the highest point being Kachkar Peak (3,932 m), are a continuation of the Lesser Caucasus into the coastal area of Turkey.

The **Southern Highlands**, made up of lava ridges and a broad volcanic plateau, extend to the south of the Lesser Caucasus Mountain Chain. The northern part of the Highlands, located in Georgia, is called the Javakheti Highlands. Typical volcanic features of this system include lava plateaus, depressions, and individual ridges. The highest point is Mount Agri or Ararat (5,165 m) in Turkey. In the southwest, the mountain ranges of southern Armenia are bordered by the Middle Araz (Araks) Basin, part of a system of low depressions of the Araz (Araks)¹ River that stretches throughout the entire Caucasus Ecoregion. The Southern Highlands includes parts of Georgia, Armenia, Azerbaijan (Nakhchivan), Turkey, and Iran.

The **Talish-Western Alborz Mountains** are located in the southeastern Caucasus, extending along the Caspian Sea. The Mountains are separated from the Lesser Caucasus Mountain Chain by a depression carved out by the Araz (Araks) River. Kyumyurkyoy Peak (2,492 m) is the highest mountain in the Talish Range. Barir Peak (4,805 m) is located at the eastern border of the Ecoregion in the Alborz Range. Narrow lowlands separate the mountains from the Caspian Sea. The Talish-Western Alborz Mountains and lowlands make up the western section of the Hyrcanic Region, a refugium for plants during the Pleistocene epoch. The Talish-Western Alborz Mountains extend across the border between Azerbaijan and Iran, along the Caspian Sea coast.

There are a variety of soil types and variations in the Caucasus Region, from chestnut-type, dry semi-desert and steppe soils, to cold and wet alpine meadow soils, to the red and yellow earth of the Colchic foothills and the Lenkoran Region. The majority of the terrain of the Caucasus Ecoregion, however, is covered with forest brown soils.

¹ The Araz or Araks River has different names in different countries: Aras, Arax, Araxes, and Araz. Henceforth, we use Araz (Araks), according to the Times Atlas of the World (1975).

1.2.2. Climate

The Caucasus Ecoregion is situated on the boundary of temperate and moist-temperate climate belts. The variation in climate in the Caucasus is intensified by the Greater Caucasus Mountain Range, which blocks the north-south movement of air masses. The difference in air temperatures north and south of the mountain range is especially great. Near sea level, the average annual temperature in the north is about +10°C, while in the south the average temperature is +16°C. In wintertime, the average temperature in the North Caucasus Plain ranges from -2°C to -5°C, while in the southwest Caucasus temperatures are warmer – from 4.5°C to 6°C, and in the southeast Caucasus from 1°C to 3.3°C. At the same time, the Caucasus Region is influenced by both marine and continental weather systems.

The elaborate mountain relief creates a diversity of climate zones in the Caucasus, resulting in large variation among different regions. The moist temperate climate of the Colchic foothills and lowlands in the western portion of the Transcaucasian Depression, which receives 1,200 to 2,000 mm of precipitation per year, permits growth of citrus and tea plants. The arid climate of the Kura-Araz (Araks) Lowlands in the eastern portion of the Depression, on the other hand, where less than 250 mm of rain falls per year and sunshine is abundant in summer, is favorable for growing cotton and other drought-resistant species.

Climatic conditions change with elevation as the mountains rise from the plain. The influence of the Atlantic Ocean and Mediterranean Sea increases with altitude, causing the air in alpine areas to be more humid. The highest amount of precipitation (as much as 2,500 to 4,500 mm per year) falls on the western parts of the Greater and Lesser Caucasus mountains, facing the Black Sea. This region has the highest level of humidity in all of the Caucasus and western Eurasia.

The proximity of the Black Sea results in increased precipitation over the southwest Caucasus in winter and sunny weather on the Black Sea Coast in summer. Thousands of tourists come to the coast in summertime to enjoy the pleasant weather and splendid nature, as well as to bathe in therapeutic mineral springs and relax on the beaches of the Black Sea.

More than 2,200 glaciers lie on the upper slopes of the Greater Caucasus Range, covering 1,430 km² of the region. The largest glaciers (making up 70 percent of the total glacier area) are located on the northern edge of the Greater Caucasus Range. More glaciers are found in the western and central parts of the range than in the eastern portion, where continental climate prevails. The largest glacial systems in the region are on Elbrus and Kazbek mountains.

1.2.3. Flora

More than 6,500 species of vascular plants are found in the Caucasus, and a quarter of these are found nowhere else, the highest level of endemism in the temperate world. Outstanding features of vegetation include plants and plant associations that date back to the Tertiary period, including in the Colchic Region in the Black Sea basin and the Hyrcanic Region in the southeastern portion of the Caucasus on the Caspian Sea coast. The abundance of relic and endemic plant species in the region is largely due to the fact that the Caucasus was spared glaciation during the last Iceage. The Colchic Refugium (Georgia, Russia, and Turkey) and the Hyrcanic Refugium (Azerbaijan and Iran) harbor species found nowhere else: Imeretian and pontic oaks (*Quercus imeretina*, *Q. pontica*), Medwedew's birch (*Betula medwedewii*), Ungern's and Smirow's rhododendrons (*Rhododendron ungerii*, *R. smirnowii*), epigea (*Epigaea gaultherioides*), and many others. Chestnut-leaf oak (*Quercus castaneifolia*), Hyrcanic poplar (*Populus hyrcana*), Danae (*Danaë racemosa*), and others are endemic relics of the Hyrcanic Region.

About 700 species of higher plants are listed in national Red Lists/Books of Rare and Endangered Species, including at least 20 kinds of bellflower and 18 kinds of iris. Five species of lichens and 11 species of fungi are also locally endangered. Tigran's elder (*Sambucus tigranii*) is the only globally threatened plant included in the IUCN Red List.² This vulnerable shrub is an endemic found sporadically in the Yerevan, Daralagyaz, Aparan, and Shirak floristic regions of Armenia, generally in lower and middle mountain belts on dry rocky and clay soils. It is threatened by habitat loss to development and overgrazing.

A variety of plant ecosystems are found over a relatively small area, due in part to sharp rises in elevation and distinct changes in climate. In the lowlands of the North Caucasus Plain, the vegetation changes from steppe with feathergrass (*Stipa* spp.) and fescue (*Festuca valesiaca*) in the west, to semi-deserts and then deserts made up primarily of wormwood (*Artemisia taurica*) in the east. To the south, the Greater Caucasus Range is enveloped by

broadleaf and coniferous forests (with evergreen understory in the western Colchic section), topped by subalpine and alpine meadows, glaciers, and snowfields. In the Transcaucasian Depression, ecosystems range from swamp forests of alder (*Alnus barbata*) and Caucasus wing-nut (*Pterocarya pterocarpa*) in the Kolkheti Lowlands in the west, to steppes and arid woodlands, semi-deserts, and deserts in the east. Relic oaks (*Quercus imeretina*, *Q. hartwissiana*, *Q. pendunculiflora*) line floodplains and river terraces. The Lesser Caucasus Mountain Chain rises to the south of the Transcaucasian Depression, with broadleaf and coniferous forests, and alpine meadows and shrublands. The Southern Highlands about the Lesser Caucasus Mountains, characterized by mountain steppe and grasslands. Mixed Eastern oak (*Quercus macranthera*) woodlands dominate the terrain, along with thorn-cushion steppe vegetation such as golden milkvetch (*Astragalus aureus*), horned sainfoin (*Onobrychis cornuta*), and other species. In the foothills of the western Lesser Caucasus and southwestern Greater Caucasus, Colchic mixed broadleaf forests dominate the terrain up to about 600 m. Higher up, Colchic sweet chestnut (*Castanea sativa*) and oriental beech (*Fagus orientalis*) forests take over the landscape. Oriental spruce (*Picea orientalis*) and Caucasian fir (*Abies nordmanniana*) extend from 1,400 to 2,200 m above sea level. A dense evergreen understory is typical in Colchic forests from sea level to sub-alpine elevations: pontic rhododendron (*Rhododendron ponticum*), cherry-laurel (*Laurocerasus officinalis*), and Colchic holly-tree (*Ilex colchica*) are the main evergreen dominants. Another species of alder (*Alnus incana*) grows in mountain gorges. The tall Caucasian berry (*Vaccinium arctostaphylos*) is also a common deciduous shrub in the Colchic understory. Georgian oak (*Quercus iberica*) and oriental and Caucasian hornbeam (*Carpinus orientalis*, *C. caucasica*) mixed forests are common in the eastern Greater and Lesser Caucasus Mountains along with oriental beech, Eastern oak, and Caucasian pine (*Pinus kochiana*). Endemic species of birch (*Betula* spp.) and shrub vegetation grow at higher elevations of the Greater Caucasus and northern Lesser Caucasus from 1,800 to 2,500 m. Alpine areas, from 2,500 to 3,000 m, are covered with grasslands and thickets of relic and endemic Caucasian rhododendron (*Rhododendron caucasicum*). Endemic plant species are common above 3,000 m.

1.2.4. Fauna

The animal diversity of the Caucasus is unusually high for the Temperate Zone, resulting from the geographic positioning of the region. The Caucasus Ecoregion lies at the junction of three distinct parts of the Palaearctic Zoogeographic Region: the Euro-Siberian, Central Asian, and Mediterranean. Endemic species of animals are common in the western part of the Greater and Lesser Caucasus ranges, as well as in the Talish Mountains. At least 153 mammals inhabit the Caucasus Ecoregion; one-fifth of these is endemic. Newly-evolved species mix here with relic species.

A number of flagship, indicator, and focal species are important for biodiversity conservation in the Caucasus. Among large carnivores, the North Persian leopard (*Panthera pardus saxicolor*) is protected under IUCN as an endangered species. The nearly extinct population of this species in the central part of the Greater Caucasus possibly belongs to a distinct, narrow-ranged taxon described as the Caucasian leopard (*P. p. ciscaucasica*). Many scientists fear that the leopard has now disappeared from the region altogether, in spite of the fact that it was widespread throughout the Caucasus half a century ago. However, recent surveys conducted within WWF projects have shown that about 45-50 animals still inhabit the Talish Range, Zangezur Range, and northern Iran. Small populations have also survived in the eastern Greater Caucasus Range and Iori-Mingechaur Priority Conservation Area. The leopard feeds on prey species like bezoar goat (*Capra aegagrus*), wild boar (*Sus scrofa*), roe deer (*Capreolus capreolus*), and other ungulates. By conserving leopard habitat and the animal's food base, important ecosystems for a number of other species can be preserved simultaneously.

Another large carnivore, the striped hyena (*Hyaena hyaena*), is also on the verge of extinction in the Ecoregion. Striped hyenas live in lowland ecosystems, including arid habitats and floodplain forests. The scavenger used to be widespread in the eastern Caucasus, but hyena numbers decreased drastically in the second half of the 20th century due to their persecution by hunters and as a result of habitat loss to agriculture. In Georgia, from 1950 to 1970, only one to two individuals were recorded each year, mostly in remote gorges of the Vashlovani Strict Nature Reserve and in sanctuaries along the Iori River floodplain. Similarly, in Azerbaijan each year only a few individuals are registered across the entire country. Today it is believed that only a handful of hyenas remain within a very small range in the southeastern Caucasus plains (Azerbaijan and a small portion of Georgia). Exact data on the number of hyenas left or the state of the population are not available.

² Work on determining other threatened plant species for listing under IUCN is currently underway with assistance from the Missouri Botanical Garden, IUCN, the Global Trees Campaign, FFI, UNEP-WCMC and CEPF.

Several species of ungulates are threatened in the Caucasus Ecoregion. The highly endangered bezoar or wild goat, the ancestor of the domestic goat, is found only in the eastern part of the Greater Caucasus Range and in the southern portion of the Lesser Caucasus Mountain Chain and Southern Highlands. The bezoar goat is endangered due to poaching and habitat loss to pasturelands. Populations of the Gmelin's or Armenian mouflon (*Ovis ammon gmelinii*), a restricted-range subspecies of wild sheep, have dwindled to fewer than several hundred in southern Armenia and in the Nakhchivan Autonomous Republic (Azerbaijan). The Caucasian chamois (*Rupicapra rupicapra caucasica*), a small mountain ungulate, is also declining in the region. Small, isolated populations have been conserved only in parts of the Greater Caucasus Range and the Lesser Caucasus Mountain Chain. Goitred gazelles (*Gazella subguturosa*) number about 5,000, but nearly all these animals are located in the Shirvan National Park in Azerbaijan, from where they are unable to disperse to a wider territory. The European bison (*Bison bonasus*), which was reintroduced to the North Caucasus after disappearing from the wild in 1921, is once again under threat. There are just over 150 bison (including hybrids of different subspecies) remaining in two nature reserves in the Russian Caucasus. The West Caucasian tur (*Capra caucasica*) and the East Caucasian tur (*C. cylindricornis*) live on western and eastern ends of the Greater Caucasus Range; the two species mix in the central part of the Caucasus Range. Tur populations have declined significantly in recent years, and the animal is now included in the IUCN Red List. The Caucasian subspecies of red deer is one of the most endangered species of wildlife in the South Caucasus, where fewer than 650 animals remain. Yet several thousand red deer are found on the northern slopes of the Greater Caucasus Range in Russia, where the animals are still legally hunted.

Among small mammals, there are many endemic species, including the very narrow-ranged Dahl's jird (*Meriones dahl*), Kazbegi birch mouse (*Sicista kazbegica*), Klukhori birch mouse (*Sicista kluchorica*), and Gudauri snow vole (*Chionomys gud*). Dahl's jird is found in semi-desert habitats in the Araz (Araks) River Valley, while others live in isolated regions of the Greater Caucasus. The Ecoregion harbors several bat species included in the IUCN Red List and protected by international conventions. Several rodents and insectivores are endemics of western Caucasian mountain forests. The long-clawed mole-vole (*Prometheomys schaposchnikovi*), found only in the western Caucasian uplands, is the sole representative of a monotypic genus which is endemic to the region.

Bird diversity is moderate in the Caucasus Ecoregion with about 400 species, four of which are endemics. The coasts of the Black and Caspian seas are important stopover sites for millions of migrating birds, flying over the isthmus each spring and autumn between their summer and winter homes. The four endemic bird species in the region are the Caucasian black grouse (*Tetrao mlokosiewicz*) – found in subalpine meadows and subalpine forests throughout the region; the Caspian snowcock (*Tetraogallus caspius*) – occurring in alpine areas throughout the region except the Greater Caucasus Range; the Caucasian snowcock (*Tetraogallus caucasicus*) – found only in the Greater Caucasus Range; and the Armenian gull (*Larus armenicus*) – which nests only on Lake Sevan and Lake Arpi in Armenia. Two species typical for the Himalayan Mountains – the great finch (*Carpodacus rubicilla*) and Gueldenstaedt's redstart (*Phoenicurus erythrogaster*) – have small and completely isolated populations in the Caucasus, separated from their “main” ranges by thousands of kilometers. Among predatory birds and vultures, lammergeyer (*Gypaetus barbatus*), golden eagle (*Aquila chrysaetos*), imperial eagle (*A. heliaca*), and Egyptian vulture (*Neophron percnopterus*) are endangered in the Caucasus Ecoregion. A subspecies of the peregrine falcon (*Falco peregrinus caucasicus*) is especially rare, with only 30 to 50 pairs left in the Ecoregion. Poaching and habitat loss are the main reasons for the bird's decline.

Of the 77 species of reptiles in the Caucasus, more than 28 are endemic to the Ecoregion. The most interesting reptiles are endemic Caucasian vipers (*Vipera* spp.) and rock lizards (*Darevskia* spp.). Many of these species occupy total ranges of only a few thousand square kilometers. The *Darevskia* genus from the Lacertidae family of lizards exhibits particular diversity. Of the 26 known species in the world, 25 occur in the Caucasus and 23 are endemics. Three endemic Caucasian mountain vipers are also included in the IUCN Red List. There are only 14 amphibians in the Caucasus, four of which are endemic to the region. The Caucasian salamander (*Mertensiella caucasica*), which has evolved independently for 15 million years, is found only in the western Caucasus of Georgia and in Turkey, and is included in the IUCN Red List. The Caucasian mud-diver (*Pelodytes caucasicus*) and Caucasian toad (*Bufo verrucosissimus*) live in mountain forests of the western Caucasus.

Over 200 species of fish are found in the rivers and seas of the region, including species that migrate from the Caspian and Black seas to spawn in freshwater rivers; of these a third are endemics. Six species of sturgeon (*Acipenser* spp.) and the beluga (*Huso huso*) are endangered by overfishing and habitat degradation in the Black and Caspian seas. The Atlantic (Baltic) sturgeon (*A. sturio*), which spawns only in rivers in the Kolkheti Lowlands in Georgia, is critically endangered.

1.3. Major Ecosystems

A wide array of ecosystems is concentrated into a relatively small area in the Caucasus Ecoregion, contributing to the uniquely high level of biodiversity (Map 2 – Natural Landscapes). Major ecosystems include forest, freshwater, marine, high mountain, dry mountain shrublands, steppe, semi-desert, and wetland communities. The following section describes each of these ecosystems in brief.

1.3.1. Forest Ecosystems

Forests are the most important biome for biodiversity conservation in the Caucasus, covering nearly one-fifth of the Ecoregion. Mountain forests make up the majority of the forest biome. Forests used to be widespread on mountain slopes and in valleys in the Caucasus before humans began to clear the land for agriculture and pasturelands. Forest cover is closely linked to precipitation and climate in the region, and the lower edge of woodlands varies considerably. Trees grow at sea level where average annual precipitation is high enough (in the Colchic and Hyrcanic regions, for example). In the dry regions of the Araz (Araks) Basin, forests retreat almost to the subalpine belt.

Broadleaf, coniferous, timberline, arid open woodland, and lowland forests are the main types of forests in the Caucasus, dispersed according to elevation, soil conditions, and climate. Broadleaf forests account for more than two-thirds of forests in the region. Broadleaf forests consist primarily of Oriental beech, oak, hornbeam (*Carpinus caucasica*, *C. orientalis*, *C. betulus*), and chestnut. Beech forests play the leading role in the region's timber industry. Careless clearcutting of mountain beech stands has permanently damaged a significant portion of valuable beech forests in the North Caucasus.

Oak forests used to be widespread throughout the Caucasus. Sessile oak (*Quercus petraea*), found on steep slopes, and English oak (*Q. robur*), which grows in valleys, are the dominant species of oak in the North Caucasus. Georgian oak is the main species in the lower and mid-elevation forest belts of the South Caucasus, while Eastern oak makes up the majority of the trees in high elevation forests of the southeastern Caucasus. Fourteen of the 17 oak species found in the Caucasus are endemic to the region. Chestnut forests are found on acidic soils in the Colchic foothills and in the northwestern Caucasus, and are often mixed in with hornbeam and beech forests.

Coniferous forests are made up primarily of Oriental spruce, Caucasian fir, and Caucasian pine. Dark coniferous forests (spruce and fir) are found in the western part of the Lesser Caucasus Mountain Chain, and on both sides of the western and central Greater Caucasus Range. The rare and endemic Caucasian fir grows taller than any tree in the Temperate Zone, reaching up to 70 meters skyward. Caucasian pine forests are prevalent in the North Caucasus and in the Kura River watershed in Georgia and Azerbaijan. Coniferous forests grow in wide bands generally from 900 to 2,150 m, often on steep, rocky slopes, where they play an important role in protecting soil from erosion. Conifers are logged for paper production and timber, which has resulted in a severe depletion of forest reserves. Poor forest health leads to fungal and bark beetle invasions, which can spread and destroy entire stretches of spruce forests.

Timberline forests, growing under high altitude conditions, consist of trees that grow in crooked, dwarfed, and sparse formations. These tree forms are found particularly in areas with snowy winters or dry continental weather. Birch (*Betula* spp.), mountain ash (*Sorbus caucasigena*), beech, Eastern oak, Trautvetter's maple (*Acer trautvetteri*), and pine in places are generally common at or near timberline.

Arid open woodlands, consisting of juniper (*Juniperus* spp.) and pistachio (*Phistacia mutica*) species, form on dry, rocky slopes in the eastern and southern Caucasus. Willow-leaf pear (*Pyrus salicifolia*), Georgian maple (*Acer ibericum*), esa (*Celtis* spp.), and Araxian oak (*Quercus araxina*) are interspersed with juniper and pistachio. Christ's thorn (*Paliurus spina-christi*), cotoneaster (*Cotoneaster* spp.), dog rose (*Rosa canina* and others), and jasmine (*Jasminum* spp.) grow in the understory.

Lowland forests are found in floodplains and on low river terraces, generally growing on alluvial, swampy, or moist soils. Very few such forests have been preserved to this day; some stands remain only in the Lenkoran and Kolkheti Lowlands and in the Kura, Iori, Samur, and Alazani-Agrichay river valleys. Lowland forests are entangled in vines, which grow especially thick in clearings and along edges, roads, and rivers.

Most of the focal species of animals are, to various extents, associated with forest ecosystems. The majority of bat species, brown bear (*Ursus arctos*), bezoar goat, chamois, Caucasian red deer, European bison, both endemic species of salamanders (*Mertensiella caucasica* and *Batrachuperus persicus*), and Caucasian leopard depend on the presence and quality of forests. Roe deer (*Capreolus capreolus*) and wild boar feed on leaves, roots, and nuts in forests. Common otter (*Lutra lutra*) and European mink (*Mustela lutreola*) are associated with riparian forest ecosystems. Moreover, species that live in the subalpine belt (both West and East Caucasian turs and Caucasian black grouse) use mountain forests as alternate feeding and wintering habitats. As forests in the western Caucasus and the Talish Range are largely isolated from other large tracts of forests in Europe and Central Asia, they contain most of the narrow endemic species of the Caucasus Ecoregion. One notable group is endemic rock lizards (*Darevskia* genus), which includes some parthenogenetic forms. Additionally, the following species are associated with forest landscapes to varying degrees: the endemic Caucasian adder (*Vipera kaznakovi*), included in the IUCN Red List; the endemic Caucasian mud-diver and Caucasian toad, also rare according to IUCN; and several endemic rodents and insectivores, such as Robert's snow vole (*Chionomys roberti*), Caucasian mouse (*Apodemus ponticus*), Caucasian mole (*Talpa caucasica*), and Shelkovnikov's water shrew (*Neomys schelkovnikovii*). Many endemic invertebrates, such as the Caucasian running beetle (*Carabus causicus*) and beech snail (*Helix buchii*), are also exclusively dependent on forest ecosystems. Caucasian populations of European wild cat (*Felis silvestris*) and pine marten (*Martes martes*) are relatively abundant in forests, and maintaining these populations is important for conservation of the species worldwide. Bird fauna in Caucasian forests is also reasonably rich, although the number of endemic or globally threatened species is relatively low. Owls, such as eagle owl (*Bubo bubo*), seven species of woodpeckers, and various small passerines, including some whose European range is limited to the Near East like the red-fronted serin (*Serinus pusillus*), coexist in Caucasian forests with widespread species of European birds.

1.3.2. Freshwater Ecosystems

Wetlands and freshwater habitats cover 11.72 percent of the Caucasus Ecoregion, twelve wetland sites have been declared internationally important under the Ramsar Convention. Freshwater ecosystems include rivers, lakes, and swamps, each of which described in brief below.

Rivers in the Caucasus Ecoregion lie in the catchment areas of three different seas. The Kura, Araz (Araks), Terek, Kuma, and Samur rivers flow toward the Caspian Sea. The Rioni, Inguri, Kodori, Chorukh (Chorokhi), and Bzyb rivers belong to the Black Sea Basin. The Kuban River and its tributaries are part of the Azov Sea Basin. Water levels vary considerably, due to heavy rains and different rates of snowmelt. Many rivers in the eastern part of the North Caucasus Plain dry up as they traverse the water-starved semi-deserts of the Terek-Kuma Lowlands. Only the Terek and Sulak Rivers make it all the way to the Caspian Sea.

Lakes of differing origin are distributed throughout the Caucasus Ecoregion. The largest lake in the Ecoregion is Lake Sevan in Armenia, with a surface area of 1,262 km² and a maximum depth of 83 meters. The lake is situated 1,900 m above sea level in the Armenian Highlands and has been declared a national park with Ramsar status. The Razdan River flows out of Lake Sevan. Downstream, water is used to generate power through a series of hydroelectric stations, as well as to irrigate more than 100,000 hectares of agricultural land in the Ararat Valley. The high mountains of the western and central parts of the Greater Caucasus are dotted with glacial and karst lakes (on limestone ridges). Volcanic processes formed lakes in the Javakheti-Armenian Highlands (part of the Southern Highlands).

Mires consist of two different kinds: low-lying swamps and marshes, and highland bogs (including peat-bogs). Swamp alder forests and unique lowland peat bogs are found in the lower reaches of the Rioni River in the Kolkheti Lowlands around Paliastomi Lake. Large, low-lying mires are situated within the Kura-Araz (Araks) Valley along main rivers and irrigation channels. The most significant of these are reed- and cattail-covered swamps near Ag Gel (Aghgol) and Sarysu lakes in Azerbaijan. For generally arid regions, lowland wetlands play a very important role in maintaining biodiversity. Highland bogs are also critical for a number of species, occurring only in these habitats. High mountain wetlands occupy large areas on the Javakheti Plateau and in the Southern Highlands (the southern part of the Lesser Caucasus Mountain Chain). Sedge (*Carex* spp.) plants occupy much of mountain wetlands.

Wetlands and lakes are particularly important habitats for waterfowl, providing nesting, wintering, and stopover areas during migration. Over 150 species of waterfowl nest on lakes in the Caucasus, including globally threatened species such as corncrake (*Crex crex*), black-winged pratincole (*Glareola nordmanni*), pygmy cormorant (*Phalacrocorax pygmaeus*), and lesser white-fronted goose (*Anser erythropus*). Breeding populations of white-

winged scoter (*Melanitta fusca*) in southern Georgia are separated from the main Arctic range of this species by thousands of kilometers. Great and little egrets (*Egretta alba*, *E. garzetta*), night and gray herons (*Nycticorax nycticorax*, *Ardea cinerea*), black stork (*Ciconia nigra*), various terns and stints, diving ducks, and divers are also quite common in wetlands. Cormorants, egrets, and herons mostly concentrate in lowland lakes and reservoirs, whereas ducks gather along the seashore, and cranes are found in uplands. Probably the most common species of waterfowl are the yellow-legged gull (*Larus cachinnans*) and the closely related Armenian gull. Three species of harriers (*Circus* spp.) are found around wetlands as well. Dalmatian and Eastern white pelicans (*Pelecanus crispus*, *P. onocrotalus*) and greater flamingo (*Phoenicopterus ruber*) are not rare at large lakes, but they generally use them as stopover sites rather than nesting areas.

The most common wetland mammals are water voles (*Arvicola terrestris*) and two large introduced rodents – the muskrat (*Ondatra zibethicus*) in uplands and nutria (*Myocastor coypus*) in lowlands. Large lakes and rivers provide habitat for common otter, considered here as a species of special concern. The most abundant amphibians and reptiles are lake frogs (*Rana ridibunda*), grass snakes (*Natrix natrix*, *N. tessellata*), European marsh turtle (*Emys orbicularis*), and Caspian terrapin (*Mauremys caspica*) – the latter is found only in lowlands. More than 70 fish species occur in lakes and rivers, and at least 14 are endemic to the Caucasus. Trout (*Salmo fario*) is the most common fish in the mountains. An endemic form of salmon (*S. ischchan*) lives in Lake Sevan. Several species of whitefish (*Coregonus* spp.) have been introduced in high mountain lakes. Anadromous fish, primarily sturgeon and salmon, migrate into freshwater rivers from the Caspian and Black seas to spawn. All species of sturgeon are threatened by illegal fishing in spawning areas, pollution, and other anthropogenic impacts in freshwater ecosystems.

1.3.3. Marine Ecosystems

The Caucasus Ecoregion encompasses coastal areas of the Caspian, Black, and Azov seas. The coastal regions of the Caspian and Black seas harbor habitats for numerous fish, waterfowl, and marine invertebrates. The Caspian is the largest inland sea in the world, with an area of about 422,000 km² and 6,397 km of coastline. The average water temperature in the coastal region throughout the year ranges from 15.9°C to 17°C. The variation in water temperatures from the coldest area in the north to the warmest area in the south is 4°C in winter and 16°C in summer. Over 120 species of fish inhabit the Caspian. The main species used commercially are sturgeons: beluga, Russian sturgeon (*Acipenser gueldenstaedtii*), Persian sturgeon (*A. persicus*), and star sturgeon (*A. stellatus*). These species produce caviar, a delicacy prized around the world. Other fish include sprat (*Clupeonella cultriventris*, *C. engrauliformis*, *C. grimmi*), mullet (*Liza aurata*, *L. saliens*), carp (*Cyprinus carpio*), bream (*Abramis brama*), pike-perch (*Stizostedion lucioperca*), roach (*Rutilus rutilus*), and salmon (*Salmo trutta caspius*). There are no significant communities of aquatic plants along the Caucasian coast of the Caspian Sea.

The Caspian Sea coastline offers important habitat for migrating waterfowl. Waders, gulls, ducks and other waterfowl are abundant here during migration and breeding season. Lesser kestrel (*Falco naumanni*), sociable lapwing (*Vanellus gregarius*), marbled duck (*Marmaronetta angustirostris*), lesser white-fronted goose, red-breasted goose (*Branta ruficollis*), and white-headed duck (*Oxyura leucocephala*) are some of the globally threatened birds that migrate along the Caspian's coastal regions. Among mammals, the Caspian seal (*Phoca caspica*) is found in the Caspian Sea. The greatest threats to marine ecosystems come from overfishing, pollution, and oil development. All species of sturgeon and the beluga are endangered by overfishing and habitat degradation in marine and coastal ecosystems.

The relatively deep Black Sea and shallow Azov Sea form a network of marine habitats for saltwater and anadromous fish on the western side of Caucasus Isthmus. The most significant bird habitats are located along the coast of the Black Sea in the Kolkheti Lowlands and along the Azov seashore in the delta of the Kuban River and in brackish bodies of water. The most numerous nesting birds are gulls, sandpipers, and terns. The diversity of wintering birds and those that use the Black Sea coast as a stopover area during migrations is much higher. Grebes, egrets, herons, swans, cormorants, and at least ten species of ducks and diving ducks congregate here. Migrating birds of prey gather near Batumi in an important bottleneck. At least 27 species of raptors are found along the Black Sea coast.

There are three species of dolphins found in the Black Sea (*Delphinus delphis*, *Tursiops truncatus*, *Phocoena phocoena*). Two subspecies of dolphins are endemic to the Azov and Black seas, and all three species are protected under the Bonn Convention. Coastal areas of the Black Sea, especially near the mouth of the Rioni River, harbor important habitats for focal sturgeon (*Acipenser stellatus*, *A. sturio*, *A. gueldenstaedti*, *A. nudiventris*). Other

fish include sprat (*Clupeonella cultriventris*, *C. engrauliformis*), mullet, herring (*Alosa* spp.), and salmon (*Salmo trutta labrax*). A significant share of fish and invertebrates in the Black Sea are relics of the time (over ten million years ago) when the joined basins of the Black and Caspian seas were completely separated from the Mediterranean. Most of these species are adapted to low levels of salinity. Notably, the commercially valuable species of sturgeon belong to this group. These Caspian-Black Sea relic species, as they are called, coexist today with widespread Mediterranean species, which penetrated into the Black Sea during a later period. As with the Caspian, there are no significant communities of aquatic plants along the Caucasian coast of the Black Sea.

1.3.4. High Mountain Ecosystems

High mountains are found throughout the Caucasus, occupying more than 17 percent of the Ecoregion. High mountain ecosystems are principle pasturelands for livestock, sheep, and goats. Overgrazing for many decades has altered vegetation cover and species composition, causing a decline in productivity. The top layers of soil have been seriously damaged, resulting in soil erosion, avalanches, and mudslides. Many plants are collected for use in traditional medicine and for decoration. Mountain ecosystems are under pressure from ski resorts in some areas.

High mountain habitats include meadows, alpine mats, rhododendron thickets, and cliff and rock vegetation. Meadow vegetation, dominated by herbaceous species, is widespread in alpine ecosystems, usually from about 2,500 to 3,000 m above sea level. The variety of grass species in subalpine meadows makes these areas particularly good for grazing and haymaking, but overuse can result in severe degradation of this fragile ecosystem. Alpine meadows are often composed of one or two dominant species such as sedge and fescue.

Alpine mats cover the terrain from 2,800 to 3,100 m in the Greater Caucasus Range and from 3,000 to 3,450 m in parts of the Lesser Caucasus Mountain Chain. Alpine carpets are formed by a dense layer (1.5 to 4 cm thick) of low-lying perennial plants. Although plant productivity is low in alpine mats, they are used intensively as summer pastures, particularly for sheep grazing.

Thickets of the endemic Caucasian rhododendron grow in alpine peat soils on moist slopes with northern exposure in the Greater Caucasus Range, as well as in the northern part of the Lesser Caucasus Mountain Chain. Open shrub communities with juniper are found on southern slopes. Both rhododendron and juniper help hold rocky soils together and reduce erosion.

Scree and rock vegetation is found throughout the high mountains of the Caucasus Ecoregion. Many of the endemic species in the Caucasus are found in these unique habitats; approximately 80 percent of the plant species in rock and scree communities on Colchic limestone ridges in the Greater Caucasus are endemic. Certain plants have developed unique ways of surviving in harsh conditions – by branching out over rock surfaces, or shooting roots deep into the cracks of cliffs.

Upland (subalpine and alpine) ecosystems provide key habitats for focal animal species such as turs in the Greater Caucasus, Gmelin's mouflon in the Lesser Caucasus, Caucasian black grouse, Caucasian snowcock, Darevsky's and Dinnik's vipers (*Vipera darevskii*, *V. dinniki*). Some species for which key habitats lie in the upper part of the forest belt are also strongly associated with the subalpine zone, including bezoar goat, chamois, and possibly leopard. Upland landscapes harbor habitats for common otter in wetlands and offer important feeding grounds for brown bear and red deer. High mountain meadows host several endemic reptiles (including three species of adders and five or six endemic lizards of the *Darevskia* genus), the endemic long-clawed mole-vole, several species of endemic birch mice (*Sicista* spp.) and snow voles (*Chionomys* spp.). High mountains provide key habitats for large scavengers such as lammergeyer (*Gypaetus barbatus*), black vulture (*Aegypius monachus*), and griffon vulture (*Gyps fulvus*). Bird species not found in Europe, such as Eastern rock nuthatch (*Sitta tephrota*), coexist here with widespread alpine species like alpine chough (*Pyrrhocorax graculus*). A number of spectacular insects can be observed in uplands like the Apollo butterfly (*Parnassius* spp.), including both widespread and endemic species, and the alpine Capricorn beetle (*Rosalia alpina*).

1.3.5. Dry Mountain Shrubland Ecosystems

Shrublands are especially prevalent in the Araz (Araks) River watershed with its continental climate. These dry habitats are found from 1,500 to 2,000 m and in places up to 2,500 m above sea level. Brush vegetation communities, consisting of thyme (*Thymus* spp.), germander (*Teucrium* spp.), woundwort (*Stachys* spp.), wormwood (*Artemisia* spp.) and other plants, are generally quite diverse. Many of these plants have very narrow ranges. The *Astragalus*

genus is especially diverse with many local endemics. Shrub communities consisting of buckthorn (*Rhamnus pallasii*), cherry (*Cerasus mahaleb*), and evergreen jasmine (*Jasminum fruticans*) are also relatively common in dry mountain areas or on deforested slopes. The main threats to this biome are infrastructure development and landscape degradation from conversion of shrublands to pastures and irrigated arable lands – resulting in the increased salinity of soils.

Shrublands in the Caucasus harbor a high diversity of animals, most of which are typical for all of southwestern Asia and the Mediterranean. Shrublands provide key habitats for focal animal species such as striped hyena and goitred gazelle. Brown bear are also found in arid shrublands of the southern and southeastern Caucasus. Large carnivores, such as wolf (*Canis lupus*) and golden jackal (*Canis aureus*), and a variety of birds are also found in shrublands, including chukar partridge (*Alectoris chukar*), Egyptian and griffon vultures, wagtails (*Oenanthe* spp.), European bee-eater (*Merops apiaster*), Eurasian roller (*Coracias garrulus*), and shrikes (*Lanius* spp.). Over 15 species of snakes inhabit shrublands; in areas near Tbilisi, as many as 12 snake species can be found in one area, including five racers (*Coluber* and *Elaphe* spp.), several dwarf racers (*Eirenis* spp.), grass snakes (*Natrix* spp.), lizard snake (*Malpolon monspessulanus*), cat snake (*Telescopus fallax*), sand boa (*Eryx jaculus*), and blind snake (*Typhlops vermicularis*), as well as nearly a dozen lizards, including at least six true lizards (*Lacerta* genus), three species of skinks (*Eumeces* and *Ablepharus* genera), European glass lizard (*Pseudopus apodus*), and one Caucasian agama (*Laudakia caucasica*). Other notable species are the venomous and dangerous Levantine viper (*Vipera lebetina*) and the Mediterranean tortoise (*Testudo graeca*). The most common amphibians here are the Syrian spadefoot toad (*Pelobates syriacus*), which is declining throughout the region, and the Asia Minor tree frog (*Hyla savignyi*). Several species such as Radde's viper (*Vipera raddei*) and Persian dwarf racer or black-headed ground snake (*Rhynchocalamus melanocephalus*), are found only in areas along the Araz (Araks) Valley. Some endemic insects are found in this habitat type, including the Caucasian zerinthia (*Allancastra caucasica*).

1.3.6. Steppe Ecosystems

Steppes used to be widespread on the Caucasus Isthmus, but today only fragments of steppe communities have survived, primarily on rocky slopes unsuitable for agriculture. Valley and foothill steppe communities, located mostly in the South Caucasus, are made up of tussocks of feathergrass (*Stipa stenophylla*, *S. capillata*, *S. lessingiana*), fescue, crested hair-grass (*Koeleria gracilis*), and other species. Plains blue-stem (*Bothriochloa ischaemum*) steppe is located in the transitional area between fescue-feathergrass communities and wormwood semi-deserts. Steppe vegetation is intermixed in many areas with semi-desert, arid open woodlands, and thicket communities.

Diverse highland steppe communities are found primarily in dry regions, for example, on Mount Elbrus and in Dagestan from 1,500 to 2,000 m. Highland steppe vegetation also covers volcanic highlands in southern Georgia (from 1,700 to 2,300 m), Armenia, Azerbaijan (Nakhchivan), Turkey and Iran to 2,600 m above sea level. Highland steppe communities are generally situated on mountain plateaus with productive black earth soils, thus most of these areas have been plowed for farming. Highland steppe is also used for grazing and haymaking.

The composition of fauna significantly varies in steppes on the northern and the southern sides of the Greater Caucasus Range. Saiga antelope (*Saiga tatarica*) and ground squirrel or souslik (*Citellus suslikus*), for example, are found only in the steppes (and semi-deserts) to the northeast of the Greater Caucasus Range, whereas the rare marbled polecat (*Vormela peregusna*), Nehring's mole rat (*Nannospalax nehringi*), and Brandt's – or Turkish – hamster (*Mesocricetus brandti*) are found in mountain steppes of the southern Caucasus. Yet both lowland and highland steppes on either side provide habitats for predators such as wolf, golden jackal, and fox (*Vulpes vulpes*). The most common mammal species throughout the entire steppe belt are common vole (*Microtus arvalis*) and sociable vole (*M. socialis*). Birds commonly observed in lowland steppes are larks (*Melanocorypha* and *Galerida* spp.), little bustard (*Tetrax tetrax*), and various species of waterfowl congregating near lakes and wetlands in the steppe zone. Birds of prey like lesser kestrel soar over the steppe in search of rodents and lizards. Sand lizard (*Lacerta agilis*), multi-oscillated racerunner (*Eremias multiocellata*), large whip snake (*Coluber jugularis*), and Orsini's viper (*Vipera ursinii*) are some of the reptiles found in steppe ecosystems north of the Caucasus Range. Mountain steppes of the southern Caucasus (southern Georgia, Armenia, and eastern Turkey) harbor several endemic reptiles – Darevsky's viper, Valentine's lizard (*Darevskia valentine*), and the parthenogenic Armenian lizard (*D. armeniaca*). Transcaucasian frog (*Rana macrocnemis camerani*) and green toad (*Bufo viridis*) are common in high mountain steppes. The common spadefoot toad (*Pelobates fuscus*) can be observed in steppes of the North Caucasus. As a whole, the diversity of fauna in steppe landscapes is much less than in most other ecosystems.

1.3.7. Semi-Desert Ecosystems

Semi-deserts with elements of desert vegetation were until recently widespread in the lowlands and foothills of the eastern part of the Caucasus Isthmus. In the past few decades, agricultural development, irrigation, and winter grazing practices have significantly altered the landscape in this region. The few semi-deserts that have been preserved are either predominately wormwood or salt semi-deserts.

Wormwood semi-deserts are distributed in the plains in the eastern part of the Caucasus. Various species of wormwood (*Artemisia lerchiana*, *A. taurica*, *A. fragrans*) carpet the dry soils. Feathergrass, licorice (*Glycyrrhiza glabra*), and camel's thistle (*Alhagi pseudoalhagi*) grow in places. Different species of saltwort (*Salsola dendroides*, *S. ericoides*, *S. nodulosa*) live on saline soils intermixed with wormwood.

Salt semi-deserts are distributed over a large territory in certain areas of the plains. Tree-like saltwort (*S. dendroides*) grows on slightly saline soils used as pasturelands. As salinity increases, bluish saltwort (*S. glauca*) and small-leaved seablite (*Suaeda microphylla*) begin to take over the terrain, while on highly saline soils along the Caspian Sea halophytic shrubs (*Halostachys caspica*, *Kalidium caspicum*, *Halocnemum strobilaceum*) form mounds and salt tussocks.

Regions of rocky highland desert are found on gypsum deposits in foothills of the Araz (Araks) Valley in southern Armenia. A broad strip of this type of desert runs through the Sahara, southern Iran, and Afghanistan; its northern tip reaches into the Caucasus. Sparse, poor vegetation cover is typical for rocky deserts, but the plant species composition is unique and there are few annual plants.

Animal diversity of semi-deserts in the eastern Caucasus is poor compared to most of the other ecosystems (excluding steppes). However, semi-deserts are key habitats for focal species such as goitred gazelle. Semi-deserts of the northwestern Caspian host saiga antelope and giant mole rat (*Spalax giganteus*). Jirds (*Meriones* spp.) and jerboas (*Allactaga* spp.) are other typical rodents in northern Caucasian semi-deserts. The same faunal groups are found in the semi-deserts of the southern Caucasus, but the particular species vary. Among semi-desert birds, lesser kestrel, Eurasian roller, crested lark (*Galerida cristata*), and various buntings and wheaters (*Emberiza* and *Oenanthe* spp.) can be observed. Toad agamas (*Phrynocephalus* spp.) make up the most diverse group of reptiles in the northwestern Caspian region, as well as in the Araz (Araks) Valley. Other typical semi-desert reptiles are racerunners (*Eremias* spp.), snake-eyed lizard (*Ophisops elegans*), long-legged skink (*Eumeces schneideri*), four-striped racer (*Elaphe hohenackeri*), and lizard snake. Interestingly, common representatives of Central Asian fauna (*Eremias*, *Phrynocephalus*, *Allactaga*, *Saiga*) coexist in Caucasian semi-deserts with Middle Eastern (*Meriones*) and Transmediterranean (*Malpolon*, *Eumeces*) species alike.

1.4. The Protected Areas System in the Caucasus Ecoregion

1.4.1. Types of Protected Areas

Protected areas have played an important role in biodiversity conservation in the Caucasus for nearly a century. There are several different categories of protected areas in the region: strict nature reserves, national parks, sanctuaries, nature parks, and others.

Strict nature reserves correspond to category I of IUCN's widely recognized protected area classification system. The first strict nature reserve in the region was created in 1912 in the Lagodekhi Gorge on the southeastern slopes of the Greater Caucasus Range in Georgia. In the last century, more than 60 strict nature reserves were created in the former Soviet part of the Caucasus, yet many of these were abolished in the 1950s as part of Stalin's plan to mobilize natural resources. Georgia, for example, had 22 strict nature reserves prior to 1951; yet by the end of the protected area reform process, only one reserve remained. In time, some previously existing protected areas were re-established and new ones were created.

Today, there are 47 strict nature reserves in the Caucasus Ecoregion covering 2.23 percent of its area. Strict nature reserves have traditionally been afforded a high level of protection, generally enforced by an armed ranger service. Public access is not allowed to these areas, though scientific research and supervised educational activities are permitted. In recent years, however, limited access to tourists and other visitors has been allowed in an effort to supplement dwindling financial support from government sources, particularly in the former Soviet republics.

National park is the second highest category of protection in the region (IUCN II). National parks are generally created to preserve natural as well as aesthetic values, and permit recreation in specially designated zones. National parks offer opportunities for environmental education and working with the public. Many national parks have a strictly protected core, where scientists study natural processes in unaltered habitats. Some national parks allow traditional natural resource use in designated areas. Though national parks are some of the most common types of protected areas in the world, they are relatively new to Russia and the former Soviet republics. Sochinsky National Park, created in 1983 in the Russian Caucasus, was the first national park in the Caucasus Ecoregion. The Borjomi-Kharagauli National Park, established in 1999, was the first to be established in the South Caucasus according to international standards of zoning and management planning. Today, there are 22 national parks in the Caucasus, covering 1.8 percent of the region.

Sanctuaries or wildlife refuges are a third category of protection with IUCN IV to VI status, depending on the established regime. Traditionally, many wildlife sanctuaries were created as hunting refuges, but today new forms of refuges are being established, such as landscape, botanical, and zoological sanctuaries. Sanctuaries are usually poorly protected and most lack an administrative body with rangers and scientific staff. Refuges are often created to protect a certain threatened habitat or species. Protection regimes generally forbid logging, drainage of wetlands, use of chemicals, and any other intensive forms of nature use, but often permit hunting, fishing, and collection of non-timber forest resources such as mushrooms, berries, and medicinal plants. The first sanctuary – Garayazy-Agstafa – in the Caucasus Ecoregion was created in 1923 in Azerbaijan. Today, 164 sanctuaries, wildlife refuges, and other types of protected areas (nature parks, protected landscapes, etc.) cover approximately 5.5 percent of the Caucasus Ecoregion. However, according to expert analysis, only 56 of these (covering 2.1 percent of the Ecoregion) correspond to IUCN category IV.

Thus protected areas with a status corresponding to IUCN I to IV cover 5.8 percent of the Caucasus Ecoregion. Protected areas of all types occupy 9.5 percent of the region.

1.4.2. Current Status of the Protected Areas System

The status of the protected areas systems in each of the six countries of the Caucasus Ecoregion as of February 2005 is described in brief below (Map 4 – Protected Areas).

Armenia launched its protected areas system in 1958 with creation of three strict nature reserves and nine sanctuaries. Today, the country still has three strict nature reserves (39,615 ha), plus two national parks (174,100 ha) and 23 sanctuaries – totaling 316,954 ha or 10.64 percent of the country (2.13 percent corresponds to IUCN I-II and 5.04 percent to IUCN IV). Nearly two-thirds of the plant and animal species found in Armenia are represented within protected areas; however there is a bias toward forest habitats. New protected areas need to be established in Armenia to connect existing reserves and represent other ecosystems. The Ministry of Nature Protection of Armenia has elaborated a National Strategy and Action Plan on Developing Specially Protected Areas, which was approved in 2002. The purpose of the strategy is to improve the system of specially protected areas by ensuring the network corresponds to international agreements, standards, and criteria. The plan calls for creating several new strict nature reserves and national parks, including Arevik and Zangezour in southern Armenia, Arpi in the central part of the country, and Arpi Lake in northwestern Armenia (in PCAs 42, 43, 46, 51).

Azerbaijan's system of strictly protected nature reserves dates back to 1925, when the Goygol (Gey-Gel) Strict Nature Reserve was created in the Lesser Caucasus. Today, Azerbaijan has 13 strict nature reserves and six national parks (IUCN I-II) covering 318,817 ha or 3.68 percent of the country. Azerbaijan also has 19 wildlife refuges or sanctuaries (IUCN IV), with a combined area of 272,847 ha, protecting an additional 3.15 percent of the country. Other protected sites include geological and paleontological objects and endemic, valuable, and unique ecosystems, as well as more than 2,000 trees over a century old, each of which are granted individual protection. The National Academy of Sciences of Azerbaijan elaborated a strategy for expansion of the country's protected areas system by 2010. The plan calls for creation of new strict nature reserves and national parks, adding more than 350,000 ha to the current protected areas network. In recent years, Azerbaijan has established six national parks, two nature reserves, and one sanctuary toward that goal.

Georgia founded the first strict nature reserve in the Caucasus Ecoregion – the Lagodekhi Strict Nature Reserve – in 1912. Georgia now has 18 strict nature reserves, covering an area of 171,903 ha, and four national parks with an area of 210,843 ha. Together, nature reserves and national parks (IUCN I-II) cover 5.49 percent of the country. Additionally, Georgia has 11 sanctuaries, three of which have significantly large buffer zones, protecting an additional 0.81 percent of the country (0.29 percent corresponding to IUCN IV). However, Georgia's protected areas system is

not sufficient to protect a representative share of biodiversity of the country. Corridors between protected areas need to be established to allow animal migrations and certain threatened ecosystems need to be set aside. The Georgian Government has made a commitment to set aside 15 percent of forests in protected areas (IUCN categories I-IV) by 2010.

Iran's protected areas system covers five percent of its total land area or 7.44 percent in the Caucasus portion of Iran. Iran's 11 national parks represent some of the most outstanding examples of the nation's geological, ecological, and cultural history. One of these parks (3,250 ha) is in the Iranian Caucasus. Iran has 25 strict nature reserves, but none fall within the Caucasus Ecoregion. Iran also has a number of multiple-use sanctuaries and biosphere reserves, covering an additional 7.38 percent of the Iranian Caucasus (1.82 percent corresponding to IUCN IV). Iran's Department of Environment intends to increase the area of protected areas to 10 percent of the country.

Russia's system of strict nature reserves dates back to 1916 when Barguzinsky Strict Nature Reserve (Zapovednik) was created on the eastern shore of Lake Baikal. The first strict nature reserve in the Russian Caucasus (Kavkazsky) was established in 1924. Today, Russia has 100 strict nature reserves, of which six are in the North Caucasus. Three of Russia's 35 national parks are located in the Caucasus Ecoregion. Together, strict nature reserves and national parks cover 1,216,177 ha or 4.52 percent of the North Caucasus. Seventy-eight sanctuaries and nature parks add an additional 1.46 million ha (or 5.44 percent) to the area of protected lands in the North Caucasus. Hundreds of other sites with regional and local protected status are scattered throughout the North Caucasus. Despite the relatively high density of protected areas in the North Caucasus, the current network is insufficient to conserve a representative portion of the unique biodiversity of the Caucasus Ecoregion, much less save threatened ecosystems. Large gaps between the reserves do not allow animals to migrate naturally and without interference from humans. Scientists are calling for creation a green corridor along the Greater Caucasus Range to link existing protected areas.

Turkey founded its first national park in 1958. There are 34 strict nature reserves in Turkey – four are in the Turkish Caucasus, covering 2,387 ha. There are 36 parks in the country's national park system, six of which are in the Turkish Caucasus (188,134 ha). National parks and strict nature reserves together protect 2.77 percent of the Turkish Caucasus. Three of Turkey's nature parks and 15 protected areas, equivalent to sanctuaries, are also located in the Caucasus Ecoregion, covering 305,558 ha or 4.44 percent of the area. In July 2005, a biosphere reserve was designated in the Camili Region of Turkey's Karchal Mountains, including the Efeler and Gorgit strict nature reserves with a buffer zone around them. Two national parks were recently established in the Turkish Caucasus – Agri Mountain and Sarikamis Allahuekber Mountains, covering more than 100,000 ha. Altogether in the Caucasus part of Turkey, 496,079 ha or 7.21 percent are offered protection. While the Turkish Caucasus has a relatively high number of protected areas in comparison to the rest of Turkey, ecosystems in the northern part of the Turkish Caucasus are more thoroughly represented than in the southern part.

1.4.3. Gaps in the Protected Areas System

Existing systems of strict nature reserve, national parks, sanctuaries, and other types of protected areas provide a significant foundation for conservation of biodiversity in the Caucasus Ecoregion. The reserves – some decades old – serve as a basis by which to assess the impacts on biodiversity in areas that are not protected. Yet there are many deficiencies and gaps in the current system. First, of the 56 Priority Conservation Areas (see Part 2 of this report) identified by experts in the Caucasus, protected areas are completely absent in 20; only eight of the identified 62 Priority Corridors have some portion in protected areas (Map 6 – Priority Conservation Areas, Corridors, and Protected Areas). At the same time, the existing protected areas system is not entirely representative of the full range of biodiversity in the Ecoregion: most mountain reserves, for example, end abruptly where subalpine and alpine meadows begin – key grazing pastures that are difficult to withdraw from economic use. In the North Caucasus, most protected areas are situated in the middle and high mountain areas, while there are virtually no reserves with sufficient protection regimes between 800 and 1,200 meters, resulting in an under-representation of forest and forest-steppe habitats. Plains and lowlands are also poorly represented in the reserve network in the South Caucasus. If relatively intact portions of these habitats are not set aside now, a second chance may never come and these areas will be fragmented or destroyed altogether.

Second, most strict nature reserves and national parks in the Ecoregion are too small to guarantee long-term biodiversity conservation. Due to the high human population density in the region, historically few reserves were created over large territories. Instead, many small territories were set aside, often located in agricultural areas or near villages, particularly in the South Caucasus. In many cases, the borders curve in and out of agricultural and pasture lands or have farms located directly on their territories.

Third, existing protected areas are distributed randomly around the Ecoregion and linking corridors are non-existent. Corridors would allow migration of wide-ranging species and ensure the resilience of plants and animals to climate change and anthropogenic development. The large number of protected areas along the Greater Caucasus Range and the southern part of the Lesser Caucasus in Armenia and Azerbaijan could easily be transformed into ecological networks (Econets) of nature reserves and linking corridors with appropriate conservation regimes.

Fourth, management practices of existing protected areas and adjacent lands do not always guarantee effective conservation of biodiversity. In many cases, protected areas were created without considering the interests of local communities and administrations. As a result, conflicts abound and public support for protected areas is generally lacking. Several internationally renowned ski areas and tourist centers (for example, Krasnaya Polyana, Dombay, and Prielbrusiye in Russia) are located within or adjacent to strict nature reserves and national parks, yet cooperation between the protected areas and resorts is limited and the level of use is often incompatible with established protection regimes. Local people are poorly informed about protected areas and, as a result of the economic crisis in the Caucasus, poaching, illegal forest cutting, and grazing in protected areas are on the rise. Buffer zones are virtually non-existent, so consequences of resource use and human pressures outside reserves spill over the borders and impact protected ecosystems.

Finally, government support for the protected areas system is often insufficient. State funding for protected areas operations and development is hardly enough to ensure that protected regimes are upheld. International cooperation on protected areas between governments is also lacking. Nearly two-thirds of the border between Russia and Georgia runs through or near protected areas. This border region unites a variety of ecosystems of the Greater Caucasus Range and is a center of endemism for many plants and animals. However, government cooperation on transborder protected areas and exchanges between individual reserves across borders are virtually non-existent.

Saving the unique ecosystems and endangered species of the Caucasus Ecoregion requires creating new protected areas where gaps exist and linking reserves in a network of corridors and stepping stones, while improving management, financing, and government and public support of protected area activities. Strategic networks (Econets) of protected areas require planning and multi-national cooperation at the Ecoregional level. Econets integrate various land management tools and all types of protected areas into an integrated framework for biodiversity conservation and sustainable use of natural resources. Econets in the Caucasus could incorporate strict nature reserves, national parks, and other areas of high conservation value (IUCN I-II) as core areas or nodes, and use sanctuaries, protected forests, and other multiple-use areas (IUCN IV-VI) as stepping zones and corridors between the nodes.

1.5. Major Threats to Biodiversity in the Caucasus Ecoregion

Biodiversity of the Caucasus is being lost at an alarming rate. On average, nearly half the lands in the Ecoregion have been transformed by human activities. The plains, foothills, and subalpine belts have been the most heavily impacted. Native floodplain vegetation remains on only half of its original area in the North Caucasus, and only two to three percent of original riparian forests remain in the South Caucasus. Most natural old growth forests have been fragmented into small sections, divided by areas of commercial forests or plantations, as well as agricultural and developed lands. For the Caucasus as a whole, about a quarter of the region remains in reasonable condition, while less than 12 percent of the original vegetation, including forests, can be considered pristine.

Participants of the January 2003 stakeholder workshop, facilitated through funding from CEPF, determined proximate threats and their root causes in the Caucasus Ecoregion. The major threats to biodiversity in the Ecoregion are: illegal logging, fuelwood harvesting, and the timber trade; overgrazing; poaching and the illegal wildlife trade; overfishing; infrastructure development; and pollution of rivers and wetlands. These threats lead to habitat degradation, decline of species populations, and disruption of ecological processes – all contributing to the overall loss of biodiversity. A brief description of each of the major threats is provided below.

1.5.1. *Illegal Logging, Fuelwood Harvesting, and the Timber Trade*

Illegal logging, fuelwood harvesting, and the timber trade threaten biodiversity in the region's forests and lead to habitat degradation. While officially-sanctioned logging has actually decreased in some areas in the past few years (in the North Caucasus, for example, only 30 to 50 percent of the originally planned area is being logged), illegal logging has increased. In Georgia experts believe that illegal logging (including fuelwood harvesting) accounts for three times more than official quotas permit. In Armenia, as a result of the energy crisis, 27,000 ha of forests were

cut from 1992 to 1995, comprising eight percent of the entire forest area of the country. The amount of timber and fuelwood taken from forests in the Eastern Anatolian Province of Turkey is nine times higher than forest productivity. Fuelwood harvesting has increased nearly three times in some areas compared to a decade ago as a result of energy shortages and the economic crisis. Rural populations are largely dependent on fuelwood consumption for heating and cooking.

Illegal timber export is a serious problem, particularly for Georgia and Russia, but official estimates of exports are not available. Illegal logging leads to decline in species composition, forest degradation, and overall habitat loss, impacting a number of plant and animal species. Fuelwood harvesting and consumption lead to forest degradation and disappearance of certain species, as well as contribute to forest fires and global warming. The regions most impacted by unsustainable logging and fuelwood harvesting are: the Greater Caucasus Mountain Range and the Lesser Caucasus Mountain Chain (including the Dogu Karadeniz Mountains in northeastern Turkey, the Meskheta and Trialeti ridges in Georgia, the Shakhdag, Sevan or Areguni, Pambak, Khalal, Ijevan, and Zangezur mountain ranges in Armenia, and the southern Zangezur Range in the Nakhchivan Autonomous Republic of Azerbaijan and Talish Mountains).

In order to halt illegal logging, independent assessments of the level of unsanctioned logging and timber exports need to be made. Possible measures to combat illegal logging and trade include increasing the capacity of customs and forest inspection agencies to stop illegal trade and monitor logging in forestry enterprises. Information exchange between importing and exporting countries, as well as transboundary cooperation and NGO participation in monitoring the timber trade would help curb illegal logging. Fines for violators could be increased, while increasing the sale price of timber would mean that fewer trees would have to be cut to turn a profit. At the same time, processing wood in the region into construction materials, wood flooring, furniture, and other quality goods would fetch a higher price on regional and international markets, eventually leading to lower levels of timber extraction from forests. Measures to reduce unsustainable fuelwood harvesting include enforcing restrictions on fuelwood harvesting near villages, and reducing dependence on fuelwood by providing alternative sources of energy such as natural gas.

1.5.2. Overgrazing

Overgrazing and uncontrolled livestock grazing threaten steppe, subalpine, and alpine ecosystems. A third of pastures in the region are subject to erosion. Sheep grazing in winter ranges and in steppes and semi-deserts of the eastern Caucasus has nearly tripled in the past decade. Intensive grazing has resulted in reduced species diversity and habitat degradation. Secondary plant communities now occupy 80 percent of grasslands in the subalpine belt. The alpine belt is slightly better preserved. Grazing of cattle in forested areas disturbs undergrowth and creates competition for wild ungulates. Overgrazing is causing environmental damage in much of the Ecoregion, particularly along the Kuma-Manych Depression, in the Greater Caucasus Mountain Range, river valleys of the Transcaucasian depression, the Javakheti Highlands, the Lesser Caucasus Mountain Chain, and the northern part of the northwestern Iranian mountains.

Measures to reduce the impacts of overgrazing include developing sustainable rangeland management plans, enforcing restrictions on grazing in protected areas, and prohibiting grazing in damaged fields near rivers and on steep slopes. Furthermore, developing opportunities for alternative sources of income such as collection of useful plants or promotion of ecotourism would reduce the need to keep large numbers of livestock in some rural communities.

1.5.3. Poaching and the Illegal Wildlife Trade

Poaching and the illegal wildlife trade have increased significantly as a result of the economic crisis and the opening of borders in the former Soviet countries. Overhunting of legal game species and poaching of rare species is widespread in mountain regions in particular. Government agencies set quotas for game species without carrying out appropriate research on game numbers and population dynamics. Thus, quotas are often too high to ensure that viable populations of game animals (mostly ungulates) are maintained. Nature reserves are neither equipped nor authorized to control poaching outside their boundaries.

Large herbivore numbers have dropped dramatically in the past century, largely due to poaching and overhunting. The European bison nearly went extinct in the North Caucasus. Red deer numbers have plummeted from 800 in the Lagodekhi Nature Reserve of Georgia to fewer than 150 today. In Azerbaijan only 600 red deer remain, while fewer

than 3,000 animals are left in Russia. Saiga numbers in the North Caucasus Plain have dropped from several hundred thousand in the middle of the 20th century to fewer than 20,000 today. Brown bear, bezoar goat, and turs are also heavily poached in the Caucasus. Leopards have been driven to near extinction due to poaching.

Lynx, otter, martens, wild cat, fox, and jackal are killed for their furs. Rare species of falcons are captured and sold abroad. Reptiles and amphibians like Mediterranean tortoise, Caucasian agama, and Caucasian salamander have been collected for decades, both for laboratory use and the pet trade. Vipers have long been exploited for their venom.

Measures to reduce poaching include building capacity (training, equipment, transportation) of existing ranger services, inspection agencies, and NGO groups to patrol areas where violations are prevalent. Anti-poaching units within governmental inspection agencies and civil groups could be created to monitor territories outside protected areas. Fines for poachers should be increased and prosecution of violators enforced. New opportunities for providing income to local communities through ecotourism and sustainable resource use should be developed to reduce the need for poaching to supplement incomes. Illegal export of animal derivatives should be halted by working with customs agencies across borders and through the TRAFFIC network to reduce demand on world markets.

1.5.4. Overfishing

Overfishing, mostly driven by poverty and international demand for black caviar, is widespread in the Caspian Sea and spawning rivers. Caviar from one beluga fetches as much as \$30,000 on world markets. Illegal fishing could cause some species of sturgeon to go extinct within the next few years. Sturgeon require nearly two decades to reach maturity, therefore overfishing has far-reaching impacts for populations of these fish. Overfishing is also a serious problem in the Black and Azov seas. A study in the Black Sea found that the annual catch value to the fishing industry declined by \$300 million from 1980 to the mid-1990s. Poachers may exceed the legal catch quota by ten times. Fish inspection agencies are often powerless to halt overfishing – either they are corrupt and benefit from the business or they lack the capacity to fight it. Overfishing and illegal fishing also impacts lakes and rivers.

Measures to halt overfishing include enacting and enforcing bans on threatened fish species and decreasing demand for threatened species on international markets through public awareness campaigns. Fines for illegal fishing should be increased and violators prosecuted to the full extent of the law. Capacity (training, equipment, transportation) of marine and freshwater inspection agencies should be strengthened. Fishing quotas should be established based on independent scientific studies of reproductive capacity of fish populations. Alternative sources of income should be provided for fishermen.

1.5.5. Infrastructure Development

Infrastructure development, including roads, dams, channels, and pipelines, when inappropriately planned and monitored, may fragment natural habitats and contribute to habitat loss. Draining wetlands and digging channels for agriculture and irrigation alters riparian ecosystems considerably and leads to habitat loss. Thus, activities such as oil extraction in Baku Bay in the Caspian Sea and construction of the Baku-Ceyhan pipeline must be carefully monitored so as to prevent pollution, habitat degradation, and other serious impacts on biodiversity.

The TRACECA (Transportation Corridor Europe-Caucasus-Asia) initiative was launched as a result of a conference in Brussels in 1993. Within the initiative, five countries in Central Asia and four countries (Armenia, Azerbaijan, Georgia, and Turkey) in the Caucasus will implement a program funded by the European Union to develop a transportation corridor along a West-East axis from Europe, across the Black Sea to the Caucasus and the Caspian Sea, and on to Central Asia. TRACECA will likely result in increased traffic, water and air pollution, habitat fragmentation due to new roads and railways, and a greater likelihood of oil spills. The transport corridor may limit possibilities for acquiring new lands for protected areas and conservation corridors, but the full impacts of the project on biodiversity is poorly understood. WWF-Caucasus is working on a study to assess these potential impacts.

Certain areas in the region have experienced population booms in the past ten years, leading to a growth in construction of residential housing, industrial complexes, and infrastructure. These activities have caused some damage and alteration to natural ecosystems. Measures to mitigate impacts of infrastructure development include carrying out environmental impact assessments and monitoring, bringing public attention to the environmental

consequences of development projects, and encouraging development companies to take measures to support protected areas and conservation of other important areas for biodiversity.

1.5.6. Water Pollution

Pollution of rivers and wetlands is generally a result of runoff from human settlements, factories, farmlands, and pastures. While the use of pesticides and fertilizers in commercial agriculture has declined significantly in the former Soviet countries since 1990, use of chemicals on private plots is growing. Manure from livestock is often dumped directly into rivers, altering nutrient balances and causing eutrophication of lakes. Waste materials from timber production are also thrown into rivers at logging and processing sites. Erosion from farmlands, pastures, and logged forests causes increased turbidity in many rivers.

Large-scale industrial production in the former Soviet states has decreased dramatically in the last decade as a result of the economic crisis, leading to lower levels of pollution. However, smaller factories generally do not have the means to install effective waste management mechanisms and equipment, and runoff water is highly polluted. Pollution of wetlands and rivers impacts fish and nesting birds. Pesticides and fertilizers kill large numbers of invertebrates and make their way up the food chain to birds and even humans. Pollution has impacted freshwater systems in the Kuma-Manych Basin and the central part of the Transcaucasian Depression. Pollution from oil extraction, runoff, and other sources has compromised the integrity of marine ecosystems in the Caspian, Azov, and Black seas. Ineffective water management is a serious problem for water conservation for Lake Sevan and for neighboring regions in northeastern and central Armenia. Water conservation is also important for a number of rivers (Iori, Alazani, and Kura).

Measures to reduce pollution of rivers and wetlands include increasing fines for dumping polluted wastewater into rivers and prosecuting violators. NGOs and other groups should be involved in monitoring pollution levels in rivers and lakes to determine sources. Dumping of manure and other waste into rivers should be prohibited. Independent groups should closely monitor use of pesticides and other chemicals near waterways. Conversion of lands adjacent to rivers and lakes for agriculture should be prohibited. Mechanisms for changing zoning practices along rivers should be investigated, for example, to allow wider forest buffers to be protected.

1.5.7. Root Causes

A number of root causes are behind the proximate threats to biodiversity. Root causes can be broadly grouped into three categories – socio-economic, political, and institutional. Poverty is perhaps the most significant of the socio-economic root causes, leading to poaching, fuelwood consumption, illegal logging, overgrazing, and other threats. Poverty forces people to be dependent on natural resources and use resources unsustainably to meet their basic needs. The lack of public awareness and public involvement in nature conservation is another reason people are more likely to turn to poaching, overfishing, and other violations. Economically, the public has little incentive to conserve firewood, water, or other resources. Poor land-use planning results in overgrazing, pollution of waterways, and inefficient infrastructure development.

Political root causes of biodiversity degradation stem from gaps and contradictions in legislation and the lack of a clear delineation of jurisdiction for enforcement agencies. Political and civil conflicts hinder cooperation on nature conservation, and military conflicts often result in increased forest fires, logging, poaching, and pollution. The lack of transboundary cooperation between countries hinders control of overfishing, illegal trade of timber and wildlife, and pollution of waterways.

Institutional root causes include ineffective administrative institutions and enforcement of legislation. Limited coordination among institutions and lack of communication result in duplication of efforts and misunderstandings. Insufficient knowledge of conservation issues among key stakeholders hinders environmental protection efforts. Gaps in protected area networks and poor management lead to poaching, illegal logging, overgrazing, and other threats. Insufficient research and monitoring mean that the extent of illegal logging, overfishing, and poaching is unknown, and long-term impacts on biodiversity are poorly understood.

Assessment of proximate threats and root causes helps to determine the focus of conservation programs. Conservation strategies should aim to address the root causes in order to mitigate major threats to biodiversity. Improving management of protected areas and capabilities of state conservation agencies will be an important direction, as well as increasing transboundary coordination. Programs to create alternative incomes for local communities will be critical to reducing the public's dependence on natural resource consumption. Strategies to increase awareness among decision-makers and the public will promote involvement in and support of conservation

activities. Training and support of NGOs and key stakeholders will help them carry out important conservation projects more efficiently and in coordination with existing government efforts, thereby maximizing effectiveness and sustainability. Monitoring and research activities will help to gain a better understanding of the extent of threats to biodiversity and what measures are needed to halt biodiversity loss.

2. Overview and Conclusions of Socio-Economic Assessments

Humans have inhabited the Caucasus for many millennia. Legions of rulers and government regimes have vied for control of the region and its rich natural and cultural resources. Humans have transformed nearly half the lands in the Caucasus. Any strategy for conservation of the rich biodiversity of the region will have to take the human factor into account – by seeking alternative ways to boost local economies through integrating sustainable practices of natural resource use and including local communities in conservation programs.

Socio-economic assessments were carried out from 2001 to 2003 in each of the six countries of the Caucasus Ecoregion with the aim of determining the main factors influencing biodiversity conservation in the region. The results of these analyses were used in elaborating the Ecoregion Conservation Plan, in particular where institutional issues and socio-economic factors are concerned. A brief overview of the results of those assessments is presented below.

2.1. Institutional Framework

After the breakup of the Soviet Union in 1990, Armenia, Azerbaijan, Georgia, and Russia faced the challenge of building new governmental structures. New state institutions dealing with natural resources were created while others were dismantled or reorganized. Today environmental ministries are the leading agencies in biodiversity conservation in Armenia (Ministry of Nature Protection), Azerbaijan (Ministry of Ecology and Natural Resources), and Georgia (Ministry of Environmental Protection and Natural Resources), while the Ministry of Natural Resources absorbed the functions of the environmental committee in Russia in 2000. Forestry, water resource management, agricultural, and other agencies also have jurisdiction over various aspects of natural resources. Ministries generally have regional divisions in each of the provinces within the countries. However, state conservation agencies often lack funding and capacity to implement their mandates or to enforce legislation and international obligations. Conflicting policies in legislation and overlapping jurisdictions in addition to a general lack of communication among governing bodies hinder effective management of environmental resources and create contradictions in regulation.

In Turkey the Ministry of Environment and Forestry deals with management of forests, forest conservation, as well as with pollution, marine and wetland ecosystems, climate change, sustainable resource use, and other issues. The Ministry of Agriculture and Rural Affairs is charged with biodiversity conservation in coastal, marine, and steppe ecosystems as well. Iran's Department of the Environment is responsible for environmental protection in that country.

Universities, scientific academies, and specialized institutes on forestry, soils, biology, and marine resources play an important role in research and inventory of biodiversity in the Caucasus Ecoregion. Scientists and students participate in fieldwork in protected areas and reserve planning.

The NGO movement has gained momentum over the past decade in each of the Caucasus countries. National and local NGOs speak out on environmental issues, impact public opinion, and conduct scientific studies on environmental and social issues. NGOs provide independent information on important topics, often filling in gaps where scientific and governmental institutions fall short. NGOs play a crucial role in bringing a variety of stakeholders together, holding meetings among decision-makers, local communities, businesses, and international organizations.

In Turkey 14 national NGOs, including WWF-Turkey, the Turkish Society for Conservation of Nature (DHKD), the Turkish Foundation for Combating Soil Erosion, the Nature Association (DD), Reforestation and Protection of Natural Habitats (TEMA), and the Research Association for Rural Environment and Forestry (RAREF), as well as over eight local NGOs, such as the Black Sea Environmentalists, are active in the Turkish Caucasus. In Iran the Center for Sustainable Development (CENESTA) is one of many environmental NGOs active in biodiversity conservation in that country. In Armenia some of the more notable of the over 20 NGOs are the Biodiversity and Landscape Conservation Union, the Khazer Ecological and Cultural NGO, and the Center for Environmental Rights. Azerbaijan has the Ornithological Society, the Biodiversity Centre, the Green Movement of Azerbaijan, and the Ecocex, among 40 others. At least 50 environmental NGOs are active in Georgia, such as the Noah's Ark Center for

Recovery of Endangered Species (NACRES), the Georgian Center for Conservation of Wildlife (GCCW), and the Green Alternative. NGOs promoting conservation in the Russian Caucasus include the North Caucasus Association of Protected Areas, the Socio-Ecological Union, and other regional divisions of Russian NGOs.

International NGOs such as WWF, Birdlife International, Wetlands International, Eurasia Foundation, MacArthur Foundation, Greenpeace, and Fauna and Flora International are important catalysts for biodiversity conservation in the Caucasus.

2.2. Nature Conservation Legislation

Armenia, Azerbaijan, Georgia, and Russia began to adopt new environmental legislation after the demise of the Soviet Union in 1990. Legislation was enacted on environmental protection, protected areas, wildlife management, and forestry. Other laws on air pollution, water, land use, and environmental impact assessments were also enacted.

In Turkey articles in the 1982 Constitution guarantee the right to a clean environment and lay out principles for protection of cultural and natural areas. A number of other laws on allocation of forests for protection, hunting and fishing, water use, tourism, coastal areas, export of animal species, and national parks have come into force in the past two decades (for example, the National Parks Law of August 10, 1983).

Iran's constitution proclaims the need to prevent pollution and environmental degradation. Laws governing management of game, forest, and rangeland resources have been in effect since 1967. Laws and acts dealing with environmental protection, air pollution, and water use were put in place beginning in the 1970s and 1980s. Deficiencies in existing regulations are related to the lack of correct environmental data and lack of enforcement by environmental inspection agencies.

Gaps and contradictions in conservation legislation and overlapping jurisdictions plague each of the countries in the Caucasus. Transboundary cooperation on environmental issues is limited, though a memorandum of understanding is under consideration between Georgia and Turkey to promote cooperation on biodiversity conservation and sustainable resource use in the globally important Colchic Region. Bilateral agreements on environmental cooperation also exist between Georgia and Azerbaijan, between Georgia and Armenia and between Georgia and Turkey, yet detailed work plans have to be elaborated.

All six countries have signed the majority of international conventions, including the Convention on Biological Diversity, the Convention on Wetlands of International Importance especially as Waterfowl Habitats (Ramsar), the Convention on International Trade in Endangered Species (CITES), and the Convention on World Cultural and Natural Heritage. Not all of the countries, however, have the capacity and finances to fulfill their international obligations. Some countries are implementing other multilateral strategies and programs such as the Caspian Environment Program and Regional Seas Project and the Asian Flyway initiative. The goal of the Caspian Environment Program is to foster environmentally sustainable development, including living resources and water quality, so as to obtain long-term benefits for the region. The program was launched in 1995 with an agreement between all five Caspian states (Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan) and numerous international agencies, including the World Bank, UNEP, UNDP, the EU/Tacis program, and others. The Regional Seas Project, launched in 1994, is a global scale program of the UNEP to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment. The Black Sea is one of the 13 regional seas in the UNEP project.

The advantages to regional countries of an ecoregional approach to fulfilling their obligations under these conventions are described in Attachment 2; the relevance of ECP Targets to the various international conventions is elaborated in Table 2 of Attachment 2.

2.3 Economic Situation

The economies of Armenia, Azerbaijan, Georgia, and Russia continue to be in a state of transition since the fall of the Soviet Union. Economic development and indicators clearly differ between urban areas and rural communities. Since most of the biodiversity that has been preserved or that requires conservation is outside of urban areas, the focus here is on economic activities in rural areas. Agricultural farming, livestock, forestry, and fishing make up bulk of the economy in rural regions in the Caucasus (Map 3 – Land Use/Land Cover).

Agriculture occupied the leading sector of the economy for Armenia, Azerbaijan, Georgia, and the Russian Caucasus during Soviet times. Fertile soils and favorable climate conditions allowed a broad range of production. Goods shipped to the USSR from the Caucasus included grapes, wine, tobacco, cotton, fruit, vegetables, tea, and citrus fruits. Since 1990 production and distribution patterns have been disrupted. In Armenia, Azerbaijan, and Georgia total production of previously exported crops such as citrus fruits and grapes is now only a third of pre-1990 levels. Today most of the rural population depends on subsistence farming, growing basic food crops for consumption. Livestock farming (cattle, sheep, and goats) is the primary source of income in mountain regions. Cattle and sheep provide wool, meat, milk, leather, and other products.

Fishing in rivers, lakes, and seas has been an important part of regional economic development for centuries. The demand for caviar, sturgeon, and other fish products on global markets stimulates overfishing and poaching. Sturgeon is the most sought after fish, and the Caspian Sea holds 90 percent of the world's sturgeon reserves. Overfishing in the Black and Caspian seas has brought about the demise of sturgeon and other fish – 13 species of fish in the Black Sea are endangered or nearly extinct. Fishing in freshwater rivers and lakes plays an important role in local economies and for supplementing low incomes in rural areas. Poaching in sturgeon spawning rivers and streams is widespread.

Agriculture is also the leading industry in the Turkish Caucasus. Major crops include grains, vegetables, industrial crops, fruit, and seeds for oil. All of the tea produced in Turkey comes from the Caucasus provinces. Livestock and beekeeping are also important sources of income in rural areas. The bulk of fish production in the country comes from the Turkish Caucasus. Yet the economic situation in the Turkish Caucasus lags behind overall economic indicators for Turkey.

The Iranian Caucasus has grasslands favorable for livestock production and agriculture. Handicrafts and fruit orchards are important sources of income in rural areas. Dairy products from this region such as Leghvan cheese are world-renowned.

The forestry and wood manufacturing industry in the Caucasus has felt the impacts of the economic crisis more acutely than other areas of production, despite relatively large forest reserves, particularly in the North Caucasus. Wood processing plants produce boards for construction, furniture, parquet flooring, and other products. Forests provide fuelwood for heat and cooking in rural areas. Due to the chronic lack of energy resources in Georgia and Armenia, the public sector now consumes two to three times more fuelwood than in the 1980s. Illegal logging and timber export put at risk some of the last remnants of forests in areas of the Caucasus Ecoregion.

A once flourishing tourism industry based on spas and mineral baths, beaches of the Black and Caspian seas, and mountain sports has diminished to next to nothing. Today many tourists prefer to travel to more exotic destinations with higher standards, resulting in serious losses to local economies. Facilities to support tourists in the former Soviet region of the Caucasus are decaying or lacking altogether, suggesting that either large investment would be required to boost this sector of the economy or local people would need to become more active in providing services to tourists (bed and breakfasts, restaurants, souvenirs) to reach a different market segment.

2.4. Infrastructure and Regional Development

Infrastructure is mainly concentrated in and around large cities, far from rural areas. Several dams for hydroelectric stations and reservoirs have altered natural river systems and flooded forests and steppes. Oil pipelines connect the Caspian and Black seas and gas pipelines run from Russia to Armenia via Georgia. The Baku-Ceyhan pipeline will connect the Caspian Sea with the Mediterranean, running through Azerbaijan, Georgia, and Turkey. If proper planning and mitigation practices are not in place, infrastructure projects may fragment natural habitats and disrupt seasonal movements of wildlife.

The road network in the region is generally underdeveloped and poorly maintained due to the complicated mountainous terrain and chronic lack of finances. Railroads follow the major roads and are connected by ferries to Ukraine and Europe, offering potential for connection to the European railway network. Water transportation is accessible from ports on the Black Sea, handling some freight and insignificant numbers of passengers. The Caspian Sea is landlocked and connections between ports of adjacent countries are limited. The TRACECA (Transportation Corridor Europe-Caucasus-Asia) initiative, funded with technical assistance from the European Union, aims to develop a transportation corridor across the Black Sea to the Caucasus and the Caspian Sea, and on to Central Asia.

Most of the Caucasus Region is electrified. The Metsamor Nuclear Power Plant, the only atomic power station in the Caucasus, produces the bulk of the energy in Armenia. In Azerbaijan thermal power plants produce 85 percent of the energy, while hydropower provides the rest. Most of the energy in Georgia is generated by hydropower.

Since infrastructure and regional development is mostly concentrated near urban centers, many of the outlying regions of the countries have been left unscathed by large-scale infrastructure and development projects. Large swaths of intact natural habitats generally remain along the border regions of the countries, which are usually the most distant from administrative centers. As a result, much of the biodiversity in the Caucasus has been preserved in these outlying areas and in border regions (Map 1 – Administrative Map of the Caucasus Ecoregion).

2.5. Demography and Social Trends

Approximately 35 million people live in the Caucasus Ecoregion, and about half in rural areas. The region has a high population density of 60 people per square kilometer. High migration rates are characteristic for the entire region. Incentives for migration include better employment opportunities, higher income, and the attraction of urban life for rural youth. As a result of migration and falling birth rates, the overall population in the region has decreased by about seven to 10 percent since 1990.

The majority of the population in rural areas of the former Soviet Union lives below the poverty level. Most have low disposable incomes, limited access to health care, poor housing, and shortages of fuel and electricity. Health care is more accessible in the Turkish Caucasus and some other areas. Many people in rural villages supplement their incomes with food from vegetable gardens, livestock, fishing, and hunting.

The Caucasus is a mosaic of ethnic, religious, and cultural diversity. A multitude of languages can be heard in the region. Christianity and Islam are practiced side by side, and while differences in religious beliefs are generally tolerated, historically religion has been the reason for many ethnic skirmishes.

Many people are aware of environmental issues due to the generally high level of education in the region (literacy is near 100 percent in most areas). Rural populations, however, are generally less informed, and competent environmental journalists in these areas are lacking. The desire to take action to improve the environmental situation is very low among the general public, since most people are preoccupied with meeting basic needs such as food, drinking water, or employment.

2.6. Stakeholders in Biodiversity Conservation in the Caucasus Ecoregion and Investment Overview

Biodiversity in the Caucasus Ecoregion can be conserved only through addressing social, political, economic, and environmental issues in an integrated manner. In order to do so, various sectors of society from government to business and from science to the general public must work together towards a common goal. There are six major groups of stakeholders in the Caucasus: government, multilateral and bilateral donors, non-governmental organizations (NGOs), scientific institutions, businesses, and the mass media. The key players in each of these groups are identified below, as well as their current level of support for biodiversity conservation in the Caucasus Ecoregion.

2.6.1. National Governments

Each of the national governments in the Caucasus has developed or is in the process of developing a national strategy and plan for conservation and sustainable use of biodiversity as part of international obligations under the Convention on Biodiversity. Environmental policies and legislation are in place in all the countries. Though regional governments allocate funds for protected areas operations and environmental programs, funding for implementation of action plans and programs is scarce. Investments recommended in this Ecoregion Conservation Plan are coherent with the national strategies envisioned by each of the countries in the Caucasus.

The Ministry of Nature Protection in Armenia carried out several projects with support of the Global Environmental Fund (GEF) and the United Nations Development Programme (UNDP) on combating desertification, climate change, and building capacity for implementing the Convention on Biodiversity. The Armenian Ministry has developed forest and biodiversity conservation strategies and an action plan for conserving Lake Sevan. The Government of Azerbaijan contributed \$2 million to creating the Shakhdag National Park, and is in the process of developing programs for protection and expansion of forests and for environmentally sustainable socio-economic development. In the

framework of the Caspian Environment Program, Azerbaijan is also elaborating the National Caspian Action Plan. The Georgian Government has made a commitment to preserve 15 percent of the country's forests in protected areas (IUCN I-IV) as part of WWF's Gifts to the Earth initiative. The Russian Government spent over \$13 million on nature conservation in the North Caucasus in 2002, four times more than in 2000. Russia also committed significant funds to developing a strategy for sustainable development in the mountains of the Adygeya Republic. The Department of Environment in Iran carried out several biological assessment projects in the Caucasus, including in the Ghorigol (Gori Gol) wetlands, and funded studies of rare flora and fauna in the Caucasus region. The Iranian government funded a study and management plan for the Sabalan Protected Area in 1995. The Turkish Government has supported biodiversity and natural resource management in the Turkish Caucasus and carried out a number of conservation projects.

2.6.2. *Bilateral and Multilateral Donors*

Among bilateral and multilateral donors in the Caucasus, GEF is one of the most active. GEF has invested substantial funds in supporting protected areas and promoting environmental education and ecotourism in the North Caucasus, as well as expanding the protected areas system in Georgia. GEF funded species conservation projects on the European bison, East Caucasian tur, and chamois. In Turkey GEF is building capacity for resource management planning, protected areas management, and conservation of threatened fauna species. GEF funded two UNDP-implemented projects worth over \$2 million on improving environmental management in the Black Sea Region. GEF also funded UNDP-implemented capacity building activities in the Ministry of Environment in Georgia and in Armenia and on preventing transboundary pollution in the Kura-Araz (Araks) Basin.

In Turkey GEF is financing a project called "Biodiversity and Natural Resource Management." The project was prepared by the Ministry of Environment and Forestry in collaboration with the World Bank and put into effect in 2000 for a period of six years. The total budget of the project is \$11.5 million, of which \$8.2 million is from a GEF grant contribution and \$3.2 million is a contribution from the Turkish Government. The project supports the establishment of effective management capacity for biodiversity conservation and sustainable use in and around four priority protected areas. One of these areas is the Camili Forest Strict Nature Reserve and surrounding biosphere reserve in the Turkish Caucasus.

The UNDP invested \$1.6 million to build disaster management capabilities and \$2.3 million on sustainable resource management in Georgia. UNDP is also funding a program on rural development in the Turkish Caucasus.

The European Union's Technical Assistance for the Commonwealth of Independent States (EU-TACIS) supported an environmental program on the Black Sea worth \$5.5 million, as well as projects on improving nature conservation policy and environmental awareness in the region.

The World Bank provided a \$15 million loan to Georgia for establishing sound forest management systems. The World Bank also supported projects on: natural resource management and poverty reduction in Armenia; boosting sturgeon populations and creating a national park in Azerbaijan; and carrying out forest assessments on the Turkish-Georgian border. The World Bank/GEF is funding an \$8.7 million protected areas development project in Georgia, which aims to establish two new national parks and expand existing reserves, as well as provide assistance to the State Department of Protected Areas. The World Bank/GEF is also supporting creation of a national park in the Kolkheti Lowlands in Georgia with a grant of \$2.5 million.

The German Ministry for Cooperation and Development (BMZ) has supported a project on erosion control in Turkey. The German Government funded development of a vision for biodiversity conservation in the Caucasus Ecoregion that provided a foundation for an Ecosystem Profile developed for CEPF and for this Ecoregion Conservation Plan. The German Government also plans to support implementation of selected projects under the Caucasus Initiative. The KfW banking group - German Credit Bank for Reconstruction is investing over \$15 million in a project in Georgia to create and maintain the Borjomi-Kharagauli National Park, and develop communal infrastructure within the Support Zone of the Park.

The United States Agency for International Development (USAID) is actively helping to promote environmental awareness in the Caucasus. In the Russian Caucasus, USAID funded projects on promoting environmental education and ecotourism in nature reserves, the mass media, and children's camps through the Institute for

Sustainable Communities. USAID invested over \$6 million in improving water management in the South Caucasus. The Swiss Government, World Bank, EU, and UNDP also contributed funds for that project.

The Swiss Government, in partnership with the World Bank, is also financing the Tourism Initiative Project in the South Caucasus, as well as a WWF project on sustainable use of medicinal plants.

The Norwegian Agency for Development Cooperation (NORAD) has recently agreed to support conservation of relic floodplain forests in the Iori-Mingechaur Priority Conservation Area. NORAD committed \$500,000 in the first one-year stage to promote transborder cooperation, sustainable river management, strengthening of existing protected areas (Eldar Pine Reserve in Azerbaijan and Chachuna Sanctuary in Georgia), building management capacity, and improving social infrastructure.

2.6.3. International NGOs and Foundations

A number of international NGOs and foundations are active in the Caucasus. The Initiative for Social Action and Renewal in Eurasia (ISAR) provides small grants for various environmental projects in the Russian Caucasus, including on promoting environmental awareness through the mass media and working with children, collecting information on impacts of military conflicts on the environment, and assessing the state of fish populations in southern Russia. IUCN financed an assessment of biological and landscape diversity in the North Caucasus. Wetlands International is supporting a project on monitoring migratory waterfowl in the Kuma-Manych Depression in the North Caucasus.

The Eurasia Foundation has contributed to rural development and poverty reduction projects in the region. The MacArthur Foundation actively supports the development of civil society in the Caucasus. MacArthur supported creation of the Regional Council for Biodiversity Conservation and Sustainable Use in the Caucasus as a follow up to its project with WWF on elaborating a portfolio of initiatives for conserving the region's biodiversity (CEPF and WWF continue support to the Council). MacArthur also financed a conference on threats to the Caspian, as well as efforts to understand issues related to the changing level of the Azov Sea.

WWF has been working in the Caucasus for 15 years through its WWF Georgia (now WWF-Caucasus), WWF Turkey, and WWF Russia offices. WWF's projects are mainly related to creation of protected areas and improving management of existing reserves, developing ecotourism, promoting environmental education and environmentally-sound policies, and conserving endangered species. In all, WWF has invested approximately \$10 million in biodiversity conservation in the Caucasus Ecoregion.

2.6.4. Regional NGOs

Most of the regional NGOs rely on international donors to support their programs. NGO capacity is limited in rural areas.

The Regional Environmental Centre for the Caucasus (REC Caucasus) operates with core support from the EU and funding from the US, Switzerland, and other countries. REC assists Armenia, Azerbaijan, and Georgia in solving environmental problems, supports building civil society, promotes public participation in the decision-making process, and helps develop the free exchange of information.

In Georgia the Noah's Ark Center for Recovery of Endangered Species (NACRES) is one of the more active local NGOs. NACRES implements projects on research and monitoring of large carnivores and on protected areas. The Georgian Center for the Conservation of Wildlife (GCCW) carries out projects on environmental awareness and studies of migratory birds and raptors, among others.

In Armenia the more active local NGOs – the Armenia Tree Project and Armenian Forests – were established and funded by Armenian Diaspora and are focused on reforestation projects. Most projects run by NGOs are funded by international donors. The "Chevre" NGO promotes sustainable development in the northeastern Azerbaijan.

2.6.5. Scientific institutions

The former Soviet countries of Armenia, Azerbaijan, Georgia, and Russia have a large network of research institutions. The first group of institutions includes biological departments of state universities (in Tbilisi, Batumi, Yerevan, Baku, Nakhchivan, Stavropol, Krasnodar, and in capitals of each of the Russian republics of the North Caucasus

and in some other cities of the Ecoregion). The second group includes academic institutions, belonging to the national systems of the Academies of Sciences. There are academic research institutes on zoology, botany, geology, and geography in Tbilisi, Baku, and Yerevan. The third group includes national museums of natural history or corresponding departments in museums. Most of these institutions carry out individual scientific projects on studying biodiversity of the Caucasus. In the Turkish Caucasus, the Black Sea Technical University in Trabzon and Forestry Faculty in Artvin carry out research projects on conservation and sustainable resource use. The Forest Research Institute in Trabzon focuses on eastern Black Sea forests. There are two scientific institutes within the Ministry of Ecology and Natural Resources of Azerbaijan.

2.6.6. Business Sector

Investments in biodiversity conservation from the business sector are relatively rare, but precedents have been made. British Petroleum, for example, supports conservation activities along the Baku-Ceyhan pipeline through special grant programs.

2.6.7. Investment Strategy of the Critical Ecosystem Partnership Fund (CEPF) for the Caucasus Hotspot and Ecoregion Conservation Plan

The Critical Ecosystem Partnership Fund (CEPF) is designed to safeguard the world's threatened biodiversity hotspots in developing countries. It is a joint initiative of CI, the Global Environment Facility (GEF), the Government of Japan, the MacArthur Foundation, and the World Bank. CEPF supports projects in hotspots – areas which combined harbor more than 60 percent of the Earth's terrestrial species in just 1.4 percent of its land surface. The Caucasus Hotspot, as it is termed by CEPF, with its unique assemblages of plant and animal communities and rare and endemic species, is globally important for conserving representative areas of the Earth's biodiversity, making it worthy of international attention and CEPF funding. The boundaries of the Caucasus Ecoregion and the Caucasus Hotspot as defined by Caucasian scientists and experts of the ECP and CEPF Ecosystem Profile are identical.

A fundamental purpose of the CEPF is to ensure that civil society is engaged in efforts to conserve biodiversity in the hotspots. An additional purpose is to ensure that those efforts complement existing strategies and frameworks established by local, regional, and national governments.

The CEPF Ecosystem Profile and five-year investment strategy for the Caucasus Region was developed in 2003 based on stakeholder workshops and background reports coordinated by the WWF Caucasus Programme Office. Species, site, and corridor (large conservation landscape) outcomes for the Caucasus were defined in cooperation with scientists at CI's Center for Applied Biodiversity Science (CABS), in accordance with methodology developed by CABS.

Corridors and CEPF strategies for the Profile were determined taking into account the conservation vision of the ECP, including identified priority areas. Fifty globally threatened species occurring in the Caucasus were identified as target species (species outcomes) for the CEPF Ecosystem Profile. Nine of these species are included in the ECP as focal species. Site outcomes were defined for each target species, recognizing that most species are best conserved through the protection of the sites in which they occur. Site outcomes are physically and/or socio-economically discrete areas of land that need to be protected to conserve the target species. For the Ecosystem Profile, 205 site outcomes were identified for the Caucasus, covering 19 percent of the Ecoregion (or Hotspot). Attachment 4 depicts overlap between ECP Priority Conservation Areas and Corridors and CEPF site outcomes: only four of the 56 PCAs do not coincide with CEPF site outcomes. Fifty-two PCAs, most of which are larger than CEPF sites, encompass 170 CEPF site outcomes. Additionally, nine of the ECP's Priority Corridors coincide with 11 CEPF sites. In total, about 90 percent of the CEPF sites overlap with the ECP's Priority Conservation Areas and Corridors.

CEPF corridor outcomes are large-scale landscapes that need to be conserved in order to allow persistence of biodiversity. Ten conservation corridors were identified in the CEPF analysis for the Caucasus Hotspot as important for biodiversity conservation. Of these, five were determined to be priority (target) corridors to conserve globally threatened species (species outcomes) and their major habitats (site outcomes). The geographical focus and priorities of the ECP and CEPF Caucasus Ecosystem Profile are nearly identical. The Greater Caucasus Corridor corresponds to the ECP's Greater Caucasus Range/Econet (see Part 3, tables 1 and 4, and long-term targets B.1 and E.1). The two West and East Lesser Caucasus Corridors correspond to the ECP's Lesser Caucasus Range/

Econet (Part 3, tables 1 and 4, and targets B.2 and E.2). The Hirkan Corridor corresponds to the ECP's Talish-Gilan (Guilan) Region/Econet (Part 3, table 1 and target B.3). The Caspian Corridor corresponds to the ECP's Caspian Sea Econet (Part 3, table 3 and target D.1).

Four strategic directions for the CEPF investment strategy were elaborated. Funding gaps and opportunities were explored to find ways that CEPF could complement existing efforts and increase the overall effectiveness of conservation activities. Priority investment areas were determined within each of the strategic directions (see the full text of the CEPF Ecosystem Profile for the Caucasus Hotspot at www.cepf.net). The compliance of the ECP's long- and medium-term targets with CEPF strategic directions and investment priorities are outlined in Attachment 3. Nineteen long-term ECP targets and 44 medium-term targets correspond to CEPF Strategic Direction 1; 24 long-term targets and 50 medium-term targets are addressed under CEPF Strategic Direction 2; CEPF Strategic Direction 3 complements 14 long-term and 27 medium-term targets in the ECP; and Strategic Direction 4 corresponds to 18 long-term and 21 medium-term targets. Thematically, around 75 percent of long- and medium-term targets in the ECP can be addressed according to the goals of the CEPF.

The CEPF Ecosystem Profile for the Caucasus Hotspot was approved by GEF's Focal Points for all six countries in the Ecoregion/Hotspot, after which the CEPF committed \$8.5 million for a five-year program in the Caucasus. Implementation of this program, which is being coordinated by WWF, began in 2004. The importance of CEPF's short-term investment program, based on a shared long-term vision, provides a unique opportunity to begin Ecoregion/Hotspot-wide activities to safeguard biodiversity of the Caucasus, which in turn will help work toward achieving the medium- and long-term targets of the ECP.

3. Conclusions of the Biological and Socio-Economic Assessments

Over 120 experts from the six countries took part in detailed assessments of biological and socio-economic features of the Caucasus Ecoregion. The aim of this work was to evaluate the current state of biodiversity and the existing institutional frameworks in order to assist in elaborating an achievable and effective Ecoregional Conservation Plan.

The Caucasus Ecoregion is a globally significant center of plant and animal diversity and endemism. However, biodiversity is currently being lost at an alarming rate. Threats to the region's natural resources include unsustainable logging, poaching, overfishing, infrastructure development, and water pollution. These threats stem from three categories of root causes: socio-economic (including poverty, lack of public awareness); political (lack of transboundary cooperation, contradictions in legislation, military conflicts); and institutional (lack of coordination and communication among institutions, insufficient knowledge and research). Conservation strategies in the Caucasus Ecoregion will only be successful in the end if they aim to mediate these root causes and reduce overarching threats to biodiversity.

The highest levels of biodiversity as well as the greatest threats are contained within four major biomes: forests, freshwater, marine, and high mountains. Twenty-six focal species are important indicators of biodiversity conservation, and in many cases serve as umbrella species for conserving habitats in certain biomes. The focal species determined as a result of the biological assessment are: Caucasian leopard, striped hyena, brown bear, East and West Caucasian turs, Caucasian red deer, bezoar goat, Gmelin's mouflon, Caucasian chamois, goitred gazelle, seven species of sturgeon, six species of birds and two amphibians. Thus, strategies in the ECP should focus on the four priority biomes and the 26 focal species, where conservation of their habitats (in the four biomes) is not sufficient.

Clearly, a well-developed institutional framework exists for conservation in the Caucasus Ecoregion. NGOs, scientific institutes, universities, and other groups are established in the region, providing a basis for conservation action, though finances and capacity are limited. Governmental institutions are generally supportive of conservation and a number of laws are in place, but agencies often lack financial and technical capabilities to enforce them. Cooperation on the environment between countries is limited but the potential exists, particularly where protected areas and migrating species are concerned. Most of the countries in the region are experiencing economic difficulties, and rural populations are especially poor, relying largely on raw natural resources to meet their basic needs. The general public is largely uninformed on environmental issues and lacks incentive to participate in conservation programs. Difficult social and economic conditions lead to overfishing, poaching, and illegal logging, while the large number of political divisions hinders efforts to halt the plundering of the region's natural resources.

A number of local, national, and international conservation groups have taken important steps towards conserving the rich biodiversity of the Caucasus Ecoregion. Governments have made commitments to setting aside protected areas and protecting internationally threatened species. Bilateral and multilateral donors such as the World Bank and GEF, USAID, EU/TACIS, UNDP, and CEPF are supporting large-scale projects related to conservation in the region. These initiatives are helping conservation groups in the region to achieve their long-term vision for biodiversity conservation, but much work still needs to be done to achieve the targets outlined in Part 3 of this ECP.

PART 2. PRIORITY BIOMES, FOCAL SPECIES, AND A BIODIVERSITY VISION FOR THE CAUCASUS ECOREGION

The main directions for biodiversity conservation in the Caucasus Ecoregion were elaborated in the biological and socio-economic assessments. Assessment of the major threats to biodiversity and root causes – poverty, lack of public awareness, lack of transboundary cooperation, and others – helps determine the strategic areas of intervention. Four priority biomes – forest, freshwater, marine, and high mountains – will be the bio-geographical focus of conservation efforts, as these contain the bulk of biodiversity with the most pressing threats. Twenty-six focal species will be targeted where habitat protection alone is not enough to guarantee survival of the species. Yet, even by limiting conservation strategies to the priority biomes and focal species, we are left with an enormous area to conserve given the limited funds of the regional and international conservation community. Therefore, the goal of this ECP was to narrow the focus into a set of Priority Conservation Areas (PCAs), based on the need to preserve the most important areas for biodiversity in the Ecoregion, while representing the four priority biomes and 26 focal species. The process for selecting these geographical priorities is described in section 1.4.2. below.

1. Priority Biomes

As mentioned above, assessments of biodiversity in the Caucasus Ecoregion have shown that the bulk of plant and animal biodiversity is concentrated in four biomes. These are forests, freshwater habitats, marine (and coastal) ecosystems, and high mountain habitats. Threats to biodiversity are also greatest in these four biomes. WWF International has identified three major biomes as WWF's global priorities for conservation (forests, freshwater habitats, and marine and coastal ecosystems). Additionally, for the Caucasus Ecoregion, high mountain habitats, which make up nearly 18 percent of the Ecoregion, harbor high levels of biodiversity and endemism, making them equally important regional targets for conservation in the Caucasus. A brief overview of the main features in each biome follows.

1.1. Forest Biome

Forests are the most important biome for biodiversity conservation in the Caucasus Ecoregion. Forest ecosystems harbor many endemic and relic species of woody plants and herbs, as well as important habitats for rare and endangered animals, including six focal species (brown bear, leopard, bezoar goat, red deer, European bison, Caucasian salamander) and eight species of special concern (Persian brook salamander, Western barbastelle, Geoffroy's bat, Bechstein's bat, Mediterranean, lesser, and Mehely's horseshoe bats, common otter, European mink). Mountain forests, which make up the greater part of the forest biome in the Caucasus Ecoregion, play a critical role in preventing soil erosion and regulating water flow. Yet intensive logging, illegal timber trade, and collection of firewood for fuel are whittling away at forest ecosystems.

Agriculture development has resulted in a significant decrease in broadleaf forests in the region, which generally occupied land favorable for growing grapes, fruit trees, and other crops. Many forests were also felled to clear land for grazing. The area of chestnut forests has significantly decreased as a result of intensive logging of this valuable species for centuries. In northeastern Turkey broadleaf forests are cleared for tea and hazelnut plantations. In northwestern Iran only 12 percent of Arasbaran broadleaf forests, noted for their high number of endemic species, remain.

Forest ecosystems cover 10,739,736 hectares or 18.52 percent of the Caucasus Ecoregion. Currently, only 13.78 percent of forests are preserved in protected areas. The most significant forests for biodiversity conservation can be grouped into five primary geographical areas. These are the Greater Caucasus Range, the Lesser Caucasus Mountain Chain, the Talish-Gilan (Guilan) Mountains, the Kura-Araz (Araks) and Iori Basin, and a small area of swamp forests in the Kolkheta Lowlands (Colchic Lowlands). These should be the focus of forest conservation activities in the ECP and can be targets for creating Econets. Currently, 16.3 percent of the forests in the Greater Caucasus Range are afforded protection. In the Lesser Caucasus Mountains, 9.11 percent of forests are protected. Only 9.52 percent of forests in the Talish-Gilan (Guilan) Mountains are in nature reserves. About 13 percent of forests in the Kura-Araz (Araks) and Iori Basin are granted protection. In the long-term, an additional 10 percent of the forests in the Ecoregion should be granted protection (IUCN I-IV), bringing the area of protected forests to nearly a quarter of the Ecoregion's forested area.

1.2. Freshwater Biome

Freshwater habitats are crucial for water conservation, spawning of fish, as well as bird nesting and migration. Freshwater ecosystems provide refuge to 10 focal species – white-headed duck, pygmy cormorant, marbled duck, Russian sturgeon, Persian sturgeon, bastard sturgeon (*Acipenser nudiventris*), starlet (*A. ruthenus*), star sturgeon, Baltic (Atlantic) sturgeon, beluga; and two species of special concern – common otter and European mink.

Freshwater habitats provide stopover sites during migration of globally-threatened birds like Dalmatian pelican, Siberian crane (*Grus leucogeranus*), corn crake, lesser white-fronted goose, ferruginous pochard (*Aythya nyroca*), red-breasted goose, black-winged pratincole (*Glareola nordmanni*), white-headed duck, white-tailed sea-eagle (*Haliaeetus albicilla*), slender-billed curlew (*Numenius tenuirostris*), sociable lapwing, as well as nesting habitats for some of the listed species. Two species of freshwater turtles (one IUCN Red List species), water snakes, and European tree frog (*Hyla arborea*) depend on these habitats.

Freshwater habitats of the Caucasus host a number of endemic fish and invertebrate species. Most important in this respect are the Chorukh (Chorokhi) River in the southwestern Caucasus, Lake Sevan in Armenia (with an endemic species of trout - *Salmo ischchan*), and some other lakes and rivers. Two species of crayfishes — Pyltsov crayfish (*Pontastacus pylzovi*) and Colchic crayfish (*Astacus colchicus*) – are relics and local endemics.

Freshwater habitats cover 4,981,602 hectares or 8.5 percent of the Ecoregion. A total of 11.72 percent of freshwater ecosystems are currently preserved in protected areas. The largest concentration of freshwater ecosystems is within the Kura-Araz (Araks) Basin, with 1,020,198 ha of freshwater habitats. The basin includes a diversity of mountain lakes and wetlands in the Javakheti-Lake Sevan region, encompassing 240,569 hectares of freshwater ecosystems considered highly important for biodiversity conservation. The second most valuable freshwater system is in the Manych-Gudilo region in Russia, with 720,835 ha of freshwater habitats. Presently, a quarter of the freshwater ecosystems in the Javakheti-Lake Sevan region are protected, while only three percent of the freshwater habitats in the Manych-Gudilo region are conserved. In the long-term, at least an additional five percent of the freshwater habitats in the Ecoregion should be granted protection (IUCN I-IV).

1.3. Marine Biome

Coastal and marine habitats in the Caucasus Ecoregion include the coastline and near-shore regions of the Azov, Black, and Caspian seas. Actual open areas of marine water are not included. Combined, there are 4,138.2 kilometers of coastline in the Ecoregion, and all countries except Armenia have marine habitats. The Caspian and Azov seas are unique in the world in their diversity in species of sturgeon fish and contain important spawning areas and nurseries for many commercial fish, as well as rare and endemic species. Focal species in marine ecosystems include seven species of sturgeon – Russian, Persian, bastard, star, and Atlantic sturgeons, starlet, and beluga. The coasts of the Caspian and Azov-Black seas provide important habitats for migrating waterfowl. A number of species of waterfowl and shorebirds are threatened by poaching and habitat loss. The three species of dolphins in the Black and Azov seas are threatened, and the Caspian seal is endemic to the Caspian Sea.

Overfishing and uncontrolled poaching in the Caspian and Azov seas could lead to the disappearance of all sturgeon species found in these two seas. Additionally, oil development, construction of transportation infrastructure (ports and pipeline terminals), tourism and recreation, and pollution threaten marine ecosystems and fish populations, resulting in biodiversity loss and impacting local economies.

Marine waters under the national jurisdiction of five countries within the Ecoregion cover approximately 6,837,865 ha. Approximately 75,401 ha or 1.1 percent of this area are afforded some sort of protection. The area of marine habitats protected in Georgia is 15,742 ha and in Russia 30,000 ha. In other countries some area of marine and coastal habitats is included in different kinds of protected areas, but not designated separately.

There are 2,366 km of coastline on the Caspian Sea included in the Ecoregion, of which 18.42 percent are preserved in coastal protected areas. On the Black and Azov seas, 1,772.7 km of marine habitats are included in the Ecoregion, of which 14.78 percent are currently afforded protection. In total, 698 km of coastline or 16.86 percent of the Ecoregion's coastline falls under some sort of protection.

In the long-term, at least an additional five percent of the marine and coastal habitats in the Ecoregion should be granted protection (IUCN I-IV).

1.4 High Mountain Biome

High mountain ecosystems harbor significant levels of biodiversity and endemism, especially distinct subspecies. Nine endemic genera are associated with high mountain ecosystems, and the higher the mountains, the greater the number of endemics. About 1,000 vascular plant species are found in the Greater Caucasus high mountains and half of these are endemics. Eight focal species use high mountain habitats (leopard, bezoar goat, West Caucasian tur, East Caucasian tur, Gmelin's mouflon, Caucasian chamois, Caucasian black grouse, imperial eagle), as well as two species of special concern (Caucasian snowcock, Darevsky's viper).

Overgrazing particularly affects high mountain habitats, impacting plant species diversity and reducing the food base of mountain ungulates. Poaching puts significant pressure on large mammals and endemic birds in high mountain regions.

High mountain habitats cover 10,159,247 ha or 17.5 percent of the Ecoregion. Of these, 11.84 percent are afforded some sort of protection. The most significant areas for conservation of high mountain habitats are the Greater Caucasus Mountain Range and the Javakheti-Asia Minor Region, which includes parts of the Lesser Caucasus Mountains and the Southern Highlands. There are 3,674,781 ha of high mountain habitats in the Greater Caucasus Range, of which nearly a quarter are in protected areas. Of the 6,473,673 ha of high mountains in the Javakheti-Asia Minor Region, only 4.59 percent are currently protected. In the long-term, at least an additional eight percent of the high mountain habitats in the Ecoregion should be granted protection (IUCN I-IV).

The ECP for the Caucasus Ecoregion will focus on these four biomes. Other habitats will be targeted only where they are important for representation of critical or threatened habitats or for conservation of focal species.

2. Focal Species

The definition of focal species is still debated in conservation literature, because the term "focal" can be interpreted in a variety of ways – from biological, political, and socioeconomic perspectives. According to the most commonly used definition, focal species are those which fall into in one or more of the following categories: keystone species, indicator species, umbrella species, flagship (charismatic) species, and vulnerable species.

A focal species approach to ecosystem monitoring is increasingly used in conservation practices. If a set of focal species is properly selected, this can greatly reduce resources needed for long-term monitoring. Taking into account the great landscape and climatic diversity of the Caucasus, we suggest that different sets of focal species should be selected for each of the four major biomes.³ Therefore the final list of candidates for focal species may appear far too long, and the focal species-based approach needs to be continually refined within the framework of a special commission.

³ While some overlap is inevitable, the selected focal species and species of special concern can be roughly grouped according to the following biomes: Forest (Caucasian leopard, brown bear, Caucasian red deer, European bison, Caucasian salamander, lynx, otter, European mink, western barbastelle, Geoffroy's bat, Bechstein's bat, Mediterranean, lesser, and Mehely's horseshoe bats, Caucasian and pontic vipers, and Persian brook salamander); High Mountain (leopard, West and East Caucasian turs, bezoar goat, Caucasian chamois, Gmelin's mouflon, imperial eagle, cinereous vulture, Caucasian black grouse, Caucasian snowcock, and Darevsky's and Dinnik's vipers); Freshwater (pygmy cormorant, marbled duck, white-headed duck, Syrian spadefoot, Russian, Persian, star, Atlantic, and bastard sturgeons, starlet, and beluga); Marine (Russian, Persian, bastard, star, and Atlantic sturgeons, starlet, and beluga); and Open landscapes (striped hyena, goitred gazelle, imperial eagle, cinereous vulture, Schaub's bat, and Wagner's viper).

Early in the process, experts in the Caucasus Ecoregion compiled a list of candidate focal species from the overall 70 model species identified (see section 1.4.1. below for clarification). The resulting 26 focal (priority) species consist of mammals (carnivores and ungulates), birds, amphibians, and fish:

Mammals

Caucasian leopard (*Panthera pardus*)
Striped hyena (*Hyaena hyaena*)
Brown bear (*Ursus arctos*)
East Caucasian tur (*Capra cylindricornis*)
West Caucasian tur (*Capra caucasica*)
Bezoar goat (*Capra aegagrus*)
Caucasian red deer (*Cervus elaphus*)
Caucasian chamois (*Rupicapra rupicapra caucasica*)
Goitred gazelle (*Gazella subgutturosa*)
Gmelin's mouflon (*Ovis ammon gmelinii*)
European bison (*Bison bonasus*)

Amphibians

Syrian spadefoot toad (*Pelobates syriacus*)
Caucasian salamander (*Mertensiella caucasica*)

Birds

Pygmy cormorant (*Phalacrocorax pygmeus*)
Imperial eagle (*Aquila heliaca*)
Cinereous vulture (*Aegypius monachus*)
Caucasian black grouse (*Tetrao mlokosiewiczii*)
Marbled duck (*Marmaronetta angustirostris*)
White-headed duck (*Oxyura leucocephala*)

Fish

Russian sturgeon (*Acipenser gueldenstaedtii*)
Persian sturgeon (*Acipenser persicus*)
Bastard sturgeon (*Acipenser nudiventris*)
Sterlet (*Acipenser ruthenus*)
Star sturgeon (*Acipenser stellatus*)
Atlantic sturgeon (*Acipenser sturio*)
Beluga (*Huso huso*)

A brief description of each of these species follows. Fifteen additional species were determined to be species of special concern (section 1.3 below). For Part 3 of the ECP, we outlined only conservation strategies for those focal species and species of special concern which are simultaneously under threat and require urgent measures for conservation.

2.1. Leopard

The leopard (*Panthera pardus saxicolor*) is the rarest species in the Ecoregion, celebrated in many local poems, fairytales, and songs. Widespread throughout the Caucasus a century ago, the big cat – last sighted in Dagestan and the Greater Caucasus in the 1980s – is now near extinction. Despite growing concern that the leopard has disappeared from the region altogether, recent investigations coordinated by WWF showed that about 35-40 animals still inhabit the Zangezur Range in Armenia and Azerbaijan (Nakhchivan), the Talish Mountains, and northern Iran. A small population survives in the eastern part of the Greater Caucasus Range and Iori-Mingechaur Priority Conservation Area. The leopard is listed in the Red Data Books of Rare and Endangered Species (Red Book) in all the countries in the Ecoregion. The subspecies is listed in the IUCN Red List as endangered (EN C2a). National legislation warrants strict punishment for killing a leopard. The main threats to the leopard are poaching and overhunting of ungulates (tur, bezoar goat, mouflon, wild boar, chamois, and roe deer) – the animal's primary food base.

Scientists believe that over the long-term, a population of 100 leopards should be sustained in the Caucasus to ensure long-term survival of the species in the Ecoregion. Currently, there are no interregional strategies for leopard conservation. Cooperation among the six countries is required to restore the leopard to its native range and conserve remaining leopard habitat. As an umbrella species, the leopard facilitates conservation of other species that also depend on forest habitats in the leopard's extended range.

2.2. Striped Hyena

The striped hyena (*Hyaena hyaena*) is on the verge of extinction in the Caucasus. The species is considered by IUCN as near threatened (NT), and listed in local Red Books. Striped hyenas live in plains ecosystems, including arid habitats and floodplain forests. The scavenger used to be widespread in the eastern Caucasus up to Tbilisi, but hyena numbers decreased drastically in the second half of the 20th century due to persecution by hunters and habitat loss to agriculture. In Georgia, from 1950 to 1970, only one to two individuals were recorded each year, mostly in remote gorges of the Vashlovani Strict Nature Reserve and in sanctuaries along the Iori River floodplain. People generally dislike hyenas due to their scavenger ways. Large bounties used to be offered for hyena skins. Hyenas often play dead when they are discovered, making them easy prey for humans. Now nearly extinct, only a few hyenas remain within a very small range in the southeastern Caucasus plains (in Azerbaijan and a small area of Georgia). Exact data on the number of hyenas left or the state of the population have not been collected. Measures

need to be taken to involve local people in hyena conservation and strengthen regulations and fines for killing hyenas.

2.3. Brown Bear

The brown bear (*Ursus arctos*) is a keystone species and top predator in the food chain in most habitats in the Caucasus. The brown bear can serve as an indicator species, reflecting the state of ecosystems and biodiversity as a whole. Protecting brown bears provides an umbrella for many other animals and the forest biome. Generally, the brown bear occupies mountain forests, but it also occurs in high mountain meadows and open plains woodlands. National legislation regulates hunting, but poaching is the main threat along with habitat loss. The Caucasian population of the brown bear has drastically declined in recent decades. In Georgia, for example, the population has decreased by a third in the past 10-15 years. While the brown bear is not included in the IUCN Red List, the total number in the Caucasus Ecoregion does not exceed 3,000 individuals, warranting protection measures. According to scientists, there are four subspecies of brown bear in the Ecoregion with complicated interrelations and overlapping ranges. Among these, two subspecies (*U. a. syriacus* and *U. a. lasistanicus*) are endangered and in need of immediate protection.

2.4. West and East Caucasian Turs

There are two distinct species of Turs in the Caucasus Ecoregion – the West (*Capra caucasica*) and East (*C. cylindricornis*) Caucasian turs. Turs are endemic to the Greater Caucasus Range and therefore to the Ecoregion, and historically have had a very narrow range – inhabiting only the slopes of the Greater Caucasus Range. *Capra caucasica* is listed in the IUCN Red List as endangered (EN A1d+2cde) and *C. cylindricornis* as vulnerable (VU A1d+2de, C1).

Both species of tur are relatively large, with sturdy torsos. The two species are differentiated by their variation in horn shape. Turs live in the high mountains from 2,000 to 4,000 m above sea level. The agile climbers can jump up to three meters from a standing position and scramble down nearly vertical cliffs. Turs used to roam in herds of several hundred in the beginning of the 20th century. Now it is rare to see more than 10 to 20 animals at once. Humans are the turs' main predator. The tur is an important source of meat for shepherds and people living in the mountains, and has recently become a popular trophy hunting species. Recent data suggests that there are around 3,500 to 4,000 West Caucasian turs and about 25,000 East Caucasian turs remaining. Uncontrolled hunting practices in Azerbaijan, Georgia, and Russia could threaten the long-term sustainability of these tur populations. Quota levels and licensing procedures differ in each country and need to be harmonized to improve tur management.

2.5. Caucasian Red Deer

The Caucasian subspecies of red deer (*Cervus elaphus maral*) is one of the most endangered species of wildlife in the South Caucasus. This subspecies is not listed in IUCN Red List. In Georgia two isolated populations of fewer than 90 deer remain in the Borjomi-Kharagauli National Park in the Lesser Caucasus Mountain Chain and around 150 deer are left in the Lagodekhi Strict Nature Reserve in the Greater Caucasus Range in eastern Georgia. Once outside of these reserves, protection of these locally rare animals cannot be ensured. Fewer than 600 red deer are left in Azerbaijan in strict nature reserves of the Greater Caucasus Range. Turkey and Iran also harbor small populations of this species. In Russia, several thousand red deer are found along the Greater Caucasus Range. Over the past few decades, deer populations have decreased, but the exact number of deer remaining is unknown. In Russia, red deer are legally hunted, while in the South Caucasus the species is legally protected. Throughout the Caucasus Ecoregion, poaching, habitat loss to pasturelands, and long-term isolation of red deer populations have caused deer numbers to go down, resulting in inbreeding in some populations. Measures need to be taken to reduce poaching, monitor deer population dynamics, and connect the isolated groups. Efforts are required to coordinate management practices for red deer in Azerbaijan, Georgia, and Russia.

2.6. Bezoar Goat

The bezoar goat (*Capra aegagrus*), or wild goat, is found only in the eastern part of the Greater Caucasus Range and in the southern portion of the Lesser Caucasus Mountain Chain. Bezoar goats roam in small herds of five to 10 animals, staying near cliffs in the forest belt and alpine areas where they feed on grasses and can quickly climb to safety from predators. Bezoar goats migrate to less snowy areas in winter. The bezoar goat is now endangered due

to poaching and habitat loss to agriculture. The animal is unwary of people and settlements, and is therefore easily approached and killed. While populations of the bezoar goat have been preserved in parts of the Caucasus Ecoregion, the species has been driven to extinction in other areas of its former range. The bezoar goat has disappeared from the northern part of the Lesser Caucasus as a result of overhunting in the first part of the 20th century. The bezoar goat is now listed in the IUCN Red List as vulnerable (VU A2cde) and in the Red Books of Georgia, Armenia, Azerbaijan, and Russia. Increased poaching due to the dire socio-economic situation in the region has resulted in the species' decline. Poachers sell the dense, sharply-pointed horns as trophies.

Today, there are several highly isolated populations of bezoar goats in different regions. Around 1,000 bezoar goats live in Dagestan and about 3,000 in Armenia (Khosrov Strict Nature Reserve, southern Armenia) and the bordering part of Nakhchivan (Azerbaijan). Small populations live in Georgia (300 individuals) on the border with Russia's Dagestan. There are approximately 2,500 bezoar goats in the Turkish Caucasus and probably a comparable number of animals in northern Iran. Individual populations are separated by nearly 500 km. Steps need to be taken to increase protection of the bezoar goat and allow the exchange of genes between the isolated populations to reduce chances of inbreeding. Local people need to be included in conservation activities, since poaching is the major threat to the animal.

2.7. Gmelin's Mouflon

The rare Gmelin's – or Armenian – mouflon (*Ovis ammon gmelini*) is an endemic subspecies of wild sheep, the ancestral form of modern domestic sheep. The mouflon is agile at climbing steep mountain slopes. The animals prefer dry, open slopes in the mountain steppe zone. Numbers of Gmelin's mouflon decreased steadily throughout the 20th century as a result of habitat loss and poaching, the effects of which are intensified in areas of ethnic conflicts. Today there are no more than several hundred of the animals left in southern Armenia and in the Nakhchivan Autonomous Republic in Azerbaijan. This species is listed in the IUCN Red List as vulnerable (VU A2cde).

There are a few herds of mouflon on Mount Agri (Ararat) and in the Allahuekber Mountains in Turkey, as well as in some areas along the Turkish-Iranian border. Mouflons also remain in small numbers on the border between Iran and Azerbaijan (Nakhchivan Republic) and in the Sabalan Mountains. Measures need to be taken to preserve mouflon habitat and increase protection of the animal.

2.8. Caucasian Chamois

The Caucasian chamois (*Rupicapra rupicapra caucasica*) is one of the more remarkable mountain ungulates. This subspecies is listed in the IUCN Red List as vulnerable (VU C1). In the summer, chamois graze in forest and alpine areas, while in winter they remain in forests where there is less snow. More and more, the chamois has been forced into the alpine belt due to human development of lower mountain slopes. The range and population of the chamois in the Caucasus has decreased drastically over the past century. Although data on chamois numbers are scarce, it is thought that approximately 3,500 chamois remain in the Kavkazsky Strict Nature Reserve in Russia, and a much smaller population resides in the Lesser Caucasus Mountain Chain within Georgia and Turkey. The greatest threat to survival of the chamois comes from poaching and habitat lost for pastures. The populations are highly isolated due to habitat fragmentation, which could lead to inbreeding. The lack of research on the current status of the animal hinders conservation efforts. Some of the Caucasus countries have listed the chamois in their national Red Books, while others have not. Coordinated approaches to chamois conservation and synchronization of the species' protected status among countries are necessary to save the animal from disappearance.

2.9. Goitred Gazelle

The goitred gazelle (*Gazella subgutturosa*), or djeiran, is listed in the IUCN Red List as near threatened (NT) and in the Azerbaijan Red Book. The gazelle is found in steppe and semi-desert habitats and open juniper woodlands. Historically, the animal was found in the Araz (Araks) Valley in Armenia, and in the eastern part of the Greater Caucasus Range. Today, the goitred gazelle remains only in the Kura Lowlands. A hundred years ago, 50-60,000 gazelles roamed the steppe, but by the end of the 1940s, only 5,000 remained in Azerbaijan. Pressured by poaching and the loss of steppe and semi-desert habitat to agricultural development in the Kura-Araz (Araks) Lowlands, the goitred gazelle population fell to catastrophic levels: in 1961, only 130 animals were left near the mouth of the Kura River. Conservation measures, including creation of the Byandovan Sanctuary in 1961 and the Shirvan Strict Nature Reserve in 1969, helped save the population from extinction in the South Caucasus. Gazelle numbers in the Shirvan protected areas (Shirvan National Park, Shirvan Strict nature Reserve and Byandovan Sanctuary) grew to

more than 4,500 by 2003. A small population of 300 gazelles lives in the Korchay Sanctuary. But the resettlement of refugees from regions plagued with ethnic conflict to lands around Shirvan National Park has once again put the gazelle population at risk. Oil development in the area threatens the integrity of gazelle habitat. Furthermore, the gazelle population cannot disperse outside the territory of the protected areas (65,535 ha), because the land in the Kura-Araz (Araks) Lowlands has been completely altered by human development. Steps need to be taken to increase protection of gazelles in reserves, and the possibility of connecting the populations via a protected corridor should be explored.

2.10. Pygmy Cormorant

In the Caucasus the pygmy cormorant (*Phalacrocorax pygmaeus*) is a nesting, migratory, and wintering species, preferring lowland freshwater and brackish habitats. The bird chooses open water areas with sizable trees nearby, fresh or brackish marshes with thick reed beds, open or slow-flowing water, and flooded fields where fish are easily caught. In the southern Transcaucasia, every lake or body of water covered with reeds has breeding populations of this species. Pygmy cormorants winter mainly in coastal lagoons, deltas, and riparian forests, but also in inland wetlands. The cormorant nests in large mixed colonies often with herons, ibises, and other birds. This is a globally threatened species, classified as near threatened (NT) by IUCN and by Birdlife International as vulnerable in Europe. The main threat is poaching, as local fishermen consider it to be competition to their fishing-based economies. The other major threats are drainage and habitat degradation of breeding and wintering habitats, including disruption of hydrological regimes.

2.11. Imperial Eagle

The imperial eagle (*Aquila heliaca*) is predominantly a lowland species, but has been pushed to higher altitudes by human pressures. In the Caucasus, breeding habitat for the eagle consists of mountain forests, hills, and areas along rivers up to 1,000 m above sea level, but also includes steppes, open landscapes, and agricultural areas. The eagle hunts in open areas and wetlands. The raptor builds nests in the tops of trees in deciduous or coniferous forests or in open landscapes. It has been documented that the birds will nest on specially-built artificial platforms. A variety of habitats are used during migration, while wetlands are the bird's preferred habitat for winter. The eagle is found primarily in the southeastern part of the Ecoregion, in lowland forests along the Araz (Araks), Kura, Alazani, Iori, and Khrami rivers, and in lowlands and foothills westward to the eastern slopes of the Trialeti Ridge. The imperial eagle is classified as vulnerable at the global level by IUCN (VU C1) and endangered at the European level by BirdLife International. The total global population is estimated at 363 to 604 pairs. In Europe the eagle has suffered a rapid decline in recent decades, and the species is now extremely rare or extinct in many areas. The main threat to the imperial eagle is the disappearance of habitats due to deforestation of lowlands and foothills. Other major threats and limiting factors include poaching and human disturbance, nest robbing, illegal trade, and poisoning.

2.12. Cinereous vulture

Cinereous vultures (*Aegypius monachus*), or Eurasian black vultures, feed on carrion and nest in loosely knit groups. Distance between nests can be as little as 200-300 m, but in some clusters, pairs are more than three kilometers apart. Distance between nests within colonies can vary, and may be determined by the availability of suitable nest trees. Alternatively, high nesting density may cause productivity to decline. Cinereous vultures prefer areas with pine, juniper, and oak. The cinereous vulture is classified by IUCN as near threatened (NT) globally. Its distribution extends from Spain in the west to Mongolia and Russia in the east, though the Spanish population is relatively isolated. In the Caucasus the species is found mostly in Azerbaijan, in the Greater and Lesser Caucasus. Waste from the animal husbandry industry in this country provides abundant food for vultures. As with many other mountain species, the vulture occurs in lowlands in winter. In most places, the range and abundance of the cinereous vulture has declined, but the opposite trend has been observed in Spain. Where population declines have been noted, these are linked to indirect persecution (for example, poisoning) and alteration of nesting habitat.

2.13. Caucasian Black Grouse

The Caucasian black grouse (*Tetrao mlokosiewiczii*) inhabits areas above timberline in the Greater and Lesser Caucasus mountains, usually at an elevation from 1,500 to 3,300 m above sea level and more often from 2,200 to 2,600 m. Presence of shrub vegetation to provide shelters for the bird is critical. In the Western Caucasus, the black grouse is usually found among Caucasian alpine rose (*Rhododendron caucasicus*) thickets, although if this type of

vegetation is not available, other shelters (mostly shrubs) can be used. The birds keep in groups, and especially high concentrations are observed in spring at display grounds. The distribution is continuous in the Greater Caucasus, where the population numbers several tens of thousands, but distribution is more patchy in nature in the Lesser Caucasus, where the number of birds is probably much lower (except in the Dogu Karadeniz or Pontic Mountains in northeastern Turkey). Habitat loss and fragmentation due to unsustainable land use are considered the most significant threat. Poaching and human disturbance among the smaller, isolated populations of black grouse also threaten the species. This species is listed by IUCN as a species for which data are deficient (DD). Protection measures may include creation of small-sized reserves in important habitats for the black grouse.

2.14. Marbled Duck

The marbled duck (*Marmaronetta angustirostris*) has a scattered distribution in the western Mediterranean (Spain, Morocco, Algeria, Tunisia, wintering in north and sub-Saharan west Africa), the eastern Mediterranean (Turkey, Israel, Jordan, Syria, wintering south to Egypt) and western and southern Asia (Azerbaijan, Armenia, Russia, Turkmenistan, Uzbekistan, Tajikistan, Kazakhstan, Iraq, Iran, Afghanistan, Pakistan, India and China, wintering in Iran, Pakistan, and northwestern India). The species sporadically occurs in Georgia, but its status is not yet known. The marbled duck is more common in Armenia, Azerbaijan, and Iran on lowland lakes, and it is adapted to temporary wetlands.

The marbled duck population fluctuates partly in response to annual variations in rainfall. The marbled duck is capable of widely dispersing in search of suitable habitat. It is less dependent on invertebrates and relies more on small seeds (especially *Ruppia*) than other ducks of the northern Temperate Zone. Marbled duck appears to have suffered a rapid population decline, according to numbers in its core wintering range, largely a result of extensive habitat destruction. Over 50 percent of the duck's suitable habitat may have been destroyed during the 20th century. Other major threats are poaching and unsuitable water levels at wintering sites. Wetlands are drained for agriculture across its range. The species qualifies as vulnerable (VU A2cd+3cd a) according to IUCN. However, data are scarce and some birds may have relocated to alternate wintering sites.

2.15. White-headed Duck

The white-headed duck (*Oxyura leucocephala*) has a wide range, occurring in Spain, Algeria, Tunisia, Russia, Kazakhstan, Turkey, Iran, Afghanistan, Uzbekistan, Pakistan, and Mongolia. In winter months, it passes through the eastern Mediterranean, the Middle East, Central Asia, and the Indian subcontinent. Within the Caucasus Ecoregion, significant populations of white-headed ducks breed primarily in Russia, Turkey, Iran, and Armenia. The duck's preferred habitats include freshwater or brackish, alkaline, and eutrophic lakes, which are frequently temporary or semi-permanent. Breeding ponds have dense vegetation around the fringes and are generally small or enclosed areas within a larger wetland system. A stable water level during the incubation period is vital for successful breeding. In the Caucasus, one of the most important wintering areas is in Azerbaijan. Wintering birds probably arrive here from Kazakhstan. The white-headed duck is a globally threatened species classified as endangered (EN A2bcde) at the global level by IUCN and at the European level by BirdLife International. The species' range and population size have declined as a result of hunting and habitat degradation. Another major threat is the variation of water levels at wintering sites. Bird counts conducted in mid-winter have indicated that the population has undergone a very rapid decline of as much as 60 percent in the last decade.

2.16. Caucasian Salamander

The Caucasian salamander (*Mertensiella caucasica*) is an endemic of the western Lesser Caucasus Mountain Chain. Its range extends through the westernmost part of the Trialeti Mountain Range, Meskheta, and the Giresun Mountains west to Giresun in northeastern Turkey. It is listed by IUCN as vulnerable (VU B2ab(iii)). Strongly dependent on mountain forests, where it finds shelter under fallen trees, the salamander occurs in the upper reaches of mountain rivers and in small streams (from sea level to 2,000 m). The salamander is an extremely discrete animal, active exclusively at night. The species' distribution is sporadic – 24 local populations are known across Georgia to Turkey. Based on the distribution of small mountain streams in the Georgian part of the species' range, however, several dozen local populations are probably located in tributaries of the Kura, Chorukh (Chorokhi), and Kintrishi rivers. One local population usually consists of several hundred individuals. Geographic populations from the watershed of the Kura River (which belongs to the Caspian Sea Basin) and rivers in the Black Sea Basin show fixed genetic differences, and are likely different species which have been isolated for more than five million years. The most significant threat to the salamander is destruction of the animals' refuges due to extensive timber harvesting. Effective protection measures would include creation of small-sized reserves encompassing the most important habitats.

2.17. Syrian Spadefoot

The Syrian spadefoot toad (*Pelobates syriacus*) lives in Asia Minor, the Middle East, the Balkans, and the Caucasus. The Syrian spadefoot is an amphibian living in the arid semi-desert and steppe landscapes of the southern Caucasus with a strictly sporadic distribution: there are six small isolated populations in Georgia, four in Armenia, eight in Azerbaijan, and one in Russia. Since the 1980s, the species' distribution has significantly decreased for unknown reasons, probably due to fragmentation of its range. While the species has not been listed by IUCN, limited efforts to coordinate among the three countries of the South Caucasus could help stabilize the species' range and avoid further decline of the spadefoot toad.

2.18. Sturgeon

The Caspian and Azov seas are unique in the world in their diversity of species of sturgeon fish (*Huso* and *Acipenser* spp.). The seven species of sturgeon considered focal species for the ECP are: Russian sturgeon (*A. gueldenstaedtii*), Persian sturgeon (*A. persicus*), bastard sturgeon (*A. nudiventris*), sterlet (*A. ruthenus*), star sturgeon (*A. stellatus*), Atlantic (Baltic) sturgeon (*A. sturio*), and beluga (*H. huso*). Russian, Persian, bastard, and star sturgeon, as well as beluga are all listed as endangered by IUCN. Atlantic sturgeon is critically endangered (CR A2d), while sterlet is vulnerable (VU A1c+2d). Today populations of all these species are threatened, yet they are still commercially fished. In the Azov Sea, the bastard and Atlantic sturgeon are on the verge of extinction. In the Kuban River, the largest river in the Russian Caucasus which flows into the Azov Sea, the sterlet and Azov Sea beluga (*H. huso maeotica*) have nearly disappeared. The Black Sea is the last global habitat for the Atlantic sturgeon, which is nearly extinct. The Rioni River in Georgia is the only spawning area for the European form of Atlantic sturgeon within the Caucasus. Overfishing and uncontrolled poaching in the Caspian and Azov seas threaten all species of sturgeon in the two seas. When sturgeons swim upstream to spawn, they are also poached or unable to reproduce in rivers that are dammed or polluted. Water levels in rivers are declining due to irrigation and unsustainable water use. Although fishing licenses are issued under specified regulations and quotas, fishing boats invariably take more than their limit. Spawning grounds are protected on paper, but the laws are not enforced. Many of the enforcement agencies are corrupt. If measures are not taken to stop the pillaging of sturgeon in the Azov and Caspian seas, these species will soon disappear altogether.

3. Species of Special Concern

Fifteen additional species were determined to be species of special concern. Species of special concern are those species that should be monitored carefully. Specific action should be taken if habitat conservation programs are not sufficient to save the species from decline. For the ECP, a species was given the status of "special concern" if a specific conservation action is required to prevent decline. These may include indicator species – which reflect the overall health of an ecosystem (for example, otter, mink, bats), and rare species which depend on certain habitats or have narrow ranges (salamanders). Generally, these species are globally threatened and further evaluation is required to determine their status in the Caucasus. Some species of special concern are endangered only in parts of the Ecoregion and common in others, such as otter. Or some species of special concern are endangered, but not protected by law. Each of the species of special concern is described in brief below. The species of special concern for the ECP are:

Mammals

Lynx (*Lynx lynx*)
Otter (*Lutra lutra*)
European mink (*Mustela lutreola*)
Western barbastelle (*Barbastella barbastellus*)
Geoffroy's bat (*Myotis emarginatus*)
Schaub's bat (*Myotis schaubi*)
Bechstein's bat (*Myotis bechsteini*)
Mediterranean horseshoe bat (*Rhinolophus euryale*)
Lesser horseshoe bat (*Rhinolophus hipposideros*)
Mehely's horseshoe bat (*Rhinolophus mehelyi*)

Birds

Caucasian snowcock (*Tetraogallus caucasicus*)

Reptiles

Darevsky's viper (*Vipera darevskii*)
Caucasian viper (*Vipera kaznakovi*)
Dinnik's viper (*Vipera dinniki*)
Pontic viper (*Vipera pontica*)
Wagner's viper (*Vipera wagneri*)

Amphibians

Persian brook salamander
(*Batrachuperus persicus*)

Fish

Sevan trout (*Salmo ischchan*)
Gokcha barbel (*Barbus goktschaicus*)

3.1. Lynx

Lynx (*Lynx lynx*) is listed as near threatened (NT) by IUCN. The species is widely distributed throughout forest ecosystems in the Caucasus. However, due its secretive habits and the absence of special studies devoted to its biology in the Caucasus, the exact distribution of lynx is unknown and even a rough estimation of the population size is not possible. Trends in population dynamics are similarly unknown. Special studies are needed to estimate the range and the approximate density of the species.

3.2. Otter

Otter (*Lutra lutra*) is listed as near threatened (NT) by IUCN. This species lives in quiet parts of river currents, avoiding densely populated areas. It is found in all kinds of landscapes, from sea level to 2,000 m. It is vulnerable globally. Trends in population dynamics are unknown. Mapping of the range is required in order to develop a strategy for maintaining connectivity between existing otter habitats. All individual habitats should be listed as areas of special concern.

3.3. European mink

European mink (*Mustela lutreola*) is listed by IUCN as endangered (EN A1ace). This is a small mustelid associated with water. The European mink lives in the plains forest belt of the Northern Caucasus. No appropriate data concerning numbers of this species or main threats are available. Mapping of the range is required in order to develop a strategy for maintaining connectivity between existing mink habitats. All individual habitats should be listed as areas of special concern.

3.4. Bats

The following group of bats is considered as one species of special concern:

Western barbastelle (<i>Barbastella barbastellus</i>)	Vulnerable (VU A2c)
Geoffroy's bat (<i>Myotis emarginatus</i>)	Vulnerable (VU A2c)
Schaub's bat (<i>Myotis schaubi</i>)	Endangered (EN B1+2c, C2a, D)
Bechstein's bat (<i>Myotis bechsteini</i>)	Vulnerable (VU A2c)
Mediterranean horseshoe bat (<i>Rhinolophus euryale</i>)	Vulnerable (VU A2c)
Lesser horseshoe bat (<i>Rhinolophus hipposideros</i>)	Not listed
Mehely's horseshoe bat (<i>Rhinolophus mehelyi</i>)	Vulnerable (VU A2c)

Seven bat species' (*Rhinolophus mehelyi*, *Myotis bechsteini*, *M. emarginatus*, *Barbastella barbastellus*, *Rhinolophus ferrumequinum*, *R. euryale*, *R. hipposideros*) were listed by IUCN in 2002 as globally threatened. All known bat species in the Caucasus, as well as in Europe, are protected by the European Bat Agreement and by the Bonn Convention for the protection of migratory animals (CMS). These species are found sporadically in forest belts. Bats of the *Rhinolophus* genus concentrate in caves in the forest belt; others use various shelters like tree hollows, old buildings, etc. Bats congregate in caves and old trees, forming large nursing and wintering colonies, often consisting of different species. The destruction and disturbance of such roosts or colonies threatens the existence of several species simultaneously. Data on the exact distribution of these bats throughout the Caucasus are scarce, although one can suppose that their ranges roughly coincide with forest distribution. The main threats include deforestation and associated destruction of bat shelters. Mini-reserves should be created in areas of large bat concentrations in caves and forests.

3.5. Caucasian snowcock

Caucasian snowcock (*Tetraogallus caucasicus*) is not listed as endangered by IUCN, but it is an important endemic species for the Caucasus Ecoregion. The species is found in alpine areas of the Greater Caucasus. Unlike the black grouse, the snowcock prefers habitats in dry alpine landscapes (usually over 2,400 m), and is mostly found where there are rocks in the subnival zone. No data about long-term trends in population dynamics are available. Necessary measures for conservation include mapping of the bird's exact range (based on both published data and special research) and possibly creation of mini-reserves in the subnival zone.

3.6. Caucasian viper

Five Caucasian vipers are treated as one species of special concern for this report:

Darevsky's viper (<i>Vipera darevskii</i>)	Critically endangered (CR C2b)
Caucasian viper (<i>Vipera kaznakovi</i>)	Endangered (EN A1cd+2)
Dinnik's viper (<i>Vipera dinniki</i>)	Vulnerable (VU C1+2)
Pontic viper (<i>Vipera pontica</i>)	Critically endangered (CR C2ab, D)
Wagner's viper (<i>Vipera wagneri</i>)	Endangered (EN A1d+2d)

Caucasian vipers are a group of species containing five narrow-ranged species included in the IUCN Red List: Caucasian viper, Dinnik's viper, Pontic viper, Darevsky's viper, and Wagner's viper. Some other species are not included in the Red List despite their very limited distributions. Common threats for all vipers and the often poorly documented fact of geographic isolation between these species mandate a single conservation strategy. Caucasian and Pontic vipers are attributed to the forest belt, while the other species inhabit subalpine and alpine belts of both the Greater and Lesser Caucasus. Potential threats include landscape degradation as a result of logging and overgrazing. Exact distribution, population sizes, and dynamics are unknown. The most effective protection measures would include creation of mini-reserves within important habitats.

3.7. Persian brook salamander

Persian brook salamander (*Batrachuperus persicus*) is near threatened (NT) according to IUCN. This species is an endemic of the Alborz Mountains in northern Iran. It is associated with the mountain forest belt. It lives in the upper reaches of small mountain streams. The brook salamander is an extremely secretive nocturnal animal. Its distribution is sporadic: only a few locations are known. The most serious threat is destruction of shelters due to extensive timber harvesting. Effective protection measures would include creation of mini-reserves in the most important habitats.

3.8. Endemic fish

Two fish species endemic to Lake Sevan are considered as one species of special concern – the Sevan trout (*Salmo ischchan*) and Gokcha barbel (*Barbus goktschaicus*). Found only in Lake Sevan, these two species have a very restricted range. Sevan trout occurs in the lake, while Gokcha barbel inhabits only tributaries of the lake. While both species are intensely overfished and threatened by ongoing habitat degradation, neither are listed in the IUCN Red List. Once there were four subspecies or races of Sevan trout. Now there is only one remaining in Lake Sevan. The main threats are overfishing and poaching, as well as habitat loss due to changing water levels. Urgent efforts for stabilization of their populations are needed.

4. Long-term Vision for Biodiversity Conservation in the Caucasus Ecoregion

Once the priority biomes and focal species were agreed upon, Priority Conservation Areas (PCAs) were determined to help to focus conservation measures in the places that are the most significant for biodiversity conservation in the Ecoregion. Next, a biodiversity vision was elaborated – an image of what the Caucasus Ecoregion should be like in 50 years, and agreed upon by all stakeholders. The biodiversity vision statement serves as a touchstone for long-term conservation of the region's unique biological features. The vision statement gives the ideological basis and strategic directions for the ECP, while the PCAs provide the geographical basis for action. By agreeing on a far-reaching vision and the steps for achieving it, the conservation community can concentrate resources and efforts on the priorities that are most important for conserving the region's biodiversity. The biodiversity vision for the Caucasus Ecoregion was agreed upon by representatives of all six countries at a November 2002 workshop.

4.1. Priority Conservation Areas

To identify PCAs, model species for important taxa (plants, mammals, birds, amphibians, reptiles, and fish) were first determined and key sites for their protection delineated. Then important areas for each taxon were determined. PCAs were next selected based on an analysis in which important taxon areas were overlaid and habitat representation was evaluated. Important corridors were identified to ensure connectivity among the selected PCAs. Next, GIS tools were used to analyze the existing protected areas network and highlight important gaps in the system based on the important taxon areas and connecting corridors. Finally, the selected PCAs were ranked in

terms of urgency and opportunity of conservation action (Map 5 - Priority Conservation Areas and Corridors). Each of these steps is described in greater detail below.

Identifying model species for important taxa: In order to maintain viable populations of species in their natural communities, it is necessary to consider their specific area requirements. Due to limited resources, a subset of species – or models – was used as the focus of the analysis. By ensuring their conservation needs, many other species and their habitats would be accounted for. During the reconnaissance phase, 70 model species representing all major taxa (plants, mammals, birds, amphibians, reptiles, and fish) were selected to aid in identification of PCAs. Among these, 51 species are listed as critically endangered, endangered, or vulnerable by IUCN, while 34 species are endemic to the region. In addition, experts identified and delineated (on a 1:500,000 scale map) the key ranges of distribution for each selected species within each country. Of these 70 model species, experts then nominated 26 priority species as focal species for the Caucasus Ecoregion.

Selection of important taxon areas: Participants of the November 2002 workshop divided into five thematic groups to design maps of important taxon areas taking into account distribution and ranges of model species selected for each of the countries. In total 260 important areas were identified as priorities for conservation of focal species and major taxa as a whole (60 for plants, 29 for mammals, 121 for birds, 28 for amphibians and reptiles, 22 for fish). While identification of important taxon areas was the basis for selection of PCAs, it also provides a framework for conservation efforts at the species and/or taxon level.

Selection of Priority Conservation Areas: The important taxon areas were overlaid on a map and habitat representation evaluated. As a result of this analysis, 56 PCAs were selected as important for maintaining the unique biodiversity of Caucasus Ecoregion. The total area of identified PCAs equals 14 million hectares, covering about 24 percent of the Ecoregion's entire territory. Most of the PCAs coincide with mountain ranges, for example, 11 priority areas are in the Greater Caucasus, 19 in the Lesser Caucasus and South Caucasus Highlands, and two in the Talish-Alborz Range (Attachment 1).

These large conservation areas were not delineated as blocks of natural habitats which need to be protected in their entirety, but indicate important areas where urgent conservation measures are required. This may include direct intervention: zoning for different forms of land-use (agriculture, industry, infrastructure development and biodiversity conservation), planning of protected areas, identification of wildlife corridors, or definition of areas for natural resource use, as well as implementation of activities such as institutional strengthening, law enforcement, and awareness building.

Gap analysis for protected areas: Next, PCAs were mapped with the existing protected area network to determine gaps in the system (Map 6 – Priority Conservation Areas, Corridors, and Protected Areas). In some cases, protected areas are not strategically placed from a biodiversity point of view or the specific protection category doesn't correspond to the actual conservation needs. This gap analysis aids in planning new protected areas in the region, as well as in determining where the protection category of existing sanctuaries needs to be increased.

Delineation of important corridors: Large mammals, as well as birds, fish, and other animals capable of migration need corridors for dispersal and to maintain viable populations by ensuring genetic exchange. Therefore, to guarantee the connectivity of the selected PCAs, experts identified 60 corridors, keeping in mind the area requirements of migrating focal species, their population ecology, and the spatial distribution of the existing protected area system. The corridors, covering relatively large territories (a total of 5,873,539 ha), were then taken into consideration in definition of priority measures and projects for the ECP.

Delineation of PCAs allows limited funding to be directed to the most important areas for biodiversity conservation in the Ecoregion. The strategies and plans for conserving priority biomes and focal species outlined in Part 3 will target these 56 PCAs, and in particular those that are not currently afforded sufficient protection in the protected areas system. These efforts will in turn help to achieve the long-term biodiversity vision for the Caucasus Ecoregion.

4.2. Vision Statement

The biodiversity vision statement was formulated taking into account outcomes of the biodiversity and socio-economic assessments and considering long-term (50 year) objectives for conservation in the Caucasus Ecoregion.

The Caucasus Ecoregion represents one of the most biologically rich temperate regions on Earth. The region includes an incredible diversity of ecosystems including deserts, temperate rain forests, and alpine meadows. The Caucasus is well known for its high number of endemic species and unique evolutionary phenomena.

Our vision for the Caucasus is of a region where healthy populations of native plants and animals flourish; habitats, landscapes and natural processes are preserved; and where vibrant and diverse peoples actively participate in the equitable and sustainable management and use of natural resources.

The vision should be achieved using the following strategies:

- *Organize a well managed protected area network across the Ecoregion*
- *Encourage collaborative management through involvement of all stakeholders, from national governments to NGOs and local communities*
- *Conserve and restore endangered species*
- *Promote transboundary cooperation*
- *Restore degraded ecosystems*
- *Harmonize legislative and policy frameworks*
- *Coordinate scientific research and monitoring across the Ecoregion, including on indigenous knowledge and local communities*
- *Increase environmental education and raise public awareness on biodiversity conservation*

A. PLAN FOR INSTITUTIONAL DEVELOPMENT AND CAPACITY BUILDING IN THE CAUCASUS ECOREGION

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Development of an institutional framework and capacity building for organizations involved in biodiversity conservation in the Caucasus Ecoregion					
1. An effective institutional framework is established to support biodiversity conservation and sustainable resource use in the Caucasus Ecoregion	1.1. Fulfillment of ECP targets is systematically monitored and ECP is updated every third year of implementation by Regional Council for Biodiversity Conservation and Sustainable Resource Use in the Caucasus	1.1.1. Establish and run Regional Council consisting of representatives of relevant governmental organizations and NGOs from six countries of the Ecoregion	Ecoregion	All PCA and CR	
	1.2. Effective and congruous conservation legislation is in place in the six countries in the Ecoregion	1.2.1. Develop recommendations on how to harmonize conservation policies in the Ecoregion with participation of NGOs and other stakeholders	Ecoregion	All PCA and CR	
		1.2.2. Perfect the system of fines for violations of environmental regulations	Ecoregion	All PCA and CR	
		1.2.3. Take steps to harmonize legislation with related EU directives and improve institutional structures in Turkey	Turkey	All PCA and CR	
	1.3. Transboundary agreements on environmental conservation facilitate bilateral and multilateral initiatives in the Ecoregion	1.3.1. Finalize memorandum of understanding about cooperation in transboundary conservation and forest management between Turkey and Georgia	Georgia Turkey	PCA 54	
		1.3.2. Prepare agreements on transboundary cooperation on conservation of focal species	Ecoregion	All transboundary PCA and CR with focal species PCA 16, 19, 22, 51, 54	
	1.4. Staff of conservation agencies are qualified to carry out environmental policies and implement international conventions	1.4.1. Increase qualifications of natural resource managers in various agencies related to biodiversity conservation	Ecoregion	All PCA and CR	Biomes Focal species

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		1.4.2. Provide support to conservation agencies for implementing international conventions (CBD, CMS, CITES, Ramsar and Convention Concerning the Protection of the World Cultural and Natural Heritage)	Ecoregion	All PCA and CR	Biomes Focal species
	1.5. Build institutional capacity to halt poaching and illegal trade in wildlife and natural resources	1.5.1. Create a Traffic-Caucasus representative office	Ecoregion	All PCA and CR	Biomes Focal species
		1.5.2. Carry out training programs for customs officials, forest rangers, enforcement agencies, and other authorities	Ecoregion	All PCA and CR	Biomes Focal species
		1.5.3. Print and distribute informational materials to customs officials, decision-makers, and travelers	Ecoregion	All PCA and CR	Biomes Focal species
		1.5.4. Ensure legal basis and capacity of anti-poaching brigades and environmental divisions in enforcement agencies	Ecoregion	All PCA and CR	Biomes Focal species
		1.5.5. Identify gaps and contradictions in legislation related to conservation of species and their habitats and make recommendations for improvement	Ecoregion	All PCA and CR	Biomes Focal species
	1.6. Hunting and fishing regulations work to maintain healthy populations of wildlife	1.6.1. Promote the use of adaptive management practices to perfect hunting and fishing regulations and determine quotas	Ecoregion	Selected PCA and CR	Biomes Focal species
		1.6.2. Assess possibility of creating a mechanism for allocating a share of income from licenses to local communities in model areas	Iran	Selected PCA and CR	Biomes Focal species
		1.6.3. Support development of awareness building programs for hunters, hunting associations, and local communities	Ecoregion	Selected PCA and CR	Biomes Focal species

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
2. NGOs play an integral role in providing objective information and formulating conservation policy in the Caucasus Ecoregion	2.1. NGOs and volunteer groups complement efforts of conservation agencies to halt illegal poaching	2.1.1. Ensure legal basis for volunteer patrol groups	Georgia Russia	PCA 11, 16, 27	Biomes Focal species
		2.2. NGOs have capacity to carry out effective conservation programs in the Ecoregion	2.2.1. Support the Green and Blue volunteer patrol groups in Russia	Russia	Selected PCA and CR in Northern Caucasus
	2.2.2. Create public watch groups in two regions in Georgia	Georgia	PCA 13, 14, 15, 16, 22, 23, 24, 25, 26, 27, 28, 51, 54, 55	Biomes Focal species	
	2.2.3. Involve university student groups in WWF Turkey's Individual Support Network	Turkey	All PCA and CR in Turkish Caucasus		
	2.2.4. Provide core support for environmental programs of at least five NGOs in each country	Ecoregion	Selected PCA and CR		
Institutional framework and capacity building for protected areas management and Econet development					
3. Coordinated efforts for development of protected areas and monitoring biodiversity lead to effective management of Econets	3.1. A strategy and framework for developing an Ecoregional Econet is adopted and implemented by all six countries	3.1.1. Elaborate an Econet Plan for the entire Caucasus Ecoregion, incorporating forest, freshwater, high mountain, and coastal and marine Econets, based on the long-term vision for biodiversity conservation in the Caucasus Ecoregion and considering Important Plant Areas and important areas for animal taxons as defined by IUCN methodology	Ecoregion	All PCA and CR in Econets	Biomes
		3.1.2. National strategies for protected area development are elaborated in parallel with the Ecoregional Econet Plan	Ecoregion	All PCA and CR in Econets	Biomes
		3.1.3. Create legal framework for ecological corridors in the Econet(s)	Ecoregion	All PCA and CR in Econets	Biomes

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	3.2. All countries of the Ecoregion will have carried out national protected area management effectiveness assessments	3.2.1. Assess management effectiveness of protected areas systems using RAPPAM methodology	Ecoregion	Corresponding PCA and CR	
	3.3. Capacity for monitoring biodiversity in model protected areas throughout the Ecoregion is established	3.3.1. Set up a system for monitoring focal species in at least three nature reserves	Ecoregion	Model reserves in PCA and CR	
	3.4. Create mechanisms for sustainable funding of protected areas	3.4.1. Establish trust fund for the South Caucasus protected areas	South Caucasus countries	Selected PCA and CR	
4. Biodiversity and focal species are effectively conserved in well-managed protected areas and linking corridors (Econets)	4.1. Protected area stakeholders (including governments and local communities) have necessary skills for effective conservation of biodiversity and qualified trainers continue training programs regularly	4.1.1. Organize training system in each country for protected areas staff	Ecoregion	All protected areas in PCA and CR	
	4.2. Management planning practices involving local communities are used in model nature reserves in the Ecoregion, helping reserves function more effectively	4.2.1. Elaborate criteria and guidelines for protected areas management and get approval by appropriate agencies in each country	Ecoregion	At least 2 model reserves in all PCA and CR	Biomes
		4.2.2. Elaborate participatory management plans for model reserves in each country	Ecoregion	At least 2 model reserves in all PCA and CR	Biomes
		4.2.3. Elaborate participatory management plans for model planned transboundary reserves	Ecoregion	Selected PCA and CR	Biomes

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
5. World Heritage Sites have sufficient protected status and are effectively managed	5.1 Eight areas are declared World Heritage Sites and have sufficient protected status	5.1.1. Prepare proposals for at least three sites in the Ecoregion	Ecoregion	PCA 11, 25, 26, 54	Biomes
		5.1.2. Prepare three participatory management plans for areas approved as World Heritage Sites	Ecoregion	PCA 11, 25, 26, 54	Biomes
Greater involvement of civil society in decision-making and management of biodiversity conservation					
6. NGOs, state conservation agencies, and the mass media regularly publicize important issues on biodiversity conservation	6.1. NGOs and state conservation agencies adopt and implement successful communications campaigns on promoting biodiversity conservation	6.1.1. Assist NGOs and state agencies in developing communications strategies for promoting biodiversity conservation and provide core support for program implementation	Ecoregion	All PCA and CR	Biomes Focal species
		6.1.2. Carry out at least one broad-scale campaign per year on biodiversity conservation, using focal species and threatened habitats	Ecoregion	All PCA and CR	Biomes Focal species
		6.1.3. Regularly publish and distribute information bulletins and press releases from prominent NGOs and state conservation agencies	Ecoregion	All PCA and CR	Biomes Focal species
		6.1.4. Support publishing of brochures, posters, calendars, social advertising, and other promotional and informational materials on priority areas, focal species, and transboundary issues	Ecoregion	All PCA and CR	Biomes Focal species
	6.2. The mass media provides the public with quality information on biodiversity conservation and articles; programs are visible in the press on a regular basis	6.2.1. Organize training for local journalists	Ecoregion		
		6.2.2. Support filming of documentaries, preparing TV/radio programs, etc. on biodiversity conservation	Ecoregion		

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
7. Regional research, reference, and learning centers work to increase information and knowledge of biodiversity issues in the Ecoregion	7.1. Establish a network of pilot co-management learning centers	7.1.1. Develop centers	Ecoregion		
		7.1.2. Disseminate the results to the entire Ecoregion	Ecoregion		
		7.1.3. Support information and experience exchange among centers via workshops, etc.	Ecoregion		
	7.2. National natural history museums function as public awareness centers in the field of biodiversity conservation	7.2.1. Build consensus among all stakeholders	Ecoregion		
		7.2.2. Complete feasibility study for creating a regional public awareness center in the field of biodiversity conservation	Georgia Turkey		
		7.2.3. Open an exposition in the former Caucasus Museum in Tbilisi for the greater public	Georgia		
	7.3. The Caucasian regional biodiversity monitoring network and information database are in place	7.3.1. Design database and website	Ecoregion		Focal species 1.2.1
		7.3.2. Create mechanism for updating information; make information accessible over the Internet	Ecoregion		
		7.3.3. Begin to compile information for database from various sources	Ecoregion		Focal species 1.2.1
	7.4. The Caucasian regional training center on surveying and monitoring biodiversity is in place	7.4.1. Carry out needs assessment for training and existing capacity for development of training centers in each country	Ecoregion		
		7.4.2. Organize training system in each country for all stakeholders and the public	Ecoregion		
		7.4.3. Provide core support for developing regional training center in the field of biodiversity conservation with national branches in each country	Ecoregion		

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	7.5. National academic institutions and museums effectively execute research in the area of biodiversity conservation	7.5.1. Clearly define the functions of academic institutions dealing with conservation research	Ecoregion		Focal species 1.1
		7.5.2. Build capacity within institutions for modern conservation studies (mostly by training students abroad)	Ecoregion		
		7.5.3. Provide technical capacity in institutions for carrying out modern conservation studies	Ecoregion		
8. Schools and youth groups throughout the Ecoregion actively work to educate children on biodiversity conservation issues	8.1. Education programs for biodiversity conservation and sustainable use are elaborated and introduced into educational curricula and supporting educational materials are provided	8.1.1. Develop education programs for biodiversity conservation and sustainable use	Ecoregion		NGO program 9.2
		8.1.2. Support exchanges to foreign institutions for leading teachers, professors, and representatives of NGOs to develop and implement conservation curricula	Ecoregion		NGO program 9.2
		8.1.3. Print books, brochures, and other teaching materials on various subjects related to biodiversity	Ecoregion		NGO program 9.2
		8.1.4. Implement conservation curricula for model schools and institutes of higher learning	Ecoregion		
	8.2. Ecological camps work to boost environmental interest in children and community groups	8.2.1. Organize environmental ecological camps in the Ecoregion	Ecoregion	Selected PCA and CR	
		8.2.2. Study traditional knowledge of biodiversity conservation and sustainable use, and use results in above mentioned programs	Ecoregion	Selected PCA and CR	
9. NGOs play an important role in promoting environmental awareness in the Ecoregion	9.1. NGOs and other groups actively promote public awareness	9.1.1. Provide small grants to NGOs, schools, and other organizations for working with local communities on environmental awareness	Ecoregion	All PCA and CR	NGO program 9.2 Education program 8.1
	9.2. Skilled environmental education experts from at least two NGOs in each country help promote environmental education	9.2.1. Build capacity for environmental education among NGOs in each country	Ecoregion	All PCA and CR	Education program 8.1.

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
10. Capacity is developed within NGOs and governments to effectively involve local communities in planning, decision-making, and implementation of conservation programs in the Ecoregion	10.1. Regional understanding of theory and practice in collaborative management (CM) developed and internalized by NGOs and governments	10.1.1. Hold regional workshops on collaborative management, focused on developing an understanding of the theory and practice of collaborative management, and applicability to different classes of protected areas and degrees of resource use. Series of workshops, to be held once a year, supported by IUCN-CEESP	Ecoregion		
	10.2. Practical experience of the applicability of collaborative management is achieved in areas of varying levels of protection and resource use in each country of the Ecoregion	10.2.1. Identify two potential pilot projects in collaborative management of protected areas in each country, and initiate implementation process	Ecoregion	Existing or newly established protected areas in PCA or CR, as appropriate	
		10.2.2. Implement two pilot projects in collaborative management (CM) in each country of the Caucasus Ecoregion, supported by learning-by-doing oriented workshops every six months led by experts in CM, for four years	Ecoregion	Existing or newly established protected areas in PCA or CR, as appropriate	
	10.3. Work with governments to develop national policies enabling greater involvement of local communities in conservation	10.3.1. Involve government agencies in workshops and projects to the greatest extent possible without compromising community trust in the process; share experiences between countries of the Ecoregion and elsewhere on development and implementation of policies friendly to community involvement and acceptance of responsibility	Ecoregion		

2. Conservation and Sustainable Use of Forest Ecosystems in the Caucasus Ecoregion

Forests are the most important biome for biodiversity conservation in the Caucasus, covering 10,739,736 ha or nearly one-fifth of the region. Mountain forests make up the majority of the forest biome in the Ecoregion. Mountain forests play a critical role in preventing soil erosion and regulating water flow. Forests harbour many endemic and relic species of woody plants and herbs, and are important habitat to rare and endangered species of birds and animals. Large predators such as the Caucasian leopard, wolf, and brown bear depend on forest ecosystems, as well as ungulates like red deer, roe deer, bezoar goat, and wild boar. Forests are also an important part of economic development in the region and local communities depend on fuelwood for heating and cooking. Yet, logging practices are unsustainable and generally inefficient. Additionally, illegal logging accounts for a large share of the timber harvested. Though estimates as to the extent of legal logging are scarce, in Georgia for example, experts believe that illegal logging (including fuel wood harvesting) accounts for three times more than official quotas. Forest fires can be catastrophic for forest habitats and their inhabitants. Fragmentation and degradation of the region's forests are escalating at an alarming rate. Deforestation on mountain slopes leads to erosion and pollution of waterways.

In order to combat these threats and to guarantee long-term conservation of globally important forests in the Caucasus, tracts of forests should be set aside in effectively managed forest Econets, consisting of protected areas and linking corridors. Various types of protection regimes need to be explored and new methods tested to conserve additional forests, for example by developing special regulations for conserving high conservation value forests (HCVF). Policies for improving management in the forestry sector need to be worked out, and model projects for promoting sustainable forestry and community-based forestry need to be implemented. Reforestation is required in areas that have been severely degraded.

Currently, 1,431,819 ha or 13.78 percent of forest habitats are conserved in protected areas in the Ecoregion. Table 1 lists the planned Econets and depicts the current area of forests protected by country. In the long-term, an additional 10 percent of the forests in the Ecoregion should be conserved (IUCN I-IV), bringing the area of protected forests to nearly a quarter of the Ecoregion.

Table 1. Planned Econets for Forest Ecosystems and Current Area Protected by Country

Name of Planned Econet	Total Area of Forests in Region (ha)	Percent Currently Protected	Breakdown by Country		
			Country	Area of Forests (ha)	Percent Currently Protected
Greater Caucasus	5,968,697	16.80%	Azerbaijan	497,220	17.82%
			Georgia	1,928,101	4.87%
			Russia	3,543,376	23.16%
Lesser Caucasus	3,206,209	9.80%	Armenia	351,000	22.54%
			Azerbaijan	350,490	16.12%
			Georgia	793,451	12.66%
			Iran	54,462	36.53%
			Turkey	1,656,806	3.51%
Talish-Gilan (Guilan)	1,039,855	9.76%	Azerbaijan	155,585	2.27%
			Iran	884,270	10.93%
Kura-Araz (Araks) and Iori Basin	77,758	16.97%	Azerbaijan	49,310	20.36%
			Georgia	28,448	11.09%
Forest within Econets	10,292,519	13.91%		10,292,519	
Other forests outside Econets	447,217	10.71%			
Total in Ecoregion	10,739,736	13.78%			

The plan for forest conservation and sustainable use (as for other biomes) is divided into three sections: Conservation, Management, and Restoration. Ecoregions fall under conservation measures, but activities proposed in the management section, such as ecotourism, will largely take place within the Ecoregions.

Long-term (by 2025) and 10-year targets (by 2015) are indicated in the ECP. Projects should be begun in each of the six countries in the immediate future to ensure that these targets can be reached. Measures that should be taken in the near future are outlined in the Immediate Actions column. These measures include creating new nature reserves, improving management in existing reserves, training and capacity building, drafting and adopting legislation on forest management, and carrying out model projects.

Projects should be implemented in PCAs and CRs for forest ecosystems, as determined in the biodiversity assessment for the Caucasus Ecoregion (Map 5 – Priority Conservation Areas and Corridors). Priority areas for the forest biome include:

Priority Conservation Areas (PCA)

Abrau-Dyurso (1)
West Greater Caucasus (11)
Teberdinsky Nature Reserve (12)
Svaneti (13)
Racha-Central Caucasus (14)
Khevi-Tusheti (15)
Lagodekhi-Zagatala-West Dagestan (16)
Sarybash (17)
Ismailly-Shahdagh (21)
Alazani-Ganykh (23)
Askhi-Karst Massif (25)
Trialeti (27)
Kura-Jandari (28)
Mount Gyamysh (29)
Talish-Zuvand (37)
Gilan (39)
Meghri (42)
Arasbaran (44)
Bichanek (45)
Pambak-Sevan (50)
Sarikamis Forest (53)
West Lesser Caucasus (54)
Manglisi (55)

Priority Conservation Corridors (CR)

West Greater Caucasus – Teberdinsky Nature Reserve (9)
Svaneti – Racha-Central Caucasus (11)
Svaneti – Askhi-Karst Massif (12)
Racha-Central Caucasus – Trialeti (14)
Trialeti – West Lesser Caucasus (16)
West Lesser Caucasus – Sarikamis Forest (17)
Trialeti – Manglisi (18)
Manglisi – Pambak-Sevan (20)
Khevi-Tusheti – Lagodekhi-Zagatala-West Dagestan (23)
Lagodekhi-Zagatala-West Dagestan – Alazani-Ganykh (26)
Sarybash – Alazani-Ganykh (27)
Lagodekhi-Zagatala-West Dagestan – Sarybash – Ismailly-Shahdagh (29)
Pambak-Sevan – Mount Gyamysh (32)
Mount Gyamysh – Meghri – Arasbaran (43)
Talish-Zuvand – Sefid Rud-Anzali (58)
Sefid Rud-Anzali – Gilan (59)

Since many of the PCAs and CRs are found along mountain systems and in valleys, parts of this section overlap with the high mountain and freshwater conservation plans. Measures in the institutional development and capacity building plan also pertain to forest ecosystems. Cross-references are listed where appropriate in the last column of the table below.

B. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF FOREST ECOSYSTEMS IN THE CAUCASUS ECOREGION

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions by 2010	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Conservation					
1. Representative forests and associated biodiversity of the Greater Caucasus Range are effectively preserved in a network of protected areas and linking corridors (Econet)	1.1. Framework for Greater Caucasus Econet is established	1.1.1. Identify representative forest types and carry out gap analysis of current protected areas system	Azerbaijan Georgia Russia	PCA 11, 12, 13, 14, 15, 16, 17, 18, 21 CR 11, 12, 14, 16, 23, 26, 27, 29	High mountain 1.1
		1.1.2. Identify and assess current and potential threats to forest biodiversity	Azerbaijan Georgia Russia	The same PCA and CR	High mountain
		1.1.3. Elaborate plan/guidelines for creation of the Greater Caucasus Econet	Azerbaijan Georgia Russia	The same PCA and CR	High mountain 1.1
	1.2. Half of Greater Caucasus Econet is created – an additional 150,000 ha of forests is conserved and management is improved on at least 100,000 ha of existing protected areas in the Greater Caucasus	1.2.1. Improve management of Zagatala, Ilisu, Pirgulu, Ismailly, and Turyanchay strict nature reserves	Azerbaijan	PCA 17	Focal species 6.1.1, 8.2.1
		1.2.2. Create Shahdagh National Park and Sheki Nature Park	Azerbaijan	PCA 21 CR 29	High mountain 1.2.1
		1.2.3. Create the Racha National Park	Georgia	PCA 14	High mountain 1.2.2 Focal species 6.1.2
		1.2.4. Establish the Svaneti National Park	Georgia	PCA 13	High mountain 1.2.3 Focal species 6.1.2
		1.2.5. Establish Khevsureti Sanctuary	Georgia	PCA 15	High mountain 1.2.4, 2.2.10 Focal species 6.1.2, 8.2.1
		1.2.6. Create nature park in Krasnodar Region	Russia	PCA 11	High mountain 1.1
		1.2.7. Create nature park in Karachaevo-Cherkessiya	Russia	PCA 11, 12 CR 9, 10	High mountain 1.1

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		1.2.8. Establish four new sanctuaries in Krasnodar Region	Russia	PCA 11	
		1.2.9. Establish three sanctuaries in Dagestan	Russia	PCA 16, 19	High mountain Freshwater
		1.2.10. Establish transregional park between Northern Osetiya and Kabardino-Balkariya	Russia	PCA 14	High mountain 1.2.8
		1.2.11. Upgrade status of Tiyaratinsky Sanctuary to strict nature reserve	Russia	PCA 16	High mountain 1.2.9 Focal species 6.1.1, 7.2.5
		1.2.12. Establish biosphere polygon for Teberdinsky Nature Reserve	Russia	PCA 12	High mountain 1.2.7 Focal species 6.1.1
		1.2.13. Create additional protected areas and connecting corridors as outlined by Econet Plan	Azerbaijan Georgia Russia	Selected PCA and CR	High mountain and Freshwater Econets
	1.3. At least two transboundary protected areas are established as part of the Greater Caucasus Econet	1.3.1. Establish the Northwestern Caucasus Transboundary Reserve	Georgia Russia	PCA 11	High mountain 1.3.1
		1.3.2. Create the Eastern Greater Caucasus Transboundary Reserve	Azerbaijan Georgia Russia	PCA 16	High mountain 1.3.2 Focal species 6.1.1
	1.4. Public support for the Greater Caucasus Econet is evidenced by a decrease in poaching and illegal logging	1.4.1. Work with local communities to build support for protected areas	Azerbaijan Georgia Russia	Selected regions of Greater Caucasus Econet	High mountain 1.4.1
		1.4.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Georgia Russia	Selected regions of Greater Caucasus Econet	High mountain 1.4.2

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
2. Representative forests and associated biodiversity of the Lesser Caucasus Range are effectively preserved in a network of protected areas and linking corridors (Econet)	2.1. Framework for Lesser Caucasus Econet is established	2.1.1. Complete gap and threat analysis in the Lesser Caucasus	Armenia Azerbaijan Georgia Iran Turkey	PCA 27, 29, 42, 44, 50, 53, 54, 55 CR 14, 16, 17, 18, 20, 32, 43	Freshwater 1.2.9 High mountain 2.1
		2.1.2. Elaborate plan/guidelines for creation of the Lesser Caucasus Econet	Armenia Azerbaijan Georgia Iran Turkey	PCA 27, 29, 42, 44, 50, 53, 54, 55 CR 14, 16, 17, 18, 20, 32, 43	Freshwater 1.1 High mountain 2.1
	2.2. Half of Lesser Caucasus Econet is created, an additional 100,000 ha of forests is conserved and management is improved on at least 100,000 ha of existing protected areas in the Lesser Caucasus	2.2.1. Create new protected area in southern Armenia for protection of forests and focal species	Armenia	PCA 42, 43 CR 42, 43	High mountain 2.1, 2.2.5 Focal species 3.2.1, 7.2.1, 11.2.3
		2.2.2. Continue improving protection regime and management of Shikahogh and Khosrov strict nature reserves	Armenia	PCA 42, 43, 49	High mountain 2.1 Focal species 3.2.1, 7.2.3, 11.2.2
		2.2.3. Elaborate management plan for protected area complex in the Dsegh-Haghartsin-Pambak region with participation of local communities	Armenia	PCA 50	
		2.2.4. Create a corridor between the Khosrov and Zangezur ranges in southern Armenia to allow animal migrations	Armenia	CR 40, 41	High mountain 2.2.5
		2.2.5. Create the Goygol (Gey-Gel) National Park based on Goygol (Gey-Gel) Strict Nature Reserve	Azerbaijan	PCA 29	
		2.2.6. Strengthen management of Shahbuz Strict Nature Reserve	Azerbaijan	PCA 45	High mountain 2.2.7
		2.2.7. Improve protection of Kintrishi Strict Nature Reserve and Ajameti Strict Nature Reserve	Georgia	PCA 54	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		2.2.8. Establish the Nedzvi and Tetrobi sanctuaries in the support zone of Borjomi-Kharagauli National Park	Georgia	PCA 27	
		2.2.9. Create a protected area between Borjomi-Kharagauli National Park and Kintrishi Strict Nature Reserve	Georgia	PCA 27, 54 CR 16	
		2.2.10. Create a protected area to conserve oak forests in the Tetrtskaro Region	Georgia	CR 20	
		2.2.11. Establish the Mtrala Regional Park in the Ajara Autonomous Republic	Georgia	PCA 54	
		2.2.12. Plan a national park in the Erusheti Range	Georgia	PCA 54	
		2.2.13. Improve protection of the Arasbaran Nature Reserve (MAB) in Iran	Iran	PCA 44	
		2.2.14. Improve management and increase size of protected areas in Camili (Gorgit and Efeler nature reserves)	Turkey	PCA 54	
		2.2.15. Establish visitors centers in existing national parks in the Turkish Caucasus	Turkey	PCA 54	
		2.2.16. Elaborate management plan for at least one existing national park and improve management practices	Turkey	PCA 54	
		2.2.17. Create new protected area in the Sarikamis Forest PCA	Turkey	PCA 53 CR 22	Focal species 5.1.4
		2.2.18. Create new protected area in the Yalnizcam Mountains (Important Plant Area)	Turkey	CR 17	Focal species 5.1.4
		2.2.19. Establish ecological corridors linking existing protected areas in the Dogu Karadeniz Mountains	Turkey	PCA 54	Focal species 5.1.4

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		2.2.20. Create additional protected areas and connecting corridors as outlined by Econet Plan	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR	High mountain 2.1
	2.3. Create at least one transboundary reserve in the Lesser Caucasus Econet	2.3.1. Explore feasibility of creating a transboundary protected area on the border of Georgia/Turkey	Georgia Turkey	PCA 54	
	2.4. Public support for the Lesser Caucasus Econet is evidenced by a decrease in poaching and illegal logging	2.4.1. Work with local communities to build support for protected areas	Azerbaijan Armenia Georgia Iran Turkey	Selected PCA and CR in the Lesser Caucasus	Freshwater 1.4.1 High mountain 2.4.1 Focal species 3, 7, 11
		2.4.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Armenia Georgia Iran Turkey	Selected PCA and CR in the Lesser Caucasus	Freshwater 1.4.2 High mountain 2.4.2

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
3. Representative forests and associated biodiversity of the Talish-Gilan (Guilan) (Western Alborz) Region are effectively preserved in a network of protected areas and linking corridors (Econet)	3.1. Framework for Talish-Gilan (Guilan) Econet is established	3.1.1. Identify representative forest types and carry out gap analysis in current protected areas system in the Talish-Gilan (Guilan) Region	Azerbaijan Iran	PCA 37, 39 CR 58, 59	Focal species 3.1
		3.1.2. Identify and assess current and potential threats to forest biodiversity	Azerbaijan Iran	PCA 37, 39 CR 58, 59	
		3.1.3. Elaborate plan/guidelines for creation of the Talish-Gilan (Guilan) Econet	Azerbaijan Iran	PCA 37, 39 CR 58, 59	Freshwater 4.1.1
	3.2. Half of Talish-Gilan (Guilan) Econet is created, an additional 50,000 ha of forests is conserved and management is improved on at least 50,000 ha of existing protected areas in Talish-Gilan	3.2.1. Elaborate management plan and establish infrastructure of the Hirkan National Park	Azerbaijan	PCA 37	Focal species 3.2.1, 8.3.1
		3.2.2. Work with local communities to create at least one Community Conservation Area (CCA)	Iran	PCA 37, 39, 56 CR 57, 58, 59, 60	
		3.2.3. Create additional protected areas and connecting corridors as outlined by Econet Plan	Azerbaijan Iran	Selected PCA and CR	Focal species 3.1
	3.3. Transboundary initiatives for conservation of forests in the Talish-Gilan (Guilan) Econet are in place	3.3.1. Create a transboundary protected area to conserve forests and important leopard habitat	Azerbaijan Iran	PCA 37, 41	Focal species 3.1.4
		3.3.2. Create additional protected areas and connecting corridors between Azerbaijan and Iran as outlined by Econet Plan	Azerbaijan Iran	PCA 37, 39 CR 58, 59	Focal species 3.1.4, 3.1.5
	3.4. Public support for the Talish-Gilan (Guilan) Econet is evidenced by a decrease in poaching and illegal logging	3.4.1. Work with local communities to build support for protected areas	Azerbaijan Iran	PCA 37, 39 CR 58, 59	
		3.4.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Iran	PCA 37, 39 CR 58, 59	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
4. Representative forests in the Kura-Araz (Araks) Lowlands and Iori Basin are conserved in protected areas of various types	4.1. An additional 5,000 ha of forests and open woodlands are protected in the Kura-Araz (Araks) Lowlands and Iori basin and conservation in 50,000 ha of existing reserves is improved	4.1.1. Improve management of Garayazy Strict Nature Reserve	Azerbaijan	PCA 28	Freshwater 4.1.3
		4.1.2. Develop management plan and infrastructure of Eldar Pine Strict Nature Reserve	Azerbaijan	PCA 22	Freshwater 4.1.3
		4.1.3. Improve conservation and management of four sanctuaries in floodplain forests of Eastern Georgia	Georgia	PCA 22	Freshwater 4.1.3
		4.1.4. Create additional protected areas and connecting corridors as needed in coordination with freshwater conservation plan	Azerbaijan Georgia	Selected PCA and CR	Freshwater 4.1
	4.2 Transboundary initiatives for conservation of forests in the Kura- Araz (Araks) Lowlands and Iori Basin are in place	4.2.1. Create a transboundary protected area in floodplain forests of the Kura River Valley (Gardabani Sanctuary in Georgia and Garayazy Nature Reserve and Garayazy-Agstafa Sanctuary in Azerbaijan)	Azerbaijan Georgia	PCA 28	Freshwater 4.1
		4.2.2. Establish transboundary cooperation in Iori River Basin (Eldar Pine Strict Nature Reserve, Azerbaijan, and Chachuna Sanctuary, Georgia)	Azerbaijan Georgia	PCA 22	Freshwater 4.1.3 Focal species 4.1.4
	4.3. Public support for the Kura-Araz (Araks) Lowlands and Iori Basin is evidenced by a decrease in poaching and illegal logging	4.3.1. Work with local communities to build support for protected areas	Azerbaijan Georgia	PCA 22, 28	Freshwater 1.4.1 High mountain 2.4.1
		4.3.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Georgia	PCA 22, 28	Freshwater

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
<u>Management</u>					
5. Forests are managed effectively, widespread illegal logging is eliminated and conservation of biodiversity is taken into account in forestry practices	5.1. An Ecoregion-wide concept on conservation and sustainable use of forests is adopted and implemented	5.1.1. Hold conference with decision-makers, managers of forestry enterprises, and other stakeholders on sustainable forestry and conservation in the Ecoregion	Ecoregion	All forest PCA and CR	
		5.1.2. Assess the current state of forests and forest management practices in the Ecoregion	Ecoregion	All forest PCA and CR	
		5.1.3. Elaborate Ecoregion-wide concept of sustainable forest management in a participatory manner and obtain approval of stakeholders in all six countries	Ecoregion	All forest PCA and CR	
	5.2. A normative framework for using HCVF as a means of good forest management practice is established	5.2.1. Develop and get approval for methodology to identify, inventory, classify, and designate HCVF in at least three countries of the Ecoregion	Ecoregion/ Selected countries	Selected PCA and CR	
		5.2.2. Draft guidelines on identification of forests according to HCVF criteria in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	
		5.2.3. Conduct training in delineation of HCVF for forest management agencies and enterprises in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	
		5.2.4. Identify HCVF in at least three countries and instate corresponding management practices	Ecoregion/ Selected countries	Selected PCA and CR	
	5.3. Illegal logging and timber trade levels are cut by half in forest PCA and CR	5.3.1. Assess impacts and extent of illegal logging in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		5.3.2. Identify and disseminate information on best practices of forest management and law enforcement for prevention of illegal logging in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	
		5.3.3. Provide information on and options for improved policy and practice in timber-producing and/or timber-consuming countries, such as measures to address trade in illegally harvested timber and timber products in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	
		5.3.4. Promote development of effective independent monitoring system of illegal logging timber trade in at least three countries	Ecoregion/ Selected countries	Selected PCA and CR	
		5.3.5. Halt construction of additional roads and close some existing roads to stop illegal logging	Iran	PCA 37, 39, 44	
	5.4. Openness of logging operations and accounting procedures is adopted in all timber enterprises	5.4.1. Launch public awareness campaign against illegal logging in the Ecoregion	Ecoregion	All forest PCA and CR	
		5.4.2. Ensure public access to information on state of forests and logging operations	Ecoregion		
		5.4.3. Rate timber companies according to their environmental records and distribute information to buyers	Georgia Iran Russia	Selected PCA and CR	
		5.4.4. Carry out independent inspections and publicize findings of operations in two of timber enterprises in each country	Ecoregion	Selected PCA and CR	
		5.4.5. Launch international awareness campaign against illegal logging and trade in consumer markets	Russia and Europe	Selected PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	5.5. Sustainable forestry is practiced in one-third of commercial forests in the Ecoregion	5.5.1. Obtain approval and commitment of at least two timber harvesting enterprises to adopt methods of sustainable forest management	Georgia Russia	Selected PCA and CR	
		5.5.2. Establish demonstration forest on a model site adjacent to the Borjomi-Kharagauli National Park	Georgia	PCA 27	
		5.5.3. Establish two model forests in mountain regions of the North Caucasus	Russia	PCA 11	
		5.5.4. Integrate biodiversity conservation into forest management in at least one forest management unit	Turkey	PCA 54	
		5.5.5. Develop and implement model project on sustainable forest management in at least one forest management unit in the Turkish Caucasus	Turkey	PCA 53	
	5.6. Successful models of community-based forestry are functioning in each country	5.6.1. Prepare framework for community-based forestry	Selected country or countries	PCA 27, 37, 39, 44	
		5.6.2. Launch model projects on community-based forestry in specific countries	Selected country or countries	PCA 27, 37, 39, 44	
6. Forest certification is established and functioning in the Caucasus Ecoregion according to international standards	6.1. Capacity for voluntary forest certification is created in the Ecoregion	6.1.1. Prepare feasibility study for implementing FSC certification in all countries, develop and submit follow-up project proposals to relevant donors	Ecoregion	Forest PCA and CR	
		6.1.2. Lobby relevant agencies/stakeholders to implement FSC	Ecoregion	Selected PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
7. Alternatives to timber production play a viable role in the economy of model forest communities	7.1. Non-timber forest products play a viable role in the economies of six model communities	7.1.1. Elaborate program for use of non-timber forest products in at least three model areas	Selected countries	Selected PCA and CR	High mountain 5.1
		7.1.2. Begin implementation of five model projects on sustainably collecting and raising useful forest plants	Armenia Azerbaijan Georgia	Selected PCA and CR	High mountain 5.1
		7.1.3. Promote sustainable production of commercial species	Turkey	PCA 52, 54 CR 17	
	7.2. Community-based resource management relieves pressures on forests in six model areas	7.2.1. Carry out model project on sustainable grazing in forests	Iran Turkey	Selected PCA and CR	High mountain 4.1.5, 4.1.6
		7.2.2. Provide small grants to at least one NGO in each country to develop alternative livelihoods in forest communities in PCA and CR	Ecoregion	Selected PCA and CR	High mountain
	8. Ecotourism is a viable source of income in model forest communities in each country	8.1. Framework and capacity for sustainable ecotourism in forest ecosystems are in place and integrated into reserve planning	8.1.1. Elaborate participatory plans for developing ecotourism in two-three selected sites in each country	Ecoregion	Selected PCA and CR
8.1.2. Develop capacity for model projects on ecotourism			Ecoregion	Selected PCA and CR	High mountain 6.1.2
8.1.3. Launch model projects in selected sites			Ecoregion	PCA 12, 27, 43, 37, 54	High mountain 6.2.1
Restoration					
9. The area of forests is increased using native species in forest PCA and CR in the Ecoregion	9.1. Detailed Forest Landscape Restoration (FLR) plans with clear biodiversity and socio-economic goals are prepared for at least two model PCA and two CR	9.1.1. Develop FLR plans for one lowland/floodplain PCA and one CR	Selected countries	Selected PCA and CR	
		9.1.2. Develop FLR plans for one mountain PCA and one CR	Selected countries	Selected PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	9.2. Governments of at least two countries have implemented policies consistent with FLR	9.2.1. Analyze existing forest restoration practices in the Ecoregion	Selected countries	Selected PCA and CR	
		9.2.2. Organize regional seminar on FLR for stakeholders and develop recommendations for elaborating governmental policies consistent with FLR	Ecoregion	Ecoregion	
	9.3. The area of planted forests is increased in Armenia by 4,000 ha	9.3.1. Develop and begin implementation of at least one model project on FLR with participation of local communities	Armenia	PCA 42, 43, 50 CR 20, 32, 42, 43	
		9.3.2. Launch campaign to reduce forest fires in Armenia	Armenia	PCA 42, 43, 50 CR 20, 32, 42, 43	
		9.3.3. Elaborate and begin implementing model projects to reduce the area affected by forest pests and disease in Armenia	Armenia	PCA 42, 43, 50 CR 20, 32, 42, 43	
		9.3.4. Develop and begin implementing measures for controlling invasive species	Armenia	PCA 42, 43, 50 CR 20, 32, 42, 43	
	9.4. Forest cover is increased in Azerbaijan by 75,000 ha	9.4.1. Develop a program for forest restoration taking into account climate change	Azerbaijan	Selected PCA and CR	
		9.4.2. Begin to restore degraded forests in the Greater Caucasus, Talish, and Kura-Araz (Araks) Lowlands	Azerbaijan	PCA 19, 23, 28, 37 CR 26, 27	
		9.4.3. Select and begin restoring model territory of subalpine forests	Azerbaijan	Appropriate PCA and CR	
		9.4.4. Elaborate strategy for conservation and restoration of relic forests in the Samur-Devechi floodplain of Azerbaijan	Azerbaijan	PCA 19	Marine 1.2.1, 1.3.1
9.4.5. Begin afforestation projects to create contiguous forest cover in northern Gobustan		Azerbaijan	PCA 31		

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		9.4.6. Plant forests on the Caspian coast	Azerbaijan	Selected PCA	
		9.4.7. Begin at least one model project on FLR with participation of local communities	Azerbaijan	Selected PCA and/or CR	
	9.5. At least two model projects on FLR are implemented in Georgia	9.5.1. Elaborate and begin implementation of model projects on FLR with participation of local communities	Georgia	Selected PCA and/or CR	
	9.6. At least 100,000 ha of forests are restored in the Iranian Caucasus	9.6.1. Begin model project on forest restoration in the Abbas Abad Region	Iran	PCA 37, 39, 44 CR 43, 58, 59	
	9.7. At least 10 percent of degraded forests are restored in the Turkish Caucasus through FLR projects	9.7.1. Encourage governmental institutions and NGOs to adopt FLR approach	Turkey	All PCA and CR in the Turkish Caucasus	
		9.7.2. Carry out gap and threat analysis, identify and map target FLR sites	Turkey	PCA 53, 54 CR 17	
		9.7.3. Develop socio-economic and ecological criteria and indicators for tracking progress with FLR	Turkey	Selected PCA or CR	
		9.7.4. Initiate at least one FLR project in a PCA in the Turkish Caucasus	Turkey		
	9.8. At least 10 percent of degraded forests are restored in the Russian Caucasus through FLR projects	9.8.1. Carry out gap and threat analysis, identify and map target FLR sites	Russia	Selected PCA and CR	
		9.8.2. Develop regional socio-economic and ecological criteria and indicators for tracking progress of FLR	Russia	Selected PCA and CR	
		9.8.3. Initiate at least one FLR project in a PCA in the Russian Caucasus	Russia	Selected PCA and CR	
		9.8.4. Initiate other forest restoration projects in the Caspian coastal zone	Russia	Selected PCA and CR	

3. Conservation and Sustainable Use of Freshwater Ecosystems in the Caucasus Ecoregion

Wetlands and freshwater habitats cover nearly five million hectares or about 12 percent of the Caucasus Ecoregion, including river estuaries along the Black and Caspian seas, numerous freshwater lakes, rivers, and swamps. Freshwater habitats are crucial for migrating and nesting birds, spawning fish, and provide priceless water for humans. Rare birds that depend on freshwater systems include marbled duck, white-headed duck, and many others. Fish migrate into freshwater rivers from the Caspian and Black seas to spawn. Several species of sturgeon are threatened by illegal fishing, pollution, and other anthropogenic impacts in freshwater spawning areas.

Freshwater ecosystems contain some of the most threatened habitats in the region due to negative impacts from mismanaged irrigation and wetland drainage, unsustainable water use, overfishing, infrastructure development, and pollution. Overfishing is a problem in most of the freshwater priority conservation areas and corridors, especially where monitoring and control by inspection agencies are insufficient. Infrastructure development threatens natural habitats along the Caspian Sea coast, in the western and southern parts of the Lesser Caucasus Mountains, and the central part of the Transcaucasian Depression. Pollution from agriculture and industry has impacted freshwater systems and breeding bird and fish populations in the Kuma-Manych Basin of the North Caucasus and in the central part of the Transcaucasian Depression, as well as other areas. Ineffective water management is a serious problem for water conservation for Lake Sevan and neighbouring regions in Armenia and for a number of rivers in the Ecoregion (Iori, Alazani, Kura, and others).

In order to combat these threats and guarantee long-term conservation of globally important freshwater ecosystems, areas along river basins should be set aside in effectively managed Econets, consisting of protected areas and linking corridors. Restoration projects should be carried out in degraded wetlands, and model projects on water conservation, reducing pollution, and monitoring illegal fishing should be implemented.

Currently, 11.72 percent of freshwater habitats in the Ecoregion are conserved in protected areas. An additional five percent should be set aside for conservation in the long-term. Table 2 lists the planned Econets and the current area of freshwater habitats protected in each country.

Table 2. Planned Econets for Freshwater Ecosystems and Current Area Protected by Country

Name of Region and/or Planned Econet	Total Area of Freshwater Habitats in Region (ha)	Percent Currently Protected	Breakdown by Country		
			Country	Area of Freshwater (ha)	Percent Currently Protected
Javakheti-Asia Minor – Lake Sevan Region and Kura-Araz (Araks) Basin	1,020,198	19.24%	Armenia	180,736	70.05%
			Azerbaijan	573,738	6.31%
			Georgia	137,953	15.52%
			Iran	68,102	17.45%
			Turkey	59,669	0.33%
Manych-Gudilo	720,835	3.34%	Russia	720,835	3.34%
Other freshwater habitats in Ecoregion	2,997,006	7.85%	Azerbaijan	230,049	14.1%
			Georgia	171,395	15.89%
			Iran	18,002	10.2%
			Russia	2,817,504	10.7%
			Turkey	625	0%
Total in Ecoregion	4,978,608	11.72%			

The plan for conservation and sustainable use of freshwater ecosystems is divided into three sections: Conservation, Management, and Restoration. Creation of Econets falls under conservation measures, but activities proposed under sustainable use, such as ecotourism, will also largely take place within the Econets.

Long-term (by 2025) and 10-year targets (by 2015) are indicated in the conservation plan. Projects should be begun in each of the six countries in the immediate future to ensure that these targets can be reached. These near-term measures are outlined in the Immediate Actions column. These measures include creating new nature reserves, improving management in existing reserves, training water resource managers, drafting and adopting legislation on management of fish and water resources, and carrying out model projects.

Projects should be implemented in PCAs and CRs for freshwater ecosystems, as determined in the biodiversity assessment for the Caucasus Ecoregion (Map 5 – Priority Conservation Areas and Corridors). Priority areas for the freshwater biome include:

Priority Conservation Areas (PCA)

Abrau-Dyurso (1)
Kuban (2)
Primorsko-Akhtarsk (3)
Yeysk (4)
Don Delta (5)
Veselovskoye Reservoir (6)
Manych-Gudilo (7)
Dadynskoye Lake (8)
Kizlyarsky Bay (9)
Samur-Yalama (19)
Aghzibir (Akzybir) Lake (20)
Iori-Mingechevir (Mingechaur) (22)
Alazani-Ganykh (23)
Rioni (26)
Kura-Jandari (28)
Varvara-Barda (30)
Gobustan-Hajigabul (31)
Makhmud Chala (34)
Gyzyl-Agach (Gyzylaghaj) (35)
Kura-Araz (Araks) Valley (36)
Araz (Araks) Valley (38)
Agri Dagi and Armash (48)
Pambak-Sevan (50)
Javakheti (51)
Igdir Plain and Armavir (52)
Sefid Rud-Anzali (56)

Priority Conservation Corridors (CR)

Primorsko-Akhtarsk – Kuban (2)
Don Delta – Veselovskoye Reservoir (5)
Veselovskoye Reservoir – Manych-Gudilo (6)
Manych-Gudilo – Dadynskoye Lake (7)
Javakheti – Igdir Plain and Armavir (21)
Freshwater Igdir Plain and Armavir – Agri Dagi (Ararat) and Armash (34)
Varvara-Barda – Kura-Araz (Araks) Valley (44)
Kura-Araz (Araks) Valley – Makhmud Chala (49)
Kura-Araz (Araks) Valley – Araz (Araks) Valley (50)
Makhmud Chala – Gyzyl-Agach (Gyzylaghaj) (51)
Alazani-Ganykh – Iori-Mingechevir (Mingechaur) (28)

Since many of the freshwater PCAs and CRs are found near coastal systems and in mountains and forested valleys, parts of this section overlap with the marine and forest conservation plans. Measures in the institutional development and capacity building plan will also impact freshwater ecosystems. Cross-references are listed where appropriate in the last column of the conservation plan.

C. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF FRESHWATER ECOSYSTEMS IN THE CAUCASUS ECOREGION

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions by 2010	Country	Priority Area (PCA)/ Corridor (CR)	Cross-Reference	
Conservation						
1. Representative freshwater habitats and associated biodiversity of the Javakheti-Asia Minor – Lake Sevan Region and Kura-Araz (Araks) Basin are effectively preserved in a network of protected areas and linking corridors (Econet)	1.1. Framework for protection of freshwater habitats in the Lesser Caucasus – Javakheti-Asia Minor Region is established	1.1.1. Elaborate plan/guidelines for creation of protected areas and corridors in the Lesser Caucasus and Javakheti-Asia Minor Regions	Armenia Azerbaijan Georgia Iran Turkey	PCA 22, 23, 28, 30, 34, 36, 38, 48, 50, 51, 52 CR 21, 28, 34, 44, 49, 50, 51	Forest 2.1 High mountain 2.1	
		1.2. New protected areas are created on at least 50,000 ha and management of existing protected areas is improved on at least 100,000 ha	1.2.1. Improve management of Sevan National Park	Armenia	PCA 50	
			1.2.2. Create Lake Arpi National Park and three sanctuaries in northwestern Armenia	Armenia	PCA 51	Freshwater 4.1.5 High mountain 2.2.1
			1.2.3. Create the Prikurinsky Strict Nature Reserve	Azerbaijan	PCA 33	
			1.2.4. Improve management of Ag-Gel (Aghgol) National Park	Azerbaijan	PCA 36	
			1.2.5. Improve conservation of freshwater ecosystems and bird nesting areas in the Kura River Basin	Azerbaijan	PCA 30, 34, 36	
			1.2.6. Create Javakheti National Park	Georgia	PCA 51	
			1.2.7. Create the Ktsia-Tabatskuri Sanctuary	Georgia	PCA 27	High mountain 2.2.9
			1.2.8. Obtain legal status for potential freshwater protected areas in the Turkish Caucasus	Turkey	Selected PCA and CR	
			1.2.9. Assess and create additional protected areas and connecting corridors as outlined by Econet Plan	Armenia Azerbaijan Georgia Iran Turkey	CR 21, 28, 34, 44, 49, 50, 51	Forest 2.1 High mountain 2.1

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	1.3. Establish pilot Community Conservation Areas (CCA) in each country	1.3.1. Establish at least two pilot CCAs	Selected countries	Selected PCA and CR	
	1.4. Public support for conservation in the Javakheti-Asia Minor – Lake Sevan Region and Kura-Araz (Araks) Basin is evidenced by a decrease in poaching, illegal fishing, and other violations	1.4.1. Work with local communities to build support for protected areas	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR in Javakheti-Lake Sevan Region	Forest 2.4.1, 4.3.1 High mountain 2.4.1
		1.4.2. Publish informational materials to distribute in local communities and to visitors	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR in Javakheti-Lake Sevan Region	High mountain 2.4.2
2. Representative freshwater habitats and associated biodiversity of the Manych-Gudilo Region are effectively preserved in a network of protected areas and linking corridors (Econet)	2.1. Framework for Manych-Gudilo Econet is established	2.1.1. Elaborate plan/guidelines for creation of the Manych-Gudilo Econet	Russia	PCA 5, 6, 7, 8 CR 5, 6, 7	
	2.2. New protected areas are created along the Manych-Gudilo Depression on at least 20,000 ha	2.2.1. Establish two sanctuaries on Manych-Gudilo Reservoir	Russia	PCA 7	
		2.2.2. Protect freshwater habitats and bird nesting areas in the Veselovskoye and Ust-Manych Reservoirs	Russia	PCA 6 CR 6	
		2.2.3. Create additional protected areas and connecting corridors as outlined by Econet Plan	Russia	PCA 5, 6, 7, 8 CR 5, 6, 7	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	2.3. Public support for the Manych-Gudilo Econet is evidenced by a decrease in poaching, illegal fishing, and other violations	2.3.1. Work with local communities to build support for protected areas	Russia	PCA 5, 6, 7, 8 CR 5, 6, 7	
		2.3.2. Publish informational materials to distribute in local communities and to visitors	Russia	PCA 5, 6, 7, 8 CR 5, 6, 7	
3. All freshwater habitats of international importance (Ramsar sites and Important Bird Areas – IBAs) are granted protection (IUCN I-IV)	3.1. About 12 new sites in the Ecoregion are approved under the Ramsar Convention as Wetlands of International Importance	3.1.1. Inventory important freshwater habitats and prepare recommendations for Ramsar sites in each country	Ecoregion	PCA 2, 3, 4, 5, 6, 7, 8, 9, 19, 20, 22, 26, 28, 30, 31, 34, 35, 36, 38, 48, 50, 51, 52, 56	High mountain 3.1.1 – 3.1.7 Focal species 16, 17, 18
		3.1.2. Begin to prepare documentation to nominate two sites in each country	Ecoregion	The same PCAs	See above
		3.1.3. Obtain Ramsar status and begin to elaborate management plans for approved sites	Ecoregion	The same PCAs	See above
	3.2. Legislative basis for conservation of Important Bird Areas (IBAs) in freshwater habitats is established and one-third of freshwater IBAs are protected	3.2.1. Complete IBA identification and delineation in freshwater ecosystems	Ecoregion	The same PCAs	High mountain 3.1.1 – 3.1.7 Focal species 16, 17, 18
		3.2.2. Prepare and publish national IBA inventories	Ecoregion	The same PCAs	See above
		3.2.3. Develop IBA caretaker network and establish long-term monitoring in key freshwater habitats	Ecoregion	The same PCAs	See above
		3.2.4. Promote the IBA concept at national and local levels	Ecoregion	The same PCAs	See above
		3.2.5. Draft and adopt legislation granting status for IBAs	Ecoregion	The same PCAs	See above
		3.2.6. Begin designation of IBAs as protected areas	Ecoregion	The same PCAs	See above
		3.2.7. Integrate IBAs into other national and regional policies (EIAs, relevant legislation, environmental and development plans, strategies)	Ecoregion	The same PCAs	See above

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
4. Transboundary cooperation leads to effective conservation of shared freshwater habitats	4.1. At least three transboundary initiatives for conservation of freshwater habitats are in place	4.1.1. Elaborate transboundary program to conserve rivers and streams in the Talish Mountain Range	Azerbaijan Iran	PCA 37	Forest 3.1.3
		4.1.2. Develop transboundary program to conserve rivers and streams in the eastern Greater Caucasus and on the Caspian Sea coast	Azerbaijan Russia	PCA 19	Forest 1.2.13 Marine 2.1.1, 2.2.1, 2.2.2
		4.1.3. Develop and begin implementation of program for conservation of transboundary rivers between Georgia and Azerbaijan	Azerbaijan Georgia	PCA 22, 23, 28	Forest 4.1, 4.2.2 Focal species 4.1.4
		4.1.4. Develop and begin implementation of transboundary program to conserve Aktas (Kartsakhi) Lake	Turkey Georgia	PCA 51	High mountain 2.3.1
		4.1.5. Establish transborder cooperation between Lake Arpi and Javakheti national parks	Armenia Georgia	PCA 51	Freshwater 1.2.2 High mountain 2.2.1
Management					
5. Model rivers and/or lake catchment areas in the Ecoregion are managed sustainably	5.1. Elaborate an Ecoregion-wide strategy and obtain approval of stakeholders in all six countries	5.1.1. Assess conditions of threatened rivers and freshwater habitats	Ecoregion	All freshwater PCA and CR	
		5.1.2. Carry out conference with decision-makers, managers of water resources, and other stakeholders on sustainable water management in the Ecoregion	Ecoregion	All freshwater PCA and CR	
		5.1.3. Carry out training program for water resource managers	Ecoregion	All freshwater PCA and CR	
	5.2. Pilot projects on Integrated River Basin Management are in place in at least three freshwater systems	5.2.1. Launch pilot project on biodiversity conservation and sustainable management in the Iori River Basin	Georgia Azerbaijan	PCA 22	
		5.2.2. Elaborate and begin implementation of pilot projects on sustainable watershed management in Armenia	Armenia	PCA 48, 50, 51, 52	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		5.2.3. Develop and begin implementation of model project for sustainable use of water resources in the Kuban River	Russia	PCA 2 CR 1	
		5.2.4. Develop and begin implementation plans for integrated watershed management of the Kura and Araz (Araks) basins	Selected countries	Selected PCA and CR	
		5.2.5. Elaborate and begin to implement program for sustainable management of Firtina Stream	Turkey	PCA 54 CR 17	
6. Model agricultural enterprises, industries, and development companies adopt measures for sustainable water use and minimizing impacts on freshwater systems	6.1. Impacts to freshwater systems from development projects in PCA and CR are minimized	6.1.1. Assess potential impacts of planned and ongoing development projects (dams, roads, etc.) and make recommendations for reducing impacts to freshwater systems in PCA and CR	Ecoregion	Freshwater PCA and CR	
		6.1.2. Obtain approval of at least one large company to adopt recommendations for minimizing impacts	Ecoregion	Freshwater PCA and CR	
		6.1.3. Establish and train a network of wetland volunteers to monitor and maintain freshwater habitats in protected areas	Turkey	PCA 48, 52, 54	
7. Viable populations of endangered species of fish are preserved and illegal fishing is reduced	7.1. Unsustainable forms of fishing are reduced by half	7.1.1. Elaborate and implement normative acts on introduction and management of non-native fish species in at least two countries of Ecoregion	Ecoregion/ Selected countries	Freshwater PCA and CR	
		7.1.2. Develop and implement normative acts and financing mechanisms for conserving biodiversity in private fish enterprises in at least two countries of Ecoregion	Ecoregion/ Selected countries	Freshwater PCA and CR	
		7.1.3. Develop and implement a system for independent monitoring of illegal fishing in at least two countries	Selected countries	Freshwater PCA and CR	
		7.1.4. Improve capacity of fishing inspection agencies in at least one country	Selected countries	Freshwater PCA and CR	
		7.1.5. Increase fines for illegal fishing and the number of violators prosecuted in selected countries	Selected countries	Freshwater PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Restoration					
8. Initiatives for restoring degraded freshwater habitats are in place in the Ecoregion	8.1. At least five projects are underway to restore freshwater habitats in Ecoregion	8.1.1. Elaborate and begin to implement program for restoring Lake Gilli as important waterfowl habitat	Armenia	PCA 50	
		8.1.2. Elaborate and begin to implement program to restore Gnisheek River	Armenia	PCA 46	
		8.1.3. Elaborate restoration program and begin to carry out restoration measures in model sites in Azerbaijan	Azerbaijan	PCA 36	
		8.1.4. Elaborate measures and begin restoration of degraded wetlands in the Gyzyl-Agach (Gyzylaghaj) Strict Nature Reserve	Azerbaijan	PCA 35	Marine 1.2.5
		8.1.5. Elaborate restoration program and begin to carry out restoration measures in Khanchali Lake	Georgia	PCA 51	
		8.1.6. Elaborate measures and begin restoration of rivers running to the Caspian for facilitating fish migration	Iran	PCA 37, 56	Focal species 21.1.6
		8.1.7. Elaborate measures for restoration of degraded freshwater habitats in Manych-Gudilo Region and begin implementation	Russia	PCA 5, 6, 7, 8 CR 5, 6, 7	
		8.1.8. Elaborate measures to restore rivers in the Azov-Black Sea Basin	Russia	PCA 2, 3, 4, 5, 9, 19 CR 2	
		8.1.9. Elaborate measures to restore rivers in the Caspian Sea Basin	Russia	PCA 9, 10, 16, 19 CR 8, 24, 25	Focal species 21.1.7

4. Conservation and Sustainable Use of Coastal and Marine Ecosystems in the Caucasus Ecoregion

Coastal and marine habitats in the Caucasus Ecoregion include the coastline of the Azov, Black, and Caspian seas. Combined, there are 4,139 kilometres of coastline in the Ecoregion. While the total area of the Caucasus Ecoregion includes only the terrestrial area, threatened marine habitats and species found in these seas are also included in the Marine Conservation Plan. All countries in the Ecoregion except Armenia have marine habitats.

The Caspian and Azov seas are unique in the world in their diversity in sturgeon species. Six species of sturgeon and beluga are found here, and all are threatened with extinction. The Caspian and Azov-Black sea coasts harbor important habitats for migrating waterfowl, as well as nesting areas for raptors. There are three species of dolphins in the Black Sea, all of which are protected by the Bonn Convention. The main threats to coastal and marine ecosystems are overfishing, urban development, oil extraction, transportation infrastructure (ports and oil pipeline terminals), tourism and recreation, and pollution. Overfishing, mostly driven by poverty and the international demand for caviar and fish, is widespread in the Caspian and Azov seas and may lead to the disappearance of all sturgeon species found in these two seas in the near future. Pollution from oil extraction, run off, and other sources has compromised the integrity of marine ecosystems in the Caspian, Azov, and Black seas. Infrastructure development, such as highway construction, expansion of urban centers, and oil platforms, has resulted in irreversible impacts on marine and coastal ecosystems.

In order to combat these threats and mitigate future threats, intact habitats along the Azov, Black, and Caspian seas should be set aside in effectively managed Econets, consisting of protected areas and linking corridors. Transboundary measures on saving endangered fish and bird populations should be implemented. Restoration projects should be carried out in degraded coastal areas, illegal fishing should be halted, and model projects on ecotourism and integrated resource management should be carried out.

Currently, 698 kilometers or 16.86 percent of the Ecoregion's coastline are conserved in protected areas, comprising 75,401 ha of marine and coastal habitats. In the long-term, an additional five percent of marine and coastal habitats should be granted protection. The following table lists the planned Econets and depicts the length of marine coastline protected in each country.

Table 3. Planned Econets for Coastal and Marine Ecosystems and Current Amount Protected by Country

Name of Region and/or Planned Econet	Total Length of Coastline in Ecoregion (km)	Percent Currently Protected	Breakdown by Country		
			Country	Length of Coastline (km)	Percent Currently Protected
Azov and Black Seas	1,772.66	14.78%	Georgia	318.16	8.02%
			Russia	1,063.67	22.08%
			Turkey	390.82	0.39%
Caspian Sea	2,366	18.42%	Azerbaijan	1,273.08	17.85%
			Iran	357.08	7.25%
			Russia	735.83	24.83%
Total in Ecoregion	4,138.65	16.86%			

The plan for conservation and sustainable use of coastal and marine ecosystems is divided into three sections: Conservation, Management, and Restoration. Econets fall under conservation measures, but many of the activities proposed in sustainable use will also take place within the Econets.

Long-term (by 2025) and 10-year targets (by 2015) are indicated in the conservation plan. Projects should be begun in each of the five countries with coastal and marine habitats in the immediate future to ensure that these targets can be reached. These near-term measures are outlined in the Immediate Actions column. These measures include creating new nature reserves, improving management in existing reserves, drafting and adopting legislation on illegal fishing, and carrying out model projects.

Projects should be implemented in PCAs and CRs for coastal and marine ecosystems, as determined in the biodiversity assessment for the Caucasus Ecoregion. Priority areas for the coastal and marine biome include:

Priority Conservation Areas (PCA)

Azov-Black Sea

Kuban (2)
Primorsko-Akhtarsk (3)
Yeysk (4)
Don Delta (5)
Rioni (26)

Caspian Sea

Agrakhansky Bay (10)
Samur-Yalama (19)
Kizlyarsky Bay (9)
Aghzibir (Akzybir) Lake (20)
Gobustan-Absheron (32)
Shirvan (33)
Gyzyl-Agach (Gyzylaghaj) (35)
Talish-Zuvand (37)
Sefid Rud-Anzali (56)

Priority Conservation Corridors (CR)

Azov-Black Sea

Kuban – Rioni (1)
Primorsko-Akhtarsk - Kuban (2)
Yeysk – Primorsko-Akhtarsk (3)
Don Delta – Yeysk (4)
Rioni – West Lesser Caucasus (15)

Caspian Sea

Kizlyarsky Bay – Agrakhansky Bay (8)
Agrakhansky Bay – Samur-Yalama (24)
Samur-Yalama – Aghzibir (Akzybir) Lake (31)
Aghzibir (Akzybir) Lake – Gobustan-Absheron (46)
Gobustan-Absheron – Shirvan (48)
Shirvan – Gyzyl-Agach (Gyzylaghaj) (52)
Gyzyl-Agach (Gyzylaghaj) – Talish-Zuvand (55)
Talish-Zuvand – Sefid Rud-Anzali (57)
Marine Sefid Rud-Anzali – Gilan (60)

Since many of the coastal and marine PCAs and CRs border river estuaries and coastal forests, parts of this section overlap with the freshwater and forest conservation plans. Measures in the institutional development and capacity building plan also apply to marine habitats, particularly where halting illegal fishing is concerned. Cross-references are listed where appropriate in the last column.

D. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF COASTAL AND MARINE ECOSYSTEMS IN THE CAUCASUS ECOREGION

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions By 2010	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Conservation					
1. Representative coastal and marine habitats of the Caspian Sea and associated biodiversity are effectively preserved in a network of protected areas and linking corridors (Econet)	1.1. Framework for Caspian Sea Econet is established	1.1.1. Elaborate plan/guideline for creation of the Caspian Sea Econet	Azerbaijan Iran Russia	PCA 2, 3, 4, 5, 9, 10, 19, 20, 26, 32, 33, 35, 37, 56 CR 1, 2, 3, 4, 8, 15, 24, 31, 46, 48, 52, 55, 57, 60	Freshwater
	1.2. New protected areas are created in the Caspian Sea Econet on at least 50,000 ha and existing reserves are strengthened on at least 80,000 ha	1.2.1. Create the Samur-Yalama National Park	Azerbaijan	PCA 19	Forest 9.4.4 Freshwater
		1.2.2. Establish protected areas and sanctuaries in the Kura River Delta and on islands in the Baku and Absheron archipelagos	Azerbaijan	PCA 32, 33	
		1.2.3. Establish additional small sanctuaries on Absheron to preserve rare coastal plant communities	Azerbaijan	PCA 32	
		1.2.4. Establish protected areas and sanctuaries in the Aghzibir (Akzybir) Lake (Devechinsky Liman) and on Yashma Island	Azerbaijan	PCA 20	Marine 9.1.1
		1.2.5. Improve protection of wetlands and coastal habitats in GyzyI-Agach (Gyzylaghaj) Nature Reserve	Azerbaijan	PCA 35	Freshwater 8.1.4
		1.2.6. Improve management of Absheron National Park for protecting migratory birds and Caspian seal	Azerbaijan	PCA 32	
		1.2.7. Create marine park and protected areas	Iran	PCA 56	
		1.2.8. Strengthen existing Bojagh Reserve	Iran	PCA 56	
		1.2.9. Optimize the territory of Dagestan Strict Nature Reserve by adding a marine section	Russia	PCA 9	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	1.3. At least one transboundary protected area is created to preserve shared marine habitats of the Caspian Sea and other reserves are established in the Econet	1.3.1. Create the Samur transboundary protected area	Azerbaijan Russia	PCA 19	Forest 9.4.4
		1.3.2. Create additional protected areas and connecting corridors as outlined by Econet Plan	Azerbaijan Iran Russia	PCA 9, 10, 19, 20, 32, 33, 35, 37, 56 CR 8, 24, 31, 46, 48, 52, 55, 57, 60	
	1.4. Public support for the Caspian Sea Econet is evidenced by a decrease in poaching, illegal fishing, and other violations	1.4.1. Work with local communities to build support for protected areas and Econet	Azerbaijan Iran Russia	The same PCA and CR	
		1.4.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Iran Russia	The same PCA and CR	
2. Viable populations of endangered fish and waterfowl are preserved in the Caspian Sea Region	2.1. Transboundary cooperation leads to effective conservation of endangered fish species	2.1.1. Develop transboundary strategy for conserving rare species of sturgeon and other fish in the Caspian Sea	Azerbaijan Iran Russia	PCA 19, 37 CR 24, 31, 55	Freshwater 4.2.1 Focal species 21
	2.2. Transboundary cooperation leads to effective conservation of endangered waterfowl and shorebirds	2.2.1. Develop transboundary strategy for conserving rare species of waterfowl and shorebirds along the Caspian Sea	Azerbaijan Iran Russia	PCA 9, 10, 19, 20, 32, 33, 35, 37, 56 CR 8, 24, 31, 46, 48, 52, 55, 57, 60	Freshwater 4.1.2 Focal species 16, 17, 18

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
3. Representative coastal and marine habitats of the Azov-Black Sea and associated biodiversity are effectively preserved in a network of protected areas and linking corridors (Econet)	3.1. Framework for Azov-Black Sea Econet is established	3.1.1. Elaborate plan/guidelines for creation of the Azov-Black Sea Econet	Georgia Russia Turkey	PCA 2, 3, 4, 5, 26 CR 1, 2, 3, 4, 15	Forest Freshwater
		3.2. New protected areas are created in the Azov-Black Sea Econet on 30,000 ha and existing reserves are strengthened on at least 15,000 ha	3.2.1. Strengthen management of Kolkheti National Park's marine section	Georgia	PCA 26 CR 1
	3.2.2. Create two new marine sanctuaries in Krasnodar Province		Russia	PCA 2, 3, 4, 5 CR 1, 2, 3, 4	
	3.2.3. Carry out gap analysis and identify potential sites for marine protected areas along the Turkish Black Sea coast		Turkey	PCA 54	
	3.2.4. Create additional protected areas and connecting corridors as outlined by Econet Plan		Georgia Russia Turkey	PCA 2, 3, 4, 5, 26 CR 1, 2, 3, 4, 15	
	3.3. Public support for the Azov-Black Sea Econet is evidenced by a decrease in poaching, illegal fishing, and other violations	3.3.1. Work with local communities to build support for protected areas and Econet	Georgia Russia Turkey	Selected PCA an CR	
3.3.2. Publish informational materials to distribute in local communities and to visitors		Georgia Russia Turkey	Selected PCA an CR		
4. Viable populations of economically important and rare fish and waterfowl are preserved in the Azov-Black Sea Region	4.1. Transboundary cooperation leads to effective conservation of endangered sturgeon species	4.1.1. Develop and begin to implement transboundary strategy for conserving rare sturgeon and other fish in the Azov-Black Sea	Georgia Russia Turkey	PCA 2, 26 CR 1, 15	Focal species 21

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	4.2. Populations of anchovy are viable in the eastern Black Sea	4.2.1. Assess anchovy stocks in eastern Black Sea	Turkey Georgia	PCA 2, 3, 4, 5, 26 CR 1, 2, 3, 4, 15	Institutional development 1.6.1
		4.2.2. Lobby for legislative measures to prevent excessive fishing of anchovy	Turkey Georgia	The same PCA and CR	Institutional development 1.6.1
		4.2.3. Establish no fishing zones for anchovy	Turkey Georgia	The same PCA and CR	Institutional development 1.6.1
	4.3. Transboundary cooperation leads to effective conservation of endangered waterfowl and shorebirds	4.3.1. Develop and begin to implement transboundary strategy for conserving rare species of waterfowl and shorebirds along the Azov-Black Sea	Georgia Russia Turkey	PCA 2, 3, 4, 5, 26 CR 1, 2, 3, 4, 15	Freshwater 3.1, 3.2
4.4. Introduction of invasive sea species in the seas of the Ecoregion is halted	4.4.1. Begin developing legislation on preventing introduction of non-native sea species	Ecoregion	Caspian sea, Black sea, Azov sea		
Management					
5. Illegal fishing is rare and endangered fish populations begin to stabilize	5.1. An effective basis for halting illegal fishing and overfishing is in place	5.1.1. Elaborate recommendations on strengthening fishing legislation and increasing penalties for violations	Ecoregion	All marine and coastal PCA and CR	Institutional development 1.6.1 Freshwater 7.1.5
		5.1.2. Devise system for monitoring illegal fishing	Ecoregion	All marine and coastal PCA and CR	Freshwater 7.1.3

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
6. Sustainable management of coastal and marine resources leads to their effective conservation in PCA and CR	6.1. Three initiatives on sustainable management of coastal and marine resources are in place in PCA and CR	6.1.1. Elaborate international strategy for sustainable resource management and implementation guidelines for the Azov-Black Sea	Georgia Russia Turkey	Azov-Black Sea PCA and CR	
		6.1.2. Elaborate international strategy for sustainable resource management and implementation guidelines for the Caspian Sea	Azerbaijan Iran Russia	Caspian PCA and CR	
		6.1.3. Launch project on integrated resource management in model district on the Azov coast	Russia	Selected PCA or CR	
		6.1.4. Launch model project on managing sanitary-protection zones in coastal regions and river deltas of the Black Sea	Georgia	Selected PCA or CR	
		6.1.5. Launch model project on managing sanitary-protection zones in coastal regions and river deltas of the Caspian Sea	Azerbaijan	Selected PCA or CR	
7. Ecotourism is a viable source of income in at least ten coastal communities	7.1. Framework and capacity for model protects on sustainable ecotourism in coastal ecosystems are in place	7.1.1. Elaborate plans for developing ecotourism in model coastal areas	Azerbaijan Iran Russia Turkey	PCA 19, 33, 35, 56 CR 31, 48, 52, 57, 60	
		7.1.2. Develop capacity for model projects on ecotourism			
		7.1.3. Elaborate and implement regional legislation in model area on regulating recreational diving and underwater hunting	Russia	Selected PCA or CR	
	7.2. Ecotourism provides 20 percent of income to five model communities and nature reserves	7.2.1. Launch model project on diving and snorkeling in coastal regions on the Azov Sea	Russia	PCA 2, 3, 4 CR 2, 3, 4	
		7.2.2. Launch model project on ecotourism in coastal protected areas along the Caspian Sea	Azerbaijan	PCA 19, 33, 35, 56 CR 31, 48, 52, 57, 60	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
8. Impacts of development on biodiversity in coastal and marine PCA and CR are reduced to a minimum	8.1. Independent information on development projects is available and leads to reduced environmental impacts	8.1.1. Support civil society's efforts to mitigate, monitor, and participate in development projects	Ecoregion		
	8.2. Negative impacts of development in PCA and CR in the Caspian Sea are reduced by a third	8.2.1. Prevent construction of new poultry farms in coastal areas of Iran and begin moving one-third of existing farms to other sites	Iran	PCA 37, 56 CR 57, 60	
		8.2.2. Limit new real estate development in coastal regions in Iran	Iran	PCA 37, 56 CR 57, 60	
	8.3. The impact of fuel transportation pipelines is monitored on a permanent basis	8.3.1. Implement mitigation measures during pipelines construction	Azerbaijan Georgia Turkey	PCA 27, 28, 30, 31, 32, 55 CR 17, 18, 20, 45	High mountain Forest Freshwater
		8.3.2. Long-term monitoring projects implemented along the pipeline Baku-Tbilisi-Ceyhan	Azerbaijan Georgia Turkey	PCA 27, 28, 30, 31, 32, 55 CR 17, 18, 20, 45	High mountain Forest Freshwater
	8.4. Impacts of TRACECA on marine and coastal habitats in PCA and CR are minimized	8.4.1. Assess potential threats to PCA and CR and work out plan for preventing degradation to these areas	Selected countries	Corresponding PCA and CR	High mountain Forest Freshwater

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
<u>Restoration</u>					
9. Initiatives for restoring degraded coastal or marine habitats are ongoing in PCA and CR	9.1. At least two projects are underway to restore marine and coastal habitats along the Caspian Sea	9.1.1. Elaborate strategy and begin measures to restore coastal ecosystems in Aghzibir (Akzybir) Lake (Devechinsky Liman)	Azerbaijan	PCA 20 CR 31, 46	Marine 1.2.4
		9.1.2. Remove artificial barriers in coastal waters sectioning off recreational areas in order to restore natural marine processes along the coast of the Caspian Sea	Iran	PCA 37, 56 CR 57, 60	
		9.1.3. Restore natural migration routes of sturgeon in the mouth of Kura River	Azerbaijan	PCA 33 CR 52	Focal species 21.1.3
	9.2. At least two projects are underway to restore marine and coastal habitats along the Black Sea	9.2.1. Remove artificial barriers and restore natural migration routes of sturgeon in the Kuban and Don rivers	Russia	PCA 2	Freshwater Focal species 21
		9.2.2. Identify priority areas for restoring migration ways of key species in the Black Sea coastal area of Georgia	Georgia	PCA 26 CR 15	Focal species 21.1.4
		9.2.3. Identify priority areas for restoring migration ways of key species in Black Sea coastal area of Turkey to protect them from environment impacts of highway development	Turkey	PCA 54	Focal species 21

5. Conservation and Sustainable Use of High Mountain Ecosystems in the Caucasus Ecoregion

The high mountain biome in the Caucasus Ecoregion, generally including lands 2,200 m above sea level and higher, harbors unique assemblages of plants and animals and a number of endemic species. Over half of the endemic plant genera in the Caucasus Ecoregion are found in high mountain plant communities. High mountain habitats occupy more than 10 million ha or 17 percent of the Ecoregion. High mountain ecosystems are found along the Greater and Lesser Caucasus ranges, in the Javakheti Plateau, in northeastern Turkey, in the Talish-Hyracan mountain system, and in parts of northern Iran.

High mountain meadows provide important summer grazing habitat for ungulates, including chamois, turs, bezoar goat, and mouflon. Leopards and wolves occasionally hunt for ungulates in the high mountains. The Caucasian snowcock, Eurasian griffon vulture, and alpine chough are among the many birds that depend on high mountain habitats.

Humans also rely on resources in high mountain ecosystems. Sub-alpine and alpine meadows are principle pasturelands for livestock such as sheep and goats. Intensive grazing over the course of several decades has resulted in reduced species diversity and degradation in high mountain plant communities. Secondary plant communities now occupy 80 percent of grasslands in the subalpine belt. The alpine belt is slightly better preserved. In many areas, the top layers of soil have been seriously damaged, resulting in soil erosion, avalanches, and mudslides. High mountain habitats contain many plants collected for use in traditional medicine and for decoration. Some mountain ecosystems are under pressure from ski resorts, particularly in the Greater Caucasus Range. In some parts of the Ecoregion, people traditionally migrate to high mountain pasturelands to spend the summer. Recently, this pastime has become a staple of the tourism industry, and unsustainable use by tourists and uncontrolled settlement in pasturelands is one of the main pressures on fragile high mountain vegetation, particularly in Turkey.

The most threatened high mountain ecosystems are in the Greater Caucasus, the Javakheti Highlands, the Lesser Caucasus, and the northern part of the northwestern Iranian mountain ranges. In order to combat threats and guarantee long-term conservation of globally important plant and animal associations, a representative network of high mountain ecosystems should be protected in an effectively managed Econet, consisting of protected areas and linking corridors. Various types of protection regimes need to be explored and new methods to conserve high mountain habitats tested, for example by developing special regulations and management regimes for high mountain pasturelands.

Table 4. Planned Econets for High Mountain Ecosystems and Current Area Protected by Country

Name of Region and/or Planned Econet	Total High Mountain Habitats in Region (ha)	Percent Currently Protected	Breakdown by Country		
			Country	Area of High Mountains (ha)	Percent Currently Protected
Greater Caucasus Econet	3,674,781	24.64%	Azerbaijan	197,607	7.09%
			Georgia	1,050,267	2.49%
			Russia	2,426,907	35.66%
			Armenia	1,278,230	2.11%
			Azerbaijan	399,802	15.35%
Javakheti-Asia Minor Econet	6,473,673	4.61%	Georgia	627,823	5.27%
			Iran	725,130	8.76%
			Turkey	3,442,626	5.79%
Other high mountain ecosystems	10,793	1.07%			
Total in Ecoregion	10,159,247	11.84%			

Currently 11 percent of the high mountain habitats in the Ecoregion are preserved in protected areas. In the long-term, an additional eight percent of high mountain ecosystems should be protected. Table 4 lists the planned Econets and depicts the current area of high mountain habitats protected in each country. The plan for conservation and sustainable use of high mountain ecosystems is divided into three sections: Conservation, Management, and Restoration. Econets fall under conservation measures, but many of the activities proposed in sustainable use will also take place within the Econets. Long-term (by 2025) and 10-year targets (by 2015) are indicated in the conservation plan. Measures that should be taken in the next five years to reach these targets are outlined in the Immediate Actions column. These measures include creating new nature reserves, improving management in existing reserves, training and capacity building, and carrying out model projects on sustainable pastureland management.

Projects should be implemented in PCAs and CRs for high mountain ecosystems, as determined in the biodiversity assessment for the Caucasus Ecoregion. The priority areas that contain high mountain ecosystems are:

Priority Conservation Areas

West Greater Caucasus (11)
Teberdinsky Nature Reserve (12)
Svaneti (13)
Racha-Central Caucasus (14)
Khevi-Tusheti (15)
Lagodekhi-Zagatala-West Dagestan (16)
Sarybash (17)
Laman-Kam (18)
Ismaily-Shahdagh (21)
Trialeti (27)
Mount Gyamysh (34)
Talish-Zuvand (37)
Gilan (39)
Sabalan (40)
Marakan-Kiamaki (41)
Meghri (42)
Zangezur (43)
Bichanek (45)
Noravank (46)
Maku and Western Iranian Border (47)
Agri Dagi (Ararat) and Armash (48)
Khosrov (49)
Pambak-Sevan (50)
Javakheti (51)
Igdır Plain and Armavir (52)
Sarıkamis Forest (53)
West Lesser Caucasus (54)

Priority Conservation Corridors

West Greater Caucasus – Teberdinsky Nature Reserve (9)
Teberdinsky Nature Reserve – Svaneti (10)
Svaneti – Racha-Central Caucasus (11)
Svaneti – Askhi-Karst Massif (12)
Racha-Central Caucasus – Khevi-Tusheti (13)
Trialeti – West Lesser Caucasus (16)
West Lesser Caucasus – Sarıkamis Forest (17)
Trialeti – Javakheti (19)
Javakheti – Igdır Plain and Armavir (21)
Sarıkamis Forest – Igdır Plain and Armavir (22)
Khevi-Tusheti – Lagodekhi-Zagatala-West Dagestan (23)
Lagodekhi-Zagatala-West Dagestan – Laman-Kam Area (25)
Lagodekhi-Zagatala-West Dagestan – Sabalan – Ismailly-Shahdagh (29)
Laman-Kam Area – Ismailly-Shahdagh (30)
Pambak-Sevan – Mount Gyamysh (32)
Pambak-Sevan – Khosrov (33)
Igdır Plain and Armavir – Agri Dagi (Ararat) and Armash (35)
Igdır Plain and Armavir – Maku and Western Iranian Border (36)
Agri Dagi (Ararat) and Armash – Maku and Western Iranian Border (37)
Maku and Western Iranian Border – Marakan-Kiamaki (38)
Noravank – Bichanek (39)
Khosrov – Noravank (40)
Khosrov – Bichanek (41)
Bichanek – Zangezur (42)
Marakan-Kiamaki – Sabalan (53)
Araz (Araks) Valley – Sabalan (54)
Sabalan – Talish-Zuvand (56)

Since many of the priority areas and corridors cover landscapes with marked vertical shifts or broad plateaus, parts of this section overlap with the forest and freshwater conservation plans.

Focal species will also benefit from a number of the projects to protect high mountain habitats. Cross-references are listed where appropriate in the last column of the conservation plan.

E. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF HIGH MOUNTAIN ECOSYSTEMS IN THE CAUCASUS

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions by 2010	Country	Priority Conservation Area (PCA)/ Corridor	Cross-Reference	
<u>Conservation</u>						
1. Representative high mountain habitats and associated biodiversity of the Greater Caucasus Range are effectively preserved in a network of protected areas and linking corridors (Econet)	1.1. Framework for Greater Caucasus Econet is established	See appropriate section in Forest Conservation Plan	Azerbaijan Georgia Russia	PCA 11 , 12, 13, 14, 15, 16, 17, 18, 21 CR 9, 10, 11, 12, 13, 23, 25, 29, 30	Forest 1.1.1-1.1.3, 1.2.6	
	1.2. New protected areas in high mountain habitats are created on 100,000 ha and existing reserves are strengthened on at least 80,000 ha	1.2.1. Create Shahdagh National Park		Azerbaijan	PCA 21	Forest 1.2.2.
		1.2.2. Create Racha National Park		Georgia	PCA 14	Forest 1.2.3 Focal species 6.1.2
		1.2.3. Establish Svaneti National Park		Georgia	PCA 13	Forest 1.2.4 Focal species 6.1.2
		1.2.4. Establish Khevsureti Sanctuary		Georgia	PCA 15	Forest 1.2.5 Focal species 6.1.2
		1.2.5. Prepare management plan and develop infrastructure of Tusheti National Park		Georgia	PCA 15	Focal species 3.1.2, 6.1.1
		1.2.6. Provide core support for establishing protected regime and extension of Erzi Strict Nature Reserve in Ingushetiya		Russia	PCA 15	Forest 1.2.13
		1.2.7. Establish biosphere polygon for Teberdinsky Nature Reserve		Russia	PCA 12	Forest 1.2.12 Focal species 6.1.1
		1.2.8. Establish transregional park between Northern Osetiya and Kabardino-Balkariya		Russia	PCA 14	Forest 1.2.10.
		1.2.9. Upgrade Tlyaratinsky Sanctuary status to strict nature reserve		Russia	PCA 18	Forest 1.2.11 Focal species 6.1.1, 7.2.5

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		1.2.10. Create additional protected areas and connecting corridors in high mountain habitats as outlined by Econet Plan	Azerbaijan Georgia Russia	PCA 14, 12, 15 CR 10, 13, 23, 25, 30	Forest 1.2.13 Focal species 3.2.4
	1.3. Two transboundary nature reserves are established as part of the Greater Caucasus Econet	1.3.1. Establish the Northwestern Caucasus Transboundary Reserve	Georgia Russia	PCA 11	Forest 1.3.1.
		1.3.2. Create transboundary reserve on the basis of Lagodekhi, Zagatala, and Tlyaratinsky protected areas	Azerbaijan Georgia Russia	PCA 16	Forest 1.3.2. Focal species 6.1.1, 8.2.1
	1.4. Public support for the Greater Caucasus Econet is evidenced by a decrease in poaching and other violations	1.4.1. Work with local communities to build support for protected areas	Azerbaijan Georgia Russia	Selected regions of Greater Caucasus Econet	Forest 1.4.1 Freshwater 1.4.1
		1.4.2. Publish informational materials to distribute in local communities and to visitors	Azerbaijan Georgia Russia	Selected regions of Greater Caucasus Econet	Forest 1.4.2 Freshwater 1.4.2
2. Representative high mountain habitats and associated biodiversity of the Lesser Caucasus and Javakheti-Asia Minor Regions are effectively preserved in a network of protected areas and linking corridors (Econet)	2.1. Framework for Lesser Caucasus and Javakheti-Asia Minor Econet is established	See appropriate sections in Forest and Freshwater conservation plans	Armenia Georgia Iran Turkey	PCA 27, 34, 37, 39, 40, 41, 42, 43, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54 CR 16, 17, 19, 21, 22, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 53, 54, 56	Forest 2.1.1 -2.1.2, 2.2.20 Freshwater 1.1.1.
		2.2.1. Create Lake Arpi National Park	Armenia	PCA 51	Freshwater 1.2.2, 4.1.5
	2.2. New protected areas in high mountain habitats are created over 100,000 ha and existing reserves are strengthened on at least 100,000 ha	2.2.2. Create Arpi National Park in Central Armenia	Armenia	PCA 46	Focal species 3.2.2, 7.2.2, 11.2.1
		2.2.3. Plan Djermuk National Park on the basis of existing sanctuaries	Armenia	CR 41	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		2.2.4. Improve management of Sev Lich Sanctuary and carry out needs assessment to provide core support	Armenia	PCA 46	
		2.2.5. Create a corridor between the Khosrov reserve and Zangezur ranges in southern Armenia to allow animal migrations	Armenia	CR 40, 41	Forest 2.2.4 High mountain 2.2.4 Focal species 3.1.2
		2.2.6. Improve management and develop infrastructure of Ordubad National Park	Azerbaijan	PCA 43	Focal species 3.2.1, 7.2.4, 11.2.4
		2.2.7. Improve management and develop infrastructure of Shahbuz Strict Nature Reserve	Azerbaijan	PCA 45	Forest 2.2.6
		2.2.8. Create Javakheti National Park	Georgia	PCA 51	Freshwater 1.2.4
		2.2.9. Establish Ktsia-Tabatskuri Sanctuary	Georgia	PCA 27	Freshwater 1.2.5, 1.2.7
		2.2.10. Establish Khevsureti Sanctuary	Georgia	PCA 15	Forest 1.2.5
		2.2.11. Involve local community in management, monitoring, and protection of Marakan Nature Reserve	Iran	PCA 41	
		2.2.12. Assess possibility of creating new protected areas and corridors	Iran	PCA 41, 47, 48 CR 38	
		2.2.13. Establish new national park on Mt. Agri Dagi (Ararat) and create management plan and infrastructure	Turkey	PCA 48	
		2.2.14. Assess feasibility of creating nature reserve on Mt.Tendurek (Important Plant Area)	Turkey	PCA 36	
		2.2.15. Create corridors to connect existing protected areas	Turkey	CR 17, 21, 22, 35, 36, 37	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		2.2.16. Create additional protected areas and connecting protected corridors in high mountain habitats as outlined by Econet Plan	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR	Forest Freshwater Focal species 3.1.5
	2.3. Transboundary initiatives for conservation of high mountain ecosystems in the Lesser Caucasus-Javakheti-Asia Minor are in place	2.3.1. Assess feasibility of creating transboundary nature reserve along the Armenian-Turkish-Georgian border	Armenia Georgia Turkey	PCA 51	Freshwater 4.1.4
		2.3.2. Assess feasibility of creating transboundary protected area between Turkey and Georgia in the Karchal Mountains	Georgia Turkey	PCA 54	
		2.3.3. Assess feasibility of creating transboundary nature reserve between Iran and Turkey	Iran Turkey	PCA 47, 48 CR 37	
	2.4. Public support for the Javakheti-Asia Minor is evidenced by a decrease in poaching and other violations	2.4.1. Work with local communities to build support for protected areas	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR in Econet	Freshwater 1.4.1
		2.4.2. Publish informational materials to distribute in local communities and to visitors	Armenia Azerbaijan Georgia Iran Turkey	Selected PCA and CR in Econet	Freshwater 1.4.2

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
3. All high mountain ecosystems of international importance are granted protection (IUCN I-IV)	3.1. Legislative basis for Important Bird Areas (IBAs) in high mountain ecosystems is established and half of high mountain IBAs are protected	3.1.1. Complete IBA identification and delineation in high mountain ecosystems	Ecoregion	PCA 11, 12, 13, 14, 15, 16, 17, 18, 21, 27, 29, 41, 42, 43, 44, 50, 51, 54 CR 9, 10, 11, 13, 16, 17, 18, 19, 23, 29, 32, 43	Freshwater 3.1.1 – 3.2.7 Focal species 13, 14, 15
		3.1.2. Prepare national IBA inventories in the Ecoregion	Ecoregion	The same PCA and CR	See above
		3.1.3. Develop IBA caretaker network and establish long-term monitoring in key high mountain habitats	Ecoregion	The same PCA and CR	See above
		3.1.4. Promote the IBA concept at national and local levels	Ecoregion	The same PCA and CR	See above
		3.1.5. Draft and adopt legislation granting special status for IBAs	Ecoregion	The same PCA and CR	See above
		3.1.6. Begin designation of IBAs as protected areas	Ecoregion	The same PCA and CR	See above
		3.1.7. Integrate IBAs into other national and regional policies (EIAs, relevant legislation, environmental and development plans, strategies)	Ecoregion	The same PCA and CR	See above
<u>Management</u>					
4. Sustainable pastureland management is practiced in high mountain habitats and conservation of biodiversity is taken into account	4.1. Sustainable grazing practices are used on at least 700,000 ha of high mountain pasturelands	4.1.1. Organize conference with decision-makers, managers of high mountain areas, and other stakeholders on sustainable pastureland management in the Ecoregion	Ecoregion		
		4.1.2. Elaborate an Ecoregion-wide strategy and obtain approval of stakeholders in all six countries	Ecoregion		
		4.1.3. Launch three model projects on sustainable pastureland management	Armenia Azerbaijan Georgia	Selected PCA	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		4.1.4. Launch two model projects in the Sabalan and Marakan-Kiamaki PCA using traditional approaches	Iran	PCA 40, 41	
		4.1.5. Launch model project for demonstrating sustainable range management in Turkey	Turkey	PCA 48, 54	Forest 7.2.1
		4.1.6. Develop and begin implementation of program to prevent overgrazing in the Turkish Caucasus	Turkey	PCA 48, 54	Forest 7.2.1
5. Medicinal and other economically important wild plants occupy a stable place in markets in the Ecoregion, having been harvested sustainably in high mountain areas	5.1. Successful models for sustainable collection of useful plants are in place and income in four model communities triples	5.1.1. Prepare framework and build capacity for sustainable collection of useful plants in model areas	Armenia Georgia Iran Turkey	Selected high mountain PCA and CR	Forest 7.1.1
		5.1.2. Launch model project on sustainable collection of high mountain plants in Armenia	Armenia	PCA 43, 51	Forest 7.1.2
		5.1.3. Launch model project on sustainable collection of high mountain plants in Georgia	Georgia	PCA 15, 51	Forest 7.1.2
		5.1.4. Launch model project on sustainable collection of high mountain plants in the Sabalan PCA	Iran	PCA 40	Forest 7.1.1
		5.1.5. Launch model project on sustainable collection of high mountain plants in the Dogu Karadeniz Mountains	Turkey	PCA 54	Forest 7.1.2, 7.1.3
6. Ecotourism is a viable source of income in high mountain communities	6.1. Framework and capacity for sustainable ecotourism in high mountain ecosystems are in place and integrated into reserve planning	6.1.1. Elaborate plans for developing ecotourism in each country	Ecoregion	Selected PCA and CR	Forest 8.1.1
		6.1.2. Develop capacity for model projects on ecotourism	Ecoregion	Selected PCA and CR	Forest 8.1.2
	6.2. Benefits of ecotourism are tangible in six model high mountain communities and nature reserves	6.2.1. Launch model projects in selected sites	Ecoregion	Selected PCA and CR	Forest 8.1.3

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
7. Impacts of development on biodiversity in high mountain priority areas and corridors are abated	7.1. Exclude use of dangerous pollutants (such as DDT) in high mountain PCA and CR	7.1.1. Introduce a system of monitoring use of mineral fertilizers and pesticides and reducing impacts of livestock in three high mountain model areas	Armenia Georgia Iran	PCA 14, 15,16, 50	
	7.2. Standards for reducing impacts of industrial mining in high mountain areas are used by all large mining companies working in PCA and CR	7.2.1. Develop and implement measures to minimize impacts of mining in high mountain areas	Ecoregion	PCA 14, 15,16, 50	

6. *Conservation of Focal Species and Their Habitats in the Caucasus Ecoregion*

Twenty-six focal species requiring urgent measures for conservation were identified for the Caucasus Ecoregion, including three carnivores, eight ungulates, six birds, two amphibians, and seven species of fish. These are: Caucasian leopard, striped hyena, brown bear, East and West Caucasian turs, bezoar goat, Caucasian red deer, Caucasian chamois, goitred gazelle (djeiran), Gmelin's (Armenian) mouflon, European bison, Caucasian black grouse, imperial eagle, cinereous vulture, marbled duck, white-headed duck, pygmy cormorant, Syrian spadefoot toad, Caucasian salamander, and the seven species of sturgeons threatened in the Black and Caspian seas.

The plan for conservation of focal species is divided into seven sections: the Ecoregional framework for conservation of focal species; leopard conservation; carnivore conservation (excluding the leopard); ungulate conservation; bird conservation; amphibian conservation; and fish conservation.

Projects should be implemented in PCAs and CRs as determined in the biodiversity assessment for the Caucasus Ecoregion. There are 46 PCAs and 51 CRs that contain key populations of the focal species.

Priority Conservation Areas

Kuban (2)
Primorsko-Akhtarsk (3)
Yeysk (4)
Don Delta (5)
West Greater Caucasus (11)
Teberdinsky Nature Reserve (12)
Svaneti (13)
Racha - Central Caucasus (14)
Khevi-Tusheti (15)
Lagodekhi-Zagatala-West Dagestan (16)
Sarybash (17)
Laman-Kam Area (18)
Samur-Yalama (19)
Aghzibir (Akzybir) Lake (20)
Ismailly-Shahdagh (21)
lori-lori-Mingechevir (Mingecheaur) (22)
Alazani-Ganykh (23)
Askhi-Karst Massif (25)
Rioni (26)
Trialeti (27)
Kura-Jandari (28)
Mount Gyamysh (29)
Gobustan-Hajigabul (31)
Gobustan-Absheron (32)
Shirvan (33)
Gyzyl-Agach (Gyzylaghaj) (35)
Talish-Zuvand (37)
Araz (Araks) Valley (38)
Gilan (39)
Sabalan (40)
Marakan-Kiamaki (41)
Meghri (42)
Zangezur (43)
Arasbaran (44)
Bichanek (45)
Noravank (46)
Maku and Western Iranian border (47)
Agri Dagi (Ararat) and Armash (48)
Khosrov (49)
Pambak-Sevan (50)
Javakheti (51)
Igdird Plain and Armavir (52)

Sarikamis Forest (53)
West Lesser Caucasus (54)
Manglisi (55)
Sefid Rud-Anzali (56)

Priority Conservation Corridors

Kuban – Rioni (1)
Primorsko-Akhtarsk – Kuban (2)
Yeysk – Primorsko-Akhtarsk (3)
Don Delta – Yeysk (4)
West Greater Caucasus – Teberdinsky Nature Reserve (9)
Teberdinsky Nature Reserve – Svaneti (10)
Svaneti – Racha-Central Caucasus (11)
Svaneti – Askhi-Karst Massif (12)
Racha – Central Caucasus – Khevi-Tusheti (13)
Racha – Central Caucasus – Trialeti (14)
Rioni – West Lesser Caucasus (15)
Trialeti – West Lesser Caucasus (16)
West Lesser Caucasus – Sarikamis Forest (17)
Trialeti – Manglisi (18)
Manglisi – Pambak-Sevan (20)
Javakheti – Igdir Plain and Armavir (21)
Sarikamis Forest – Igdir Plain and Armavir (22)
Khevi-Tusheti – Lagodekhi-Zagatala-West Dagestan (23)
Agrakhansky Bay – Samur-Yalama (24)
Lagodekhi-Zagatala-West Dagestan – Laman-Kam Area (25)
Lagodekhi-Zagatala-West Dagestan – Alazani-Ganykh (26)
Sarybash – Alazani-Ganykh (27)
Alazani-Ganykh – Iori-Iori-Mingechevir (Mingecheur) (28)
~~Lagodekhi-Zagatala-West Dagestan – Sabalan-Shahdagh (29)~~
Laman-Kam Area – Ismailly-Shahdagh (30)
Samur-Yalama – Aghzibir (Akzybir) Lake (31)
Pambak-Sevan – Mount Gyamysh (32)
Pambak-Sevan – Khosrov (33)
Freshwater Igdir Plain and Armavir – Agri Dag (Ararat) and Armash (34)
Igdir Plain and Armavir – Agri Dag (Ararat) and Armash (35)
Igdir Plain and Armavir – Maku and Western Iranian Border (36)
Agri Dag (Ararat) and Armash – Maku and Western Iranian Border (37)
Maku and Western Iranian Border – Marakan-Kiamaki (38)
Noravank – Bichanek (39)
Khosrov – Noravank (40)
Khosrov – Bichanek (41)
Bichanek – Zangezur (42)
Mount Gyamysh – Meghri – Marakan-Kiamaki (43)
Iori-Iori-Mingechevir (Mingecheur) – Gobustan-Hajigabul (45)
Aghzibir (Akzybir) Lake – Gobustan-Absheron (46)
Gobustan-Hajigabul – Shirvan (47)
Gobustan-Absheron – Shirvan (48)
Shirvan – Gyzyl-Agach (Gyzylaghaj) (52)
Marakan-Kiamaki – Sabalan (53)
Araz (Araks) Valley – Sabalan (54)
Gyzyl-Agach (Gyzylaghaj) – Talish-Zuvand (55)
Marine Talish-Zuvand – Sefid Rud-Anzali (57)
Talish-Zuvand – Sefid Rud-Anzali (58)
Sefid Rud-Anzali – Gilan (59)
Marine Sefid Rud-Anzali – Gilan (60)

Because focal species rely on forest, freshwater, marine, and high mountain habitats for survival, the plan includes actions referenced in the respective biome conservation plans. Actions on halting illegal hunting and fishing should be

coordinated with efforts in the institutional development and capacity building plan. Appropriate cross-references are given in the last column.

F. PLAN FOR CONSERVATION OF FOCAL SPECIES IN THE CAUCASUS ECOREGION

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions by 2010	Country	Priority Conservation Area (PCA)/Corridor (CR)	Cross-Reference
<u>Ecoregional framework for conservation of focal species</u>					
1. Populations of all identified focal species are stabilized and focal-species based approach is implemented in ecosystem conservation	1.1. Regional working groups on focal species are functioning	1.1.1. Establish regional Mammal Working Group and clarify focal species	Ecoregion	All PCA and CR	Institutional development 1.4.2, 7.5
		1.1.2. Establish regional Bird Working Group and clarify focal species	Ecoregion	All PCA and CR	See above
		1.1.3. Establish regional Amphibian and Reptile Working Group and clarify focal species	Ecoregion	All PCA and CR	See above
		1.1.4. Establish regional Fish Working Group and clarify focal species	Ecoregion	All PCA and CR	See above
		1.1.5. Establish regional Invertebrates Working Group and identify focal species	Ecoregion	All PCA and CR	See above
		1.1.6. Establish regional Plant Working Group and identify focal species	Ecoregion	All PCA and CR	See above
		1.1.7. Support seminars for working groups on conservation of focal species and species of special concern	Ecoregion	All PCA and CR	See above
	1.2. Databases on all focal species exist and are regularly updated	1.2.1. Framework for databases is created for all groups of focal species	Ecoregion	All PCA and CR	Institutional development 7.3.1, 7.3.3
	1.3. Focal-species approach is applied to conserve a selected set of PCA and CR	1.3.1. Establish small grants program to support efforts to conserve globally threatened species, focal species, and species of special concern in PCA and CR	Ecoregion	All PCA and CR	Biomes
	1.4. Minimize illegal hunting and habitat degradation	1.4.1. Assess impacts of illegal hunting and habitat degradation on globally threatened species, focal species, and species of special concern	Ecoregion	PCA and CR where endangered and focal species are found	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
2. International and national Red Lists accurately reflect the status of endangered species in the Caucasus Ecoregion	2.1. The Caucasus section of the IUCN Red List is updated regularly and assists in determining international and regional conservation priorities	2.1.1. Revise the IUCN Red List for the Caucasus	Ecoregion	All PCA and CR where endangered and focal species are found	
	2.2. National Red Lists are updated regularly taking into account IUCN criteria and assist in determining regional and national conservation priorities	2.2.1. Update the Red List for Armenia and enact appropriate legislation	Armenia	All PCA and CR in Armenia where endangered species are found	
		2.2.2. Update the Red List for Azerbaijan	Azerbaijan	All PCA and CR in Azerbaijan where endangered species are found	
		2.2.3. Update the Red List for Georgia	Georgia	All PCA and CR in Georgia where endangered species are found	
		2.2.4. Prepare/Update the Red List for Iran	Iran	All PCA and CR in Iran where endangered species are found	
		2.2.5. Update the Red List for Russia	Russia	All PCA and CR in Russia where endangered species are found	
		2.2.6. Prepare/Update the Red List for Turkey	Turkey	All PCA and CR in Turkey where endangered species are found	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Plan for conservation of the endangered Leopard (<i>Panthera pardus saxicolor</i>)					
3. An effectively managed leopard conservation landscape consisting of protected areas and connecting corridors is established and the leopard population increases by 50 percent	3.1. Econet is created to support a viable leopard population and improve leopard protection in nature reserves where the animal is thought to be found	3.1.1. Assess and analyze current range and population of the leopard, determine key areas and migratory routes for leopards, and elaborate Econet Plan	Ecoregion	PCA 15, 16, 17, 22, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53 CR 23, 38, 39, 40, 41, 42, 43, 58, 59	Econets plans for biomes
		3.1.2. Elaborate and implement measures for leopard conservation in Khosrov and Shikahogh nature reserves, (Armenia); Hirkan National Park and Zuvand Sanctuary, Ilisu Reserve (Akhar-Bakhar Range), Ordubad National Park and Sanctuary, Shahbuz Reserve (Azerbaijan); Tusheti National Park, Vashlovani Reserve and National Park (Georgia), Marakan, Kiamaky, Lavandvil, Lisar, Gasht-e-Rodkan and Siahmazgy, Siah Rud-e Rudbar, Sarv-e lat and Javaherdasht, Beles Kuh, Arasbaran Biosphere Reserve (Iran) and Turkey	Armenia Azerbaijan Georgia Iran Turkey	PCA 16, 22, 37, 39, 41, 42, 43, 44, 45, 48, 49, 52, 53 CR 38, 39, 40, 41, 42, 43, 58, 59	Forest High mountain
		3.1.3. Organize training seminar for rangers in leopard reserves and increase coordination among reserves	Armenia Azerbaijan Georgia Iran	PCA 16, 22, 37, 39, 41, 42, 43, 44, 48, 49	Institutional development 1.5.2
		3.1.4. Establish transboundary cooperation to conserve important leopard habitat	Ecoregion	PCA 16, 22, 37, 41, 42, 43, 44, 48	Forest 3.3.1
		3.1.5. Ensure protected status of key corridors for leopard migration	Armenia Azerbaijan Georgia Iran Russia	CR 23, 26, 38, 39, 40, 41, 42, 43, 53, 58, 59	Forest 3.2.3 High mountain 1.2.10, 2.2.16

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	3.2. Create new protected areas for leopard conservation	3.2.1. Establish new protected areas in southern Armenia to conserve leopards and other focal species	Armenia	PCA 42, 43	Forest 2.2.1 High mountain 2.2.5 Focal species 7.2.1, 11.2.4
		3.2.2. Create Arpi National Park in Central Armenia	Armenia	PCA 46	High mountain 2.2.2 Focal species 7.2.2
		3.2.3. Create Akhar-Bakhar Reserve in northwestern Azerbaijan	Azerbaijan	PCA 22	
		3.2.4. Create two sanctuaries for leopard conservation and restoration in North Caucasus	Russia	Selected PCA and CR	High mountain 1.2.10
3a. Increase leopard prey base (mouflon, bezoar goat, wild boar, roe deer)	3.3. Innovative measures for increasing prey populations are carried out in leopard habitat	3.3.1. Enact ban on hunting ungulates in reproductive areas in leopard habitat or where ungulate numbers have declined	Armenia Azerbaijan Georgia Iran Russia	PCA 16, 22, 37, 39, 41, 42, 43, 44, 45, 48, 49, 52, 53 CR 38, 39, 40, 41, 42, 43, 58, 59	Institutional development 1.6 Focal species 6, 7, 11
		3.3.2. Develop and implement new norms for game hunting in leopard habitat, including using adaptive management techniques, in cooperation with game managers and hunting societies	Armenia Azerbaijan Georgia Iran Russia	PCA 16, 22, 37, 39, 41, 42, 43, 44, 45, 48, 49, 52, 53 CR 38, 39, 40, 41, 42, 43, 58, 59	Institutional development 1.6 Focal species 6, 7, 11
	3.4. Work with nature reserves and sanctuaries to ensure healthy populations of leopard prey	3.4.1. Provide technical and methodological support to help reserves assess populations of leopard prey	Armenia Azerbaijan Georgia Iran	PCA 15, 16, 22, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49	
		3.4.2. Create anti-poaching brigades to combat poaching of leopards and their prey	Armenia Azerbaijan Georgia Russia	PCA 16, 22, 37, 39, 42, 43, 49	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
3b. Monitoring and research lead to effective leopard conservation	3.5. Monitoring and research are carried out over the leopard's entire range continuously	3.5.1. Coordinate scientific research among experts from different countries and carry out seminar	Ecoregion		
		3.5.2. Carry out census of leopards in model areas	Armenia Azerbaijan Georgia Iran Russia	PCA 16, 22, 37, 41, 42, 43, 44 CR 39, 40, 41, 42	
		3.5.3. Study dynamics of the leopard's range and identify possible areas for expansion	Ecoregion	PCA 15, 16, 17, 22, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53 CR 23, 38, 39, 40, 41, 42, 43, 58, 59	
3c. Legal and financial mechanisms for leopard conservation are enacted and enforced	3.6. An effective institutional and legislative basis for leopard conservation is in place	3.6.1. Ecoregional strategy for leopard conservation is elaborated and agreed on at regional stakeholder workshop; National Action Plans are elaborated and approved by relevant governmental organizations	Ecoregion		
		3.6.2. Increase penalties for poaching leopards	Ecoregion		
		3.6.3. Elaborate system for compensating people for livestock and other losses to leopards	Ecoregion	PCA 16, 22, 37, 41, 42, 43, 44	
		3.6.4. Ensure state support and official status of anti-poaching brigades	Armenia Azerbaijan Georgia Russia	PCA 16, 22, 37, 39, 42, 43, 49	Institutional development 1.5.4
	3.7. Customs agencies effectively halt trade in leopard derivatives	See institutional development plan	Ecoregion		Institutional development 1.5.2, 1.5.3

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
Plan for conservation of focal carnivores (excluding leopard)					
4. Striped hyena population reaches viable numbers	4.1. Decline of hyena population is halted	4.1.1. Assess state of hyena population	Ecoregion	PCA 22, 31, 33, 37, 38, 42, 43, 44, 45, 46, 47, 49 CR 38, 39, 40, 41, 42, 47, 53, 54	
		4.1.2. Elaborate and begin implementation of measures for hyena conservation	Ecoregion	The same PCA and CR	
		4.1.3. Develop and begin implementation of action plan on hyena conservation in Azerbaijan	Azerbaijan	PCA 22, 30, 31, 32, 33, 34, 35, 36, 37, 43	
		4.1.4. Strengthen and enlarge Chachuna Sanctuary	Georgia	PCA 22, 23	Forest 4.2.2 Freshwater 4.1.3
		4.1.5. Promote conservation of hyenas in local communities and work to improve the hyena's image	Azerbaijan Georgia Iran	Selected PCA and CR	
		4.1.6. Strengthen regulations for hyena conservation and increase fines for poaching	Armenia Azerbaijan Georgia Iran Turkey		
5. Endangered species programs are in place and work toward increasing populations of bears and species of special concern¹	5.1. NGOs, protected areas, and other organizations carry out successful programs on restoring carnivore populations	5.1.1 Assess populations of bear, wolf, and lynx. Launch studies (distribution, prey-predator relationships, carnivore-human conflicts, wildlife-habitat associations) on wolf and brown bear and continue at least for two years; design species monitoring program for wolf, bear, and two selected large herbivore prey species	Ecoregion	PCA 11, 13, 14, 25, 26, 27, 54	

¹ The wolf is considered as species of special concern only for Turkey

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		5.1.2. Begin project to monitor and halt decline of lynx population in Ecoregion	Ecoregion	Selected PCA and CR	
		5.1.3. Elaborate action plans for conservation of wolf, bear, and two selected large prey herbivores and gain approval for their implementation	Selected countries	Selected PCA and CR	
		5.1.4. Establish protected areas for conservation of bear, wolf, and two large prey herbivores	Turkey	PCA 47, 48, 51, 52, 53, 54 CR 17, 21	Forest 2.2.17 – 2.2.20
		5.1.5. Establish procedures for solving human-wildlife conflicts, including through co-management of wildlife conservation programs	Selected countries	Selected PCA and CR	
		5.1.6. Coordinate research and lessons learned on carnivore-human conflicts among experts from different countries and carry out international seminar	Ecoregion		
Plan for conservation of focal ungulates					
6. Improve management of West and East Caucasian tur populations and increase numbers by at least 20 percent	6.1. Protected areas effectively preserve turs throughout the animals' range	6.1.1. Strengthen protected areas in tur habitat (Tusheti, Lagodekhi, Zagatala, Ilisu, Ismailly, Teberdinsky, and others)	Azerbaijan Georgia Russia	PCA 11, 12, 13, 14, 15, 16, 17, 18, 21 CR 9, 10, 11, 13, 23, 25, 29, 30	Forest 1.2.1, 1.2.11, 1.2.12, 1.3.2 High mountain 1.2.5, 1.2.7, 1.2.9, 1.3.2
		6.1.2. Create new protected areas in Khevsureti, Svaneti, Racha	Georgia	PCA 13, 14, 15	Forest 1.2.3 - 1.2.5 High mountain 1.2.2 - 1.2.4
		6.1.3. Provide salt licks for turs in Kavkazsky Strict Nature Reserve to keep the animals from leaving the reserve and being shot by hunters	Russia	PCA 11	
	6.2. Decline of tur populations and shrinking of range is halted in all three countries	6.2.1. Develop strategy and national action plans for tur conservation and restoration	Azerbaijan Georgia Russia		

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		6.2.2. Begin implementation of tur conservation measures	Azerbaijan Georgia Russia	PCA 11, 12, 13, 14, 15, 16, 17, 18, 21 CR 9, 10, 11, 13, 23, 25, 29, 30	
	6.3. Hunting for tur is sustainable in areas where populations are stable	6.3.1. Make recommendations for sustainable yields in areas where the animals are hunted and for standardizing procedures in all three countries	Azerbaijan Georgia Russia	The same PCA and CR	Institutional development 1.6
		6.3.2. Promote collaboration of hunting management and protection agencies on tur conservation	Azerbaijan Georgia Russia	The same PCA and CR	See above
		6.3.3. Monitor and control hunting levels to prevent poaching	Azerbaijan Georgia Russia	The same PCA and CR	Institutional development 1.5
		6.3.4. Improve legislation and enact measures to eliminate trade of tur horns	Georgia		Institutional development 1.6
7. Bezoar goat numbers increase over an expanded range by at least 20 percent, including in protected areas	7.1. Decline of bezoar goat population is halted	7.1.1. Assess state of bezoar goat population, develop strategy and national action plans for the species conservation	Ecoregion	PCA 15, 16, 29, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 52, 53, 54 CR 17, 21, 22, 23, 25, 35, 36, 37, 38, 39, 40, 41, 42, 53, 54	
		7.1.2. Elaborate and implement urgent measures for conserving and restoring goat populations	Ecoregion	The same PCA and CR	
		7.1.3. Assess feasibility of captive breeding programs in Armenia and Azerbaijan	Armenia Azerbaijan		
		7.1.4. Work with local communities to provide incentives for bezoar goat conservation	Turkey		

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		7.1.5. Elaborate program and begin establishing a founder population of 7-8 pairs of bezoar goats in the Borjomi-Kharagauli National Park	Armenia, Georgia	PCA 27	
		7.1.6. Elaborate and begin implementation of program for reintroduction of bezoar goat in Zuvand Sanctuary (Azerbaijan)	Azerbaijan	PCA 37	
	7.2. New protected areas are created and existing reserves strengthened for conservation of bezoar goat	7.2.1. Establish new protected areas in southern Armenia to conserve leopard, bezoar goat, and other focal species	Armenia	PCA 42, 43	Focal species 3.2.1. Forest 2.2.1.
		7.2.2. Create Arpi National Park (9,000 ha) in Central Armenia	Armenia	PCA 46	High mountain 2.2.2 Focal Species 3.3.2, 7.2.2, 11.2.1
		7.2.3. Develop management plan and improve infrastructure of Khosrov Strict Nature Reserve	Armenia	PCA 49	Forest 2.2.2 Focal species 3.1.2
		7.2.4. Develop management plan and infrastructure of Ordubad National Park in Nakhchyvan	Azerbaijan	PCA 43	High mountain 2.2.6 Focal species 3.1.2
		7.2.5. Upgrade Tlyaratinsky Sanctuary status to strict nature reserve	Russia	PCA 18	Forest 1.2.11 High mountain 1.2.9
	7.3. An effective legislative basis for bezoar goat conservation is in place	7.3.1. Harmonize legislation on bezoar goat protected status among countries and increase penalties for poaching bezoar goats	Ecoregion		
8. Sustainable management practices for Caucasian red deer are in place in the North Caucasus and red deer population in the South Caucasus doubles	8.1. Long-term strategy for red deer conservation is developed and implementation begun	8.1.1. Survey red deer populations in each country and assess threats	Ecoregion	PCA 11, 12, 16, 17, 21, 27, 28, 37, 39, 50 CR 9, 29, 32, 43, 58, 59	
		8.1.2. Develop long-term strategy and coordination mechanisms for red deer conservation, and begin implementation	Ecoregion	The same PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	8.2. Strengthen existing reserves for red deer conservation and create linking corridors	8.2.1 Strengthen protection of Borjomi-Kharagauli National Park and Lagodekhi Strict Nature Reserve in Georgia, and Zagatala, Iltisu, and Ismailly strict nature reserves in Azerbaijan	Azerbaijan Georgia	PCA 16, 17, 21, 27 CR 29	Forest 1.2.1, 2.2.8 High mountain 1.3.2 Focal species 6.1.1
		8.2.2. Elaborate plan and begin creation of migration corridors to connect isolated red deer populations	Azerbaijan Georgia Russia		
	8.3. Program for reintroduction of red deer in the wild in its former range is launched	8.3.1. Elaborate and begin implementation of program for reintroduction of red deer in Hirkan National Park	Azerbaijan	PCA 37	
		8.3.2. Elaborate and begin implementation of program for reintroduction of red deer in Dilijan National Park	Armenia	PCA 50	
		8.3.3. Work out captive breeding programs and create reproductive herds in breeding centers	Azerbaijan Georgia Iran	PCA 16, 17, 21, 27, 28, 38	
		8.3.4. Identify protected areas and other sites where reintroduction is feasible and establish appropriate protected regime in sites	Ecoregion	Selected PCA	
	8.4. Sustainable hunting of red deer is practiced in the Russian Caucasus	8.4.1. Assess population of red deer in the North Caucasus and elaborate sustainable quotas and system for monitoring actual number taken	Russia	PCA 11, 12, 14, 15, 16	Institutional development 1.5, 1.6, 2.2
		8.4.2. Ensure coordination of game management and other hunting agencies across republic boundaries	Russia	The same PCA and CR	See above
		8.4.3. Support inspection agencies to effectively manage red deer hunting and poaching	Russia	The same PCA and CR	See above
		8.4.4. Support NGO patrol groups for red deer conservation	Russia	The same PCA and CR	Institutional development 2.1.1, 2.2.1

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
9. Chamois population is increased by 20 percent	9.1. Decline of chamois populations is halted	9.1.1. Assess chamois populations and elaborate a unified strategy and urgent measures for its conservation	Azerbaijan Georgia Russia Turkey	PCA 11, 12, 13, 14, 15, 16, 17, 18, 21, 27, 52, 53, 54 CR 9, 10, 11, 12, 13, 16, 17, 18, 21, 22, 23, 25, 29, 30	
		9.1.2. Include chamois in national Red Lists in all countries where the animal is found	Azerbaijan Georgia Turkey		Focal species 2.2.2, 2.2.3, 2.2.6
		9.1.3. Work with local communities to provide incentives for chamois conservation	Azerbaijan Georgia Russia Turkey	Selected PCA and CR	
		9.1.4. Provide core support to strengthen reserves where the chamois is found	Azerbaijan Georgia Russia Turkey	PCA 11, 12, 13, 14, 16, 27, 53, 54 CR: 17, 22	
10. The goitred gazelle is restored to protected areas in its former range and the population doubles	10.1. A long-term strategy for goitred gazelle conservation is being implemented	10.1.1. Assess current population and distribution	Azerbaijan	PCA 22, 31, 33 CR 45, 47	
		10.1.2. Elaborate strategy and management plan for goitred gazelle and implement urgent measures	Azerbaijan		
	10.2. New protected areas are created, existing reserves are strengthened, and plans for linking them are adopted and implementation begun	10.2.1. Elaborate management plan and develop infrastructure of Gakh Sanctuary (37,000 ha) to preserve steppe habitat for the goitred gazelle	Azerbaijan	PCA 22	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		10.2.2. Elaborate management plan and develop infrastructure for Shirvan National Park	Azerbaijan	PCA 33	
		10.2.3. Provide core support for Shirvan National Park and Korchay Sanctuary for protecting goitred gazelle	Azerbaijan	PCA 22, 33	
		10.2.4. Upgrade Korchay Sanctuary status to strict nature reserve and provide necessary support for enforcing regime	Azerbaijan	PCA 22	
		10.2.5. Assess feasibility of creating protected migration corridors between the two isolated populations and begin to implement measures	Azerbaijan	PCA 31 CR 45, 47	
	10.3. Program for reintroduction of goitred gazelle is underway	10.3.1. Create breeding centers in Shirvan and Vashlovani national parks	Azerbaijan Georgia	PCA 22, 33	
		10.3.2. Determine potential sites for gazelle release and ensure their protection	Azerbaijan Georgia	PCA 22 CR 45 and other selected PCA and CR	
		10.3.3. Work with local communities to ensure support for release program	Azerbaijan Georgia	The same PCA and CR	
11. Population of Gmelin's mouflon is increased by at least 50 percent	11.1. A long-term strategy for mouflon conservation is adopted and implementation begun	11.1.1. Assess current population and distribution	Armenia Azerbaijan Iran Turkey	PCA 42, 43, 45, 46, 48, 49, 52 CR 35, 39, 40, 41, 42	
		11.1.2. Elaborate strategy and action plans for mouflon and implement urgent measures	Armenia Azerbaijan Iran Turkey	The same PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		11.1.3. Assess feasibility of launching captive breeding and transboundary protection programs	Armenia Azerbaijan Iran Turkey	Selected PCA and CR	
	11.2. Mouflon are effectively conserved in protected areas	11.2.1. Create Arpi National Park in central Armenia for conservation of leopard and mouflon habitat	Armenia	PCA 46	High mountain 2.2.2 Focal species 3.3.2, 7.2.2
		11.2.2. Improve protection of mouflon in Khosrov Reserve and Urts Range of Armenia; increase protected status of Gorovan Sands Sanctuary	Armenia	PCA 49 CR 40	Forest 2.2.2 Focal species 3.1.2
		11.2.3. Establish new protected areas in southern Armenia to conserve mouflon, leopard, and other focal species	Armenia	PCA 42, 43	Forest 2.2.1 Focal species 3.2.1
		11.2.4. Elaborate management plan and develop infrastructure of Ordubad National Park in Nakhchyan	Azerbaijan	PCA 43	High mountain 2.2.6 Focal species 3.1.2, 7.2.4
		11.3. Program is begun for reintroduction of mouflon to the wild in its former range	11.3.1. Elaborate captive breeding program and begin establishing founder population of 7-8 pairs of mouflons to allow gene flow between isolated populations	Armenia Azerbaijan	PCA 42, 43, 45, 46, 49
12. A healthy population of European bison is managed sustainably	12.1. European bison are effectively conserved in protected areas	12.1.1. Increase protection of bison in the wild by providing support to protected areas where the animals are found	Russia	PCA 11, 12	
		12.1.2. Work with local communities to provide incentives for conserving bison	Russia	PCA 11, 12	
		12.1.3. Support research and monitoring of bison in Kavkazsky and Teberdinsky strict nature reserves	Russia	PCA 11, 12	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		12.1.4. Provide salt licks for bison in Kavkazsky Strict Nature Reserve to keep the animals from leaving the reserve and being shot by poachers	Russia	PCA 11, 12	
		12.1.5. Assess political situation and determine feasibility of reintroducing additional bison to the region	Russia	PCA 11, 12	
Plan for conservation of focal birds					
13. Critical habitats of Caucasian black grouse are protected and the species' long-term persistence is ensured	13.1. The most important sites are identified and their protection is ensured	13.1.1. Finalize research on species status, including distribution, biology, genetics, and threats assessment through its range	Ecoregion	All related PCA and CR	
		13.1.2. Identify critical sites and develop measures for their protection	Ecoregion	All related PCA and CR	High mountain 3.1
		13.1.3. Begin establishment of new protected areas for species conservation	Ecoregion	All related PCA and CR	High mountain 3.1
	13.2. Conservation action plans are implemented in all countries within the grouse's range	13.2.1. Develop national and regional conservation action plans for Caucasian Black grouse and initiate implementation	Ecoregion	All related PCA and CR	High mountain 3.1
	13.3. Monitoring of species populations and habitats is implemented in countries within the grouse's range	13.3.1. Develop species monitoring plans and build capacity for implementation in all countries within the grouse's range	Ecoregion	All related PCA and CR	
14. The population of the imperial eagle in the Caucasus is stabilized	14.1. All nesting sites of imperial eagle are protected	14.1.1. Complete inventory and threats assessment of imperial eagle nests	Ecoregion	All related PCA and CR	High mountain 3.1
		14.1.2. Elaborate and initiate implementation of protection measures for imperial eagle nests	Ecoregion	All related PCA and CR	High mountain 3.1
		14.1.3. Elaborate monitoring plan and build capacity for its implementation	Ecoregion	All related PCA and CR	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
	14.2. New potential nesting sites are identified and artificial nests are built	14.2.1. Identify new potential nesting sites based on species distribution and occurrence research	Ecoregion	All related PCA and CR	High mountain 3.1
		14.2.2. Design program and begin construction of artificial nests	Ecoregion	All related PCA and CR	
15. The population of cinereous vulture in the Caucasus is stabilized	15.1. All nesting sites of Cinereous vulture are identified and granted protection	15.1.1. Complete inventory and threats assessment of cinereous vulture nesting sites in the Caucasus	Ecoregion	All related PCA and CR	High mountain 3.1
		15.1.2. Develop measures to protect cinereous vulture nesting sites	Ecoregion	All related PCA and CR	High mountain 3.1
		15.1.3. Develop monitoring plan and build capacity for its implementation	Ecoregion	All related PCA and CR	
	15.2. Number of cinereous vulture pairs increases by 50 percent	15.2.1. Design and begin implementation of artificial feeding program	Ecoregion	All related PCA and CR	High mountain 2.2.2
16. A viable breeding population of marbled duck is ensured in the Caucasus	16.1. All nesting sites of marbled duck are identified and granted protection	16.1.1. Inventory marbled duck nesting sites	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
		16.1.2. Develop measures to protect marbled duck nesting sites	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
	16.2. Quality of marbled duck breeding habitat is improved	16.2.1. Develop habitat management measures and initiate implementation	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
17. A viable population of white-headed duck is ensured in the Caucasus	17.1. All important sites for white-headed duck are identified and granted protection	17.1.1. Inventory important sites for white-headed duck in the Caucasus	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
		17.1.2. Develop measures to protect white-headed duck habitats	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
		17.1.3. Develop and build capacity for white-headed duck population monitoring program	Ecoregion	All related PCA and CR	
	17.2. Quality of white-headed duck breeding habitats is improved	17.2.1. Develop habitat management measures and begin implementation	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
18. A viable population of pygmy cormorant is ensured in the Caucasus	18.1. All important breeding sites for pygmy cormorant are identified and ensured protection	18.1.1. Inventory pygmy cormorant breeding sites in the Caucasus	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
		18.1.2. Elaborate measures to protect pygmy cormorant breeding sites	Ecoregion	All related PCA and CR	Freshwater 3.1, 3.2
		18.1.3. Elaborate and build capacity for monitoring program on pygmy cormorant breeding population	Ecoregion	All related PCA and CR	
Plan for conservation of focal amphibians					
19. The number of local populations of Syrian spadefoot toad increases by 20 percent and the species' range is stabilized	19.1. Ten large and stable populations of the spadefoot exist within the Ecoregion	19.1.1. Collect detailed information about the location of spadefoot populations throughout range	Ecoregion	PCA 19, 22, 36, 41, 42, 43, 49, 52	
		19.1.2. Grant legal protection to at least eight populations of spadefoot in PCA	Ecoregion	The same PCA	
		19.1.3. Introduce spadefoot in large reservoirs created within the species' range	Ecoregion	The same PCA	
	19.2. Gene flow between major regions is ensured through conservation corridor	19.2.1. Connect important habitats with corridors appropriate for spadefoot dispersal	Armenia Azerbaijan Georgia	PCA 46, 49	
		19.2.2. Restock individual isolated habitats from key locations	Armenia Azerbaijan Georgia	PCA 46, 49	

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
20. Over 50 locations of the Caucasian salamander are legally protected throughout the entire range and connected by corridors	20.1. The exact area of distribution of salamanders is known	20.1.1. Clarify range of Caucasian salamander in Georgia and describe key limiting factors	Georgia	PCA 27, 54 CR 16	Forest
	20.2. Identified locations of Caucasian salamander are legally protected in PCAs connected by corridors	20.2.1. Outline key habitats for salamanders	Georgia Turkey	PCA 27, 54 CR 16, 17.	Forest
		20.2.2. Grant legal protection to corridors for dispersal of at least 10 populations of salamander	Georgia Turkey	PCA 27, 54 CR 16, 17.	Forest
Plan for conservation of focal fish species					
21. Recovering populations of sturgeon are conserved in the Black and Caspian seas	21.1. All spawning areas are strictly protected and decline of all sturgeon populations is halted	21.1.1. Identify all spawning grounds for sturgeons and assess threats	Azerbaijan Georgia Iran Russia Turkey	PCA 2, 3, 4, 5, 9, 10, 19, 20, 26, 32, 33, 35, 37, 56 CR 1, 2, 3, 4, 8, 15, 24, 31, 46, 48, 52, 55, 57, 60	Marine
		21.1.2. Enact legislation against fishing in spawning areas	Azerbaijan Georgia Iran Russia	The same PCA and CR	Institutional development 1.6 Marine
		21.1.3. Strengthen protection of spawning areas on the Caspian in Kura Delta and Samur, Yalama, and Talish rivers	Azerbaijan	PCA 19, 20, 32, 33, 35, 37 CR 31, 46, 48, 52, 55	Marine 9.1.3
		21.1.4. Restore strict protection in the aquatic section of Kolkheti National Park	Georgia	PCA 26	Marine 9.2.2
		21.1.5. Renew activities of the Geguti Fish Farm of releasing sturgeon young in the Rioni River	Georgia	PCA 26	
		21.1.6. Secure habitat and restore migratory routes for sturgeon in all major rivers	Iran	PCA 37, 56	Freshwater 8.1.6

Long-Term Target by 2025	Medium-Term Target by 2015	Immediate Actions	Country	Priority Conservation Area (PCA)/ Corridor (CR)	Cross-Reference
		21.1.7. Secure habitat and restore migratory routes for sturgeon in all spawning rivers	Russia	PCA 2, 3, 4, 5, 9, 10, 19 CR 1, 2, 3, 4, 8, 24	Freshwater 8.1.9
		21.1.8. Establish sanctuary on lower Rioni River	Georgia	PCA 26	
	21.2. National Action Plans are elaborated and state of sturgeon populations and threats in the Black and Azov seas are known	21.2.1. Status of sturgeon populations and threats are assessed in the Georgian section of the Black Sea, National Action Plan is elaborated and approved by relevant governmental organizations	Georgia	PCA 26 CR 15	Marine
	21.3. Research on taxonomy of sturgeon species is completed	21.3.1. Taxonomy of sturgeon species is revised	Ecoregion	All marine PCA and CR	
	21.4. Market assessment is completed and public awareness campaign initiated	21.4.1. Domestic markets in main sturgeon-consuming countries of the Ecoregion are assessed and public awareness campaign is facilitated	Russia Azerbaijan		
	21.5. Illegal sturgeon fishing is reduced by half in the Ecoregion	21.5.1. Take measures to control the illegal trade of sturgeon and caviar in Georgia	Georgia	PCA 26	Institutional development 1.5, 1.6 Marine
22. Viable populations of <i>Salmo ischchan</i> and <i>Barbus goktschaicus</i> are established	22.1. Populations of <i>Salmo ischchan</i> and <i>Barbus goktschaicus</i> begin to recover	22.1.1. Restore habitats of <i>Salmo ischchan</i> and <i>Barbus goktschaicus</i> in Armenia	Armenia	PCA 50, 51	Freshwater 1.2.1

PRIORITY CONSERVATION AREAS AND CORRIDORS IN THE CAUCASUS ECOREGION

Brief Description

A. Priority Conservation Areas

1. ABRAU-DYURSO

Location:	West from the city of Novorossiysk, at the westernmost end of the Greater Caucasus Range, bordering the Black Sea Longitude: 37°32'53" Latitude: 44°44'05"
Area:	26,877 ha
Econet:	Greater Caucasus Forest
Countries:	Russia
Main Biomes:	Forest
Main Habitats⁵:	Forests – 25,694 ha (95.60%): Crimea-Novorossiysk low-mountain oak and pine forests and juniper open woodlands
Land Use/Land Cover⁶:	Urban areas – 421 ha (1.57%); farmlands – 3,429 ha (12.76%); Lake Abrau-Dyurso – 120 ha (0.45%); actual forest cover – 22,907 ha (85.23%)
Protected Areas:	Two areas totaling 18,100 ha (67.34%): Abrausky Sanctuary – 11,500 ha (42.79%) and Bolshoy Utrish Sanctuary – 6,600 ha (24.56%)
Key Phenomena:	Rare plant communities: <i>Juniperus exselsa</i> , <i>J. foetidissima</i> , <i>Pistacia mutica</i> , and endemic species of reptiles and fish (<i>Clupeonella abrau</i> is endemic to Lake Abrau Durso)
Focal Species:	None
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i>
Population Density:	Moderate
Resource Dependence:	Low
Threats:	High recreation pressure
CEPF Site Outcomes⁷:	None

2. KUBAN

Location:	At the mouth of the Kuban River, in the Azov Sea coastal area Longitude: 37°22'18" Latitude: 45°20'23'
Area:	85,484 ha (aquatic area – 16,077 ha, terrestrial area – 69,407 ha)
Econet:	Azov-Black Sea Coast
Countries:	Russia
Main Biomes:	Freshwater, marine
Main Habitats:	Wetlands – 39,130 ha (56.38% of terrestrial area), including 33,826 ha of mires
Land Use/Land Cover:	Rural settlements – 847 ha (1.22% of terrestrial area); farmlands – 28,655 ha (41.29% of terrestrial area), among them 2,185 ha (3.15%) vineyards; lakes

⁵ According to Map 2: Natural Landscapes of the Caucasus (sc. 1:500,000)

⁶ According to Map 3: Land Use/Cover of the Caucasus (sc. 1:500,000)

⁷ According to CEPF Profile for Caucasus Hotspot (www.cepf.net)

	(including ephemeral) – 24,808 ha (35.74% of terrestrial area); saline lands– 296 ha (0.43%); reed and bulrush – 3,828 ha (5.52%); mires – 9,586 ha (13.81%); actual forest cover – 478 ha (0.69%); rivers – 908 ha (1.31%)
Protected Areas:	None
Key Phenomena:	Spawning area for sturgeons (Focal Species), stopover and wintering grounds for migratory birds, large congregations of migratory birds
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Population Density:	Moderate
Resource Dependence:	Moderate
Threats:	Poaching, water pollution, habitat degradation
CEPF Site Outcomes:	Kuban (2)

3. PRIMORSKO-AKHTARSK

Location:	Middle part of the eastern coast of the Azov Sea from the saline Beysugsky Liman to the southern outskirts of the town of Primorsko-Akhtarsk Longitude: 38°11'09" Latitude: 46°01'16"
Area:	163,163 ha (aquatic area – 19,290 ha, terrestrial area –143,873 ha)
Econet:	Azov-Black Sea Coast
Countries:	Russia
Main Biomes:	Freshwater, marine
Main Habitats:	Wetlands: freshwater ecosystems – 83,017 ha (57.70% of terrestrial area); delta, floodplain swamp forests, grasslands, and salt marshes – 61,551 ha (42.78% of terrestrial area)
Land Use/Land Cover:	Terrestrial area: urban areas and rural settlements – 1,850 ha (1.29% of terrestrial area); farmlands – 59,006 ha (41.01% of terrestrial area); lakes (including ephemeral lakes and reservoirs) – 64,221 ha (44.64% of terrestrial area); rivers – 190 ha (0.13%); mires — 9,948 ha (6.91%); reed and bulrush – 8,657 ha (6.02%)
Protected Areas:	None
Key Phenomena:	Sturgeon populations, habitats of waterfowl, large aggregations of migratory birds
Focal Species:	<i>Oxyura leucocephala</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Population Density:	Moderate
Resource Dependence:	Moderate
Threats:	Water pollution
CEPF Site Outcomes:	Azov Sea Eastern Coast (9), Primorsko-Akhtarsk Salt Lakes (11)

4. YEYSK

Location:	Coastal area of Yeysky zaliv (Yeysky Bay), Azov Sea Longitude: 38°36'55" Latitude: 46°38'49"
Area:	130,184 ha (aquatic area – 21,820 ha, terrestrial area – 108,364 ha)
Econet:	Azov-Black Sea Coast
Countries:	Russia
Main Biomes:	Freshwater, marine

Main Habitats:	Delta and floodplain landscapes with wetlands, swamp forests and grasslands, and salt marshes – 12,340 ha (11.39% of terrestrial area).
Land Use/Land Cover:	Urban and rural settlements – 2,841 ha (2.62% of terrestrial area); farmlands – 96,323 ha (88.89% of terrestrial area); lakes (including ephemeral lakes and reservoirs) – 486 ha (0.45% of terrestrial area); actual forest cover – 100 ha (0.09%), rivers – 241 ha (0.22%); mires – 8,373 ha (7.73%)
Protected Areas	None
Key Phenomena:	Sturgeon populations, habitats of waterfowl, population of <i>Otis tarda</i> , large aggregations of migratory birds
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Population Density:	High
Resource Dependence:	High
Threats:	Water pollution, illegal fishing, poaching
CEPF Site Outcomes:	None

5. DON DELTA

Location:	Don River Delta at the northernmost point of the Azov Sea Longitude: 39°24'10" Latitude: 47°09'13"
Area:	55,234 ha (aquatic area – 10,256 ha, terrestrial area – 44,948 ha). 7,224 ha of PCA (13.03% of territory) is located within Ecoregion boundaries
Econet:	Azov-Black Sea Coast, Manych-Gudilo
Countries:	Russia
Main Biomes:	Freshwater, marine
Main Habitats:	Delta and floodplain wetlands – 44,849 ha (99.71% of terrestrial area)
Land Use/Land Cover:	Within the Ecoregion: rural settlements - 53 ha (0.73%); farmlands (mainly arable lands) – 2,052 ha (28.40%); lakes (including ephemeral lakes and reservoirs) – 44 ha (0.61%); rivers – 1,888 ha (26.14%); mires – 334 ha (4.62%); reed and bulrush – 2772 ha (38.38%); actual forest cover– 81 ha (1.12%)
Protected Areas:	None
Key Phenomena:	Sturgeon populations, aggregations of waterfowl
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Population Density:	High
Resource Dependence:	High (PCA borders the large city of Rostov-on-Don)
Threats:	Water pollution, illegal fishing, poaching
CEPF Site Outcomes:	Don Delta (5)

6. VESELOVSKOYE RESERVOIR

Location:	Westernmost part of Kuma-Manych Depression Longitude: 41°05'13" Latitude: 47°05'09"
Area:	86,140 ha 23,722 ha of PCA (27.54% of territory) is located within Ecoregion boundaries
Econet:	Manych-Gudilo
Countries:	Russia
Main Biomes:	Freshwater
Main Habitats:	Delta and floodplain wetlands – 75,107 ha (87.19% of PCA's total area)

Land Use/Land Cover:	Within the Ecoregion: urban and rural settlements – 85 ha (0.36%); farmlands – 13,137 ha (55.38%); reservoirs, ponds – 9,832 ha (41.45%); lakes (including ephemeral lakes) – 285 (1.2%); actual forest cover – 382 ha (1.61%).
Protected Areas:	None
Key Phenomena:	Stopover site for migratory birds, large aggregations of migratory birds
Focal Species:	None
Species of Special Concern:	<i>Lutra lutra</i>
Population Density:	Low, moderate in areas
Resource Dependence:	High
Threats:	Water pollution, illegal fishing, poaching
CEPF Site Outcomes:	Veselovskoye Reservoir (8)

7. MANYCH-GUDILO

Location:	Central part of the Kuma-Manych Depression, at the westernmost end of Manych-Gudilo Lake Longitude: 42°22'23" Latitude: 46°28'36"
Area:	97,261 ha 54,309 ha (55.84% of territory) is located within Ecoregion boundaries
Econet:	Manych-Gudilo
Countries:	Russia
Main Biomes:	Freshwater
Main Habitats:	Delta and floodplain wetlands with swamp grasslands and salt marshes – 12,657 ha (13.01% of PCA's total area), surrounded by 31,518 ha of mixed herb-grass steppes (32.41%) and 43,210 ha of halophytic semi-deserts with <i>Artemisia</i> spp. and <i>Salsola</i> spp. (44.43%)
Land Use/Land Cover:	Within the Ecoregion: urban areas and rural settlements – 1,006 ha (1.85%); farmlands – 42,402 ha (78.08%), reservoirs – 9,468 ha (17.43%); saline lands – 1,024 ha (1.89%); lakes (including ephemeral lakes) – 409 ha (0.75%)
Protected Areas:	None
Key Phenomena:	Stopover for migratory birds, large aggregations of migratory birds
Focal Species:	None
Species of Special Concern:	<i>Lutra lutra</i>
Population Density:	Moderate
Resource Dependence:	High
Threats:	Water pollution, illegal fishing, poaching
CEPF Site Outcomes:	Manych-Gudilo Lake (3)

8. DADYNSKOYE LAKE

Location:	Eastern part of the Kuma-Manych Depression near the Dadynskoye saline lake Longitude: 45°06'54" Latitude: 45°15'39"
Area:	65,868 ha 52,445 ha of PCA (79.62%) is located within Ecoregion boundaries
Econet:	Manych-Gudilo
Countries:	Russia
Main Biomes:	Freshwater
Main Habitats:	Delta and floodplain wetlands – 3,325 ha (5.05% of PCAs total area), surrounded by 55,587 ha of halophytic semi-deserts with <i>Artemisia</i> and <i>Salsola</i> (84.39%)

Land Use/Land Cover: Within the Ecoregion: farmlands – 8,144 ha (15.53%); saline lands – 3,920 ha (7.48%); winter pastures – 34,855 ha (66.45%); lakes, mainly ephemeral – 5,526 ha (10.54%)

Protected Areas: None

Key Phenomena: Stopover for migratory birds, large aggregations of migratory birds; habitats for *Glareola nordmanni*, *Branta ruficollis*, *Anser erythropus*, *Otis tarda*, *Oxyura leucocephala*, *Falco naumanni*

Focal Species: *Oxyura leucocephala*

Species of Special Concern: None

Population Density: Low

Resource Dependence: Moderate

Threats: Water pollution, illegal fishing, poaching

CEPF Site Outcomes: Dadynskiye Lakes (1)

9. KIZLYARSKY BAY

Location: Caspian Sea coast, north from the mouth of Terek River, covering Kizlyarsky Bay and the northern section of Terek River Delta
Longitude: 46°51'24" Latitude: 44°21'14"

Area: 201,483 ha, (aquatic area – 25,417 ha, terrestrial area – 176,066 ha).

Econet: Caspian Sea coast

Countries: Russia

Main Biomes: Freshwater, marine

Main Habitats: Delta and floodplain wetlands, swamp grasslands, and salt marshes – 152,501 ha (86.62% of terrestrial area)

Land Use/Land Cover: Rural settlements – 1,123 ha (0.64% of terrestrial area); winter pastures – 126,131 ha (71.68% of terrestrial area); lakes (including ephemeral lakes and reservoirs) – 8,209 ha (4.66% of terrestrial area); reed and bulrush – 32,699 ha (18.6% of terrestrial area); mires – 5730 ha (3.26%); saline lands – 138 ha (0.08%); sands – 1,971 ha (1.12%); actual forest cover – 65 ha (0.04%)

Protected Areas: Two areas (IUCN categories I-II): Dagestansky Strict Nature Reserve – 46,690 ha (26.52% of PCA's terrestrial area). Other PAs: Tarumovsky Zakaznik (Sanctuary) – 55,495 ha (31.52% of PCA's terrestrial area)

Key Phenomena: Stopover for migratory birds, large aggregations of migratory birds (waterfowl and waders); habitats for *Spalax giganteus*, *Saiga tatarica*, *Vipera ursinii*, *Testudo graeca*

Focal Species: None

Species of Special Concern: *Lutra lutra*

Population Density: Low

Resource Dependence: Moderate, high dependence in parts

Threats: Water pollution, illegal fishing, poaching

CEPF Site Outcomes: Dagestan NR and Kizlyar Bay (75), Tarumovsky Sanctuary, and Karakolsky Lakes (76)

10. AGRAKHANSKY BAY

Location: Caspian Sea coast, south from the mouth of the Terek River, Agrakhansky Peninsula and Bay
Longitude: 47°33'03' Latitude: 43°42'22"

Area: 81,218 ha (aquatic area – 30,644 ha, terrestrial area – 50,574 ha)

Econet:	Caspian Sea coast
Countries:	Russia
Main Biomes:	Marine
Main Habitats:	Delta and floodplain wetlands, swamp grasslands, and salt marshes – 15,065 ha (18.55% of PCA's total area), surrounded by 35,398 ha of halophytic semi-deserts with <i>Artemisia</i> spp. and <i>Salsola</i> spp. (43.58%)
Land Use/Land Cover:	Rural settlements – 346 ha (0.68% of terrestrial area); farmlands and winter pastures – 27,084 ha (53.55% of terrestrial area); lakes and mires – 8,463 ha (16.74% of terrestrial area); hilly sands – 14,681 ha (29.03% of terrestrial area)
Protected Areas:	One area: Agrakhansky Zakaznik (Sanctuary) – 39,000 ha (77.11% of PCA's terrestrial area)
Key Phenomena:	Stopover for migratory birds, large aggregations of migratory birds, including waterfowl and waders
Focal Species:	None
Species of Special Concern:	None
Population Density:	Low
Resource Dependence:	Moderate
Threats:	Water pollution, illegal fishing, poaching
CEPF Site Outcomes:	Agrakhansky Bay (78)

11. WEST GREATER CAUCASUS

Location:	Western foothills of the Greater Caucasus Range on the Black Sea Coast Longitude: 40°00'10" Latitude: 43°43'01"
Area:	874,535 ha
Econet:	Greater Caucasus
Countries:	Georgia, Russia
Main Biomes:	Forest, high mountain
Main Habitats:	Forest – 593,459 ha (67.86%) including: 102,972 ha of Colchic lowland swamp alder forests and sphagnum bogs, 192,508 ha of Colchic middle-mountain beech forests mainly with evergreen understory, and 221,650 ha of dark coniferous (spruce-fir) forests; total high mountain habitats – 165,622 ha (18.93%) ⁴
Land Use/Land Cover:	Urban areas and rural settlements – 13,878 ha (1.59%); farmlands – 69,882 ha (7.99%); actual forest cover – 672,887 ha (76.94%); summer pastures – 89,237 ha (10.20%); barren and rocky areas – 26,977 ha (3.08%); mires – 321 ha (0.04%); lakes – 425 ha (0.05%); rivers – 923 ha (0.11%)
Protected Areas:	10 PAs totaling 649,671 ha (74.29%): Ritsa Strict Nature Reserve – 16,289 ha and Pitsunda-Myussera Strict Nature Reserve – 3,761 ha (Georgia), Kavkazsky Strict Nature Reserve – 278,959 ha (IUCN I – 299,009 ha – 34.19%) and Sochinsky National Park – 193,737 ha (22.15%) (Russia) (IUCN I+II – 492,746 ha – 56.34%); other PAs: Sochinsky Zakaznik (Sanctuary) – 48,450 ha (5.54%), Tuapsinsky Zakaznik – 15,000 ha (1.72%), Dakhovskiy Zakaznik – 23,000 ha (2.63%), Psebaisky Zakaznik – 37,400 ha (4.28%), Damkhurtssky Zakaznik – 30,000 ha (3.43%), Zakaznik Bolshoy Tkhach – 3,075 ha (0.35%) (Russia); other PAs – 156,925 ha (17.95%)
Key Phenomena:	Part of the Colchic refugium of humid Pliocene flora; high proportion of endemic plants, invertebrates, amphibians and reptiles, mammals, important populations of focal species

¹¹ Including sub-alpine landscapes with crooked-stem forests and elfin woods

Focal Species:	<i>Ursus arctos</i> , <i>Capra caucasica</i> , <i>Rupicapra rupicapra</i> , <i>Cervus elaphus</i> , <i>Bison bonasus</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus ferrumequinum</i> , <i>R. mehelyi</i> , <i>R. hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Miniopterus schreibersii</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Mustela lutreola</i> , <i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low (except along coast)
Resource Dependence:	High
Threats:	Illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes:	Bichvinta-Miusera NR (21), Ritsa NR (22), Kavkazsky Biosphere Reserve (37), Sochinsky NP (38), Sochinsky Sanctuary (43), Damkhurtssky Sanctuary (51)

12. TEBERDINSKY STRICT NATURE RESERVE

Location:	North-western part of the Greater Caucasus Range Longitude: 41°27'28" Latitude: 43°28'40"
Area:	357,256 ha
Econet:	Greater Caucasus
Countries:	Russia, Georgia
Main Biomes:	Forest, high mountain
Main Habitats:	Forests – 143,937 ha (40.29%), including 46,103 ha of Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests and 70,219 ha of Caucasian upper-mountain birch and pine forests; total high mountain habitats – 210,836 ha (59.02%), including 80,870 ha of Caucasian alpine grasslands and rhododendron thickets
Land Use/Land Cover:	Urban areas and rural settlements – 1,229 ha (0.34%); farmlands – 27,044 ha (7.57%); summer pastures – 133,842 ha (37.46%); actual forest cover – 150,385 ha (42.09%); barren and rocky areas – 44,429 ha (12.44%); lakes – 328 ha (0.09%).
Protected Areas:	Seven PAs totaling 340,283 ha (95.25%); IUCN I-II: Teberdinsky Strict Nature Reserve – 103,064 ha (28.85%), Pskhu-Gumista Strict Nature Reserve – 40,819 ha (11.43%); total – 143,883 ha (40.27%); other PAs: Labinsky Zakaznik (Sanctuary) – 15,000 ha (4.2%), Cheremukhovskiy Zakaznik – 36,500 ha (10.22%), Chilikskiy Zakaznik – 35,000 ha (9.8%), Arkhyzskiy Zakaznik – 35,000 ha (9.8%), Dautskiy Zakaznik – 74,900 ha (20.96%); other PAs: 196,400 ha (57.98%), plus buffer zones of the strict nature reserves – 435,715 ha
Key Phenomena:	Part of the Colchic refugium of humid Pliocene flora; high proportion of endemic plants, invertebrates, amphibians and reptiles, small mammals
Focal Species:	<i>Ursus arctos</i> , <i>Capra caucasica</i> , <i>Rupicapra rupicapra</i> , <i>Cervus elaphus</i> , <i>Bison bonasus</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus ferrumequinum</i> , <i>R. mehelyi</i> , <i>R. hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Miniopterus schreibersii</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low
Resource Dependence:	Medium
Threats:	Illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes:	Sukhumi (23), Teberdinsky NR (36), Dautskiy Sanctuary (50)

13. SVANETI

Location:	South-western part of the Greater Caucasus Range Longitude: 42°39'23" Latitude: 43°02'14"
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Area:	232,050 ha
Econet:	Greater Caucasus
Countries:	Georgia
Main Biomes:	Forest, high mountain
Main Habitats:	Forest – 85,763 ha (36.96%), including 54,593 ha of Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests and 26,584 ha of Caucasian upper-mountain birch and pine forests; total high mountain habitats – 145,640 ha (62.76%), including 62,210 ha of Caucasian alpine grasslands and rhododendron thickets and 33,746 ha of high-mountain plant micro-communities with mosses and lichens (sub-nival); glacial-nival forms of landscapes – 23,256 ha (10.02%)
Land Use/Land Cover:	Urban areas and rural settlements – 2,450 ha (1.06%); farmlands – 8,746 ha (3.77%); summer pastures – 64,387 ha (27.75%); forests – 97,873 ha (42.17%); barren and rocky areas – 57,954 ha (24.97%); lakes – 640 ha (0.28%)
Protected Areas	None
Key Phenomena:	Part of the Colchic refugium of humid Pliocene flora; important habitats for focal species, anticipated hybrid zone between the two species of turs
Focal Species:	<i>Ursus arctos</i> , <i>Capra caucasica</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes:	Svaneti-1 (24)

14. RACHA-CENTRAL CAUCASUS

Location:	Western part of Central Greater Caucasus Longitude: 43°32'58" Latitude: 42°53'07"
Area:	328,120 ha
Econet:	Greater Caucasus
Countries:	Georgia, Russia
Main Biomes:	Forest, high mountain
Main Habitats:	Forest – 82,661 ha (25.19%), including 54,581 ha of Caucasian upper-mountain birch and pine forests; total high mountain habitats – 236,558 ha (72.1%), including 83,921 ha of Caucasian sub-alpine mixed meadows, tall-herbaceous communities, elfin woods, and thickets, and 90,255 ha of Caucasian alpine grasslands and rhododendron thickets
Land Use/Land Cover:	Rural settlements – 2,048 ha (0.62%); farmlands – 18,437 ha (5.62%); summer pastures – 140,936 ha (42.96%); barren and rocky area – 107,588 ha (32.79%); actual forest cover – 59,114 ha (18.01%)
Protected Areas:	Six PAs totaling 232,937 ha (70.99%); IUCN I-II: Severo-Osetinsky Strict Nature Reserve – 29,530 ha (9%), Kabardino-Balkarsky Strict Nature Reserve – 82,507 (25.15%) ha; total IUCN I – 112,037 ha (34.15%); Alaniya National Park - 55,000 ha (16.76%); IUCN I-II – 167,037 ha (50.91%); other PAs: Matsutinsky Zakaznik (Sanctuary) - 11,000 ha (3.35%), Ceysky Zakaznik – 29,900 ha (9.11%), and Zaramagsky Zakaznik – 25,000 (7.62%); other PAs – 65,900 ha (20.08%); buffer zone of Severo-Osetinsky Strict Nature Reserve – 111,913 ha (34.11%)
Key Phenomena:	Part of the Colchic refugium of humid Pliocene flora; high proportion of endemic plants, invertebrates, amphibians and reptiles, small mammals

Focal Species: *Ursus arctos*, *Capra cylindricornis*, *C. caucasica*, *Rupicapra rupicapra*, *Tetrao mlokosiewiczii*

Species of Special Concern: *Rhinolophus hipposideros*, *Barbastella barbastellus*, *Lynx lynx*, *Tetraogallus caucasicus*

Population Density: Low

Resource Dependence: High

Threats: Illegal logging, illegal hunting, overgrazing

CEPF Site Outcomes: Racha (27), Severo-Osetinsky NR and sanctuaries (40), Kabardino-Balkarsky NR (42), Alania NP (48)

15. KHEVI-TUSHETI

Location: Central part of the Greater Caucasus Range
Longitude: 45°00'14" Latitude: 42°34'08"

Area: 531,553 ha

Econet: Greater Caucasus

Countries: Georgia, Russia

Main Biomes: Forest, high mountain

Main Habitats: Forest – 82,557 ha (15.53%), mainly Caucasian upper-mountain birch and pine forests – 67,395 ha (12.68%); total high mountain habitats – 424,598 ha (79.88%), including 234,373 ha of Caucasian sub-alpine mixed meadows, tall-herbaceous communities, elfin woods, and thickets

Land Use/Land Cover: Urban areas and rural settlements – 2,935 ha (0.55%); farmlands – 62,731 ha (11.80%); summer pastures – 312,018 ha (58.70%); forest – 107,169 ha (20.16%); barren and rocky area – 46,406 ha (8.73%); lakes – 294 ha (0.06%)

Protected Areas: Five PAs totaling 188,000 ha (35.37%); IUCN I-II: Kazbegi Strict Nature Reserve – 8,707 ha (1.64%), Tusheti Strict Nature Reserve – 10,694 ha (2.01%), Erzi Strict Nature Reserve – 48,536 ha (9.13%); total IUCN I – 76,644 ha (14.42%); Tusheti National Park – 83,453 ha (15.7%); IUCN I+II: 160,097 ha (30.12%); other PAs: Tusheti Protected Landscape – 27,903 ha (5.25%).

Key Phenomena: Important habitats for large game, particularly bezoar goat

Focal Species: *Panthera pardus*, *Ursus arctos*, *Capra aegagrus*, *C. cylindricornis*, *Rupicapra rupicapra*, *Tetrao mlokosiewiczii*

Species of Special Concern: *Lynx lynx*, *Tetraogallus caucasicus*

Population Density: Low

Resource Dependence: High

Threats: Illegal logging, illegal hunting, overgrazing

CEPF Site Outcomes: Khevi (29), Khevsureti (30), Tusheti (31), Erzi NR (46), Ingushsky Sanctuary (47)

16. LAGODEKHI-ZAGATALA-WEST DAGESTAN

Location: Central part of the eastern section of the Greater Caucasus Range
Longitude: 46°25'11" Latitude: 42°00'47"

Area: 498,706 ha

Econet: Greater Caucasus

Countries: Georgia, Azerbaijan, Russia

Main Biomes: Forest, high mountain

Main Habitats: All forest types – 168,511 ha (33.79%), including 106,121 ha of Caucasian upper-mountain birch and pine forests; high mountain landscapes – 330,153

Land Use/Land Cover:	ha (66.20%), including 180,117 ha of Caucasian sub-alpine mixed meadows, tall-herbaceous communities, elfin woods, and thickets Rural settlements – 2,367 ha (0.47%); farmlands – 38,118 ha (7.64%); summer pastures – 302,321 ha (60.62%); barren and rocky area – 16,623 ha (3.34%); actual forest cover – 139,238 ha (27.92%); lakes – 39 ha (0.01%)
Protected Areas:	Seven PAs totaling 324,300 ha (65.03%); IUCN I-II: Lagodekhi Strict Nature Reserve – 22,358 ha (4.48%), Zagatala Strict Nature Reserve – 23,844 ha (4.78%); total IUCN I – 46,202 ha (9.26%); other PAs: Bezhtinsky Zakaznik (Sanctuary) – 41,300 ha (8.28%), Kosobsko-Kelebsky Zakaznik – 107,600 ha (21.58%), Tlyaratinsky Zakaznik – 83,500 ha (16.74%), and Charodinsky Zakaznik – 85,000 ha (17.04%) (all in Russia), Lagodekhi Sanctuary – 1,998 ha (0.4%) (Georgia); other PAs – 278,098 ha (55.76%)
Key Phenomena:	High proportion of endemic plants, invertebrates, amphibians and reptiles, mammals; important habitats for large game and Caucasian black grouse
Focal Species:	<i>Panthera pardus</i> , <i>Ursus arctos</i> , <i>Cervus elaphus maral</i> , <i>Capra aegagrus</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>R. mehelyi</i> , <i>Barbastella barbastellus</i> , <i>Myotis emarginatus</i> , <i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low, south of PCA border is a densely populated area
Resource Dependence:	High
Threats:	Poaching, overgrazing
CEPF Site Outcomes:	Zagatala NR (12), Eastern Caucasus (34), Lagodekhi (35), Tlyaratinsky Sanctuary (39), Kosobsko-Kelebsky Sanctuary (44), Begtinsky (45)

17. SARYBASH

Location:	Central part of south-eastern section of the Greater Caucasus Range Longitude: 47°01'51" Latitude: 41°30'32"
Area:	21,100 ha
Econet:	Greater Caucasus
Countries:	Azerbaijan
Main Biomes:	Forest, high mountain
Main Habitats:	Forest – 17,707 ha (83.92%), including 8,205 ha of southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak forests, and 7,735 ha of Caucasian upper-mountain birch and pine forests; high mountain habitats – 3,393 ha (16.08%)
Land Use/Land Cover:	Rural settlements – 50 ha (0.24%); farmlands – 9 ha (0.04%); summer pastures – 9,969 ha (47.25%); rocks – 537 ha (2.55%); actual forest cover – 10,535 ha (49.92%)
Protected Areas:	One PA, IUCN I: Ilisu Strict Nature Reserve – 12,359 ha (58.85%)
Key Phenomena:	Important habitats for large game and Caucasian black grouse
Focal Species:	<i>Cervus elaphus maral</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Ursus arctos</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes:	Sarybash (14)

18. LAMAN-KAM AREA

Location:	Eastern part of the Greater Caucasus Range Longitude: 47° 54'09" Latitude: 41°29'25"
Area:	14,759 ha
Econet:	Greater Caucasus
Countries:	Russia
Main Biomes:	High mountain
Main Habitats:	Caucasian sub-alpine mixed meadows, tall-herbaceous communities, elfin woods, and thickets – 2,624 ha (17.78%), surrounded by northern Caucasian middle mountain meadows, steppes, meadow-steppes, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 11,541 ha (78.19%)
Land Use/Land Cover:	Rural settlements – 195 ha (1.32%); farmlands – 12,160 ha (82.39%); summer pastures – 2,186 ha (14.81%); rocks – 24 ha (0.16%); actual forest cover – 194 ha (1.32%)
Protected Areas	None
Key Phenomena:	Important habitat for eagles
Focal Species:	<i>Ursus arctos</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Tetraogallus caucasicus</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Illegal hunting, overgrazing
CEPF Site Outcomes:	Laman-Kam Area (41)

19. SAMUR-YALAMA

Location:	Caspian Sea coast, northeastern Azerbaijan, southeastern Dagestan/Russia Longitude: 48°27'34" Latitude: 41°41'54"
Area:	129,657 ha (aquatic area – 11,063 ha, terrestrial area – 118,549 ha)
Econet:	Caspian Sea coast
Countries:	Azerbaijan, Russia
Main Biomes:	Freshwater, marine, forest
Main Habitats:	Delta and floodplain forests, wetlands and grasslands, and salt marshes – 61,013 ha (51.47% of terrestrial area); forests – 43,051 ha (36.32% of terrestrial area), including 33,489 ha of northern Caucasian low-mountain and plain mixed broad-leaf oak and hornbeam forests and 9,562 ha of northern Caucasian middle-mountain beech, partly beech-hornbeam and hornbeam-oak forests; grasslands – 14,420 ha (12.16% of terrestrial area)
Land Use/Land Cover:	Rural settlements – 4,982 ha (4.20% of terrestrial area); farmlands – 71,465 ha (60.26% of terrestrial area); sands – 278 ha (0.23%); lakes – 91 ha (0.08%); rivers – 3,404 ha (2.87%); rocks – 4 ha (0.003%); actual forest cover – 38,370 ha (32.36%)
Protected Areas:	Two PAs totaling 26,200 ha (22.10% of terrestrial area): Gusar Sanctuary – 15,000 ha, Samursky Sanctuary – 11,200 ha
Key Phenomena:	Spawning area for sturgeon (focal species) and stopover site for migratory birds, large congregations of migratory birds; congregations of <i>Aquila heliaca</i> , <i>Falco naumanni</i> , <i>Aquila clanga</i> , <i>Anser erythropus</i> ; isolated population of Syrian spadefoot toad (<i>Pelobates syriacus</i>)
Focal Species:	<i>Aquila heliaca</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Barbastella barbastellus</i> , <i>Phoca caspica</i> , <i>Lutra lutra</i>

Population Density: High
Resource Dependence: Medium
Threats: Illegal logging, poaching, recreation, habitat degradation
CEPF Site Outcomes: Samur Delta (52), Yalama Rivers (53), Samur River (81), Berkubinsky Forest (82)

20. AGHZIBIR (AKZYBIR) LAKE

Location: Caspian Sea coast in northern Azerbaijan
Longitude: 49°10'58" Latitude: 41°08'17"

Area: 76,552 ha (aquatic area – 30,234 ha, terrestrial area – 46,318 ha)
Econet: Caspian Sea coast
Countries: Azerbaijan
Main Biomes: Freshwater, marine
Main Habitats: Delta and floodplain wetlands, swamp grasslands and salt marshes – 7,351 ha (15.87% of terrestrial area), surrounded by eastern Caucasian lowland and foothill landscapes with *Artemisia* and halophytic deserts and semi-deserts – 38,594 ha (83.23% of terrestrial area); lakes – 373 ha (0.81% of terrestrial part)

Land Use/Land Cover: Rural settlements – 423 ha (0.91% of terrestrial area); farmlands – 39,715 ha (85.75% of terrestrial area); sands – 3,777 ha (8.15% of terrestrial area); mires – 1,998 ha (4.31%); lakes – 373 ha (0.81%); %; actual forest cover– 32 ha (0.07%).

Protected Areas: None
Key Phenomena: Stopover site for migratory birds, large aggregations of migratory waterfowl
Focal Species: *Marmaronetta angustirostris*, *Huso huso*, *Acipenser stellatus*, *A. ruthenus*, *A. persicus*, *A. nudiventris*, *A. gueldenstaedtii*
Species of Special Concern: *Phoca caspica*
Population Density: Moderate
Resource Dependence: Moderate
Threats: Water pollution
CEPF Site Outcomes: Yalama Rivers (53), Akzibir Lake (54)

21. ISMAILLY-SHAHDAGH

Location: Southeastern part of the Greater Caucasus Range
Longitude: 47°58'37" Latitude: 41°05'50"

Area: 245,097 ha
Econet: Greater Caucasus
Countries: Azerbaijan
Main Biomes: Forest, high mountain
Main Habitats: Forest – 91,357 ha (37.27%), including 73,928 ha of southeast Caucasian middle-mountain beech forests mixed with hornbeam-oak communities, partly with pine forests and secondary grasslands; total high mountain habitats – 145,714 ha (59.45%), including 66,864 ha of Caucasian alpine grasslands and rhododendron thickets, and 70,805 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets

Land Use/Land Cover: Rural settlements – 1,387 ha (0.57%); farmlands – 12,331 ha (5.03%); summer pastures – 155,801 ha (63.57%); barren and rocky areas – 5,611 ha (2.29%); lakes – 10 ha (0.004%); actual forest cover – 69,958 ha (28.54%)

Protected Areas:	Three PAs totaling 79,922 ha (32.61%); IUCN I-II: Ismailly Strict Nature Reserve – 16,840 ha (6.87%). other PAs: Gabala – 39,700 ha (16.2%) and Ismailly Sanctuaries – 23,382 ha (9.54%)
Key Phenomena:	Habitats for large mammals
Focal Species:	<i>Ursus arctos</i> , <i>Cervus elaphus maral</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczi</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Myotis bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Population Density:	Low (except along the southern border of PCA)
Resource Dependence:	High
Threats:	Illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes:	Gabala (13), Ismailly (15), Babadag Mountain (16), Shakhdag Mountain-1 (17), Shakhdag Mountain-2 (18), Bazar-Duzu Mountain (19), Oguz (20)

22. IORI-MINGECHEVIR (MINGECHAUR)

Location:	Middle Kura River, lower Iori and Alazani river valleys, Iori plateau, Jeyranchol Steppe and Turyanchay area, along the Mingechevir Reservoir and Ajinohur (Adjinaur) Lake Longitude: 46°28'56" Latitude: 41°10'15"
Area:	631,181 ha
Econet:	Kura-Araz (Araks) Basin
Countries:	Georgia, Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Floodplain wetlands, forest, and salt marshes – 44,926 ha (7.12%); lakes (including ephemeral lakes and reservoirs) – 73,678 ha (11.67%), including Mingechevir Reservoir – 71,439 ha; dry grasslands, shrublands and woodlands – 481,222 ha (76.23%) including 187,140 ha of southeastern Caucasian low-mountain juniper woodlands, dry shrublands (shibliak), and dwarf-shrub vegetation (phrygana), and 156,731 ha of eastern Georgian hills with <i>Botriochloa</i> and <i>Stipa</i> steppes, dry shrub (shibliak), dwarf-shrub (phrygana) vegetation, and semi-deserts
Land Use/Land Cover:	Urban areas and rural settlements – 1,795 ha (0.28%); farmlands – 42,872 ha (6.79%); winter pastures – 362,439 ha (57.42%); barren and rocky areas – 2,885 ha (0.46%); lakes – 73,678 ha (11.68%); rivers – 1,692 ha (0.27%); sands – 2,536 ha (0.40%); saline lands – 13,128 ha (2.08%); shrublands – 78,173 (12.39%); floodplain forests (Tugai type) – 21,222 ha (3.36%); other types of forests and woodlands – 30,761 ha (4.87%)
Protected Areas:	10 PAs totaling 133,075 ha (21.08%); IUCN I-II: strict nature reserves – Eldar Pine – 1,686 ha (0.27%), Ilisu (branch) – 4,867 ha (0.77%), and Turyanchay – 22,488 ha (3.56%) (Azerbaijan), Vashlovani (Georgia) – 8,480 ha (1.34%); total IUCN I – 37,521 ha (5.94%); Vashlovani National Park – 25,114 ha (3.98%); total IUCN I-II – 62,635 ha (9.92%); other PAs: sanctuaries – Korchay – 15,000 ha (2.38%), Gakh – 36,836 ha (5.84%), Shamkir – 10,000 ha (1.58%) (Azerbaijan), Korughi – 2,068 ha (0.33%), Iori – 1,336 ha (0.21%), Chachuna – 5,200 ha (0.82%) (Georgia); total other PAs: 70,440 ha (11.16%)
Key Phenomena:	Stopover site for migratory birds, leopard habitat, isolated plots of Mediterranean shrublands, high species diversity of reptiles, key populations of Mediterranean tortoise and Levantine viper, relic savannah-like habitats, important findings of Pliocene fossils
Focal Species:	<i>Panthera pardus</i> , <i>Hyaena hyaena</i> , <i>Ursus arctos</i> , <i>Gazella subgutturosa</i> , <i>Aegypius monachus</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Pelobates syriacus</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>Myotis emarginatus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>

Population Density: Low
Resource Dependence: High
Threats: Illegal hunting, overgrazing
CEPF Site Outcomes: Samukh (131), Korchai Sanctuary (132), Gekchai Bozdag Mountains (137), Shamkhor (138), Ajinaur Lake (139), Iori Plateau (140)

23. ALAZANI-GANYKH

Location: Alazani River Valley
Longitude: 46°16'37" Latitude: 41°35'20"
Area: 51,230 ha
Econet: Kura-Araz (Araks) Basin
Countries: Azerbaijan, Georgia
Main Biomes: Forest, freshwater
Main Habitats: Floodplain forests, wetlands, grasslands, and salt marshes – 28,160 ha (54.97%), among them 5,162 ha of floodplain forests and meadows (Tugai type); eastern Transcaucasian plain oak and oak-*Zelkova* forest with secondary grasslands – 23,058 ha (45.01%); total forest area – 19,284 ha
Land Use/Land Cover: Rural settlements – 76 ha (0.15%); farmlands – 31,857 ha (62.18%); lakes – 13 ha (0.02%); shrublands – 628 ha (1.23%); floodplain forest (Tugai type) – 5,162 ha (10.08%); actual area covered by other types of forest – 13,494 ha (26.34%)
Protected Areas: None
Key Phenomena: Key Caucasian populations of pheasant, European marsh turtle, wild boar
Focal Species: *Ursus arctos*, *Aquila heliaca*, *Phalacrocorax pygmeus*
Species of Special Concern: *Lutra lutra*
Population Density: Moderate
Resource Dependence: High
Threats: Illegal logging, poaching, overgrazing
CEPF Site Outcomes: Alazani Valley (Az) (135), Alazani Valley (Geo) (142)

24. KVERNAKI

Location: Left bank of the middle Mtkvari (Kura) River
Longitude: 44°26'04" Latitude: 41°56'30"
Area: 12,672 ha
Econet: Outside Econet
Countries: Georgia
Main Biomes: Dry woodlands and shrublands, steppes
Main Habitats: Southeastern Caucasian sub-Mediterranean foothills with remnants of hornbeam-oak forests and woodlands and *Botriochloa* steppes – 11,395 ha (89.92%)
Land Use/Land Cover: Rural settlements – 147 ha (1.16%); farmlands – 11,484 ha (90.63%); lakes – 81 ha (0.64%); rocks – 171 ha (1.35%); actual forest cover – 789 ha (6.22%)
Protected Areas: None
Key Phenomena: Isolated populations of *Eremias velox* and several other species of reptiles; ancient architectural complex in original rocky landscape
Focal Species: *Aquila heliaca*
Species of Special Concern: *Rhinolophus hipposideros*
Population Density: Low
Resource Dependence: High
Threats: Habitat degradation, overgrazing
CEPF Site Outcomes: Kvernaki (191)

25. ASKHI-KARST MASSIF

Location:	South-western part of the Greater Caucasus Range Longitude: 42°26'51" Latitude: 42°38'26"
Area:	43,723 ha
Econet:	Greater Caucasus
Countries:	Georgia
Main Biomes:	Forest
Main Habitats:	Forest – 35,035 ha (80.13%), including 15,141 ha of Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, partly with evergreen understory, and 15,120 ha of Colchic middle-mountain beech forests mainly with evergreen understory; high mountain habitats: Caucasian subalpine meadows, tall-herbaceous communities, elfin woods, and thickets – 8,688 ha (19.87%)
Land Use/Land Cover:	Farmlands – 59 ha (0.13%); summer pastures – 5,971 ha (13.66%); rocks – 3,330 ha (7.62%); actual forest cover – 34,363 (78.59%)
Protected Areas:	None
Key Phenomena:	Large number of karst caves - shelters for bats
Focal Species:	<i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lynx lynx</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Illegal logging, habitat degradation, poaching
CEPF Site Outcomes:	Askhi Massif (190)

26. RIONI

Location:	Eastern coastal area of the Black Sea, Kolkheti Lowlands Longitude: 41°33'20" Latitude: 42°21'00"
Area:	152,939 ha (aquatic area – 68,731 ha, terrestrial area – 84,208 ha)
Econet:	Black Sea coast
Countries:	Georgia
Main Biomes:	Forest, marine, freshwater
Main Habitats:	Freshwater and forest ecosystems – 81,951 ha (97.32% of terrestrial area), including 70,373 ha of Colchic lowland landscapes with swamp alder forests and sphagnum bogs and foothill landscapes with hornbeam-oak forests alternating with beech-chestnut, oak- <i>Zelkova</i> , and poly-dominant forests with evergreen understory, and 11,578 ha of lowland landscapes with wetlands; other freshwater habitats – 14,914 ha (17.71% of terrestrial area), including 2,257 ha of lakes and 7,915 ha of rivers
Land Use/Land Cover:	Urban areas and rural settlements – 1,977 ha (2.34% of terrestrial area), including 1,031 ha of the town of Poti; farmlands – 32,174 ha (38.22% of terrestrial area); mires – 4,700 ha (5.58%); lakes – 2,299 ha (2.73%); rivers – 7,915 (9.40%); actual forest cover – 35,139 ha (41.73% of terrestrial area)
Protected Areas:	Two PAs totaling 44,608 ha (29.17% of PCA's entire area); IUCN II: Kolkheti National Park: terrestrial part - 28,571 ha (33.93% of terrestrial part of PCA), marine – 15,742 ha (22.9% of marine part of PCA); other PAs: Katsoburi Sanctuary – 295 ha (0.35% of PCA's terrestrial part)
Key Phenomena:	Spawning area for sturgeons (focal species); key habitat for Atlantic sturgeon (<i>Acipenser sturio</i>); stopover site for migratory birds, large aggregations of

	migratory birds; rare wetland and forest communities; endemic plants and invertebrates
Focal Species:	<i>Oxyura leucocephala</i> , <i>Acipenser sturio</i> , <i>A. stellatus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i> , <i>Huso huso</i>
Species of Special Concern:	<i>Lutra lutra</i>
Population Density:	High in parts
Resource Dependence:	High
Threats:	Water pollution, illegal fishing, illegal logging, poaching
CEPF Site Outcomes:	Kolkheti (97), Rioni River (98), Kolkheti NP (Aquatory) (100), Enguri River (101)

27. TRIALETI

Location:	Northern part of the Lesser Caucasus mountain chain, parts of Meskheta and Trialeti ranges
	Longitude: 43°09'18" Latitude: 41°46'48"
Area:	276,118 ha
Econet:	Lesser Caucasus
Countries:	Georgia
Main Biomes:	Forest
Main Habitats:	Forests – 191,300 ha (69.28%), including 60,447 ha of various deciduous forests (among them Colchic middle-mountain beech forests mainly with evergreen understory – 28,431 ha), and 130,853 ha of mixed forest (Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, partly with evergreen understory – 110,702 ha); total high mountain habitats – 80,733 ha (29.24%), including 75,125 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets
Land Use/Land Cover:	Urban areas and rural settlements – 3,847 ha (1.39%); farmlands – 10,684 ha (3.87%); summer pastures – 58,516 ha (21.19%); lakes – 1,418 ha (0.51%); rocks – 276 ha (0.1%); shrublands – 669 ha (0.24%); actual forest cover – 200,708 ha (72.70%)
Protected Areas:	Five PAs totaling 112,211 ha (40.64%); IUCN I-II: Borjomi Strict Nature Reserve – 17,948 ha (6.50%), Borjom-Kharagauli National Park – 57,963 ha (20.99%); IUCN I+II – 75,911 (27.49%); other PAs: sanctuaries – Ktsia-Tabatskuri – 22,000 ha (7.98%), Nedzvi - 11,200 ha (4.06%), and Tetrobi - 3,100 ha (1.12%) – 36,300 ha (13.15%)
Key Phenomena:	Number of endemic plants, insects, snails, amphibians, reptiles, and small mammals (for some groups endemism level exceeds 50%)
Focal Species:	<i>Ursus arctos</i> , <i>Cervus elaphus maral</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlkosiewiczzi</i> , <i>Mertensiella caucasica</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>
Population Density:	Moderate
Resource Dependence:	High
Threats:	Illegal logging, poaching, overgrazing
CEPF Site Outcomes:	Tetrobi Sanctuary (84), Ktsia-Tabatskuri Sanctuary (85), Trialeti Range (86), Nedzvi Sanctuary (87), Borjomi-Kharagauli NP (88)

28. KURA-JANDARI

Location:	Middle Kura River Valley from the town of Rustavi, Georgia to the town of Agstafa, Azerbaijan; includes Lake Jandari (Jandargol) with surrounding wetlands and irrigation channels Longitude: 45°07'07" Latitude: 41°21'48"
Area:	30,068 ha
Econet:	Kura-Araz (Araks) Lowlands and Iori Basin
Countries:	Azerbaijan, Georgia
Main Biomes:	Forest, freshwater
Main Habitats:	Hydromorphic landscapes including floodplain forests – 15,936 ha (53%), forested area – 5,660 ha (18.82%); dry grasslands and shrub vegetation – 13,121 ha (43.64%), including 9,598 ha of eastern Georgian hill and foothill steppes with <i>Botriochloa</i> and <i>Stipa</i> , dry shrublands (shibliak), dwarf-shrub (phrygana) vegetation, and semi-deserts
Land Use/Land Cover:	Rural settlements – 1,363 ha (4.53%); farmlands – 10,167 ha (33.82%); winter pastures – 8,141 ha (27.07%); lakes – 1,010 ha (3.36%); rivers – 3,728 ha (12.40%); floodplain forests (Tugai forests) – 2,129 ha (7.08%); actual forest cover – 3,530 ha (11.74%)
Protected Areas:	Three PAs totaling 20,309 ha (67.54%); IUCN I-II: Garayazy Strict Nature Reserve – 9,800 ha (32.59%), other PAs: sanctuaries – Garayazy-Agstafa – 7,025 ha (23.36%) (Azerbaijan), and Gardabani (Georgia) – 3,484 ha (11.59%)
Key Phenomena:	Rare plant communities: Tugai type forests
Focal Species:	<i>Cervus elaphus maral</i> , <i>Phalacrocorax pygmeus</i> , <i>Aquila heliaca</i> , <i>Pelobates syriacus</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Lutra lutra</i>
Population Density:	Moderate
Resource Dependence:	High
Threats:	Illegal logging, overgrazing, pollution, habitat fragmentation
CEPF Site Outcomes:	Garayazy-Agstafa Sanctuary (130), Garayazy NR (134), Jandar Lake (136), Gardabani Sanctuary (141), Jandari Lake (143)

29. MOUNT GYAMYSH

Location:	Northeastern part of the Lesser Caucasus mountain chain, east from lake Sevan and south from the town of Ganja, Azerbaijan Longitude: 46°03'13" Latitude: 40°24'45"
Area:	107,666 ha
Econet:	Lesser Caucasus
Countries:	Azerbaijan
Main Biomes:	Forest
Main Habitats:	Forests – 55,681 ha (51.72%), including southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak, partly with pine forests and secondary grasslands – 39,247 ha (36.45%) and 15,072 ha of Caucasian upper-mountain birch and pine forests; high mountain ecosystems – 51,846 ha (48.15%), including 22,323 ha of Caucasian alpine grasslands and rhododendron thickets and 28,373 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets
Land Use/Land Cover:	Urban areas and rural settlements – 438 ha (0.41%); farmlands – 2,424 ha (2.25%); summer pastures – 65,992 ha (61.28%); rocks – 201 ha (0.19%); lakes – 138 ha (0.13%); actual forest cover – 38,473 ha (35.47%)

Protected Areas:	Two PAs totaling 11,874 ha (11.030%); IUCN I-II: Goygol (Geygel) Strict Nature Reserve – 6,739 ha (6.26%); other PAs: Gyzylja Sanctuary – 5,135 ha (4.77%)
Key Phenomena:	Important habitat for bezoar goat
Focal Species:	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Cervus elaphus maral</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i> , <i>Tetraogallus caspius</i>
Population Density:	Low (high at the northern border)
Resource Dependence:	Moderate, partially high
Threats:	Illegal logging, poaching, overgrazing
CEPF Site Outcomes:	Gizildja Sanctuary (181), Gey-Gel Lake (187), Mount Giamysh (189)

30. VARVARA-BARDA

Location:	Middle Kura River Valley, close to the town of Evlakh, Azerbaijan Longitude: 47°13'49" Latitude: 40°32'30"
Area:	29,195 ha
Econet:	Kura-Araz (Araks) Lowlands and Iori Basin
Countries:	Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Floodplain wetlands, forests, grasslands and salt marshes – 22,264 ha (76.26%), surrounded by 5,716 ha (19.58%) of eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts and semi-deserts – 5,522 ha
Land Use/Land Cover:	Rural settlements – 718 ha (2.46%); farmlands – 10,171 ha (34.84%); winter pastures – 2,173 ha (7.44%); reservoirs – 1,214 ha (4.16%); rivers – 2,729 ha (9.35%); shrub communities – 400 ha (1.37%); floodplain forests (Tugai forest) – 5,193 ha (17.79%); actual area of other types of forests – 6,594 ha (22.59%)
Protected Areas:	One PA totaling 7,500 ha (25.69%): Barda Sanctuary
Key Phenomena:	Rare plant communities: Tugai forest
Focal Species:	<i>Aquila heliaca</i> , <i>Phalacrocorax pygmaeus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i>
Species of Special Concern:	<i>Lutra lutra</i>
Population Density:	High
Resource Dependence:	High
Threats:	Illegal logging, poaching, habitat degradation
CEPF Site Outcomes:	Barda Sanctuary (133)

31. GOBUSTAN-HAJIGABUL

Location:	Southeastern slope of the Greater Caucasus Range Longitude: 49°04'52" Latitude: 40°13'25"
Area:	211,491 ha
Econet:	Outside Econet
Countries:	Azerbaijan
Main Biomes:	Semi-deserts, steppe, freshwater
Main Habitats:	Dry grasslands – 193,722 ha (91.60%), including 84,941 ha of eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts, and semi-deserts and 71,832 ha of southeastern Caucasian low-mountain landscapes with juniper woodlands, dry shrublands (shibliak), and

33. SHIRVAN

Location:	Mouth of the Kura River, right bank, eastern border of Salyan-Baku motorway; south-eastern part of Shirvan Plain; Caspian Sea coast from Cape Byandovan to mouth of the Kura River Longitude: 49°14'30" Latitude: 39°32'00"
Area:	132,313 ha (aquatic area – 26,527 ha, terrestrial area – 105,786 ha)
Econet:	Caspian Sea coast
Countries:	Azerbaijan
Main Biomes:	Marine, deserts, semi-deserts
Main Habitats:	Eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts, and semi-deserts – 94,180 ha (89.038% of terrestrial area), and 10,301 ha (9.74% of terrestrial area) of delta and floodplain wetlands, forest and grasslands, and salt marshes
Land Use/Land Cover:	Rural settlements – 122 ha (about 0.12%); farmlands – 20,724 ha (19.59%); summer pastures – 30,579 ha (28.91%); winter pastures – 44,926 ha (42.46%); saline lands – 5,080 ha (4.80%); sands – 69 ha (0.07%); freshwater lakes (including ephemeral lakes and reservoirs) – 1,219 ha (1.15%); rivers – 872 ha (0.82%); mires – 1,406 ha (1.33%); floodplain forests (Tugai forest) – 789 ha (0.75%)
Protected Areas:	Three PAs totaling 65,535 ha (61.95% of terrestrial area); IUCN I-II: Shirvan Strict Nature Reserve – 6,232 ha (5.89% of terrestrial area); Shirvan National Park – 54,373 ha (51.40% of terrestrial area); other PAs: Byandovan Sanctuary – 4,930 ha (4.66% of terrestrial area)
Key Phenomena:	Key habitat for sturgeon; important habitat for goitred gazelle
Focal Species:	<i>Gazella subgutturosa</i> , <i>Marmaronetta angustirostris</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Population Density:	Low
Resource Dependence:	High (pasturelands)
Threats:	Illegal hunting and fishing, overgrazing
CEPF Site Outcomes:	Shirvan Strict Nature Reserve/Shorhyol Lakes (67), Kura Delta (69)

34. MAKHMUD CHALA

Location:	Salyan Plain between the towns of Bilasuvar (West) and Salyan (East) Longitude: 48°40'34" Latitude: 39°28'26"
Area:	39,034 ha
Econet:	Kura-Araz (Araks) Lowlands and Iori Basin
Countries:	Azerbaijan
Main Biomes:	Freshwater, deserts, semi-deserts
Main Habitats:	Delta and floodplain wetlands, forest and grasslands, and salt marshes – 5,892 ha (15.09%), surrounded by 33,076 ha (84.74%) of eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts, and semi-deserts
Land Use/Land Cover:	Farmlands – 31,340 ha (80.3%); saline lands – 1,546 ha (3.96%); lakes (including ephemeral lakes) – 66 ha (0.16%); mires – 6,082 ha (15.58%)
Protected Areas:	None
Key Phenomena:	Stopover site for migratory birds, large aggregations of migratory birds; congregations of waterfowl
Focal Species:	<i>Marmaronetta angustirostris</i>

Species of Special Concern: None
Population Density: Medium, high in parts
Resource Dependence: High (pasturelands)
Threats: Overgrazing, improper irrigation, habitat degradation
CEPF Site Outcomes: Mahmud-Chala Lake (71)

35. GYZYL-AGACH (GYZYLAGHAJ)

Location: Caspian Sea coast in southern Azerbaijan, Gyzylaghaj Bay (Kirovskiy Zaliv)
Area: 146,349 ha (aquatic area – 69,482 ha, terrestrial area – 78,867 ha, 52.52% of PCA's entire area)
 Longitude: 48°59'08 Latitude: 39°03'59"
Econet: Caspian Sea coast, Kura-Araz (Araks) Lowlands and Iori Basin
Countries: Azerbaijan
Main Biomes: Marine, deserts, semi-deserts, freshwater
Main Habitats: Freshwater ecosystems (mires, reeds, lakes) – 24,098 ha (30.56% of terrestrial area); surrounded by 54,769 ha (69.44% of terrestrial area) of eastern Caucasian north subtropical lowland and foothill landscapes with *Artemisia*, halophytic deserts, semi-deserts
Land Use/Land Cover: Rural settlements – 686 ha (0.89% of terrestrial part); farmlands (mainly arable lands) – 6,015 ha (7.83%); winter pastures – 37,298 ha (48.52%); saline lands – 6,515 ha (8.48%); freshwater lakes (including ephemeral lakes and reservoirs) – 747 ha (0.97%); mires – 23,350 ha (30.38%); shrub communities – 2,256 ha (2.93%)
Protected Areas: Two PAs totaling 99,060 ha (67.69% of entire area of PCA); IUCN I-II: Gyzylaghaj (Gyzyl-Agach) Strict Nature Reserve – 88,360 ha (60.38% of entire area of PCA); other PAs: Small Gyzyl-Agach Sanctuary – 10,700 ha (7.31% of entire area of PCA)
Key Phenomena: Important habitat for sturgeon (focal species); wintering place and stopover site for migratory birds, large aggregations of migratory birds and waterfowl
Focal Species: *Marmaronetta angustirostris*, *Huso huso*, *Acipenser stellatus*, *A. ruthenus*, *A. persicus*, *A. nudiiventris*, *A. gueldenstaedtii*
Species of Special Concern: *Phoca caspica*
Population Density: Low, except southern part (high)
Resource Dependence: Moderate
Threats: Illegal fishing and hunting
CEPF Site Outcomes: Gizyl-Agach Bay (70)

36. KURA-ARAZ (ARAKS)⁹ VALLEY

Location: Between the Kura and Araz rivers, within the triangle of the towns of Agdjabegi (west), Sabirabad (east), and Birmay (south)
 Longitude: 47°54'33" Latitude: 39°54'27"
Area: 158,091 ha
Econet: Kura-Araz (Araks) Lowlands and Iori Basin
Countries: Azerbaijan

⁹ The Araz or Araks River has different names in different countries: Aras, Arax, Araxes, and Araz. Henceforth, we use Araz (Araks), according to the Times Atlas of the World (1975).

Main Biomes:	Deserts, Semi-deserts, Freshwater
Main Habitats:	Freshwater ecosystems – 14,318 ha (9.06%), including 6,584 ha of floodplain wetlands, forest and grasslands, and salt marshes (6,042 ha of mires) and 7,603 ha of seasonal lakes; surrounded by 143,904 ha (91.03%) of eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts, semi-deserts
Land Use/Land Cover:	Urban areas and rural settlements – 1,291 ha (0.82%); farmlands – 56,241 ha (35.57%); winter pastures – 82,667 ha (52.29%); forest – 2,333 ha (1.48%); saline lands – 1,241 ha (0.78%); freshwater lakes (including ephemeral lakes and reservoirs) – 8,276 ha (5.24%); mires – 6,042 ha (3.82%)
Protected Areas:	One PA of IUCN I-II: Aghgol (Ag-Gel) National Park – 17,924 ha (11.34%)
Key Phenomena:	Congregations of waterfowl
Focal Species:	<i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i>
Species of Special Concern:	<i>Rhinolophus euryale</i>
Population Density:	Moderate
Resource Dependence:	Moderate
Threats:	Habitat fragmentation and degradation
CEPF Site Outcomes:	Mil-Karabakh Steppe (74), Sarysu Lake (177), Ag-Gel Lake (178), Lake Boz-Koba (180), Lachin Sanctuary (186)

37. TALISH-ZUVAND

Location:	Eastern slopes of the Talish-Western Alborz Mountains from southeastern Azerbaijan to the Sefid Rud River in Iran Longitude: 48°47'50" Latitude: 38°01'49"
Area:	826,200 ha (aquatic area – 28,365 ha, terrestrial area – 797,835 ha)
Econet:	Talish-Gilan, Caspian Sea coast
Countries:	Azerbaijan, Iran
Main Biomes:	Forest, marine, high mountain
Main Habitats:	All types of Hyrcanian forest – 540,532 ha (67.75% of terrestrial area), including 292,041 ha (36.60% of terrestrial area) of Hyrcanian low-mountain chestnut-oak, oak- <i>Parrotia</i> and hornbeam-oak forests and 238,352 ha (29.87% of terrestrial area) of Hyrcanian middle-mountain beech forests; total high mountain habitats – 107,674 ha (13.50% of terrestrial area); grasslands – 76,193 ha (9.55% of terrestrial area), mainly southern Caucasian middle-mountain landscapes with meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation
Land Use/Land Cover:	Urban areas and rural settlements (14,384 ha) – 16,709 ha (2.09% of terrestrial area); farmlands – 160,885 ha (20.16%); pastures (mainly summer) – 91,139 ha (11.41%); rocks – 3,118 ha (0.39%); lakes (including reservoirs) – 615 ha (0.08%); shrub communities – 1,674 ha (0.24%); actual forest cover – 523,695 ha (65.63%)
Protected Areas:	Five PAs totaling 111,360 ha (13.96 of terrestrial area); IUCN II: Hirkan National Park (Azerbaijan) – 21,434 ha (2.69% of terrestrial area); other PAs: Lavandvil (Iran) – 949 ha (0.12%), Zuvand (Azerbaijan) – 15,000 ha (1.88%); Lisar (Iran) – 34,465 ha (4.32%) IUCN V Gasht-e Rudkhan and Siahmazgy (Iran) – 39,512 ha (4.95%); total other PAs – 89,926 ha (11.27%)
Key Phenomena:	Humid Pliocene forest refugium; high proportion of endemic plants, invertebrates, amphibians and reptiles, mammals
Focal Species:	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Hyaena hyaena</i> , <i>Aquila heliaca</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>

Species of Special Concern: *Rhinolophus hipposideros*, *Myotis emarginatus*, *Barbastella barbastellus*, *Phoca caspica*, *Lynx lynx*, *Lutra lutra*
Population Density: High
Resource Dependence: High
Threats: Illegal logging, illegal hunting
CEPF Site Outcomes: Hyrcan (165), Zuvand Sanctuary (166), Lisar NR (167), Lavandevil (169), Anzali Lagoon (170), Gasht-e Rudkhan and Siahmazgy (171)

38. ARAZ (ARAKS) VALLEY

Location: Right bank of Araz (Araks) River in northern Iran, northernmost point is the town of Pirsabad; the Araz (Araks) River forms the northwestern border, the state border between Azerbaijan and Iran forms the northeastern border, and the southern border runs along the Khoroslu Dag Mountain Range
Longitude: 47°31'50" Latitude: 39°16'47"

Area: 567,290 ha
Econet: Kura-Araz (Araks) Lowlands and Iori Basin
Countries: Iran
Main Biomes: Steppes, semi-deserts, freshwater
Main Habitats: Floodplain wetlands, forests, grasslands, and salt marshes – 21,876 ha (3.86%), surrounded by semi-arid landscapes – 545,200 ha (96.11%), including 351,800 ha (62.01%) of hilly and foothill landscapes with *Botriochloa* and *Stipa* steppes, dry shrublands (shibliak), dwarf-shrub (phrygana) vegetation, and semi-deserts; 163,191 ha (28.77%) of eastern Caucasian north subtropical lowland and foothill landscapes with *Artemisia*, halophytic deserts, and semi-deserts

Land Use/Land Cover: Rural settlements – 4,664 ha (0.82%); farmlands (mainly vineyards) – 2,675 ha (0.47%); pastures (winter) – 554,609 ha (97.77%); rocks – 703 ha (0.12%); freshwater lakes (including ephemeral lakes and reservoirs) – 212 ha (0.04%); rivers – 2,828 ha (0.5%); open woodlands – 1,599 ha (0.28%)

Protected Areas: None
Key Phenomena: Congregations of waterfowl; important habitat for bezoar goat
Focal Species: *Capra aegagrus*, *Aquila heliaca*, *Tetrao mlokosiewiczzi*, *Oxyura leucocephala*, *Marmaronetta angustirostris*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *Lutra lutra*, *Lynx lynx*
Population Density: Moderate
Resource Dependence: Moderate
Threats: Habitat degradation, overgrazing
CEPF Site Outcomes: Kaleibar and Arasbaran (160), Parsabad (161)

39. GILAN

Location: Northern slopes of Alborz Mountains, east from the Sefid Rud River to the Chalus River Valley
Longitude: 50°29'11" Latitude: 36°40'15"

Area: 640,308 ha
Econet: Talish-Gilan
Countries: Iran
Main Biomes: Forest, high mountain
Main Habitats: Forest – 338,511 ha (52.87%), including 168,556 ha (26.32%) of Hyrcanian middle-mountain beech and oak forests and 92,165 ha (14.39%) of Hyrcanian low-mountain chestnut-oak, oak-*Parrotia*, and hornbeam-oak forests; total high

Land Use/Land Cover:	mountain habitats – 226,586 ha (35.39%), including 216,711 ha of Caucasian alpine landscapes with grasslands and rhododendron thickets; mixed with middle-mountain, plateau and upland steppes, dry shrublands, and dwarf-shrub (phrygana) vegetation, partly alternating with stony deserts – 75,206 ha (11.75%) Rural settlements – 6,137 ha (0.96%); farmlands – 94,786 ha (14.80%); summer pastures – 187,716 ha (29.32%); shrub communities – 7,265 ha (1.13%); forest plantations – 4,774 ha (0.75%); glaciers – 170 ha (0.03%); actual forest cover - 339,460 ha (53.01%)
Protected Areas:	Three PAs, with IUCN status lower than category IV totaling 60,694 ha (9.48%): Siah Rud-e Rudbar – 28,136 ha (4.39%), Sarv-e lat and Javaherdasht – 21,254 ha (3.32%), Beles kuh – 11,304 ha (1.77%)
Key Phenomena:	Humid Pliocene forest refugium; high proportion of endemic plants, invertebrates, amphibians, reptiles, and mammals; wintering place and stopover site for migratory birds, large aggregations of migratory birds; spawning area for sturgeon (focal species)
Focal Species:	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Cervus elaphus maral</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i>
Population Density:	Moderate
Resource Dependence:	Moderate
Threats:	No information available
CEPF Site Outcomes:	None

40. SABALAN

Location:	Sabalán Mountain Range	Longitude: 47°23'49"	Latitude: 38°15'38"
Area:	188,347 ha		
Econet:	Javakheti-Asia Minor		
Countries:	Iran		
Main Biomes:	High mountain		
Main Habitats:	Total high mountain habitats – 93,561 ha (49.67%), including 63,744 ha of Near East high-mountain meadow-steppes and fragments of sub-alpine meadows, and 29,816 ha of Caucasian alpine grasslands; surrounded by 76,488 ha (40.61%) of Iranian upper and middle plateau with steppes and semi-deserts		
Land Use/Land Cover:	Rural settlements – 1,318 ha (0.70%); farmlands – 56,203 ha (29.84%); summer pastures – 127,993 ha (67.95%); rocks – 1,541 ha (0.82%); forest – 1,292 ha (0.69%)		
Protected Areas:	None		
Key Phenomena:	Important habitats for <i>Ovis ammon</i> and other focal species		
Focal Species:	<i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Panthera pardus</i> , <i>Aquila heliaca</i>		
Species of Special Concern:	<i>Myotis schaubi</i>		
Population Density:	Low		
Resource Dependence:	High		
Threats:	Overgrazing		
CEPF Site Outcomes:	Mount Sahand and Sabalan (194)		

41. MARAKAN-KIAMAKI

Location:	Mountain ranges along the northern border of Iran with Nakhchivan, Azerbaijan Longitude: 45°22'51" Latitude: 38°57'40"
Area:	248,875 ha
Econet:	Javakheti-Asia Minor
Countries:	Iran
Main Biomes:	High mountain, deserts, semi-deserts
Main Habitats:	Total high mountain habitats – 152,858 ha (61.42%), including 125,580 ha (or 50.46% of area) mountain flat terrain landscapes with stony deserts, semi-deserts, and dry dwarf-shrub vegetation; only 14,801 ha of Caucasian alpine grasslands; 82,540 ha (33.17%) of low- and middle-mountain semi-arid landscapes, including 65,463 ha of Iranian foothill and Anatolian middle-mountain deserts and semi-deserts
Land Use/Land Cover:	Urban and rural settlements – 2,035 ha (0.81%); arable lands – 169,648 ha (68.17%); summer pastures – 31,922 ha (12.83%); winter pastures – 24,681 ha (9.92%); saline lands – 2,645 ha (1.06%); rocks – 11,530 ha (4.63%); rivers and reservoirs – 5,828 ha (2.34%); forests – 586 ha (0.24%)
Protected Areas:	Two PAs totaling 177,115 ha: Kiamaki - 84,400 ha (33.91%); Marakan - 92,715 ha (37.25%)
Key Phenomena:	Important habitat for <i>Ovis ammon</i> , congregations of waterfowl
Focal Species:	<i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Panthera pardus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Lutra lutra</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Habitat degradation, overgrazing
CEPF Site Outcomes:	Marakan (162), Kiamaky (163), Aras Dam Lake (164)

42. MEGHRI

Location:	Southeastern part of the Lesser Caucasus mountain chain, Meghri Mountain Range, left bank of Araz (Araks) River Longitude: 46°22'04" Latitude: 39°02'59"
Area:	74,931 ha
Econet:	Lesser Caucasus
Countries:	Armenia
Main Biomes:	Forest, high mountain
Main Habitats:	Forest – 38,718 ha (51.67%), including 24,447 ha of southeast Caucasian middle-mountain beech forests alternating with hornbeam-oak forests and secondary grasslands, and 14,272 ha of southeastern Caucasian low-mountain hornbeam-oak, oak forests, and secondary dry shrublands (open communities of juniper); total high mountain habitats – 22,346 ha (29.82%), including 16,667 ha (22.24%) of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets; 12,304 ha (16.42%) of grasslands, mainly mixed with Armenian-Iranian low-mountain semi-deserts and dwarf-shrub vegetation – 11,674 ha (15.58%)
Land Use/Land Cover:	Urban areas and rural settlements – 587 ha (0.78%); farmlands – 27,135 ha (36.21%); summer pastures – 13,695 ha (18.28%); rivers – 550 ha (0.73%); shrublands - 20 ha (0.03%); actual forest cover - 32,944 ha (43.97% of PCA's area)

Protected Areas:	Three PAs totaling 10,390 ha (13.87%); IUCN I-II: Shikahogh Strict Nature Reserve – 10,330 ha (13.78%); Plane-Grove Sanctuary – 60 ha (0.08%)
Key Phenomena:	Habitat and migration route of large ungulates and carnivores (<i>Panthera pardus</i>) along the Lesser Caucasus; rare plant communities (<i>Quercus araxina</i> , <i>Cercis griffithii</i>)
Focal Species:	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Tetrao mlkosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> ; <i>Lutra lutra</i> , <i>Lynx lynx</i> .
Population Density:	Moderate
Resource Dependence:	Moderate
Threats:	Illegal logging, poaching, overgrazing
CEPF Site Outcomes:	Meghri (124)

43. ZANGEZUR

Location:	Southeastern part of the Lesser Caucasus mountain chain, Zangezur Range Longitude: 45°50'12" Latitude: 39°06'22"
Area:	206,674 ha
Econet:	Lesser Caucasus
Countries:	Armenia, Azerbaijan/Nakhchivan Autonomy
Main Biomes:	High mountain, semi-deserts
Main Habitats:	Total high mountain habitats – 104,256 ha (50.44%), including 50,272 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, and thickets, and 34,637 ha of mountain plateau stony deserts, semi-deserts, and dry dwarf-shrub vegetation; rock vegetation – 9,320 ha (4.51%), surrounded by 84,982 ha (41.12%) of semi-arid landscapes, including 77,310 ha (37.41%) of low-mountain semi-deserts and dwarf-shrub vegetation
Land Use/Land Cover:	Urban areas and rural settlements – 2,100 ha (1.02%); farmlands (arable lands) – 95,205 ha (46.07%); pastures (mainly summer) – 86,843 ha (42.01%); rocks – 9,320 ha (4.51%); rivers – 1,315 ha (0.64%); actual forest cover – 11,891 ha (5.75%)
Protected Areas:	Three PAs totaling 42,728 ha (20.67%); IUCN II: Ordubad National Park – 12,131 ha (5.87%) (Azerbaijan); other PAs: sanctuaries – Bokhaqar (Armenia) – 2,728 ha (1.34%), Ordubad (Azerbaijan) – 27,869 ha (13.49%); total other PAs – 30,597 ha (14.80%)
Key Phenomena:	Habitat and migration corridor of large ungulates and carnivores (<i>Panthera pardus</i>) along the Lesser Caucasus
Focal Species:	<i>Panthera pardus</i> , <i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Tetrao mlkosiewiczii</i> , <i>Pelobates syriacus</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. euryale</i> , <i>Lutra lutra</i>
Population Density:	Low
Resource Dependence:	High
Threats:	Poaching, overgrazing
CEPF Site Outcomes:	Meghri (124), Ordubad Sanctuary (126), Ordubad (128)

44. ARASBARAN

Location:	Southeastern end of the Lesser Caucasus mountain chain, right bank of Araz (Araks) River
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Area: Longitude: 46°42'18" Latitude: 38°53'13"
 148,196 ha
Econet: Lesser Caucasus Forest
Countries: Iran
Main Biomes: High mountain, forest
Main Habitats: Total high mountain habitats – 106,562 ha (71.91%), including 75,705 ha (51.08%) of Iranian upper and middle plateau with steppes and semi-deserts and 30,857 ha (20.82%) of Near East high-mountain landscapes with meadows-steppes and fragments of sub-alpine meadows; semi-arid landscapes – 29,744 ha (20.07%), including 16,638 ha of Armenian-Iranian low-mountain semi-deserts, dwarf-shrub vegetation, and partly shrublands; as well as *Botriochloa* and *Stipa* steppes, dry shrublands (shibliak), dwarf-shrub (phrygana) vegetation, and semi-desert – 6,012 ha, and southern Caucasian middle-mountain meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation – 7,093 ha (4.79%)
Land Use/Land Cover: Rural settlements – 2,245 ha (1.51%); farmlands – 60,943 ha (41.12%); winter pastures – 12,286 ha (8.29%); summer pastures – 28,388 ha (19.16%); rocks – 545 ha (0.37%); rivers – 1,247 ha (0.84%); actual forest cover – 42,542 ha (28.71%)
Protected Areas: One PA: Arasbaran (Biosphere Reserve) – 72,460 ha (48.89%)
Key Phenomena: Rare plant community (*Quercus araxina*); important habitats for *Capra aegagrus*, *Ovis ammon*
Focal Species: *Capra aegagrus*, *Ovis ammon*, *Ursus arctos*, *Panthera pardus*, *Aquila heliaca*, *Marmaronetta angustirostris*, *Oxyura leucocephala*, *Tetrao mlokosiewiczii*
Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*; *Lutra lutra*, *Lynx lynx*
Population Density: Moderate
Resource Dependence: Moderate, high in parts
Threats: Forest fragmentation, illegal logging, illegal hunting, overgrazing
CEPF Site Outcomes: Karakose (160)

45. BICHANEK

Location: Southeastern part of the Lesser Caucasus mountain chain
 Longitude: 45°44'40" Latitude: 39°30'33"
Area: 23,809 ha
Econet: Lesser Caucasus
Countries: Azerbaijan, Nakhchivan Autonomy
Main Biomes: Forest, high mountain
Main Habitats: Total high mountain habitats – 14,355 ha (60.29%), including 11,136 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets and 3,219 ha of Caucasian alpine grasslands; 9,454 ha (39.71%) of southern Caucasian middle-mountain meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation
Land Use/Land Cover: Rural settlements – 362 ha (1.52%); farmlands – 6,670 ha (28.01%); summer pastures – 14,942 ha (62.76%); actual forest cover – 1,835 ha (7.71%)
Protected Areas: One PA, IUCN I: Shakhbuz Strict Nature Reserve – 3,139 ha (21.30%)
Key Phenomena: Important habitats for large game
Focal Species: *Panthera pardus*, *Ursus arctos*, *Capra aegagrus*, *Ovis ammon*
Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *M. bechsteini*, *Barbastella barbastellus*; *Lynx lynx*
Population Density: Low
Resource Dependence: High

Threats: Overgrazing, illegal logging
CEPF Site Outcomes: Bichanek (127)

46. NORAVANK

Location: Middle part of eastern section of the Lesser Caucasus mountain chain, Noravank River Valley
Longitude: 45°18'48" Latitude: 39°38'06"

Area: 24,430 ha
Econet: Lesser Caucasus
Countries: Armenia
Main Biomes: High mountain
Main Habitats: Total high mountain habitats – 12,821 ha (52.48%), including mountain meadows, high mountain steppes, and meadow-steppes – 9,051 ha (37.05%), and Caucasian alpine grasslands – 1,917 ha (7.85%); lower belts - 11,565 ha (47.34%) of semi arid ecosystems – Armenian-Iranian low-mountain semi-deserts and dwarf-shrub vegetation

Land Use/Land Cover: Rural settlements – 147 ha (0.60%); farmlands (mainly arable lands) – 13,522 ha (55.36%); summer pastures – 10,023 ha (41.02%); rocks – 575 ha (2.35%); open juniper woodlands – 163 ha (0.67%)

Protected Areas: None
Key Phenomena: Important habitats of large mammals
Focal Species: *Panthera pardus*, *Ovis ammon*, *Capra aegagrus*
Species of Special Concern: *Rhinolophus euryale*, *Lynx lynx*
Population Density: Low
Resource Dependence: High
Threats: Overgrazing, poaching
CEPF Site Outcomes: Noravank (125)

47. MAKU AND WESTERN IRANIAN BORDER

Location: Mountains on the Iran-Turkey border
Longitude: 44°24'55" Latitude: 38°52'23"

Area: 486,479 ha
Econet: Javakheti-Asia Minor
Countries: Iran, Turkey
Main Biomes: High mountain, steppes
Main Habitats: Total mountain landscapes – 115,816 ha (23.81%), including 49,022 ha of Anatolian middle and upper mountain steppes and 37,886 ha of Caucasian alpine landscapes with grasslands and thickets; total semi-arid landscapes – 310,948 ha (63.92%), including 262,806 ha of Iranian upper and middle plateau with steppes and semi-deserts and 58,781 ha of Iranian upper-mountain meadow-steppes and dry shrub vegetation

Land Use/Land Cover: Rural settlements – 4,668 ha (0.96%); farmlands – 358,258 ha (73.65%); summer pastures – 115,460 ha (23.72%); rocks – 7,033 ha (1.45%); lakes – 398 ha (0.08%); mires – 662 ha (0.14%)

Protected Areas: One PA: Van Lqzalp (Turkey) – 5,500 ha (1.13%)
Key Phenomena: Congregations of waterfowl and birds of prey
Focal Species: *Capra aegagrus*, *Ovis ammon*, *Aquila heliaca*, *Marmaronetta angustirostris*

Species of Special Concern: *Rhinolophus euryale*, *R. mehelyi*, *R. hipposideros*, *Myotis schaubi*, *Lutra lutra*, *Lynx lynx*
Population Density: Moderate
Resource Dependence: High
Threats: Overgrazing
CEPF Site Outcomes: Maku and Iran West Border (148), Van Dogusu Mountains (156)

48. AGRİ DAGI AND ARMASH

Location: Agri (Ararat) Mountain, the Araz (Araks) River Valley, between the town of Artashat in Armenia and Agh Gul Lake in Iran, forms the eastern border, the western border is the western slopes of Zor Dagi Mountain
Longitude: 44°21'48" Latitude: 39°41'28"

Area: 271,669 ha
Econet: Javakheti-Asia Minor, Kura- Araz (Araks) Lowlands and Iori Basin
Countries: Turkey, Armenia, Azerbaijan, Iran
Main Biomes: Mountain steppes
Main Habitats: Total mountain landscapes – 256,975 ha (94.59%), including 31,011 ha of high mountain landscapes (mainly Caucasian alpine grasslands – 21,793 ha) and 225,964 ha (or 83.18% of PCA's area) of middle mountain landscapes including 90,163 ha of Anatolian middle and upper mountain steppes and 68,958 ha of Agri Dagi (Ararat) mountain plateau stony deserts, semi-deserts, and dry dwarf-shrub vegetation

Land Use/Land Cover: Rural settlements – 944 ha (0.35%); farmlands – 152,798 ha (56.25%); pastures (summer – 33,516 ha and winter – 63,430 ha) – 96,946 ha (35.69%); barren and rocky area – 6,416 ha (2.36%); mires - 8,365 ha (3.08%); lakes – 2,902 ha (1.06%), rivers – 2,500 ha (0.92%); forests – 797 ha (0.29%)

Protected Areas: One PA, IUCN II: Agri Mountain National Park – 80,908 ha (29.78%) (Turkey)
Key Phenomena: Congregations of waterfowl, habitats of narrow-ranged snakes and mammals
Focal Species: *Ursus arctos*, *Ovis ammon*, *Capra aegagrus*, *Marmaronetta angustirostris*, *Oxyura leucocephala*, *Phalacrocorax pygmeus*

Species of Special Concern: *Rhinolophus hipposideros*, *R. euryale*, *Myotis schaubi*; *Lutra lutra*
Population Density: Low
Resource Dependence: High
Threats: Overgrazing
CEPF Site Outcomes: Armash (145), Armash Fish-Farm (147), Maku (149), Agh-Gel (150), Igdir Plain (154), North-East Ararat (158), Ararat (159)

49. KHOSROV

Location: Southeastern from Yerevan city, Gegam Mountain Range in the southern part of central Armenia
Longitude: 44°56'27" Latitude: 40°06'15"

Area: 201,590 ha
Econet: Javakheti-Asia Minor
Countries: Armenia
Main Biomes: High mountain
Main Habitats: Total high mountain habitats – 147,026 ha (72.93%), including 59,001 ha of mountain meadows, high mountain steppes, and meadow-steppes, 44,452 ha of Caucasian alpine grasslands, and 31,278 ha of Armenian volcanic highlands with steppes and meadow-steppes mixed with wetlands; freshwater ecosystems

	(mainly mires – 1,047 ha); more than 25% – Armenian-Iranian low-mountain semi-deserts and dwarf-shrub vegetation (25,646 ha) and dry grasslands, totaling – 51,232 ha
Land Use/Land Cover:	Rural settlements – 538 ha (0.27%); farmlands – 11,418 ha (5.66%); pastures (winter) – 41,994 ha (20.83%); pastures (summer) – 123,415 ha (61.22%); rocks – 2,191 ha (1.09%); shrub communities – 17,654 ha (8.76%); lakes and reservoirs – 256 ha (0.13%); mires – 791 ha (0.39%); forests – 3,333 ha (1.65%)
Protected Areas:	Two PAs totaling 29,396 ha (14.58%); IUCN I-II: Khosrov Forest Strict Nature Reserve – 29,196 ha (14.48%); other PAs: Sands of Gorovan Sanctuary – 200 ha (0.10%)
Key Phenomena:	Important site for migration of large mammals; juniper woodlands with rare relict species
Focal Species:	<i>Panthera pardus</i> , <i>Ursus arctos</i> , <i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Aegypius monachus</i> , <i>Pelobates syriacus</i> .
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Myotis schaubi</i>
Population Density:	Low
Resource Dependence:	Moderate
Threats:	Habitat fragmentation, poaching, overgrazing
CEPF Site Outcomes:	Khosrov NR (120), Gndasar (121), Armash (145), Goravan Sands Sanctuary (146)

50. PAMBAK-SEVAN

Location:	Northern section of the eastern part of Lesser Caucasus mountain chain, around Lake Sevan, Pambak Range in central Armenia Longitude: 45°02'33" Latitude: 40°41'33"
Area:	552,691 ha
Econet:	Lesser Caucasus, Javakheti-Asia Minor
Countries:	Armenia
Main Biomes:	Forest, high mountain, freshwater
Main Habitats:	Forest – 179,080 ha (32.40%), including 147,552 ha of southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak, partly with pine forests and secondary grasslands; forested area – 195,618 ha (35.39%), including plantations; total high mountain habitats – 171,431 ha (31.02%), including 133,251 ha of Caucasian sub-alpine meadows and thickets; semi-arid landscapes – 75,436 ha (13.65%), including 36,847 ha of southern Caucasian middle-mountain meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation
Land Use/Land Cover:	Urban areas and rural settlements – 8,439 ha (1.53%), including 6,392 ha of rural settlements (villages); farmlands – 95,022 ha (17.19%); summer pastures – 123,809 ha (22.40%); winter pastures – 25 ha; rocks – 3,038 ha (0.55%); lakes and reservoirs – 126,741 ha (22.93%), including 125,759 ha of Lake Sevan; shrub communities – 1,825 ha (0.33%); forests – 193,792 ha (35.07%)
Protected Areas:	11 PAs totaling 236,891 ha; IUCN II: Dilijan National Park – 24,000 ha (4.34%); other PAs: Sevan National Park – 150,100 ha (27.16%); sanctuaries – Idjevan – 7,800 ha (1.41%), Gandzakar – 6,800 ha (1.23%), Getik – 6,000 ha (1.09%), Juniper Forests – 3,312 ha (0.6%), Rose Bay Rhododendron – 10,000 ha (1.81%), Margaovit – 5,000 ha (0.9%), Hankavan – 9,350 ha (1.69%), Arzakan and Meghradzor – 14,500 ha (2.63%), Banx Pine – 4 ha, Akhnbabat – 25 ha (both less than 0.001%); total other PAs – 212,891 ha (38.5%)

Key Phenomena:	Rare plant communities (<i>Sambucus tigranii</i> , <i>Quercus araxina</i>); habitat of endemic <i>Sicista armenica</i>
Focal Species:	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>R. mehelyi</i> , <i>Barbastella barbastellus</i> ; <i>Lynx lynx</i> , <i>Lutra lutra</i>
Population Density:	Moderate, partly high
Resource Dependence:	High
Threats:	Illegal logging, illegal fishing, unsustainable water use and improper irrigation, overgrazing
CEPF Site Outcomes:	Dsegh-Haghartsin-Pambak Chain and Dilijan NP (117), Lake Sevan (118), Shakhdag Range (119), Ara Mount (173)

51. JAVAKHETI

Location:	Javakheti Highland and Javakheti Mountains, between Childir, Kartsakhi (Hozapini) and Paravani lakes Longitude: 43°35'53" Latitude: 41°12'11"
Area:	322,994 ha
Econet:	Javakheti-Asia Minor
Countries:	Georgia, Armenia, Turkey
Main Biomes:	High mountain, freshwater
Main Habitats:	Total high mountain habitats – 287,574 ha (89.03%), including 169,322 ha (52.42% of PCA's area) of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets; other main habitats: Javakheti-Armenian plateau with steppe and meadow-steppe vegetation – 78,303 ha (24.24%) and Caucasian alpine grasslands and rhododendron thickets – 39,949 ha (12.37%); freshwater ecosystems – 25,447 ha (7.88%), including 23,760 ha of lakes
Land Use/Land Cover:	Rural settlements – 5,096 ha (1.58%); arable lands – 83,456 ha (25.84%); summer pastures – 208,305 ha (64.5%); rocks – 690 ha (0.21%); lakes and reservoirs – 23,760 ha (7.35%); mires – 1,688 ha (0.52%)
Protected Areas:	None
Key Phenomena:	Stopover site for migratory birds, large aggregations of migratory birds; breeding place of waterbirds, including large population of white stork (<i>Ciconia ciconia</i>) and an isolated breeding population of White-Winged Scoter (<i>Melanitta fusca</i>)
Focal Species:	<i>Capra aegagrus</i> , <i>Aquila heliaca</i> .
Species of Special Concern:	<i>Lutra lutra</i>
Population Density:	Low
Resource Dependence:	Moderate
Threats:	Improper irrigation, overgrazing
CEPF Site Outcomes:	Javakheti Range (Arm) (104), Amasia (106), Paravani Lake (107), Javakheti Range (Geo) (108), Saghamo Lake (109), Madatapa Lake (110), Bugdasheni Lake (111), Khanchali Lake (112), Kartsakhi Lake (113), Aktas Lake (114), Erakatar (115), Childir Lake (116)

52. IGDİR PLAIN AND ARMAVIR

Location:	Upper part of Araz (Araks) River valley Longitude: 43°20'59" Latitude: 40°02'33"
Area:	403,170 ha
Econet:	Javakheti-Asia Minor, Kura- Araz (Araks) Lowlands and Iori Basin

Countries:	Turkey, Armenia
Main Biomes:	High mountain, freshwater
Main Habitats:	Total high mountain habitats – 370,328 ha (91.85%), including 226,787 ha (56.25% of PCA's area) of Anatolian middle- and upper-mountain steppes and 118,791 ha (29.46%) of mountain plateau landscapes with stony deserts, semi-deserts, and dry dwarf-shrub vegetation; freshwater ecosystems – 27,296 ha (6.77%), mainly floodplains with wetlands, forests and grasslands, and salt marshes – 24,232 ha (6.01%)
Land Use/Land Cover:	Urban areas and rural settlements (mainly rural settlements) – 7,467 ha (1.85%); farmlands (mainly arable lands) – 224,504 ha (55.68%); pastures (winter) – 102,762 ha (25.48%); pastures (summer) – 46,153 ha (11.45%); rocks – 12,766 ha (3.17%); rivers – 3,940 ha (0.98%); lakes – 1,358 ha (0.34%); mires – 1,483 ha (0.37%); forests – 2,737 ha (0.68%)
Protected Areas:	Two PAs totaling 18,800 ha (4.66%): Vordan Karmir Sanctuary (Armenia) – 200 ha (0.05%), Kaghizman (Turkey) – 18,600 ha (4.61%)
Key Phenomena:	Rare plant communities (<i>Sambucus tigranii</i> , <i>Zelkova carpinifolia</i>)
Focal Species:	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Rupicapra rupicapra</i> , <i>Marmaronetta angustirostris</i> , <i>Aegypius monachus</i>
Species of Special Concern:	<i>Myotis schaubi</i> , <i>Rhinolophus hipposideros</i> , <i>R. mehelyi</i> , <i>R. ferrumequinum</i> ; <i>Lutra lutra</i>
Population Density:	Moderate, high in parts
Resource Dependence:	High
Threats:	Overgrazing
CEPF Site Outcomes:	Araks River (144), Igdir Plain (154), Karakose (157)

53. SARIKAMIS FOREST

Location:	Eastern part of the Gullu Dag Mountain Range, western part of Allahuekber Mountain Range between upper Kura River and upper Araz (Araks) River, north from the town of Sarikamis Longitude: 42°23'36" Latitude: 40°29'51"
Area:	173,872 ha
Econet:	Javakheti-Asia Minor
Countries:	Turkey
Main Biomes:	Forest
Main Habitats:	Anatolian upper-mountain pine forests and meadow-steppes, partly with dry vegetation – 102,417 ha (58.90%); total high mountain habitats – 71,455 ha (41.10%), including 42,747 ha of Near East high-mountain meadow-steppes and fragments of sub-alpine meadows
Land Use/Land Cover:	Urban and rural settlements – 582 ha (0.33%); arable lands – 26,454 ha (15.22%); summer pastures – 65,162 ha (37.48%); rocks – 2,530 ha (1.45%); actual forest cover – 79,144 ha (45.52% of PCA area)
Protected Areas:	One PA – IUCN II: Sarikamis Allahuekber Mountains National Park – 23,500 ha (13.52%)
Key Phenomena:	Rare plant communities (<i>Zelkova carpinifolia</i>); habitats of narrow-ranged Radde's viper
Focal Species:	<i>Capra aegagrus</i> , <i>Aegypius monachus</i> , <i>Mertensiella caucasica</i>
Species of Special Concern:	<i>Lynx lynx</i>
Population Density:	Low
Resource Dependence:	Moderate
Threats:	Forest fragmentation, overgrazing

CEPF Site Outcomes: Mt. Zialet Forest (151), Sarakamish Forest (153)

54. WEST LESSER CAUCASUS

Location: Dogu Karadeniz Mountain Range, Turkey, catchment basin of Ajaristskali River, Georgia along the Black Sea coast from the town of Batumi to the town of Espie, Turkey
Longitude: 41°19'08" Latitude: 41°06'45"

Area: 2,126,503 ha (aquatic area – 2,761 ha, terrestrial area – 2,123,742 ha)

Econet: Lesser Caucasus

Countries: Georgia, Turkey

Main Biomes: Forest

Main Habitats: Forest – 1,410,202 ha (66.36% of terrestrial area), including 731,421 ha of Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, partly with evergreen understory; 181,909 ha of Caucasian upper-mountain birch and pine forests; 125,592 ha of Colchic lowland swamp alder forest and sphagnum bogs and foothills with hornbeam-oak forest alternating with beech-chestnut, oak-*Zelkova* and polydominant forest with evergreen understory; total high mountain habitats – 489,980 ha (23.06%), including 344,709 ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets; freshwater ecosystems – 2,899 ha (0.14%)

Land Use/Land Cover: Urban areas and rural settlements – 39,806 ha (1.87% of terrestrial area), including 35,149 ha of rural settlements; farmlands (including citrus and tea plantations) – 410,773 ha (19.34%), including 345,971 ha of arable lands; summer pastures – 478,302 ha (22.54%); rocks – 8,080 (0.38%); rivers - 2,848 ha (0.13%); lakes – 50 ha; shrub communities – 1,143 ha (0.05%); actual forest cover– 1,182,740 ha (55.69%)

Protected Areas: 21 PAs totaling 322,249.5 ha (15.17% of terrestrial part of PCA); IUCN II-II: Kintrishi Strict Nature Reserve – 13,893 ha (0.65%) (Georgia), Strict Nature Reserves — Camburnu – 180 ha (0.01%), Camili Gorgit – 490.5 ha (0.02%), Camili Efeler – 1,453 ha (0.07%), Orumcek Forest – 263 ha (0.01%) (Turkey); total IUCN I – 16,279.5 ha (0.77%); National Parks – Hatila Valley – 17,138 ha (0.81%), Kackar Mountains – 51,550 ha (2.43%), Altindere Valley (Turkey) – 4,800 ha (0.23%); total IUCN II – 73,488 ha (3.46%); total IUCN I+II – 89,767.5 ha (4.23%); other PAs – Uzungol Specially Protected Area – 14,900 ha (0.7%), Savsat-Balikli and Maden – 3,491 ha (0.16%), Uzungol – 1,625 ha (0.08%), and Artabel Lakes – 5,859 ha (0.28%), Camlihemsin-Kackar – 4,142 ha (0.2%), Yusufeli-Coruh Valley – 21,821 ha (1.03%), Cat – 59,100 ha (2.78%), Pazaryolu – 20,236 ha (0.95%), Ispir Vercecik Mountain – 50,458 ha (2.38%), Duzkoy Kerem Kayalari – 235 ha (0.01%), Siran-Kuluca – 28,229 ha (1.33%), Kelkit – 22,000 ha (1.04%), Borcka-Karagol – 386 ha (0.02%); total other PAs – 232,482 ha (10.95%)

Key Phenomena: Humid Pliocene flora refugium; high proportion of narrow-ranged (local endemic) plants (including two endemic rhododendrons and other evergreen shrubs and trees), nearly one-fourth of fish, amphibians, lizards and small mammals distributed in the PCA are endemic species of the Ecoregion; endemic snails, beetles; well-known bottleneck for migrating birds (near Batumi)

Focal Species: *Capra aegagrus*, *Rupicapra rupicapra*, *Ursus arctos*, *Aegypius monachus*, *Tetrao mlokosiewiczi*, *Mertensiella caucasica*, *Acipenser stellatus*, *A. persicus*, *Huso huso*

Species of Special Concern: *Rhinolophus hipposideros*, *R. euryale*, *Myotis emarginatus*, *Barbastella barbastellus*, *Lutra lutra*, *Lynx lynx*

Population Density: High
Resource Dependence: Moderate
Threats: Illegal logging, illegal hunting, overgrazing, recreation, infrastructure development
CEPF Site Outcomes: Goderdzi Pass (89), Shavsheti Range-1 (90), Shavsheti Range-2 (91), Chorukh (92), Batumi (93), Mtirala (94), Kintrishi NR (95), Harsit Vadisi (102), Dogu Karadeniz Mountains (103)

55. MANGLISI

Location: Northeastern part of the Lesser Caucasus, Trialeti Mountain Range
Longitude: 44°25'30" Latitude: 41°44'14"

Area: 35,816 ha
Econet: Lesser Caucasus
Countries: Georgia
Main Biomes: Forest
Main Habitats: Forest – 34,276 ha (95.70%), including 26,230 ha of southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak, partly with pine forests and secondary grasslands, 5,182 ha of southeastern Caucasian low-mountain hornbeam-oak forests, oak forests, and secondary dry shrublands, and 2,864 ha of Caucasian middle-mountain beech-dark coniferous and dark coniferous (spruce-fir) forests; total high mountain habitats – 1,539 ha (4.30%)
Land Use/Land Cover: Rural settlements – 439 ha (1.23%); arable lands – 3,074 ha (8.58%); summer pastures – 3,930 ha (10.97%); actual forest cover - 28,373 ha (79.22%)
Protected Areas: One PA; IUCN I-II: Algeti Strict Nature Reserve – 6,822 ha (19.05%)
Key Phenomena: Easternmost distribution of dark-coniferous forests in the Caucasus
Focal Species: *Ursus arctos*
Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *Barbastella barbastellus*; *Lynx lynx*
Population Density: Moderate
Resource Dependence: High
Threats: Illegal logging, illegal hunting
CEPF Site Outcomes: None

56. SEFID RUD-ANZALI

Location: Southern coast of the Caspian Sea, Sefid Rud River Valley and Gilan Lowlands
Longitude: 49°45'14" Latitude: 37°10'18"

Area: 162,647 ha (aquatic area – 34,085 ha, terrestrial area – 128,562 ha)
Econet: Caspian Sea coast
Countries: Iran
Main Biomes: (Potentially forest), freshwater, marine
Main Habitats: Terrestrial area – 128,562 ha (79.01% of the PCA's area); forests - 122,000 ha (94.90% of terrestrial area), mainly Hyrcanian plain grassland-shrublands and Hyrcanian forests – 116,035 ha
Land Use/Land Cover: Rural settlements – 6,645 ha (5.17% of terrestrial area); farmlands – 81,086 ha (63.06% of terrestrial area), including 80,613 ha of orchards, vineyards, tea plantations, etc.; sands – 2,340 ha (1.82%); rivers – 3,122 ha (2.43%); lakes (including ephemeral lakes and reservoirs) – 4,418 ha (3.44%); mires – 11,065 ha (8.61% of terrestrial area); shrub communities– 2,660 ha (2.07%); actual forest cover – 17,226 ha (13.40%)

Protected Areas:	Five PAs totaling 7,778 ha (6.05% of terrestrial area of PCA); IUCN II: Bojagh International Wetland – 800 ha (0.62); other PAs – Sorkhankol International Wetland – 448 ha (0.35%), Selkeh International Wetland – 360 ha (0.28%), Amirkalayeh International Wetland 1,230 ha (0.96%); Siah keshim International Wetland – 4,500 ha (3.5%); total other PAs – 6,978 ha (5.43%)
Key Phenomena:	Congregations of waterfowl, habitat for sturgeon
Focal Species:	<i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Phoca caspica</i>
Population Density:	High
Resource Dependence:	Moderate
Threats:	Development
CEPF Site Outcomes:	Sepirud River (168), Anzali Lagoon (170), Bojagh (172)

B. Priority Conservation Corridors

1. KUBAN – RIONI

Location:	Between the Kuban and Rioni PCAs, along the Black and Azov sea coasts Longitude: 39°5'56" Latitude: 44°02'07"
Area:	311,486 ha (aquatic area – 309,391 ha; terrestrial area – 2,093 ha)
Countries:	Georgia, Russia
Main Biomes:	Marine
Main Habitats:	Northern Caucasian semi-humid lowlands and hilly plains with mixed herb-grass steppes and meadow-steppes – 2,093 ha (100% of terrestrial area)
Land Use/Land Cover:	Rural settlements – 183 ha (8.74% of terrestrial area); vineyards – 573 ha (27.37%); pastures and hayfields around villages – 1,337 ha (63.88%)
Protected Areas:	Two PAs totaling 32,733 – aquatic area (10.51% of Corridor): Tamano-Zaporozhsky Sanctuary and Abrausky Sanctuary
Key Phenomena:	Globally significant migration corridor for waterfowl
Focal Species:	<i>Acipenser sturio</i> , <i>A. stellatus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i> , <i>Huso huso</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Threats:	Water pollution, illegal fishing
CEPF Site Outcomes:	None

2. PRIMORSKO-AKHTARSK – KUBAN

Location:	Between Primorsko-Akhtarsk and Kuban PCAs, Azov Sea coast Longitude: 37°42'51" Latitude: 45°35'01"
Area:	122,057 ha (aquatic area – 16,732 ha; terrestrial area – 105,324 ha)
Countries:	Russia
Main Biomes:	Marine, freshwater
Main Habitats:	The entire corridor is covered with freshwater ecosystems, including – 90,458 ha (85.89% of terrestrial area) of delta and floodplain wetlands, swamp forests and grasslands, and salt marshes; mires and reed thickets – 39,382 ha (37.39%); permanent or ephemeral water bodies with open surfaces – 16,017 ha (15.21%)
Land Use/Land Cover:	Urban areas – 54 ha (0.05%); rural settlements – 923 ha (0.88%); farmlands – 48,949 ha (46.47%)
Protected Areas:	One PA, Priazovsky Sanctuary - 37,800 ha (35.89% of Corridor's terrestrial area)
Key Phenomena:	Globally significant migration corridor for waterfowl
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Mustela lutreola</i> , <i>Lutra lutra</i>
Threats:	Water pollution, illegal fishing
CEPF Site Outcomes:	Kuban (2), Priazovsky Sanctuary (7), Primorsko-Akhtarsk Salt Lakes (11)

3. YEYSK – PRIMORSKO-AKHTARSK

Location:	Between Yeysk and Primorsko-Akhtarsk PCAs, Azov Sea coastal area Longitude: 38°10'31" Latitude: 46°30'10"
Area:	204,547 ha (aquatic area – 43,011 ha; terrestrial area – 161,534 ha)

Countries: Russia
Main Biomes: Marine, steppes
Main Habitats: Northern Caucasian lowlands and hilly plain with mixed herb-grass, semi-arid steppes – 155,827 ha (96.47% of terrestrial area); total freshwater ecosystems – 1,574 (0.98%)
Land Use/Land Cover: Rural settlements – 5,182 ha (3.21%); farmlands – 144,484 ha (89.44%)
Protected Areas: None
Key Phenomena: Globally significant migration corridor for waterfowl
Focal Species: *Huso huso*, *Acipenser stellatus*, *A. gueldenstaedtii*
Species of Special Concern: *Mustela lutreola*, *Lutra lutra*, *Glareola nordmanni*, *Rutilus frisii*
Threats: Water pollution, illegal fishing
CEPF Site Outcomes: None

4. DON DELTA – YEYSK

Location: Between Don Delta and Yeysk PCAs
Longitude: 38°57'43" Latitude: 46°56'21"
Area: 134,297 ha (aquatic area – 23,941 ha; terrestrial area – 110,349 ha)
Countries: Russia
Main Biomes: Marine, grassland
Main Habitats: Northern Caucasian lowlands and hilly plain with mixed herb-grass, semi-arid steppes – 105,200 ha (95.33% of terrestrial part); delta and floodplain wetlands and salt marshes – 4,092 ha (3.71%); total area of freshwater surfaces – 2,549 (2.31%)
Land Use/Land Cover: Rural settlements – 5,255 ha (4.76%); farmlands – 98,869 ha (89.60%)
Protected Areas: None
Key Phenomena: Globally significant bird migration corridor
Focal Species: *Huso huso*, *Acipenser stellatus*, *A. gueldenstaedtii*
Species of Special Concern: *Mustela lutreola*, *Lutra lutra*, *Glareola nordmanni*, *Rutilus frisii*
Threats: Water pollution, illegal fishing
CEPF Site Outcomes: Don Delta (5)

5. DON DELTA – VESELOVSKOYE RESERVOIR

Location: Between Don Delta and Veselovskoye Reservoir PCAs
Longitude: 40°06'53" Latitude: 47°10'17"
Area: 87,940 ha, including 59,413 ha in Ecoregion and 28,527 ha outside Ecoregion
Countries: Russia
Main Biomes: Freshwater
Main Habitats: Delta and floodplain wetlands and salt marshes – 56,125 ha (94.47% of terrestrial area within Ecoregion); total area of freshwater ecosystems – 10,723 ha (18.05%), including 4,634 ha (7.80%) of mires and reed thickets
Land Use/Land Cover: Rural settlements – 2,145 ha (3.61%); farmlands and orchards – 11,592 ha (19.51%); pastures and hayfields – 5,055 ha (8.51%); other arable lands – 28,589 ha (48.12%); actual forest cover – 758 ha (1.28%)
Protected Areas: None
Key Phenomena: Regionally important site for waterfowl migration and stopover
Focal Species: None
Species of Special Concern: *Lutra lutra*
Threats: Water pollution, poaching

CEPF Site Outcomes: Don Delta (5)

6. VESELOVSKOYE RESERVOIR – MANYCH-GUDILO

Location: Between Veselovskoye Reservoir and Manych-Gudilo PCAs
Longitude: 41°34'49" Latitude: 46°44'27"

Area: 89,745 ha, including 38,734 ha in Ecoregion and 51,011 ha outside Ecoregion

Countries: Russia

Main Biomes: Freshwater

Main Habitats: Delta and floodplain wetlands and salt marshes – 31,709 ha (81.86% of area within Ecoregion); total area of freshwater surfaces – 6,693 ha (17.27%), including 5,791 ha of reservoirs and ponds

Land Use/Land Cover: Rural settlements – 55 ha (0.14%); farmlands, pastures, and hayfields – 31,685 (81.74%); actual forest cover – 329 ha (0.85%)

Protected Areas: None

Key Phenomena: Regionally important site for waterfowl migration and stopover

Focal Species: None

Species of Special Concern: *Lutra lutra*

Threats: Water pollution, poaching

CEPF Site Outcomes: Manych-Gudilo Lake (3)

7. MANYCH-GUDILO – DADYNSKOYE LAKE

Location: Between Manych-Gudilo and Dadynskoye Lake PCAs
Longitude: 43°52'52" Latitude: 45°53'16"

Area: 342,401 ha, including 251,487 ha inside the Ecoregion and 90,913 ha outside the Ecoregion

Countries: Russia

Main Biomes: Freshwater

Main Habitats: Northern Caucasian lowland and hilly plain with mixed herb-grass, semi-arid steppes – 16,296 ha (6.48% of area within Ecoregion); Northern Caspian lowland landscapes with *Artemisia*, *Salsola*, and halophytic deserts and semi-deserts – 189,175 ha (75.22%)

Land Use/Land Cover: Rural settlements – 493 ha (0.20%); farmlands, pastures, and hayfields – 197,663 ha (78.60%); freshwater ecosystems – 53,332 ha (21.2%), including 31,334 ha (12.46%) of reservoirs and ponds

Protected Areas: None

Key Phenomena: Regionally important site for waterfowl migration and stopover

Focal Species: None

Species of Special Concern: *Lutra lutra*

Threats: Water pollution, illegal fishing, illegal hunting

CEPF Site Outcomes: None

8. KIZLYARSKY BAY – ARGAKHANSKY BAY

Location: Between Kizlyarsky Bay and Argakhansky Bay PCAs, Caspian Sea coast
Longitude: 47°19'09" Latitude: 44°06'35"

Area: 39,496 ha

Countries:	Russia
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, trawling, recreation
Protected Areas:	None
Key Phenomena:	Globally significant for waterfowl migration; feeding ground of endangered sturgeons
Focal Species:	Sturgeons: <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	None
Threats:	Water pollution, poaching
CEPF Site Outcomes:	None

9. WESTERN GREATER CAUCASUS – TEBERDINSKY STRICT NATURE RESERVE

Location:	Between Western Greater Caucasus and Teberdinsky Strict Nature Reserve PCAs, western part of the Greater Caucasus Range Longitude: 40°50'43" Latitude: 43°35'29"
Area:	123,171 ha
Countries:	Georgia, Russia
Main Biomes:	Forest, high mountain
Main Habitats:	Caucasian middle-mountain mixed beech and dark coniferous (spruce-fir) forests – 25,993 ha (21.10%); Caucasian upper-mountain birch and pine forests – 25,321 ha (20.56%); Colchic middle-mountain landscapes with beech forests primarily with evergreen understory – 17,692 ha (14.36%); actual forest cover – 65,681 ha (53.33%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 28,126 ha (22.83%); Caucasian alpine grasslands and Rhododendron thickets – 19,425 ha (15.77%); glaciers – 356 ha (0.29%)
Land Use/Land Cover:	Rural settlements – 757 ha (0.61%); farmlands with pastures and hayfields – 16,977 ha (13.78%); summer pastures – 31,759 ha (25.78%); rock and scree communities – 7,583 ha (6.16%)
Protected Areas:	None
Key Phenomena:	Regionally important for seasonal movement of wildlife and gene flow
Focal Species:	<i>Capra caucasica</i> , <i>Rupicapra rupicapra</i> , <i>Cervus elaphus maral</i> , <i>Bison bonasus</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	None

10. TEBERDINSKY STRICT NATURE RESERVE – SVANETI

Location:	Between Teberdinsky Strict Nature Reserve and Svaneti PCAs, western Greater Caucasus Range Longitude: 42°19'23" Latitude: 43°24'58"
Area:	329,825 ha
Countries:	Georgia, Russia
Main Biomes:	High mountain

Main Habitats:	Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 79,140 ha (23.99%), Caucasian alpine landscapes with grasslands and rhododendron thickets – 77,713 ha (23.56%); Caucasian upper-mountain landscapes with birch and pine forests – 74,252 ha (22.51%); high-mountain plant micro-communities, mosses, and lichens – 56,674 ha (17.18%); actual forest cover, including elfin woods – 99,140 ha (30.06%)
Land Use/Land Cover:	Urban areas – 326 ha (0.10%); rural settlements – 438 ha (0.13%); farmlands, pastures, and hayfields – 27,357 ha (8.29%); summer pastures – 119,813 ha (36.33%), rock and scree communities – 51,440 ha (15.6%); glaciers – 30,944 ha (9.38%)
Protected Areas	Two Pas totaling 118,400 ha (35.9%): Priel'brusiye National Park (IUCN II) – 100,400 ha (30.44%); Khasautsky Sanctuary – 18,000 ha (5.46%)
Key Phenomena:	Regionally important for seasonal movement of wildlife and gene flow of focal species
Focal Species:	<i>Capra caucasica</i> , <i>Rupicapra rupicapra</i>
Species of Special Concern:	<i>Tetrao mlokosiewiczzi</i> , <i>Tetraogallus caucasicus</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Svaneti-2 (25), Abkhazia (26), Prielbrusiye (49)

11. SVANETI-RACHA – CENTRAL CAUCASUS

Location:	Between Svaneti and Racha-Central Caucasus PCAs, southern slopes of the Greater Caucasus Range Longitude: 43°08'44" Latitude: 42°54'12"
Area:	21,946 ha
Countries:	Georgia
Main Biomes:	Forest, high mountain
Main Habitats:	Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, with evergreen understory – 3,076 ha (14.02%); Caucasian upper-mountain birch and pine forests – 2,266 ha (10.33%); actual forest cover, including elfin woods – 8,409 ha (38.32%); total high mountain habitat – 14,682 ha (66.90%), including Caucasian alpine grasslands and rhododendron thickets
Land Use/Land Cover:	Summer pastures – 10,103 ha (46.03%); rock and scree communities – 2,950 ha (13.44%)
Protected Areas:	None
Key Phenomena:	Regionally important for seasonal movement of wildlife and gene flow of focal species
Focal Species:	<i>Capra cylindricornis</i> , <i>Ursus arctos</i> , <i>Rupicapra rupicapra</i>
Species of Special Concern:	<i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i> , <i>Tetrao mlokosiewiczzi</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	None

12. SVANETI-ASKHI – KARST MASSIF

Location:	Between Svaneti and Askhi-Karst Massif PCAs, southern slopes of the Greater Caucasus Range Longitude: 42°27'21" Latitude: 42°46'43"
Area:	80,987 ha
Countries:	Georgia
Main Biomes:	Forest, high mountain

Main Habitats:	Caucasian middle-mountain beech and dark coniferous forests with evergreen understory – 23,135 ha (28.57%); Caucasian upper-mountain birch and pine forests – 14,862 ha (18.35%); Caucasian sub-alpine landscapes with mixed meadows, tall-herbaceous communities, elfin woods, and thickets – 26,666 ha (32.93%); Caucasian alpine landscapes with grasslands and rhododendron thickets – 10,694 ha (13.20%); actual forest cover, including elfin woods - 48,814 ha (60.27%)
Land Use/Land Cover:	Rural settlements – 417 ha (0.51%); farmlands – 571 ha (0.70%); summer pastures – 25,410 ha (31.38%), including 5,740 ha of rock and scree communities
Protected Areas:	None
Key Phenomena:	Locally important for seasonal migration of wildlife and gene flow
Focal Species:	<i>Ursus arctos</i> , <i>Rupicapra rupicapra</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Tetrao mlokosiewiczii</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Askhi Massif (190)

13. RACHA-CENTRAL CAUCASUS – KHEVI-TUSHETI

Location:	Between Racha-Central Caucasus PCA and Khevi-Tusheti PCAs, northern slopes of the Greater Caucasus Range Longitude: 44°17'11" Latitude: 42°47'48"
Area:	99,367 ha
Countries:	Russia
Main Biomes:	High mountain
Main Habitats:	Caucasian upper-mountain birch and pine forests – 10,357 ha (10.42%); northern Caucasian middle-mountain beech and areas of beech-hornbeam and hornbeam-oak forests – 3,447 ha (3.47%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 37,495 ha (37.74%); Caucasian alpine grasslands and rhododendron thickets – 24,489 ha (24.65%); glacial-nival landscapes – 7,190 ha (7.24%) with 3,419 ha (3.44%) of glaciers; actual forest cover, including elfin woods – 16,697 ha (16.80%); northern Caucasian mountain depression steppes, dry shrublands, and dwarf-shrub vegetation – 15,846 ha (15.95%)
Land Use/Land Cover:	Urban areas – 606 ha (0.61%); rural settlements – 982 ha (0.99%); farmlands, pastures, and hayfields – 32,032 ha (32.24%); summer pastures – 30,929 ha (31.13%), rock and scree communities – 14,697 ha (14.79%)
Protected Areas:	Buffer zone (IUCN V-VI) of Severo-Osetinsky Strict Nature Reserve – 21,196 ha (21.33%)
Key Phenomena:	Locally important for seasonal migrations of wildlife and gene flow
Focal Species:	<i>Capra cylindricornis</i> , <i>Ursus arctos</i> , <i>Rupicapra rupicapra</i>
Species of Special Concern:	<i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i> , <i>Tetrao mlokosiewiczii</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Severo-Osetinsky Strict Nature Reserve and Sanctuaries (40)

14. RACHA-CENTRAL CAUCASUS – TRIALETI

Location:	Between Racha-Central Caucasus and Trialeti PCAs, Likhi Mountain Chain Longitude: 43°38'20" Latitude: 42°16'08"
Area:	176,072 ha

Countries:	Georgia
Main Biomes:	Forest
Main Habitats:	Colchic middle-mountain beech forests primarily with evergreen understory – 83,476 ha (47.41%); Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, with evergreen understory – 24,200 ha (13.74%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 28,110 ha (15.97%); Caucasian alpine landscapes with grasslands and rhododendron thickets – 11,781 ha (6.69%); rock and scree plant communities – 3,758 ha (2.13%); glaciers – 355 ha; actual forest cover, including elfin woods – 132,206 ha (75.09%)
Land Use/Land Cover:	Rural settlements – 2,851 ha (1.62%); farmlands – 14,060 ha (7.99%); summer pastures – 22,808 ha (12.95%)
Protected Areas:	None
Key Phenomena:	Regionally important for migration of wildlife and gene flow
Focal Species:	<i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i>
Threats:	Illegal hunting, illegal logging
CEPF Site Outcomes:	Racha (27), Borjomi-Kharagauli NP (88)

15. RIONI – WEST LESSER CAUCASUS

Location:	Between Rioni and West Lesser Caucasus PCAs, Black Sea coast Longitude: 41°44'00" Latitude: 41°55'02"
Area:	32,424 ha (aquatic area – 32, 424 ha)
Countries:	Georgia
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, recreation
Protected Areas:	None
Key Phenomena:	Globally important for waterfowl migration
Focal Species:	<i>Acipenser sturio</i> , <i>A. stellatus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i> , <i>Huso huso</i>
Species of Special Concern:	None
Threats:	Illegal hunting, illegal fishing
CEPF Site Outcomes:	None

16. TRIALETI – WEST LESSER CAUCASUS

Location:	Between Trialeti and West Lesser Caucasus PCAs, Meskheta Mountain Chain Longitude: 42°31'23" Latitude: 41°45'21"
Area:	80,475 ha
Countries:	Georgia
Main Biomes:	Forest
Main Habitats:	Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests, with evergreen understory – 24,815 ha (30.84%); Colchic middle-mountain beech forests primarily with evergreen understory – 15,096 ha (18.76%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 26,434 ha (32.85%); actual forest cover, including elfin woods – 57,411 ha (71.34%)

Land Use/Land Cover:	Rural settlements – 1,918 ha (2.38%); farmlands – 2,683 ha (3.33%); summer pastures – 18,463 ha (22.94%)
Protected Areas:	None
Key Phenomena:	Regionally important for seasonal migrations of wildlife and gene flow
Focal Species:	<i>Rupicapra rupicapra</i> , <i>Ursus arctos</i> , <i>Tetrao mlokosiewiczzi</i> , <i>Mertensiella caucasica</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Borjomi-Kharagauli NP (88), Shavsheti Range-1 (90)

17. WEST LESSER CAUCASUS – SARIKAMIS FOREST

Location:	Between West Lesser Caucasus and Sarikamis Forest PCAs, valleys of the Chorukh (Chorokhi) and Oltu rivers and Yalnizcam Mountain Range Longitude: 42°06'54" Latitude: 41°02'11"
Area:	324,454 ha
Countries:	Turkey
Main Biomes:	Forest
Main Habitats:	Caucasian middle-mountain beech and dark coniferous (spruce-fir) forests with evergreen understory – 73,859 ha (22.76%); Colchic middle-mountain beech forests, primarily with evergreen understory – 30,923 ha (9.53%); Pontic low and middle mountain oak forest, combined with dry shrublands and Mediterranean elements – 9,869 ha (3.04%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 29,020 ha (8.94%); Near East high-mountain meadow-steppe and fragments of sub-alpine meadows – 28,113 ha (8.66%); eastern Black Sea Mountain middle-mountain steppes, dry shrublands, and dwarf-shrub (phrygana) vegetation – 79,547 ha (24.52%); Anatolian upper-mountain pine forests, meadow-steppe with areas of dry vegetation – 47,325 ha (14.59%); actual forest cover – 107,352 ha (33.09%)
Land Use/Land Cover:	Urban – 337 ha (0.10%); rural settlements – 7,805 ha (2.41%); farmlands – 86,584 ha (26.69%); summer pastures – 114,793 ha (35.38%), rock and scree communities - 7,184 ha
Protected Areas:	One PA: Karagol-Sahara National Park (IUCN I-II) - 3,766 ha (1.16%)
Key Phenomena:	Local migrations of wildlife and gene flow
Focal Species:	<i>Capra aegagrus</i> , <i>Rupicapra rupicapra</i> , <i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>
Threats:	Illegal hunting, overgrazing
CEPF Site Outcomes:	Dogu Karadeniz Mountains (103), Mt. Ziaret Forest (151), Yalnizcam Mountains (203)

18. TRIALETI – MANGLISI

Location:	Between Trialeti and Manglisi PCAs, central part of Trialeti Mountain Chain Longitude: 44°03'46" Latitude: 41°49'12"
Area:	136,698 ha
Countries:	Georgia
Main Biomes:	Forest
Main Habitats:	Southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak and pine forests and secondary grasslands – 81,263 ha (59.45%);

southeastern Caucasian hornbeam-oak forests, oak forests, and secondary dry shrublands – 15,736 ha (11.51%); actual forest cover – 96,793 ha (70.81%), including high mountain elfin woods; Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 18,769 ha (13.73%); rock and scree communities – 598 ha

Land Use/Land Cover: Rural settlements – 1,113 ha (0.81%), farmlands – 6,478 ha (4.74%) and summer pastures – 29,379 ha (21.49%)

Protected Areas: None

Key Phenomena: Regionally important for seasonal migrations of wildlife and gene flow

Focal Species: *Rupicapra rupicapra*, *Ursus arctos*, *Tetrao mlokosiewiczi*

Species of Special Concern: *Rhinolophus hipposideros*, *Myotis emarginatus*, *Barbastella barbastellus*, *Lynx lynx*

Threats: Illegal hunting, illegal logging, overgrazing

CEPF Site Outcomes: None

19. TRIALETI – JAVAKHETI

Location: Between Trialeti and Javakheti PCAs, Abul-Samsar Mountain Range
Longitude: 43°47'04" Latitude: 41°28'32"

Area: 52,931 ha

Countries: Georgia

Main Biomes: High mountain

Main Habitats: Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 29,918 ha (56.52%); Caucasian alpine landscapes with grasslands and rhododendron thickets – 17,887 ha (33.79%); high mountain landscapes with plant micro-communities, mosses, and lichens – 3,221 ha (6.09%)

Land Use/Land Cover: Rural settlements – 13 ha (0.02%); farmlands – 1,987 ha (3.75%); summer pastures – 50,437 ha (95.29%); lakes – 495 ha (0.93%)

Protected Areas: None

Key Phenomena: Locally significant for supporting gene flow of wildlife; hybrid zones of vicariant species of frogs and lizards

Focal Species: *Tetrao mlokosiewiczi*

Species of Special Concern: None

Threats: Illegal hunting, illegal logging, overgrazing

CEPF Site Outcomes: None

20. MANGLISI – PAMBAK-SEVAN

Location: Between Manglisi and Pambak-Sevan PCAs, Trialeti Mountain Chain
Longitude: 44°16'18" Latitude: 41°26'12"

Area: 124,359 ha

Countries: Georgia, Armenia

Main Biomes: Forest

Main Habitats: Southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak, pine forests, and secondary grasslands – 97,923 ha (78.74%) and southeastern Caucasian low-mountain hornbeam-oak forests, oak forests, and secondary dry shrublands – 19,774 ha (15.9%); Javakheti-Armenian Plateau steppe and meadow-steppe vegetation – 2,627 ha (2.11%); actual forest cover – 109,377 ha (87.95%)

Land Use/Land Cover: Urban areas – 401 ha (0.32%); rural settlements – 3,007 ha (2.42%); farmlands – 10,102 ha (8.12%), summer pastures – 1,129 ha (0.91%)

Protected Areas: None

Key Phenomena: Locally significant for wildlife migrations and gene flow

Focal Species: *Ursus arctos*

Species of Special Concern: *Rhinolophus hipposideros*, *Myotis emarginatus*, *Barbastella barbastellus*, *Lynx lynx*

Threats: Illegal logging, overgrazing

CEPF Site Outcomes: None

21. JAVAKHETI – IGDİR PLAIN AND ARMAVIR

Location: Between Javakheti and Igdir Plain and Armavir PCAs, Arpachay River Valley on the border between Armenia and Turkey
Longitude: 43°34'53" Latitude: 40°35'24"

Area: 221,531 ha

Countries: Turkey, Armenia

Main Biomes: High mountain, freshwater

Main Habitats: Agri Dagi (Ararat) mountain plateau stony deserts, semi-deserts, and dry dwarf-shrub vegetation – 81,348 ha (36.72%); Javakheti-Armenian Plateau steppe and meadow-steppe vegetation – 73,674 ha (33.26%); Anatolian middle and upper mountain steppe – 34,050 ha (15.37%); freshwater habitats within the Armenian highland volcanic plateau landscapes with steppes and meadow-steppes mixed with wetlands – 13,216 ha (5.97%); reservoirs and ponds – 4,564 ha (2.06%)

Land Use/Land Cover: Rural settlements – 4,350 ha (1.96%); farmlands – 107,557 ha (48.55%); vineyards and orchards – 5,576 ha (2.52%); summer pastures – 12,905 ha (5.83%); winter pastures – 74,595 ha (33.67%); rock and scree communities – 9,136 ha (4.12%)

Protected Areas: None

Key Phenomena: Regionally significant wildlife migration and gene flow among populations

Focal Species: *Capra aegagrus*, *Ursus arctos*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *Lutra lutra*

Threats: Overgrazing

CEPF Site Outcomes: Amasia (106), Araks River (144), Ani (175)

22. SARIKAMIS FOREST – IGDİR PLAIN AND ARMAVIR

Location: Between Sarikamis Forest and Igdir Plain and Armavir PCAs, Aladag Mountain
Longitude: 42°48'09" Latitude: 40°11'23"

Area: 57,770 ha

Countries: Turkey

Main Biomes: High mountain

Main Habitats: Anatolian middle and upper mountain steppe – 55,982 ha (96.90%)

Land Use/Land Cover: Rural settlements – 737 ha (1.28%); farmlands, pastures, and hayfields – 53,983 ha (93.44%); rock and scree communities – 2,474 ha (4.28%);

Protected Areas: One PA: Sarikamis Kagizman Kuloglu Wildlife Reserve – 18,600 ha (32.2%)

Key Phenomena: Locally significant wildlife migration and gene flow among populations

Focal Species: *Capra aegagrus*, *Rupicapra rupicapra*, *Ursus arctos*

Species of Special Concern: *Rhinolophus mehelyi*, *R. euryale*, *Myotis emarginatus*, *Lutra lutra*

Threats: Illegal hunting, overgrazing
CEPF Site Outcomes: Sarakamish Forest (153)

23. KHEVI-TUSHETI – LAGODEKHI-ZAGATALA

Location: Between Khevi-Tusheti and Lagodekhi-Zagatala PCAs, Greater Caucasus Range
Longitude: 45°47'11" Latitude: 42°19'43"

Area: 124,022 ha

Countries: Georgia, Russia

Main Biomes: Forest, high mountain

Main Habitats: Caucasian upper-mountain birch and pine forests – 22,552 ha (18.18%), southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak and pine forests and secondary grasslands – 5,724 ha (4.62%); northern Caucasus oak forests, meadow steppe, steppes, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 5,196 ha (4.19%); actual forest cover – 24,070 ha (19.41%); Caucasian sub-alpine meadows, combined with tall-herbaceous communities, elfin woods, and thickets – 61,314 ha (49.44%); Caucasian alpine grasslands and rhododendron thickets – 24,093 ha (19.43%)

Land Use/Land Cover: Rural settlements – 545 ha (0.44%); farmlands, pastures, and hayfields – 19,950 ha (16.09%); summer pastures – 77,066 ha (62.14%); rock and scree communities – 2,006 ha (1.62%); glaciers – 387 ha

Protected Areas: None

Key Phenomena: Locally significant seasonal migration of wildlife and gene flow among populations

Focal Species: *Barbastella barbastellus*, *Rhinolophus hipposideros*, *Capra aegagrus*, *C. cylindricornis*, *Rupicapra rupicapra*, *Ursus arctos*, *Tetrao mlokosiewiczi*

Species of Special Concern: *Lynx lynx*, *Tetraogallus caucasicus*

Threats: Illegal hunting, illegal logging, overgrazing

CEPF Site Outcomes: Eastern Caucasus (34)

24. ARGAKHANSKY BAY – SAMUR-YALAMA

Location: Between Argakhansky Bay and Samur-Yalama PCAs, Caspian Sea coast
Longitude: 47°45'20" Latitude: 42°42'24"

Area: 108,782 ha

Countries: Russia

Main Biomes: Marine

Main Habitats: Littoral (100%)

Use: Fishing, trawling

Protected Areas: None

Key Phenomena: Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (*Phoca caspica*)

Focal Species: *Huso huso*, *Acipenser stellatus*, *A. ruthenus*, *A. persicus*, *A. nudiventris*, *A. gueldenstaedtii*

Species of Special Concern: *Phoca caspica*

Threats: Water pollution, illegal fishing

CEPF Site Outcomes: Sulak River (79)

25. LAGODEKHI-ZAGATALA – LAMAN-KAM AREA

Location:	Between Lagodekhi-Zagatala and Laman-Kam Area PCAs, northern slopes of the Greater Caucasus Range Longitude: 47°21'18" Latitude: 41°45'26"
Area:	106,420 ha
Countries:	Russia
Main Biomes:	High mountain
Main Habitats:	Caucasian alpine grasslands and rhododendron thickets – 49,914 ha (46.90%); Caucasian sub-alpine meadows, combined with tall-herbaceous communities, elfin woods, and thickets – 32,239 ha (30.29%); high-mountain plant micro-communities, mosses, and lichens – 15,736 ha (14.79%); northern Caucasian oak forests, meadow steppe, steppe, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 6,113 ha (5.74%)
Land Use/Land Cover:	Rural settlements – 83 ha (0.08%); farmlands, pastures, and hayfields – 4,638 ha (4.36%); summer pastures – 95,075 ha (89.34%); rock and scree communities - 6,171 ha (5.80%); glaciers – 408 ha
Protected Areas:	None
Key Phenomena:	Locally important seasonal migrations of wildlife and gene flow among populations
Focal Species:	<i>Capra aegagrus</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Ursus arctos</i> <i>Tetrao mlokosiewiczi</i>
Species of Special Concern:	<i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Threats:	Illegal hunting, overgrazing
CEPF Site Outcomes:	None

26. LAGODEKHI-ZAGATALA – ALAZANI-GANYKH

Location:	Between Lagodekhi-Zagatala and Alazani-Ganykh PCAs, southern slopes of the Greater Caucasus Range Longitude: 46°30'48" Latitude: 41°36'50"
Area:	22,520 ha
Countries:	Azerbaijan
Main Biomes:	Forest
Main Habitats:	East Transcaucasian plain oak and oak- <i>Zelcova</i> forests – 14,406 ha (63.97%); southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak and pine forests and secondary grasslands – 4,765 ha (21.16%); actual forest cover – 16,863 ha (74.88%)
Land Use/Land Cover:	Rural settlements – 597 ha (2.65%); farmlands with orchards – 5,060 ha (22.47%)
Protected Areas:	None
Key Phenomena:	Locally important for wildlife migration and gene flow among populations
Focal Species:	<i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Alazani Valley (Az) (135)

27. SARYBASH – ALAZANI-GANYKH

Location:	Between Sarybash and Alazani-Ganykh PCAs, southern slopes of the Greater Caucasus Range Longitude: 46°49'12" Latitude: 41°25'37"
Area:	15,590 ha
Countries:	Azerbaijan
Main Biomes:	Forest
Main Habitats:	Eastern Transcaucasian plain oak and oak- <i>Zelcova</i> forests – 13,499 ha (86.59%); Eastern Georgian low-mountain hornbeam-oak alternating with chestnut forests – 1,285 ha (8.24%); actual forest cover – 7,412 ha (47.54%)
Land Use/Land Cover:	Rural settlements – 1,085 ha (6.96%); farmlands, pastures, and hayfields – 6,905 ha (44.29%); farmlands and orchards – 188 ha
Protected Areas:	None
Key Phenomena:	Locally important for wildlife migration and gene flow among populations
Focal Species:	<i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Barbastella barbastellus</i> , <i>Lutra lutra</i> , <i>Lynx lynx</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Sarybash (14), Alazani Valley (Az) (135)

28. ALAZANI-GANYKH – IORI-MINGECHEVIR (MINGECHAUR)

Location:	Between Alazani-Ganykh and Iori-Mingechevir (Mingechaur) PCAs, Alazani River Valley Longitude: 46°43'04" Latitude: 41°18'08"
Area:	7,105 ha
Countries:	Georgia, Azerbaijan
Main Biomes:	Plains grasslands, forest
Main Habitats:	Delta and floodplain wetlands, swamp forests and grasslands, and salt marshes – 3,642 ha (51.26%); eastern Transcaucasian plain oak and oak- <i>Zelcova</i> forests – 2,711 ha (38.15%); southeastern Caucasian sub-Mediterranean hornbeam-oak forests and woodlands and <i>Botriochloa</i> steppes on foothills – 746 ha; actual forest cover – 4,568 ha (64.28%), shrubs – 2,182 ha (30.71%), floodplain forest (tugai forests) and meadows – 2,020 ha (28.43%)
Land Use/Land Cover:	Rural settlements – 19 ha (0.26%); farmlands – 2,515 ha (35.39%); winter pastures – 4 ha (0.05%)
Protected Areas:	None
Key Phenomena:	Locally important for wildlife migration and gene flow among populations
Focal Species:	<i>Ursus arctos</i>
Species of Special Concern:	<i>Rhinolophus hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Barbastella barbastellus</i> ; <i>Lutra lutra</i>
Threats:	Illegal hunting, overgrazing
CEPF Site Outcomes:	Alazani Valley (Az) (135), Iori Plateau (140), Alazani Valley (Geo) (142)

29. LAGODEKHI-ZAGATALA – SARYBASH- ISMAILLY-SHAHDAGH

Location:	Between Lagodekhi-Zagatala and Ismailly-Shahdagh PCAs with Sarybash PCA in between, Greater Caucasus Range Longitude: 47°21'04" Latitude: 41°28'06"
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Area:	227,547 ha
Countries:	Azerbaijan, Russia
Main Biomes:	Forest, high mountain
Main Habitats:	Southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak and pine forests and secondary grasslands – 27,961 ha (12.29%); Caucasian upper-mountain birch and pine forests – 17,276 ha (7.59%); actual forest cover – 28,881 ha (12.69%); Caucasian alpine grasslands and rhododendron thickets – 93,706 ha (41.18%); Caucasian sub-alpine meadows with combination of tall-herbaceous communities, elfin woods, and thickets – 68,725 ha (30.20%); high-mountain landscapes with plant micro-communities, mosses, and lichens – 9,983 ha (4.39%); Northern Caucasus middle-mountain meadow, steppe, meadow-steppe, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 8,673 ha (3.81%), plus others to a lesser extent
Land Use/Land Cover:	Rural settlements – 927 ha (0.41%); farmlands, pastures, and hayfields – 14,807 (6.51%); summer pastures – 174,322 ha (76.61%); rock and scree communities - 8,490 ha (3.73%); glaciers – 120 ha
Protected Areas:	None
Key Phenomena:	Locally important seasonal migrations of wildlife and gene flow among populations
Focal Species:	<i>Cervus elaphus maral</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Ursus arctos</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Lynx lynx</i> , <i>Tetraogallus caucasicus</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Oguz (20)

30. LAMAN-KAM AREA – ISMAILLY-SHAHDAGH

Location:	Between Laman-Kam Area and Ismailly-Shahdagh PCAs, Northern slopes of the Greater Caucasus Range
	Longitude: 47°58'15" Latitude: 41°23'07"
Area:	9,827 ha
Countries:	Azerbaijan, Russia
Main Biomes:	High mountain
Main Habitats:	Northern Caucasus middle-mountain meadow, steppe, meadow-steppe, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 5,982 ha (60.87%); Caucasian sub-alpine landscapes combined with meadows, tall-herbaceous communities, elfin woods, and thickets – 1,904 ha (19.37%); Caucasian alpine landscapes with grasslands and rhododendron thickets – 1,793 ha (18.25%)
Land Use/Land Cover:	Rural settlements – 105 ha (1.07%); farmlands, pastures, and hayfields – 3,765 ha (38.31%); summer pastures – 4,920 ha (50.07%); rock and scree communities - 1,037 ha (10.55%)
Protected Areas:	None
Key Phenomena:	Locally important for seasonal migrations of wildlife and gene flow among populations
Focal Species:	<i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Ursus arctos</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Tetraogallus caucasicus</i>
Threats:	Illegal hunting, overgrazing
CEPF Site Outcomes:	Shakhdag Mountain-2 (18)

31. SAMUR-YALAMA – AGHZIBIR (AKZYBIR) LAKE

Location:	Between Samur-Yalama and Aghzibir (Akzybir) Lake PCAs, Caspian Sea coast Longitude: 48°53'12" Latitude: 41°36'46"
Area:	14,059 ha
Countries:	Azerbaijan
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing
Protected Areas:	None
Key Phenomena:	Globally significant migrations of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (<i>Phoca caspica</i>)
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Threats:	Water pollution, illegal fishing
CEPF Site Outcomes:	None

32. PAMBAK-SEVAN – MOUNT GYAMYSH

Location:	Between Pambak-Sevan and Mount Gyamysh PCAs, on mountains along the Armenia-Azerbaijan border Longitude: 45°29'09" Latitude: 40°39'06"
Area:	120,500 ha
Countries:	Armenia, Azerbaijan
Main Biomes:	Forest
Main Habitats:	Southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak and pine forests and secondary grasslands – 63,790 ha (52.94%); southeastern Caucasian low-mountain hornbeam-oak and oak forests, and secondary dry shrublands – 18,502 ha (15.35%); Caucasian upper-mountain birch and pine forests – 17,313 ha (14.37%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 15,457 ha (12.83%); actual forest cover – 68,381ha (56.75%)
Land Use/Land Cover:	Rural settlements – 3,406 ha (2.83%); farmlands – 32,734 ha (27.17%); summer pastures – 15,978 ha (13.26%)
Protected Areas:	None
Key Phenomena:	Locally important for wildlife migration and gene flow among populations
Focal Species:	<i>Ursus arctos</i> , <i>Tetrao mlokosiewiczii</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	None

33. PAMBAK-SEVAN – KHOSROV

Location:	Between Pambak-Sevan and Khosrov PCAs Longitude: 44°52'16" Latitude: 40°28'53"
Area:	38,897 ha
Countries:	Armenia
Main Biomes:	High mountain

Main Habitats:	Armenian high mountain steppe and meadow-steppe, transitional to mountain meadows – 21,959 ha (56.45%); Armenian highland steppe and meadow-steppe with wetlands on volcanic plateau – 5,094 ha (13.1%); southern Caucasian middle-mountain steppes, dry shrublands, and dwarf-shrub vegetation with mountain semi-desert – 9,855 ha (25.34%)
Land Use/Land Cover:	Cities – 614 ha (1.58%); rural settlements – 1,446 ha (3.72%); farmlands, pastures, and hayfields – 22,880 ha (58.82%); summer pastures – 13,809 ha (35.50%)
Protected Areas:	One PA: Sevan National Park (IUCN I-II) – 529 ha (1.36%)
Key Phenomena:	Locally important for wildlife migration and gene flow among populations
Focal Species:	<i>Ursus arctos</i> , <i>Pelobates syriacus</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Barbastella barbastellus</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Dsegh-Haghartsin-Pambak Chain and Dilijan National Park (117)

34. IGDIR PLAIN AND ARMAVIR – AGRI DAGI AND ARMASH

Location:	Between Igdir Plain and Armavir and Agri Dagı (Ararat) and Armash PCAs, the border between Armenia and Turkey in the Araz (Araks) River Valley Longitude: 44°30'27" Latitude: 39°55'45"
Area:	14,661 ha
Countries:	Turkey, Armenia
Main Biomes:	Freshwater
Main Habitats:	Agri Dagı (Ararat) mountain plateau with stony deserts, semi-deserts, and dry dwarf-shrub vegetation – 9,033 ha (61.61%); floodplain wetlands, grasslands, and salt marshes – 5,625 ha (38.37%)
Land Use/Land Cover:	Rural settlements – 164 ha (1.12%); farmlands – 6,314 ha (43.07%); vineyards – 709 ha (4.84%); winter pastures – 6,803 ha (46.40%); rivers and mires – 671 ha (4.57%)
Protected Areas:	None
Key Phenomena:	Regionally important wildlife migration and gene flow among populations
Focal Species:	None
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Lutra lutra</i>
Threats:	Overgrazing
CEPF Site Outcomes:	Armash (145), Igdir Plain (154), North-East Ararat (158)

35. IGDIR PLAIN AND ARMAVIR – AGRI DAGI AND ARMASH

Location:	Between Igdir Plain and Armavir and Agri Dagı (Ararat) and Armash PCAs, western part of Igdir Plain Longitude: 43°41'04" Latitude: 39°48'05"
Area:	46,607 ha
Countries:	Turkey
Main Biomes:	High mountain
Main Habitats:	Anatolian middle and upper mountain steppe – 25,667 ha (55.07%); Agri Dagı (Ararat) mountain plateau with stony deserts, semi-deserts, and dry dwarf-shrub vegetation – 15,485 ha (33.22%); Iranian upper and middle plateau with steppe and semi-desert - 2,782 ha (5.97%); rock and scree communities – 846 ha (2%)

Land Use/Land Cover: Rural settlements – 546 ha (1.17%); farmlands, pastures, and hayfields – 40,701 ha (87.33%); summer pastures – 2,634 ha (5.65%); winter pastures – 1,841 ha (3.95%)

Protected Areas: None

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*, *Ursus arctos*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*

Threats: Overgrazing

CEPF Site Outcomes: Igdır Plain (154), Karakose (157)

36. IGDİR PLAIN AND ARMAVIR – MAKU AND WESTERN IRANIAN BORDER

Location: Between Igdır Plain and Arnavir and Maku and Western Iranian border PCAs, Aladag Mountain and Chakmak Mountain Range
Longitude: 43°43'03" Latitude: 39°35'47"

Area: 43,441 ha

Countries: Turkey

Main Biomes: High mountain

Main Habitats: Anatolian middle and upper mountain pine forests and secondary meadows – 14,083 ha (32.42%), Near East high-mountain meadow-steppe and fragments of sub-alpine meadows – 10,815 ha (24.9%); Anatolian middle and upper mountain steppe – 12,654 ha (29.13%); rock and scree communities – 605 ha (1.39%); Armenian-Iranian low-mountain semi-deserts, dwarf-shrub vegetation, and shrublands – 2,472 ha (5.69%)

Land Use/Land Cover: Rural settlements – 377 ha (0.87%); farmlands, pastures, and hayfields – 28,663 ha (65.98%); summer pastures – 13,736 ha (31.62%)

Protected Areas: None

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *M. schaubi*

Threats: Overgrazing

CEPF Site Outcomes: Tendurek Mountain (155), Karakose (157)

37. AGRİ DAGI AND ARMASH – MAKU AND WESTERN IRANIAN BORDER

Location: Between Agri Dagı and Armash and Maku and Western Iranian Border PCAs, south from Agri (Ararat) Mountain
Longitude: 44°14'50" Latitude: 39°27'25"

Area: 31,580 ha

Countries: Turkey

Main Biomes: High mountain

Main Habitats: Agri Dagı (Ararat) mountain plateau with stony deserts, semi-deserts, and dry dwarf-shrub vegetation – 20,047 ha (63.48%), Armenian-Iranian low-mountain semi-deserts, dwarf-shrub vegetation, and shrublands – 11,474 ha (36.33%); rock and scree communities – 341 ha

Land Use/Land Cover: Rural settlements – 459 ha (1.45%); farmlands, pastures, and hayfields – 11,184 ha (35.41%); summer pastures – 19,505 ha (61.76%)

Protected Areas: One PA (IUCN II) Agri Mountain National Park – 1,990 ha within the Corridor (6.3%)

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*, *Ovis ammon*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *M. schaubi*

Threats: Overgrazing, illegal hunting

CEPF Site Outcomes: Ararat (159)

38. MAKU AND WESTERN IRANIAN BORDER – MARAKAN-KIAMAKI

Location: Between Maku and Western Iranian Border and Marakan-Kiamaki PCAs, Agh Chay River Valley
Longitude: 44°56'18" Latitude: 38°51'26"

Area: 171,739 ha

Countries: Iran

Main Biomes: High mountain

Main Habitats: Iranian upper and middle plateau with steppe and semi-deserts – 54,173 ha (31.54%), Agri Dagi (Ararat) mountain plateau with stony deserts, semi-deserts, and dry dwarf-shrub vegetation – 31,398 ha (18.28%); Anatolian middle-mountain plateau and upland with steppe, dry shrublands, and dwarf-shrub (phrygana) vegetation – 50,972 ha (29.68%); Near East low and Anatolian middle-mountain desert and semi deserts – 30,203 (17.59%); rock and scree communities – 2,224 ha (1.29%)

Land Use/Land Cover: Rural settlements – 1,936 ha (1.13%); farmlands – 162,508 ha (94.62%), including 10,282 ha of farmlands with orchards; summer pastures – 4,810 ha (2.80%)

Protected Areas: None

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*, *Ovis ammon*, *Panthera pardus*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *M. schaubii*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: Maku and Iran West Border (148)

39. NORAVANK – BICHANEK

Location: Between Noravank and Bichanek PCAs, on the border between Armenia and Nakhchivan (Azerbaijan)
Longitude: 45°26'07" Latitude: 39°31'52"

Area: 39,837 ha

Countries: Armenia, Azerbaijan

Main Biomes: High mountain

Main Habitats: Armenian highland volcanic plateau with steppe and meadow-steppe interspersed with wetlands – 13,526 ha (33.95%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 4,802 ha (12.05%); Armenian-Iranian low-mountain semi-deserts, dwarf-shrub vegetation, and shrublands in areas – 12,852 ha (32.26%); rock and scree communities – 103 ha

Land Use/Land Cover: Rural settlements – 660 ha (1.66%); farmlands – 24,041ha (60.35%), including 11,489 ha of farmlands with orchards; summer pastures – 14,450 ha (36.27%); dry open woodland – 583 ha (less than 2%)

Protected Areas: None

Key Phenomena: Regionally important wildlife migration and gene flow among populations

Focal Species: *Ovis ammon*, *Capra aegagrus*, *Panthera pardus*, *Ursus arctos*

Species of Special Concern: *Lynx lynx*, *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: None

40. KHOSROV – NORAVANK

Location: Between Khosrov and Noravank PCAs, on the border between Armenia and Nakhchivan (Azerbaijan)
Longitude: 45°05'37" Latitude: 39°44'56"

Area: 15,338 ha

Countries: Armenia, Azerbaijan

Main Biomes: High mountain

Main Habitats: Armenian-Iranian low-mountain semi-deserts, dwarf-shrub vegetation, and shrublands in areas – 14,033 ha (91.49%); rock and scree communities – 902 ha (5.88%)

Land Use/Land Cover: Rural settlements – 253 ha (1.65%); farmlands, pastures, and hayfields – 10,763 ha (70.17%); orchards – 106 ha (0.69%); summer pastures – 999 ha (6.51%); winter pastures – 2,314 ha (15.08%)

Protected Areas: None

Key Phenomena: Regionally important wildlife migration and gene flow among populations

Focal Species: *Ovis ammon*, *Capra aegagrus*, *Panthera pardus*.

Species of Special Concern: *Lynx lynx*, *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: Noravank (125), Sardarak Caves (129)

41. KHOSROV – BICHANEK

Location: Between Khosrov and Bichanek PCAs, central Armenia
Longitude: 45°30'49" Latitude: 39°47'09"

Area: 92,171 ha

Countries: Armenia

Main Biomes: High mountain

Main Habitats: Armenian mountain meadow and high mountain steppe and meadow-steppe – 23,747 ha (25.76%); Caucasian sub-alpine landscapes with a combination of meadows, tall-herbaceous communities, elfin woods, and thickets – 15,602 ha (16.93%), Caucasian alpine landscapes with grasslands and rhododendron thickets – 14,815 ha (16.07%); southern Caucasian middle-mountain meadows, meadow-steppe and steppe, dry shrublands, and dwarf-shrub vegetation – 19,259 ha (20.89%), Armenian-Iranian low-mountain landscapes with semi-deserts, dwarf-shrub vegetation, and shrublands in areas – 13,114 ha (14.23%); rock and scree communities – 459 ha (0.50%); actual forest cover – 3,960 ha (4.29%)

Land Use/Land Cover: Rural settlements – 1,050 ha (1.14%); farmlands, pastures, and hayfields – 14,383 ha (15.60%); summer pastures – 72,296 ha (78.44%)

Protected Areas: Three Pas totaling 14,204 ha (15.41%): Eghegnadzor Sanctuary – 4,200 ha (4.56%), Djermuk Sanctuary – 3,865 ha (4.19%), and Herher Juniper Forest Sanctuary – 6,139 ha (6.66%)

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Ovis ammon*, *Capra aegagrus*, *Panthera pardus*, *Ursus arctos*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: Djermuk (122)

42. BICHANEK – ZANGEZUR

Location: Between Bichanek and Zangezur PCAs on the Armenian-Nakhchivan (Azerbaijan) border
Longitude: 45°55'53" Latitude: 39°22'34"

Area: 22,277 ha

Countries: Armenia, Azerbaijan

Main Biomes: High mountain

Main Habitats: Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 13,195 ha (59.23%); Caucasian alpine landscapes with grasslands and rhododendron thickets – 8,304 ha (37.28%); total high mountain habitats – 21,499 ha (96.51%)

Land Use/Land Cover: Rural settlements – 96 ha (0.43%); farmlands, pastures, and hayfields – 664 ha (2.98%); summer pastures – 20,867 ha (93.67%)

Protected Areas: None

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*, *Ovis ammon*, *Panthera pardus*, *Ursus arctos*, *Tetrao mlokosiewiczii*

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*, *Lynx lynx*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: None

43. MOUNT GYAMYSH – MEGHRI – ARASBARAN

Location: Between Mount Gyamysh, Meghri, and Arasbaran PCAs, eastern Lesser Caucasus
Longitude: 46°47'32" Latitude: 39°35'35"

Area: 427,191 ha

Countries: Armenia, Azerbaijan

Main Biomes: Forest

Main Habitats: Southeastern Caucasian middle-mountain beech forests alternating with hornbeam-oak, partly with pine forests and secondary grasslands – 229,984 ha (53.84%); southeastern Caucasian low-mountain hornbeam-oak forests, oak forests, and secondary dry shrublands – 60,914 ha (14.26%); southeastern Caucasian sub-Mediterranean foothill hornbeam-oak forests and woodlands and *Botriochloa* steppes – 9,823 ha (2.3%); Caucasian upper-mountain birch and pine forests – 9,589 ha (2.24%); actual forest cover – 229,734 ha (53.78%); total high mountain habitats – 75,203 ha (17.60%), including 61,956 ha (14.50%)

	ha of Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets and 13,247 ha (3.1%) of Caucasian alpine grasslands and rhododendron thickets; rock and scree communities – 1,449 ha (0.34%); southern Caucasian middle-mountain meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation – 25,336 ha (5.93%)
Land Use/Land Cover:	Rural settlements – 7,438 ha (1.74%); farmlands, pastures, and hayfields – 92,508 ha (21.65%); orchards – 33,041 ha (7.73%); summer pastures – 62,247 ha (14.57%)
Protected Areas:	Five PAs totaling 83,393 ha (19.52%); IUCN I: Bastichay Strict Nature Reserve – 2,703 ha; other PAs – 80,690 ha (18.89%): Lachyn, Dashalti, Gubadly, Arazboyu sanctuaries
Key Phenomena:	Regionally important seasonal migration of wildlife and gene flow among populations
Focal Species:	<i>Cervus elaphus maral</i> , <i>Capra aegagrus</i> , <i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Tetrao mlodosiewiczi</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	Dashalti Strict Nature Reserve (179), Gubadly Sanctuary (182), Lapchin Sanctuary (183), Mount Giamysh (189)

44. VARVARA-BARDA – KURA-ARAZ (ARAKS) VALLEY

Location:	Between Varvara-Barda and Kura-Araz (Araks) Valley PCAs, Kura River Valley Longitude: 47°42'23" Latitude: 40°12'24"
Area:	15,026 ha
Countries:	Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Delta and floodplain wetlands, swamp forests and grasslands, and salt marshes – 12,645 ha (84.15%); eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts, and semi-deserts – 2,156 ha (14.35%); lakes – 224 ha (1.49%); actual forest cover – 6,602 ha (43.94%)
Land Use/Land Cover:	Rural settlements – 904 ha (6.02%), farmlands, pastures, and hayfields – 2,218 ha (14.76%); summer pastures – 2,610 ha (17.37%); winter pastures – 4 ha (0.03%); rock and scree communities – 231 ha (1.54%)
Protected Areas:	None
Key Phenomena:	Regionally important seasonal migration of wildlife and gene flow among populations
Focal Species:	None
Species of Special Concern:	<i>Lutra lutra</i>
Threats:	Illegal hunting, illegal logging, overgrazing
CEPF Site Outcomes:	None

45. IORI-MINGECHEVIR (MINGECHAUR) – GOBUSTAN-HAJIGABUL

Location:	Between Iori-Mingechevir (Mingechaur) and Gobustan-Hajigabul PCAs, eastern Greater Caucasus Range Longitude: 48°31'34" Latitude: 40°26'37"
Area:	166,207 ha
Countries:	Azerbaijan

Main Biomes:	Plains grasslands
Main Habitats:	Southeast Caucasian low-mountain juniper woodlands, dry shrublands (shibliak), and dwarf-shrub (phrygana) vegetation – 87,116 ha (52.41%); eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts and semi-deserts – 64,042 ha (38.53%); floodplain wetlands, swamp forests and grasslands, and salt marshes – 7,920 ha (4.76%); eastern Transcaucasian plain landscapes with oak and oak- <i>Zelcova</i> forests – 4,945 ha (2.98%); actual forest cover – 8,124 ha (4.89%)
Land Use/Land Cover:	Rural settlements – 4,590 ha (2.76%); farmlands, pastures, and hayfields – 66,911 ha (40.26%); orchards and vineyards – 38,483 ha (23.15%); winter pastures – 47,283 ha (28.45%); rock and scree communities – 507 ha (0.31%); lakes and reservoirs – 311 ha (0.19%)
Protected Areas:	None
Key Phenomena:	Regionally important seasonal migration of wildlife and gene flow among populations
Focal Species:	<i>Gazella subguturosa</i> , <i>Hyaena hyaena</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Lynx lynx</i>
Threats:	Overgrazing
CEPF Site Outcomes:	Central Shirvan (73), Gekchai Bozdag Mountains (137)

46. AGHZIBIR (AKZYBIR) LAKE – GOBUSTAN-ABSHERON

Location:	Between Aghzibir (Akzybir) Lake and Gobustan-Absheron PCAs, Caspian Sea coast Longitude: 49°33'36" Latitude: 40°40'25"
Area:	17,049 ha (aquatic area – 17,049 ha)
Countries:	Azerbaijan
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, trawling, recreation
Protected areas:	None
Key Phenomena:	Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (<i>Phoca caspica</i>)
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Threats:	Illegal fishing, illegal hunting, water pollution
CEPF Site Outcomes:	None

47. GOBUSTAN-HAJIGABUL – SHIRVAN

Location:	Between Gobustan-Hajigabul and Shirvan PCAs, southeastern plains of Azerbaijan Longitude: 49°08'55" Latitude: 39°58'42"
Area:	89,034 ha
Countries:	Azerbaijan
Main Biomes:	Plains grasslands
Main Habitats:	Eastern Caucasian north subtropical lowland and foothill landscapes with <i>Artemisia</i> , halophytic deserts and semi-deserts – 64,951 ha (72.95%); eastern

Land Use/Land Cover:	Caucasian low-mountain semi-deserts and deserts – 11,027 ha (12.39%); southeastern Caucasian low-mountain juniper woodlands, dry shrublands (shibliak), and dwarf-shrub vegetation (phrygana) – 9,035 ha (10.15%) Urban areas and rural settlements – 1,039 ha (1.17%); farmlands – 35,804 ha (40.22%); winter pastures – 51,399 ha (57.73%)
Protected Areas:	None
Key Phenomena:	Regionally important seasonal migration of wildlife and gene flow among populations
Focal Species:	<i>Gazella subguturosa</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> .
Threats:	Overgrazing, improper irrigation
CEPF Site Outcomes:	None

48. GOBUSTAN-ABSHERON – SHIRVAN

Location:	Between Gobustan-Absheron and Shirvan PCAs, Caspian Sea coast Longitude: 49°25'14" Latitude: 39°47'19"
Area:	2,555 ha (aquatic area – 2,555 ha)
Countries:	Azerbaijan
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, trawling, recreation
Protected areas:	None
Key Phenomena:	Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (<i>Phoca caspica</i>)
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Threats:	Illegal fishing, illegal hunting, water pollution
CEPF Site Outcomes:	None

49. KURA-ARAZ (ARAKS) VALLEY – MAKHMUD CHALA

Location:	Between Kura-Araz (Araks) Valley and Makhmud Chala PCAs, Mugan Steppe Longitude: 48°23'30" Latitude: 39°44'45"
Area:	118,171 ha
Countries:	Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Eastern Caucasian north subtropical lowland and foothill habitats with <i>Artemisia</i> , halophytic deserts and semi-deserts – 107,418 ha (90.90%); floodplain wetlands, swamp forests and grasslands, and salt marshes – 9,777 ha (8.27%); actual forest cover – 3,087 ha (2.61%)
Land Use/Land Cover:	Rural settlements – 1,639 ha (1.39%); farmlands – 53,516 ha (45.28%); winter pastures – 43,220 ha (36.57%); saline lands – 14,884 ha (12.60%)
Protected Areas:	None
Key Phenomena:	Regionally significant migration route of waterfowl and other birds
Focal Species:	None
Species of Special Concern:	None
Threats:	Overgrazing, improper irrigation
CEPF Site Outcomes:	Mil-Karabakh Steppe (74)

50. KURA-ARAZ (ARAKS) VALLEY – ARAZ (ARAKS) VALLEY

Location:	Between Kura-Araz (Araks) Valley and Araz (Araks) Valley PCAs, left bank of the Araz (Araks) River Longitude: 47°49'55" Latitude: 39°43'54"
Area:	32,219 ha
Countries:	Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Eastern Caucasian north subtropical lowland and foothill habitats with <i>Artemisia</i> , halophytic deserts and semi-deserts – 23,514 ha (72.98%); floodplain wetlands, swamp forests and grasslands, and salt marshes – 8,705 ha (27.02%); actual forest cover – 1,504 ha (4.67%)
Land Use/Land Cover:	Urban areas and rural settlements – 954 ha (2.96%); farmlands – 28,009 ha (86.93%); mires – 322 ha (1.0%)
Protected Areas:	None
Key Phenomena:	Regionally significant migration route of waterfowl and other birds
Focal Species:	None
Species of Special Concern:	<i>Lutra lutra</i>
Threats:	Overgrazing
CEPF Site Outcomes:	None

51. MAKHMUD CHALA – GYZYL-AGACH (GYZYLAGHAJ)

Location:	Between Makhmud Chala and GyzyL-Agach (Gyzylaghaj) PCAs, Salyan Plain Longitude: 48°41'47" Latitude: 39°17'41"
Area:	13,236 ha
Countries:	Azerbaijan
Main Biomes:	Freshwater
Main Habitats:	Floodplain wetlands, swamp forests and grasslands, and salt marshes – 7,188 ha (54.31%); Hyrcanic plain grassland-shrublands and Hyrcanian forests – 1,844 ha (13.93%); eastern Caucasian north subtropical lowland and foothill habitats with <i>Artemisia</i> , halophytic deserts and semi-deserts – 4,204 ha (31.76%)
Land Use/Land Cover:	Farmlands, pastures, and hayfields – 4,454 ha (33.65%); farmlands – 2,127 ha (16.07%); mires – 6,655 ha (about 50%)
Protected Areas:	None
Key Phenomena:	Regionally significant migration route of waterfowl and other birds
Focal Species:	None
Species of Special Concern:	None
Threats:	Overgrazing, improper irrigation
CEPF Site Outcomes:	None

52. SHIRVAN – GYZYL-AGACH (GYZYLAGHAJ)

Location:	Between Shirvan and GyzyL-Agach (Gyzylaghaj) PCAs, Caspian Sea coast Longitude: 49°15'54" Latitude: 39°12'39"
Area:	11,773 ha (aquatic area – 11,773ha)
Countries:	Azerbaijan
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, trawling, recreation

Protected areas:	None
Key Phenomena:	Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (<i>Phoca caspica</i>)
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Threats:	Illegal fishing, water pollution
CEPF Site Outcomes:	Gizyl-Agach Bay (70)

53. MARAKAN-KIAMAKI – SABALAN

Location:	Between Marakan-Kiamaki and Sabalan PCAs, Karadag Mountain Range Longitude: 46°18'56" Latitude: 38°31'57"
Area:	142,327 ha
Countries:	Iran
Main Biomes:	High mountain
Main Habitats:	Caucasian alpine landscapes with grasslands and rhododendron thickets – 35,091 ha (24.66%); Iranian upper, middle mountain, and plateau steppes and semi-deserts – 14,217 ha (9.99%); Near-Asian middle mountain, plateau, and upland steppes, dry shrublands, and dwarf-shrub vegetation (phrygana), partly alternating with stony deserts – 75,263 ha (52.88%); Near-Asian low-mountain and Anatolian middle-mountain deserts and semi-deserts – 17,755 ha (12.47%)
Land Use/Land Cover:	Rural settlements – 1,159 ha (0.81%); farmlands, pastures, and hayfields – 32,072 ha (22.53%); summer pastures – 108,809 ha (76.45%)
Protected Areas:	None
Key Phenomena:	Regionally important seasonal migration of wildlife and gene flow among populations
Focal Species:	<i>Capra aegagrus</i> , <i>Ovis ammon</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>Lutra lutra</i>
Threats:	Overgrazing, habitat fragmentation
CEPF Site Outcomes:	None

54. ARAZ (ARAKS) VALLEY – SABALAN

Location:	Between Araz (Araks) Valley and Sabalan PCAs, Karasu River Longitude: 47°28'19" Latitude: 38°42'16"
Area:	205,808 ha
Countries:	Iran
Main Biomes:	High mountain
Main Habitats:	Iranian plateau and upper mountain steppe, meadow-steppe, sometime brushes and phrygana – 77,101 ha (37.46%); Iranian upper, middle, and plateau steppes and semi-deserts – 40,370 ha (19.62%); southern Caucasian middle-mountain meadows, meadow-steppes and steppes, dry shrublands, and dwarf-shrub vegetation – 70,616 ha (34.31%); Near-Asian high-mountain meadow-steppes and fragments of sub-alpine meadows – 4,599 ha (2.23%); eastern Georgian hills and foothills covered with <i>Botriochloa</i> and <i>Stipa</i> steppes, dry shrublands (shibliak), dwarf-shrub (phrygana) vegetation, and semi-deserts – 11,349 ha (5.51%); actual forest cover – 1,027 ha (0.50%); rock and scree communities – 1,886 ha (0.92%)

Land Use/Land Cover: Rural settlements – 1,836 ha (0.89%); summer pastures – 4,465 ha (2.17%); winter pastures – 78,357 ha (38.07%); farmlands, pastures, and hayfields – 118,238 ha (57.45%)

Protected Areas: None

Key Phenomena: Regionally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Capra aegagrus*, *Ovis ammon*

Species of Special Concern: *Rhinolophus mehelyi*, *R. euryale*, *Myotis emarginatus*

Threats: Illegal hunting, overgrazing

CEPF Site Outcomes: Kaleibar and Arasbaran (160), Mount Sahand and Sabalan (194)

55. GYZYL-AGACH (GYZYLAGHAJ) – TALISH-ZUVAND

Location: Between Gyzyl-Agach (Gyzylaghaj) and Talish-Zuvand PCAs, Caspian Sea coast
Longitude: 48°52'17" Latitude: 38°48'58"

Area: 7,485 ha (aquatic area – 6,943 ha, terrestrial area – 542 ha or 7.24%)

Countries: Azerbaijan

Main Biomes: Marine

Main Habitats: Littoral; eastern Caucasian north subtropical lowland and foothill grasslands with *Artemisia*, halophytic deserts and semi-deserts – 383 ha (77.66% of terrestrial area or 5.11% of entire area of the corridor); wetlands (mires) – 23 ha (4.24% of terrestrial area)

Land Use/Land Cover: Urban areas and rural settlements – 137 ha (25.28% of terrestrial area); winter pastures – 372 ha (68.63% of terrestrial area); farmlands and orchards – 9 ha

Protected Areas: None

Key Phenomena: Globally important seasonal migration of wildlife and gene flow among populations

Focal Species: *Huso huso*, *Acipenser stellatus*, *A. ruthenus*, *A. persicus*, *A. nudiventris*, *A. gueldenstaedtii*

Species of Special Concern: *Phoca caspica*

Threats: Water pollution, illegal poaching

CEPF Site Outcomes: Gizyl-Agach Bay (70)

56. SABALAN – TALISH-ZUVAND

Location: Between Sabalan and Talish-Zuvand PCAs
Longitude: 48°14'04" Latitude: 38°30'16"

Area: 47,079 ha

Countries: Iran

Main Biomes: High mountain

Main Habitats: Iranian upper, middle, and plateau steppes and semi-deserts – 19,398 ha (41.20%); Caucasian sub-alpine meadows, tall-herbaceous communities, elfin woods, and thickets – 10,907 ha (23.17%); southern Caucasian middle-mountain meadows, meadow-steppes, and steppes, dry shrublands, and dwarf-shrub vegetation – 16,775 ha (35.63%); rock and scree communities – 662 ha (1.41%)

Land Use/Land Cover: Rural settlements – 765 ha (1.62%); farmlands – 16,840 ha (35.77%); summer pastures – 12,181 ha (25.87%); winter pastures – 16,621 ha (35.30%)

Protected Areas: None

Key Phenomena: Regional important for seasonal movement of wildlife and gene flow

Focal Species: None

Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus*
Threats: Overgrazing
CEPF Site Outcomes: Mount Sahand and Sabalan (194)

57. MARINE TALISH-ZUVAND – SEFID RUD-ANZALI

Location: Between Marine Talish-Zuvand and Sefid Rud-Anzali PCAs, Caspian Sea coast
Longitude: 49°01'26" **Latitude:** 37°45'13"
Area: 22,637 ha (aquatic area – 22,637 ha)
Countries: Iran
Main Biomes: Marine
Main Habitats: Littoral (100%)
Use: Fishing, trawling, recreation
Protected areas: None
Key Phenomena: Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (*Phoca caspica*)
Focal Species: *Huso huso*, *Acipenser stellatus*, *A. ruthenus*, *A. persicus*, *A. nudiiventris*, *A. gueldenstaedtii*
Species of Special Concern: *Phoca caspica*
Threats: Water pollution, illegal fishing
CEPF Site Outcomes: None

58. TALISH-ZUVAND – SEFID RUD-ANZALI

Location: Between Talish-Zuvand and Sefid Rud-Anzali PCAs, left bank of the Sefirud River
Longitude: 49°26'23" **Latitude:** 36°52'41"
Area: 33,441 ha
Countries: Iran
Main Biomes: Forest
Main Habitats: Alborz middle and upper mountain pine and oak forests and secondary meadows, partly with dry shrublands – 7,662 ha (22.91%); Hyrcanic low-mountain chestnut-oak, oak-*Parrotia*, and hornbeam-oak forests – 7,277 ha (21.76%); Hyrcanic plain landscapes with grassland-shrublands and Hyrcanian forests – 5,293 ha (15.83%); actual forest cover – 13,560 ha (40.55%); Iranian plateau and upper mountain steppe, meadow-steppe, sometime brushes and phrygana – 7,980 ha (23.86%)
Land Use/Land Cover: Urban areas and rural settlements – 889 ha (2.66%); orchards – 10,006 ha (29.92%); farmlands, pastures, and hayfields 8,205 ha (24.54%); total farmlands – 10,185 ha (30.46%)
Protected Areas: None
Key Phenomena: Regionally important for seasonal movement of wildlife and gene flow
Focal Species: *Cervus elaphus maral*, *Ursus arctos*, *Panthera pardus*, *Hyaena hyaena*
Species of Special Concern: *Rhinolophus mehelyi*, *R. hipposideros*, *R. euryale*, *Myotis emarginatus* *Lynx lynx*, *Lutra lutra*
Threats: Illegal hunting, overgrazing
CEPF Site Outcomes: Sefirud River (168)

59. SEFID RUD-ANZALI – GILAN

Location:	Between Sefid Rud-Anzali and Gilan PCAs, right bank of the Sefid Rud River Longitude: 49°33'19" Latitude: 36°53'21"
Area:	27,295 ha
Countries:	Iran
Main Biomes:	Forest
Main Habitats:	Hyrcanic middle-mountain beech and oak forests – 15,075 ha (55.23%); Alborz middle and upper mountain pine and oak forests and secondary meadows, partly with dry shrublands – 5,803 ha (21.26%); actual forest cover – 19,167 ha (70.22%); Caucasian alpine grasslands and thickets – 4,618 ha (16.92%)
Land Use/Land Cover:	Rural settlements – 446 ha (1.63%); orchards – 5,018 ha (18.38%); farmlands, pastures, and hayfields – 244 ha (0.89%); summer pastures – 2,420 ha (8.87%)
Protected Areas:	None
Key Phenomena:	Regionally important for seasonal movement of wildlife and gene flow
Focal Species:	<i>Cervus elaphus maral</i> , <i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Hyaena hyaena</i>
Species of Special Concern:	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Barbastella barbastellus</i> , <i>Lynx lynx</i> , <i>Lutra lutra</i>
Threats:	Illegal hunting, illegal fishing, overgrazing
CEPF Site Outcomes:	None

60. MARINE SEFID RUD-ANZALI – GILAN

Location:	Between Marine Sefid Rud-Anzali and Gilan PCAs, Caspian Sea coast Longitude: 50°29'18" Latitude: 37°04'54"
Area:	28,112 ha (aquatic area – 28,112 ha)
Countries:	Iran
Main Biomes:	Marine
Main Habitats:	Littoral (100%)
Use:	Fishing, trawling, recreation
Protected areas:	None
Key Phenomena:	Globally significant migration of waterfowl, fish feeding grounds, seasonal movements of Caspian seal (<i>Phoca caspica</i>)
Focal Species:	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
Species of Special Concern:	<i>Phoca caspica</i>
Threats:	Water pollution, illegal fishing
CEPF Site Outcomes:	None

INTERNATIONAL CONVENTIONS AND THE ECP - A FRAMEWORK FOR ACTION IN THE CAUCASUS

Most of the six countries in the Caucasus Ecoregion have become, or are in the processes of becoming, signatories to international conventions related to the conservation of biodiversity (Table 1). In doing so, they have signaled their commitment to conserve biodiversity, use their wetlands wisely, control illegal wildlife trade, protect migratory species, and designate some of their most significant natural and cultural sites as a heritage for the Earth's peoples.

Table 1: Signatory countries of the Caucasus Ecoregion to international biodiversity-related conventions, showing dates of: acp = acceptance; acs = accession; apr = approval; rtn = ratification; scn = notification of succession.

	CBD	CITES	CMS	Ramsar	WHC
Armenia	1993 (acp)	—	—	1993	1993 (scn)
Azerbaijan	2000 (apr)	1999	(MoU)	2001	1993 (rtn)
Georgia	1994 (acs)	1996	2000	1997	1992 (scn)
Iran	1996 (rtn)	1976	(MoUs)	1975	1975 (acp)
Russia	1995 (rtn)	1992	(MoU)	1977	1988 (rtn)
Turkey	1997 (rtn)	1996	—	1994	1983 (rtn)

As described in the Caucasus Ecoregional Conservation Plan (ECP), the countries of the Caucasus region already have a number of national initiatives targeted at fulfilling some of the objectives of the international conventions. An holistic, ecoregional approach will enhance existing efforts and ensure their long-term sustainability, through addressing such issues as comprehensive representation of ecosystems within protected areas, harmonising legislation, promoting transboundary cooperation, and coordinating research and monitoring across the region.

How does an Ecoregional Approach help to implement the International Conventions?

An ecoregion is defined as *'a relatively large unit of land or water containing a geographically distinct assemblage of natural communities that share a large majority of their species, dynamics and environmental conditions'*. The biodiversity of the Caucasus Ecoregion is especially outstanding in its diversity of temperate ecosystems and endemic species.

Ecoregions are biogeographic entities, rather than political ones. An ecoregion is the product of thousands, or even millions, of years of climatic and geological change and biological evolution, while on a biological time-scale political boundaries are recent and ephemeral. Ecoregion-based conservation recognizes the need to operate at a scale large enough to achieve results that are ecologically viable: primarily by conserving a network of key sites, migration corridors, and the ecological processes that maintain healthy ecosystems. Ecoregion-based conservation does not ignore societal realities, however, as it also recognizes and addresses broad social, economic, and political factors that are among the root causes of biodiversity loss and that will determine long term success. Importantly, long-term conservation strategies developed under an ecoregional approach often lead to long-term funding opportunities needed to achieve sustainable development.

Global conventions provide coherent objectives and common management frameworks for the conservation of biodiversity, and most of them recognise the need for regional approaches where ecosystems and species are shared resources between neighbouring countries. The CBD in particular is useful in providing a framework for regional cooperation, especially in minimizing negative transboundary ecosystem issues and in linking shared ecosystems within transboundary protected areas or by ecological corridors. Historically, most transnational agreements have focused on management of specific resources – for example, fisheries, energy, or water. Such agreements have rarely taken into account ecological functions or socio-economic differences between countries. Recently, however, a number of regional agreements have been achieved to manage some of the world's river basins, seas, and mountain systems – the Mekong River Basin, the Mediterranean Sea, and the Alps being three

cases in point. The countries of the Caucasus have already started to engage in regional cooperation to save biodiversity – for example, through the Caspian Environment Program and the Asian Flyway Initiative (under the auspices of the CMS).

The International Biodiversity-related Conventions

A detailed description of the objectives, goals and strategies of the international biodiversity conventions are beyond the scope of this Appendix. Instead, we will focus on how the approach taken by the Ecoregional Conservation Plan will help the governments of the region to implement the conventions they have signed up to, and, conversely, how the international conventions provide a framework for ecoregional action.

Briefly, the five most important biodiversity-related international conventions and the relevance of the ECP to them are:

The Ramsar Convention on Wetlands

The Ramsar Convention provides a framework for national action and international cooperation for the conservation and sustainable use of wetlands and their resources. The Convention's programme focuses on the conservation and wise use of more than 1,380 wetlands designated for the Ramsar List of Wetlands of International Importance, and on national planning to maintain the biodiversity and values and functions of all wetlands. The Convention's programme of work is described under the *Ramsar Strategic Plan* (RSP).

On accession to the Convention, Parties agree to designate at least one wetland on the Ramsar List. Currently, the Caucasus Ecoregion has twelve designated Ramsar Sites: Lake Arpi (Armenia); Lake Sevan (Armenia); Agh-Ghol (Azerbaijan), Ghizil-Agaj (Azerbaijan); Wetlands of Ispani II Marshes (Georgia/Ajara Autonomy); the Central Kohlketi (Georgia), Anzali Mordab (Talab) complex (Iran), Miankaleh Peninsula, Gorgan Bay and Lapoo-Zaghmarz Ab-bandan (Iran) and Veselovskoye Reservoir (Russia), Lake Manych-Gudilo (Russia), Kuban Delta: Group of limans between rivers Kuban and Protoka (Russia) and Kuban Delta: Akhtaro-Grivenskaya group of limans (Russia). There are no Ramsar sites currently in the Turkish sector of the Caucasus Ecoregion, although there are a number of sites in these countries outside the Ecoregion.

ECP Target C/3.1 calls for identifying about twelve new sites for listing under the Ramsar Convention by 2015 and immediate actions include C/3.1.1, C/3.1.2 and C/3.1.3. The ECP also has a suite of actions for protecting other wetlands and strengthening the management of existing wetland protected areas that are of relevance to the Ramsar Strategic Plan (see Table 2).

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The aim of CITES is to ensure that the international trade in wildlife does not threaten the survival of species being traded. The Convention establishes a worldwide system of controls on international trade in specified animals and plants (listed in its Appendices) as well as products thereof. Such trade has to be authorized by government-issued permits or certificates and restricted to ensure that it is not detrimental to the species. Over 30,000 species worldwide are covered by the Convention. CITES is legally binding on all Parties, but does not take the place of national laws – rather, it provides a framework within which each Party can adopt its domestic legislation to ensure that CITES is implemented at the national level.

In the Caucasus Ecoregion all countries except Armenia have become signatories to CITES. Implementation of this convention in the region is hampered by lack of monitoring, lack of capacity and suitable training within customs agencies, and poor law enforcement. Developing an institutional framework to address these shortcomings is covered by ECP Target A/1, with proposed actions A/1.4.2, A/1.5.1, A/1.5.2, A/1.5.3, A/1.5.4 and A/1.5.5. being of particular relevance. The ecoregional approach, which emphasises international collaboration, will be vital to success of addressing trade issues.

The Convention on Migratory Species (CMS)

CMS is the only global (and UN-based) intergovernmental organization established exclusively for the conservation and management of migratory species. Migratory species threatened with extinction throughout all or a significant portion of their range are listed on Appendix I of the Convention, while species that would benefit from international cooperation (such as, for example, most sturgeon species) are listed in Appendix II. For this reason, the Convention encourages the Range States of such species to conclude global or regional Agreements. The obligations of CMS are more direct than some other multilateral instruments, as it includes legally-binding provisions for harvesting endangered species, or populations thereof, within signatory countries.

In the Caucasus Ecoregion, only Georgia is a full Party to CMS, while Azerbaijan, Russia and Iran have signed Memoranda of Understanding with the Convention Secretariat regarding protection of populations of designated species found within their borders. For example, Iran has three MoUs regarding the Siberian crane, the slender billed curlew and the Bukhara deer. Regional countries have recently come together to initiate an agreement for the conservation of migratory birds under CMS auspices (the so-called Asian Flyway). The ECP's focal species include populations of migratory birds and fish species which could potentially be covered under a CMS Regional Agreement.

The World Heritage Convention (WHC)

The World Heritage Convention was instigated so that the world's remaining places of outstanding universal significance could be protected for all time through international cooperation. Operating under the auspices of the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the WHC currently lists 812 World Heritage Sites globally: 628 of cultural significance, 160 of natural significance and 24 mixed cultural/natural.

All six countries of the Caucasus Ecoregion are Parties to the WHC. However, although there are a number of cultural WH Sites in the Ecoregion, thus far there is only one natural WH Site: Russia's Western Caucasus World Heritage Site. Another site, the Hirkan Forest WH Site (Talysh Mountain, Hirkan National Park in south-eastern Azerbaijan on the border with Iran) is currently submitted for nomination and proposals for two more sites (Colchic Forest and Southern Armenia) are under development with support from NABU, Intercaucasus and WWF. ECP long-term Target A/5 calls for identifying eight new natural WH Sites, ensuring that they have sufficient protected status, and are effectively managed.

The Convention on Biodiversity (CBD)

Adopted at the Rio Summit in 1992, the objectives of the CBD focus on the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising from the use of genetic resources. All six countries in the Caucasus Ecoregion have signed up to this convention.

The CBD is a framework convention – unlike the other four conventions it is not prescriptive in the sense that it has lists of sites or species to be protected. However, although decisions on its implementation are left up to signatory states, the Parties to the CBD do have certain obligations, for example, to develop national strategies, plans or programmes for the conservation of biodiversity and sustainable use of its components.

The Conference of the Parties (CoP) has initiated (decision VI/26) a *Strategic Plan*. In the Strategic Plan's mission statement, Parties committed themselves to a more effective, timely and coherent implementation of the Convention's three objectives, in particular '*to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth.*' This target, hereafter referred to as the **2010 Biodiversity Target**, has obvious implications for the relevance and timeliness of the Caucasus Ecoregional Conservation Plan.

The CBD's Strategic Plan's framework includes seven focal areas, with goals and sub-targets and it identifies indicators for assessing progress on achieving the 2010 Biodiversity Target. Of particular relevance here is that **at least 10% of each of the world's ecological regions effectively conserved**' (CBD Strategic Plan Target 1.1.).

The CBD CoP has initiated *programmes of work* (PoW) on seven thematic work programmes including forest, inland waters, marine and coastal, and mountain biodiversity. The actions identified for the four focal biomes of the Caucasus ECP are thus directly relevant to CBD's thematic work programmes. The CBD also has seventeen other

programmes of work on cross-cutting issues such as protected areas, the ecosystem approach, access to genetic resources and benefit-sharing, and traditional knowledge, innovations and practices. Again, measures to be taken identified by the Caucasus ECP would enable regional agencies to participate actively in these programmes of work.

The ECP is particularly well placed to assist the countries of the region implement the CBD's PoW on Protected Areas. The PoW includes four Programme Elements:

1. Direct actions for planning, establishing, strengthening and managing protected area systems and sites;
2. Governance, participation, equity and benefit sharing;
3. Enabling activities;
4. Standards, assessments and monitoring.

Each Programme Element has a number of goals, with time-bound targets and a range of suggested activities for Parties to undertake within a stated time period. Under Programme Element 1, Goal 1.1, for example, is *"To establish and strengthen national and regional systems of protected areas integrated into a global network as a contribution to globally agreed goals"* Suggested activities by Parties to meet the targets for this goal include establishing and expanding protected areas (as well as areas securing threatened species and marine and inland water ecosystems); promoting innovative types of protected area governance; and undertaking gap analysis. Goal 1.2 *inter alia* requires integrating protected areas into broader land- and seascapes and sectors so as to maintain ecological structure and function [by] applying the ecosystem approach and the concept of ecological networks, including ecological corridors linking protected areas. Activities under this goal include undertaking ecological restoration where necessary. Goal 1.3 is *"to establish and strengthen regional networks, transboundary protected areas and collaboration between neighbouring protected areas across national boundaries"*. Goal 1.4 requires Parties to substantially improve site-based protected area planning and management (including capacity building) and Goal 1.5 requires Parties to prevent and mitigate the negative impacts of key threats to protected areas (including alien invasive species and the wildlife trade). Goals under the other Programme Elements relate to benefit and equity sharing, providing an enabling policy, institutional and socio-economic environment for protected areas, capacity building, ensuring financial sustainability, communications and public awareness and monitoring and evaluation.

The relevance of the ECP targets to the full range of CBD Programmes of Work, with their Programme Elements, goals, and activities is indicated in Table 2.

The CBD has initiated the harmonization of reporting requirements under the biodiversity-related conventions (CITES, CMS, Ramsar and World Heritage Convention), and has developed joint work programmes. It has also initiated links with the UN Framework Convention on Climate Change (UNFCCC) and other international instruments dealing with environmental issues.

The CBD CoP has adopted some principles to guide signatory States on implementation of the CBD. Of relevance here is *the ecosystem approach*, (the so-called Malawi Principles) which was adopted at the 5th CoP in 2000. The ecosystem approach is now considered a framework for the implementation of the convention. The CBD definition of the ecosystem approach is:

...a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way. Application of the ecosystem approach will help to reach a balance of the three objectives of the Convention. An ecosystem approach is based on the application of appropriate scientific methodologies focused on levels of biological organisation, which encompasses the essential structures, processes functions and interactions among organisms and their environment. It recognises that humans, with their cultural diversity, are an integral part of many ecosystems.

The CBD's ecosystem approach and the ecoregional approach as exemplified by the ECP are thus strongly linked and mutually reinforcing, as an ecoregion is another 'level of biological organisation where natural processes, functions and interactions occur'.

Finally, it is of relevance here to note that the CBD's CoP is actively seeking mechanisms for implementing the Convention at the regional level and the CBD Secretariat has been asked to compile information on regional mechanisms for CoP VIII in 2006. The ECP gives the governments of the Caucasus region a unique opportunity to demonstrate the potential of regional cooperation as a mechanism for biodiversity conservation.

Relevance of the Caucasus ECP to Implementation of the Conventions

With its ecosystem (biome)-based approach, its focus on protected area networks, and its emphasis on capacity-building, stakeholder participation, benefit sharing and education, the ECP will enable governments of the Caucasus region to implement the international conventions, and especially the CBD and its 2010 Biodiversity Target. The ECP calls for providing support to national conservation agencies to implement the international conventions (Target A/1.4) and provides a list of short-term actions needed.

The regional experts who compiled the Caucasus ECP have identified key sites and a wide range of medium term goals and short-term actions needed to implement the conventions, actions which take into account the root causes of biodiversity loss such as poverty, ineffective legislation, and lack of public education. Table 2 illustrates how the Targets and Actions of the ECP fit into the objectives and strategic work programmes of the various conventions. The ECP also identifies key stakeholders – government agencies, non-governmental organisations, and members of wider civil society that will participate in its implementation.

Table 2

Abbreviations

CBD PoW1 – Programme of Work on Protected Areas
 CBD PoW2 – Programme of Work on Inland Water Biodiversity
 CBD PoW3 – Programme of Work on Marine and Coastal Biodiversity
 CBD PoW4 – Programme of Work on Forest Biodiversity
 CBD PoW5 – Programme of Work on Mountain Biodiversity
 CBD PoW6 – Programme of Work on Technology Transfer and Technological and Scientific Cooperation
 RSP – Ramsar Strategic Plan for 2003-2008

Long-term target (by 2025)	Medium-term target (by 2015)	Relevance to CBD, Ramsar, CITES and other International Conventions
A. PLAN FOR INSTITUTIONAL DEVELOPMENT AND CAPACITY BUILDING		
1	1.1	CBD PoW1, PE3, Goal 3.1, sugg.act. 3.1.10; 3.1.11.RSP, Gen. Obj.1, Resolution VIII.12.CITES, art. IX of the Convention, Resolution conf.10.4.
	1.2	CBD PoW1, PE1, G.1.3. act.1.3.1; 1.3.2; 1.3.3.RSP, G.O.4, Recommendation 5.5, 5.6. CITES, Resolution conf.10.4.
	1.3	CBD PoW1, PE1, G.1.3, act. 1.3.3.RSP, G.O. 1, Rec. IV 4.10CITES, Resolution conf.10.4.
	1.4, 1.5	CBD PoW1, PE3, G.3.2, act.3.2.1; 3.2.3; 3.2.4; 3.2.5.CBD Decision VII/27 on Collaboration with CITES, Ramsar, CMS and World Heritage ConventionRSP, G.O. 1, Res.VII.6CITES, Resolution conf.10.4
	1.6	CBD PoW4, PE1, G.4, Obj.1, act. b,d, e. CBD PoW3, PE2, Op. obj. 2.1, act. c, g, h.CITES, Resolution conf.10.4
2	2.1, 2.2	CBD PoW1, PE2, G. 2.1, act. 2.1.2; G.2.2. act. 2.2.2.RSP, G.O. 4, Rec. 5.6.
3	3.1-3-4	CBD PoW1, G.1.2, act. 1.2.3; 1.2.4; 1.3.1; 1.3.3; 1.3.4. PE 4, G.4.2, act. 4.2.1; 4.2.2.RSP, G.O. 1, Rec. 3.3.
4	4.1-4.3	CBD PoW1, PE1, G. 1.3, act. 1.3.5. G. 1.4, act. 1.4.1; 1.4.8; PE4, G. 4.2, act. 4.2.1.RSP, G.O.1, Rec. 4.5; 6.5; Res. VIII.41 and VIII.14. CITES Decision 11.129.
5	5.1	CBD PoW1, G. 1.3. act. 1.3.5. CBD Decision VII/27 on Collaboration with CITES, Ramsar, CMS and World Heritage Convention
6	6.1, 6.2	CBD PoW1, G. 2.2. act. 2.2.3.RSP, G.O. 4, Rec. 5.6.CITES art. XI, #7, a) of the convention, Resolution conf.10.4
7	7.1-7.5	CBD PoW1, PE 4, G. 4.4, act. 4.4.1; 4.4.2; 4.4.3; 4,4,5.RSP, G.O. 4, Rec. 4.5; 6.5; Res. VIII.41
8	8.1, 8.2	CBD PoW1, PE3, G.3.5, act. 3.5.1; 3.5.2; 3.5.8. RSP, G.O. 1, Res. VI.19, VIII.31
9	9.1, 9.2	CBD PoW1, PE3, G. 3.5, act. 3.5.1; 3.5.3.RSP, G.O. 4, Rec. 5.6.CITES, art. XI, #7, a); Resolution conf.10.4
10	10.1-10.3	CBD PoW1, PE2, G. 2, act. 2.2.1; 2.2.2; 2.2.3; 2.2.4; 2.2.7.RSP, G.O. 4, Rec. 5.6.CITES, art. XI, #7, a); Resolution conf.10.4

Long-term target (by 2025)	Medium-term target (by 2015)	Relevance to CBD, Ramsar, CITES and other International Conventions
B. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF FOREST ECOSYSTEMS		
1	1.1-1.4	CBD PoW1, PE 1, G. 1.1, act. 1.1.2; G.1.3, act. 1.3.3; G.1.4, act. 1.4.4; 1.4.6. PE2, G.2.2, act. 2.2.2.
2	2.1-2.4	CBD PoW1, PE1, G. 1.1, act. 1.1.2; G.1.3, act. 1.3.3; G.1.4, act. 1.4.4; 1.4.6. PE2, G.2.2, act. 2.2.2.
3	3.1-3.4	CBD PoW1, PE1,G. 1.1, act. 1.1.2; G.1.3, act. 1.3.3; G.1.4, act. 1.4.4; 1.4.6. PE2, G.2.2, act. 2.2.2.
4	4.1, 4.2	CBD PoW1, PE1,G. 1.1, act. 1.1.2; G.1.3, act. 1.3.3; G.1.4, act. 1.4.4; 1.4.6. PE2, G.2.2, act. 2.2.2.
5	5.1-5.6	Ecosystem Approach, Principle 10,12, Sustainable Use Annex II, B. CBD PoW4, PE1, G.1, Obj.1;3, G.3, Obj.2, G.4, Obj. 1. PE 3, G.2, Obj.1.
6	6.1	CBD PoW4, PE2, G.1, Obj.4, act. e; G.3, Obj.1, act.b.
7	7.1	CBD PoW4, PE2, G.2, Obj.1, act. f.
	7.2	CBD PoW4, PE1, G.4, Obj.3, act. c. CITES art. III,2, IV, 2 and V,2.
8	8.1	CBD PoW4, PE1, G.4, Obj.1, act. g.SBSTTA Rec. VIII/5 on Tourism
9	9.1-9.8	Ecosystem Approach, Principle2, Sustainable Use AnnexII,B., CBD PoW4, PE1, G.3, Obj.1.RSP, G.O. 1, Res.VII.24 '
C. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF FRESHWATER ECOSYSTEMS		
1	1.1-1.4	CBD PoW1, PE1, G.1.1, act 1.1.2; G.1.4, act. 1.4.4; PE2, G.2.2, act. 2.2.2.RSP, G.O. 1, Res. VIII.12
2	2.1-2.3	CBD PoW1, PE1, G.1.2, act 1.2.3; 1.2.4.RSP, G.O. 1, Res. VIII.12
3	3.1, 3.2	CBD PoW2, PE1, G. 1.1, Obj. a,c, act. 1.1.1; 1.1.2; 1.1.4; 1.1.5.RSP, G.O. 1, Rec. 3.3 CBD PoW1, PE1, G. 1.3, act.1.3.1; 1.3.3.
4	4.1	CBD PoW2, PE1, G.1.1, Obj.a, act. 1.1.4RSP, G.O.1 Res. VII.18
5	5.1	CBD PoW1, PE1, G.1.3, act.1.3.1; G.1.4, act. 1.4.4; 1.4.6.RSP, G.O.1 Res. VII.18
	5.2	CBD PoW1, PE1, G.1.5, act 1.5.1; 1.5.5.
6	6.1	CBD PoW2, PE3, G.3.3, Obj.a, act.3.3.1; 3.3.2.RSP, G.O. 1, Res. VII.18.CITES,
7	7.1	Decision 11.64 and 11.129.
8	8.1	CBD PoW2, PE1, G.1.1., Obj.b, act. 1.1.4. act. 1.1.10 and 1.1.11 to be performed jointly with Ramsar Bureau. PE1, G.1.3, Obj.a, act. 1.3.1; 1.3.2; 1.3.4+Ramsar.RSP, G.O. 1, Res.VIII.16.
C. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF FRESHWATER ECOSYSTEMS		
1	1.1-1.4	CBD PoW1, PE1, G.1.4, act. 1.4.4; 1.4.6. CBD PoW3, PE3, Op. Obj. 3.1, act. a. RSP, G.O.1, Rec. 4.10.

Long-term target (by 2025)	Medium-term target (by 2015)	Relevance to CBD, Ramsar, CITES and other International Conventions
2	2.1, 2.2	CBD PoW3, PE1, Op.Obj.1.1; act. a, Op.Obj.1.2, act. a.RSP, G.O.1, Rec. 4.10.CITES Decision 11.129.
3	3.1-3.3	CBD PoW1, PE1, G.1.4, act. 1.4.4; 1.4.6.CBD PoW3, PE1, Op.Obj.1.2, act. a; Op. Obj. 1.3, act. c,d,e; PE2, Op. Obj. 2.1, act. e; PE3, Op. Obj. 3.1, act. a.RSP, G.O.1, Rec. 4.10.CITES Decision 11.129.
4	4.1-4.4	CBD PoW3, PE1, Op. Obj. 1.1, act. c,l; PE2, Op.Obj.2.1, act. f, g, h. PE5, Op.Obj. 5.1, Op. Obj. 5.2 and Op. Obj.5.3.RSP, G.O.1, Rec. 4.10.CITES Decision 11.129.
5	5.1	CBD PoW3, PE3, Op.Obj.3.2, act.a; Op. Obj. 3.4; act. a.RSP, G.O.1, Res. VIII.8CITES, art. III,2, IV,2 and V,2. Resolution conf.10.4
6	6.1	CBD PoW3, PE2, Op.Obj.2.1, act. c; PE3, Op.Obj.3.4, act a.
7	7.1, 7.2	CBD PoW3, PE3, Op.Obj.3.2, act.a, c.SBSTTA Rec.VIII/5 on TourismRSP, G.O. 1, Rec.3.3.
8	8.1-8.3	CBD PoW3, PE 1, Op. Obj.1.2, act. e; PE2, Op.Obj. 3.3, act.a.RSP, G.O.1, Rec.6.2.
9	9.1, 9.2	CBD PoW2, PE1, G.1.3, Obj.a, act. 1.3.1CBD PoW3, PE1, Op.Obj.1.2, act.a.RSP, G.O.1, Rec.6.15.CITES, Resolution conf.10.4
E. PLAN FOR CONSERVATION AND SUSTAINABLE USE OF HIGH MOUNTAIN ECOSYSTEMS		
1	1.1-1.4	CBD PoW5, PE1, G. 1.2, act. 1.2.2; 1.2.3.
2	2.1-2.4	CBD PoW5, PE1, G. 1.2, act. 1.2.2; 1.2.3.
3	3.1	CBD PoW5, PE2, G. 2.3, act. 2.3.1; 2.3.2.CBD PoW2, PE1, G. 1.2, Obj. a, act. 1.2.1; 1.2.2+Ramsar. PE2, G. 2.1, Obj. a, act. 2.1.1
4	4.1	CBD PoW5, PE1, G.1.5, act. 1.5.1; G.1.3, act. 1.3.; 1.3.2. PE2, G.2.1, act. 2.1.2; 2.1.3.
5	5.1	CBD PoW4, PE1. G.4 Obj.1, act b,h.CITES, art. III,2; IV,2 and V,2. Resolution conf.10.4
6	6.1, 6.2	CBD PoW5, PE1, G.1.3, act. 1.3.6; 1.3.7.SBSTTA Rec. VIII/5
7	7.1, 7.2	CBD PoW5, PE1, G.1.1, act. 1.1.1; 1.1.2; 1.1.3.
F. PLAN FOR CONSERVATION OF FOCAL SPECIES		
1	1.1-1.4	CBD PoW1, PE1, G. 1.1, act. 1.1.2; 1.1.3. PE1, G.1.5., act. 1.5.1; PE3, G.3.1, act. 3.1.5CITES, art. III, 2; IV, 2 and V, 2. Resolution conf.10.4. Decision 11.166
2	2.1, 2.2	CBD PoW1, PE4. G.4.3, act. 4.3.4; 4.3.6; 4.3.7
3	3.1, 3.2	CBD PoW1, PE1, G. 1.1, act. 1.1.2; G.1.2, act. 1.2.3; 1.2.4; G. 1.4, act. 1.4.4; 1.4.6.CITES, Resolution conf.10.4
	3.3, 3.4	CBD PoW1, G. 1.2, act. 1.2.3; 1.2.4.
	3.5	CBD PoW1, PE4, G.4.3, act. 4.3.1.
	3.6, 3.7	CBD PoW1, PE1, G. 1.4, act. 1.4.4.
4	4.1	CBD PoW1, PE1, G. 1.2, act. 1.2.3; 1.2.4. PE4, G.4.4., act. 4.4.3.

Long-term target (by 2025)	Medium-term target (by 2015)	Relevance to CBD, Ramsar, CITES and other International Conventions
5	5.1	CBD PoW1, PE1, G.1.5, act. 1.5.3; 1.5.6. PE4, G.4.3, act. 4.3.1. G. 4.4, act. 4.4.5. CBD PoW4, PE1, G.3, Obj.2, act. a, b. CITES, art. III,2; IV,2 and V,2. Resolution conf.10.4
6	6.1-6.4	CBD PoW1, PE1, G. 1.2, act. 1.2.2; 1.2.4. G.1.1, act. 1.1.7. G.1.5, act. 1.5.6.
7	7.1-7.3	CBD PoW1, PE1, G.1.1., act. 1.1.2; G. 1.4, act. 1.4.4; 1.4.6. G. 1.5, act. 1.5.3; PE3, G.3.1, act. 3.1.1
8	8.1-8.4	CBD PoW1, PE1, G. 1.2, act. 1.2.4; G.1.4, act. 1.4.4; 1.4.6. G.1.5, act. 1.5.3. PE3, G. 3.2, act. 3.2.4. PE4, G. 4.3, act. 4.3.1
9	9.1	CBD PoW1, PE1, G.1.5, act. 1.5.5
10	10.1-10.3	CBD PoW1, PE1, G.1.4, act. 1.4.4; PE4, G 4.3, act. 4.3.1
11	11.1-11.3	CBD PoW1, PE1, G.1.5, act 1.5.5.
12	12.1	CBD PoW1, PE1, G.1.5, act 1.5.5.
13	13.1-13.3	CBD PoW1, PE1, G.1.2, act. 1.2.5. CBD PoW5, PE1, G. 1.1., act. 1.1.9
14	14.1, 14.2	CBD PoW4, PE1, G.3, Obj. 2, act. a,b. CITES, art. III, 2; IV, 2 and V, 2. Resolution conf.10.4
15	15.1, 15.2	CBD PoW4, PE1, G.3, Obj. 2, act. a,b. CITES, art. III,2; IV,2 and V,2. Resolution conf.10.4
16	16.1, 16.2	CBD PoW4, PE1, G.3, Obj. 2, act. a,b.
17	17.1, 17.2	CBD PoW2, PE1, G. 1.2, act. 1.2.3. G.1.3, act. 1.3.2; 1.3.3.
18	18.1	CBD PoW2, PE1, G. 1.2, act. 1.2.3. G.1.3, act. 1.3.2; 1.3.3.
19	19.1, 19.2	CBD PoW1, PE1, G. 1.5, act. 1.5.5
20	20.1, 20.2	CBD PoW1, PE1, G. 1.5, act. 1.5.5
21	21.1, 21.2	CBD PoW1, PE1, G. 1.1, act. 1.1.1; 1.1.2; 1.1.3. G.1.5, act. 1.5.5; 1.5.6. CITES, art. III, 2; IV, 2 and V, 2. Resolution conf.10.4
22	22.1	CBD PoW2, PE1, G. 1.3, act. 1.3.2; 1.3.3.

COMPLIANCE OF ECP LONG- AND MEDIUM-TERM TARGETS WITH CEPF STRATEGIC DIRECTIONS AND INVESTMENT PRIORITIES

ECP long-term targets	ECP medium-term targets	CEPF Strategic Directions and Investment Priorities
A1, A3, A4, A7, A10, B1-B4, C1, C3, C4, D1-D4, E1-E3	A1.1-A1.3, A3.1-3.4, A4.1, A4.2, A7.1, A7.4, A10.1, B1.1-B1.3, B2.1-B2.3, B3.1-B3.3, B4.1, B4.2, C1.1, C1.2, C3.1, C3.2, C4.1, D1.1-D1.3, D2.1, D2.2, D3.1, D3.2, D4.1, D4.3, E1.1-E1.3, E2.1-E2.3, E3.1	<p>1. Support civil society efforts to promote transboundary cooperation and improve protected area systems in five target corridors</p> <p>1.1 Promote transboundary cooperation by carrying out joint initiatives and harmonizing existing projects to conserve border ecosystems and species and site outcomes</p> <p>1.2 Support existing efforts to create new protected areas and wildlife corridors through planning processes and co-financing efforts</p> <p>1.3 Develop and implement management plans for model protected areas with broad participation of stakeholders</p>
A1, A2, A7, A10, C3, C7, C8, D2, D4-D6, D9, E3, F1, F2, F3, F6, F7, F11, F14, F16, F17, F20, F21	A1.4-A1.6, A2.1, A2.2, A7.3, A7.5, A10.2, A10.3, C3.2, C.7.1, C8.1, D2.1, D2.2, D4.1, D4.3, D5.1, D6.1, D9.1, D9.2, E3.1, F1.1-F1.4, F2.1, F2.2, F3.3, F3.4, F6.1- F6.4, F7.1-F7.4, F11.1- F11.3, F14.1, F14.2, F16.1, F16.2, F17.1, F17.2, F20.1, F20.2, F21.1, F21.2	<p>2. Strengthen mechanisms to conserve biodiversity of the Caucasus Hotspot with emphasis on species, site, and corridor outcomes</p> <p>2.1 Provide funding for research and implementation of re-assessments of the Caucasus Red List, particularly for poorly represented taxa such as plants, invertebrates, reptiles, and fish</p> <p>2.2 Focus small grant efforts under one CEPF/Small Grant mechanism on supporting efforts to conserve 51 globally threatened species in the Hotspot</p> <p>2.3 Provide support to conservation agencies specifically to improve implementation of international conventions such as the Convention on Biological Diversity, the Convention on International Trade in Endangered Species and the Ramsar Convention on Wetlands of International Importance</p>
A1, B5, B7, B8, B9, C1, C5, C6, D7, D8, E4-E7	A1.6, B5.2, B5.5, B5.6, B7.1, B7.2, B8.1, B9.1-B9.8, C1.3, C5.2, C6.1, D7.1, D7.2, D8.1-8.3, E4.1, E5.1, E6.1, E7.2	<p>3. Implement models demonstrating sustainable resource use in five target corridors</p> <p>3.1 Evaluate and implement models for sustainable forestry, water use, and range management</p> <p>3.2 Focus small grant efforts under one CEPF/Small Grant mechanism to support existing NGOs in projects on developing alternative livelihoods, such as ecotourism, collection of non-timber forest products and sustainable hunting and fishing</p> <p>3.3 Support civil society efforts to mitigate, participate in, and monitor development projects</p>
A1-A3, A6, A7, A9, B1-B5, C1, C6, D1, D3, D8, E1, E2	A1.5, A1.6, A2.2, A3.3, A6.1, A6.2, A7.2, A9.1, B1.4, B2.4, B3.4, B4.3, B5.3, B5.4, C1.4, C6.1, D1.4, D3.3, D8.1, E1.4, E2.4	<p>4. Increase the awareness and commitment of decision-makers to biodiversity conservation in five target corridors</p> <p>4.1 Develop local capacity to train environmental journalists and develop incentives to write on environmental issues, targeting decision-makers in particular</p> <p>4.2 Develop a communications campaign to increase environmental awareness in the Caucasus Hotspot</p>

**OVERLAP BETWEEN ECP PRIORITY CONSERVATION AREAS AND
CORRIDORS AND CEPF SITE OUTCOMES**

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
PRIORITY AREAS							
1	Abrau-Duyrso	26,877			None		
2	Kuban	85,484	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>	2	Kuban	90,679	<i>Mustela lutreola</i> , <i>Lutra lutra</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>
3	Primorsko-Akhtarsk	163,163	<i>Oxyura leucocephala</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>	9	Azov Sea Eastern Coast	24,480	None
4	Yeysk	130,184	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>	11	Primorsko-Akhtarsk Salt Lakes	58,900	None
5	Don Delta	55,234	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. gueldenstaedtii</i>	5	Don Delta	54,704	<i>Branta ruficollis</i>
6	Veselovskoye Reservoir	86,140		8	Veselovskoye Reservoir	74,164	<i>Branta ruficollis</i>
7	Manych-Gudilo	97,261		3	Manych-Gudilo Lake	72,541	<i>Branta ruficollis</i> , <i>Anser erythropus</i>
8	Dadynskoye Lake	65,868	<i>Oxyura leucocephala</i>	1	Dadynskiy Lakes	39,348	<i>Branta ruficollis</i> , <i>Anser erythropus</i> , <i>Otis tarda</i> , <i>Oxyura leucocephala</i> , <i>Falco naumanni</i>
9	Kizlyarsky Bay	201,508		75	Dagestan NR and Kizlyar Bay	64,148	<i>Lutra lutra</i> , <i>Saiga tatarica</i> , <i>Spalax giganteus</i> , <i>Testudo graeca</i> , <i>Vipera ursinii</i>
				76	Tarumovsky Sanctuary and Karakolsky Lakes	49,981	<i>Lutra lutra</i> , <i>Saiga tatarica</i> , <i>Spalax giganteus</i>
10	Agrakhansky Bay	81,218		78	Agrakhansky Bay	31,604	None

* Globally threatened species on IUCN Red List

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
11	West Greater Caucasus	874,535	<i>Ursus arctos</i> , <i>Capra caucasica</i> , <i>Rupicapra rupicapra</i> , <i>Cervus elaphus</i> , <i>Bison bonasus</i> , <i>Tetrao mlodosiewiczzi</i>	21	Bichvinta-Miusera NR	4,018	none
				22	Ritsa NR	16,500	<i>Mustela lutreola</i> , <i>Capra caucasica</i> , <i>Barbastella barbastellus</i> , <i>Vipera kaznakovi</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				37	Kavkazsky Biosphere Reserve	236,882	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Mustela lutreola</i> , <i>Lutra lutra</i> , <i>Capra caucasica</i> , <i>Crex crex</i> , <i>Testudo graeca</i> , <i>Natrix megaloccephala</i> , <i>Vipera dinniki</i> , <i>V. ursinii</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i> , <i>Vipera kaznakovi</i>
				38	Sochinsky NP	193,695	<i>Rhinolophus hipposideros</i> , <i>R. euryale</i> , <i>Lutra lutra</i> , <i>Testudo graeca</i> , <i>Natrix megaloccephala</i> , <i>Vipera kaznakovi</i> , <i>Vipera dinniki</i>
				43	Kosobsko-Kelebsky Sanctuary	71,371	<i>Capra aegagrus</i>
				51	Damkhurtsky Sanctuary	8,592	<i>Vipera dinniki</i>
12	Teberdinsky Strict Nature Reserve	357,256	<i>Capra caucasica</i> , <i>Ursus arctos</i> , <i>Rupicapra rupicapra</i> , <i>Cervus elaphus</i> , <i>Bison bonasus</i> , <i>Aquila heliaca</i> , <i>Tetrao mlodosiewiczzi</i>	23	Sukhumi	38,743	<i>Myotis emarginatus</i> , <i>Mustela lutreola</i> , <i>Capra caucasica</i> , <i>Vipera kaznakovi</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				36	Teberdinsky NR	121,487	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>R. euryale</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Mustela lutreola</i> , <i>Lutra lutra</i> , <i>Capra caucasica</i> , <i>Aquila heliaca</i> , <i>Testudo graeca</i> , <i>Natrix megaloccephala</i> , <i>Vipera dinniki</i> , <i>V. ursinii</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
13	Svaneti	232,050	<i>Capra caucasica</i> , <i>C. cylindricornis</i> , <i>Ursus arctos</i> , <i>Rupicapra rupicapra</i> , <i>Tetrao mlodosiewiczzi</i>	50	Dautsky Sanctuary	34,728	<i>Vipera dinniki</i>
				24	Svaneti (1)	232,131	<i>Capra caucasica</i> , <i>Vipera dinniki</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
14	Racha-Central Caucasus	328,120	<i>Ursus arctos</i> , <i>Capra caucasica</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Tetrao mlokosiewiczii</i>	27	Racha	137,568	None
15	Khevi-Tusheti	531,559	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Tetrao mlokosiewiczii</i>	29	Khevi	101,957	<i>Capra cylindricornis</i> , <i>Crex crex</i> , <i>Vipera dinniki</i>
				30	Khevsureti	84,239	<i>Capra cylindricornis</i>
				31	Tusheti	112,142	<i>Capra cylindricornis</i> , <i>C. aegagrus</i> , <i>Vipera dinniki</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				46	Erzi NR	16,647	<i>Capra cylindricornis</i>
				47	Ingushsky Sanctuary	48,673	<i>Capra cylindricornis</i>
16	Lagodekhi-Zagatala-West Dagestan	498,704	<i>Ursus arctos</i> , <i>Cervus elaphus</i> , <i>Capra aegagrus</i> , <i>C. cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>	12	Zakatala NR	26,552	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>Capra cylindricornis</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i> <i>Crex crex</i> , <i>Aquila heliaca</i>
				34	Eastern Caucasus	35,969	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Capra cylindricornis</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				35	Lagodekhi	24,369	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Capra cylindricornis</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				39	Tlyaratinsky Sanctuary	81,722	<i>Capra cylindricornis</i> , <i>C. aegagrus</i> , <i>Vipera dinniki</i>
				44	Kosobsko-Kelebsky Sanctuary	71,371	<i>Capra aegagrus</i>
				45	Begtinsky	47,075	<i>Capra aegagrus</i>
17	Sarybash	21,100	<i>Ursus arctos</i> , <i>Cervus elaphus</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Tetrao mlokosiewiczii</i>	14	Sarybash	19,894	<i>Barbastella barbastellus</i> , <i>Capra cylindricornis</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
18	Laman-Kam Area	14,759	<i>Ursus arctos</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>	41	Laman-Kam Area	18,710	<i>Aquila clanga</i> , <i>A. heliaca</i>
19	Samur-Yalama	129,661	<i>Aquila heliaca</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	52	Samur Delta	19,653	<i>Aquila heliaca</i> , <i>Falco naumanni</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
				53	Yallama Rivers	160,353	<i>Lutra lutra</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>A. ruthenus</i> , <i>Huso huso</i>
				81	Samur River	10,753	<i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>A. ruthenus</i> , <i>Huso huso</i>
				82	Berkubinsky Forest	21,370	<i>Anser erythropus</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>A. ruthenus</i> , <i>Huso huso</i>
20	Agzibir (Akzybir) Lake	76,553	<i>Marmaronetta angustirostris</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	53	Yallama Rivers	160,353	<i>Lutra lutra</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>A. ruthenus</i> , <i>Huso huso</i>
				54	Akzibir Lake	6,826	<i>Branta ruficollis</i> , <i>Marmaronetta angustirostris</i> , <i>Falco naumanni</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
21	Ismailly-Shahdag	245,097	<i>Ursus arctos</i> , <i>Cervus elaphus</i> , <i>Capra cylindricornis</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mikosiewiczii</i>	13	Gabala NR	29,150	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Testudo graeca</i>
				15	Ismailly	40,146	<i>Barbastella barbastellus</i> , <i>Capra cylindricornis</i>
				16	Babadag Mountain	7,551	<i>Capra cylindricornis</i> , <i>Aquila heliaca</i>
				17	Shakhdag Mountain (1)	90,033	<i>Capra cylindricornis</i> , <i>Aquila heliaca</i>
				18	Shakhdag Mountain (2)	10,450	<i>Capra cylindricornis</i>
				19	Bazar-Duzu Mountain	5,762	<i>Capra cylindricornis</i>
				20	Oguz	15,613	
22	Iori-Mingechevir (Mingechaour)	631,181	<i>Ursus arctos</i> , <i>Gazella subgutturosa</i> , <i>Aegypius monachus</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Pelobates syriacus</i>	131	Samukh	76,992	<i>Anser erythropus</i> , <i>Aquila heliaca</i> , <i>Falco naumanni</i>
				132	Korchai Sanctuary	32,163	<i>Rhinolophus mehelyi</i> , <i>Myotis emarginatus</i> , <i>Testudo graeca</i>
				137	Gekchai Bozdag Mountains	17,603	<i>Aquila heliaca</i>
				138	Shamkhor	12,481	<i>Testudo graeca</i>
				139	Ajinaur Lake	1,986	None
				140	Iori Plateau	264,975	<i>Myotis emarginatus</i> , <i>Lutra lutra</i> , <i>Anser erythropus</i> , <i>Aquila heliaca</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i>
23	Alazani-Ganykh	51,230	<i>Ursus arctos</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i>	135	Alazani Valley (Az)	41,104	<i>Lutra lutra</i> , <i>Aquila heliaca</i>
24	Kvernaki	12,672	<i>Aquila heliaca</i>	142	Alazani Valley (Geo)	46,119	<i>Lutra lutra</i> , <i>Aquila heliaca</i> , <i>Anser erythropus</i>
				191	Kvernaki	12,969	<i>Aquila heliaca</i> , <i>Crex crex</i> , <i>Testudo graeca</i>
25	Askhi-Karst Massif	43,723	<i>Ursus arctos</i>	190	Askhi Massif	40,211	<i>Barbastella barbastellus</i> , <i>Rhinolophus mehelyi</i> , <i>R. euryale</i> , <i>R. hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Vipera kaznakovi</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
26	Rioni	152,939	<i>Oxyura leucocephala</i> , <i>Huso huso</i> , <i>Acipenser sturio</i> , <i>A. stellatus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i> ,	97	Kolkheti	52,246	<i>Lutra lutra</i> , <i>Oxyura leucocephala</i> , <i>Anser erythropus</i> , <i>Crex crex</i> , <i>Acipenser sturio</i> , <i>A. gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i> <i>Acipenser sturio</i> , <i>A. gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				98	Rioni River	36,431	
				100	Kolkheti NP (aquatic section)	23,217	
				101	Enguri River	23,842	
27	Trialeti	276,118	<i>Ursus arctos</i> , <i>Cervus elaphus</i> , <i>Rupicapra rupicapra</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i> , <i>Mertensiella caucasica</i>	84 85 86 87	Tetrobi Sanctuary Kisia-Tabatskuri Sanctuary Trialeti Range Nedzvi Sanctuary	3,042 21,369 121,522 11,427	<i>Vipera dorevskii</i> <i>Crex crex</i> , <i>Vipera dorevskii</i> <i>Aquila heliaca</i> <i>Myotis bechsteini</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i> <i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>M. bechsteini</i> , <i>Vipera kaznakovi</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				88	Borjomi-Kharagauli NP	261,312	
28	Kura-Jandari	30,068	<i>Cervus elaphus</i> , <i>Phalacrocorax pygmeus</i> , <i>Aquila heliaca</i> , <i>Pelobates syriacus</i>	130 134	Garayazy-Agstafa Sanctuary Garayazy NR	8,496 4,567	<i>Rhinolophus hipposideros</i> , <i>Aquila heliaca</i> , <i>Testudo graeca</i> <i>Rhinolophus hipposideros</i> , <i>Aquila heliaca</i>
				136 141	Jandar Lake (Az) Gardabani Sanctuary	557 10,896	<i>Anser erythropus</i> , <i>Aquila heliaca</i> <i>Rhinolophus hipposideros</i> , <i>Anser erythropus</i> , <i>Crex crex</i> , <i>Aquila heliaca</i> , <i>Testudo graeca</i>
29	Mount Gyamysh	107,666	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Tetrao mlokosiewiczii</i>	143 181 187 189	Jandari Lake (Geo) Gizildja Sanctuary Gey-Gel Lake Mount Giamysh	2,242 13,704 6,276 8,575	None <i>Barbastella barbastellus</i> , <i>Testudo graeca</i> <i>Lutra lutra</i> None

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
30	Varvara-Barda	29,195	<i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i>	133	Barda Sanctuary	29,404	<i>Crex crex</i> , <i>Aquila heliaca</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i>
31	Gobustan-Hajigabul	211,491	<i>Hyaena hyaena</i> , <i>Gazella subgutturosa</i> , <i>Oxyura leucocephala</i> , <i>Marmaronetta angustirostris</i>	55 72 73	Kargabazar and Gush-Gaya Mountains Hadjikabul Lake Central Shirvan	2,427 4,201	<i>Falco naumanni</i> <i>Oxyura leucocephala</i> None
32	Gobustan-Absheron	190,588	<i>Oxyura leucocephala</i> , <i>Phalacrocorax pygmeus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	56 57	Absheron Archipelago (north) and Artem Bay Absheron Sanctuary	1,843 1,179	<i>Rhinolophus hipposideros</i> , <i>Phoca caspica</i> <i>Phoca caspica</i>
33	Shirvan	132,313	<i>Gazella subgutturosa</i> , <i>Marmaronetta angustirostris</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	188 67 69	Factory Shelf Shirvan NR/Shorgel Lakes Kura Delta	3,418 65,856 6,487	None <i>Marmaronetta angustirostris</i> , <i>Aquila heliaca</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i> <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
34	Makhmud Chala	39,034	<i>Marmaronetta angustirostris</i>	71	Mahmud-Chala Lake	10,773	<i>Marmaronetta angustirostris</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
35	Gyzyl-Agach (Gyzylaghaj)	146,350	<i>Marmaronetta angustirostris</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	70	Gyzyl-Agach Bay	131,559	<i>Phoca caspica</i> , <i>Marmaronetta angustirostris</i> , <i>Branta ruficollis</i> , <i>Anser erythropus</i> , <i>Grus leucogeranus</i> , <i>Otis tarda</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>
36	Kura-Araz (Araks) Valley	158,091	<i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i>	74 177	Mil-Karabakh Steppe Sarysu Lake	56,656 16,555	None <i>Anser erythropus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Falco naumanni</i>
				178	Ag-GeI Lake	15,676	<i>Anser erythropus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Falco naumanni</i>
				180	Lake Boz-Koba	14,577	<i>Marmaronetta angustirostris</i> , <i>Falco naumanni</i>
				186	Araz-Behremtepe	2,678	<i>Grus leucogeranus</i>
37	Talish-Zuvand	826,164	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Hyaena hyaena</i> , <i>Aquila heliaca</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Pelobates syriacus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	165	Hyrcaan NR	3,601	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>Lutra lutra</i>
				166	Zuvand Sanctuary	14,944	<i>Testudo graeca</i>
				167	Lisar NR	34,449	<i>Rhinolophus hipposideros</i>
				169	Lavandevil	44,228	<i>Crex crex</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				170	Anzali Lagoon	134,151	<i>Rhinolophus hipposideros</i> , <i>Anser erythropus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Vanellus gregarius</i> , <i>Grus leucogeranus</i> , <i>Crex crex</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				171	Gasht-e Rudkhan and Siahmazgy	41,692	<i>Rhinolophus hipposideros</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
38	Araz (Araks) Valley	567,287	<i>Capra aegagrus</i> , <i>Tetrao mlukosiewiczzi</i> , <i>Aquila heliaca</i> , <i>Oxyura leucocephala</i> , <i>Marmaronetta angustirostris</i>	160	Kaleibar and Arasbaran	374,320	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Lutra lutra</i> , <i>Capra aegagrus</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i>
39	Gilan	640,308	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Cervus elaphus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i> , <i>Phalacrocorax pygmeus</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	161	Parsabad	56,222	<i>Anser erythropus</i> , <i>Branta ruficollis</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Grus leucogeranus</i> , <i>Aquila clanga</i> , <i>Falco naumanni</i>
40	Sabalan	188,347	<i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Aquila heliaca</i>	194	Mount Sahand and Sabalan	180,195	<i>Myotis schaubi</i> , <i>M. bechsteini</i> , <i>Ovis ammon</i> , <i>Falco naumanni</i> , <i>Aquila clanga</i> , <i>A. heliaca</i>
41	Marakan-Kiamaki	248,872	<i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i>	162 163 164	Marakan Kiamaky Aras Dam Lake	105,951 106,239 9,479	<i>Lutra lutra</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Testudo graeca</i> <i>Lutra lutra</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Testudo graeca</i> <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Crex crex</i>
42	Meghri	74,931	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Tetrao mlukosiewiczzi</i>	124	Meghri	121,518	<i>Capra aegagrus</i> , <i>Ovis ammon</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
43	Zangezur	206,674	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Tetrao mlkosiewiczzi</i> , <i>Pelobates syriacus</i>	124	Meghri	121,518	<i>Capra aegagrus</i> , <i>Ovis ammon</i>
44	Arasbaran	148,196	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Tetrao mlkosiewiczzi</i> , <i>Marmaroneita angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i>	160	Kaleibar and Arasbaran	374,320	<i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Lutra lutra</i> , <i>Capra aegagrus</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Falco naumanni</i> , <i>Testudo graeca</i>
45	Bichenek	23,809	<i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Panthera pardus</i> , <i>Ursus arctos</i>	127	Bichenek	9,707	<i>Capra aegagrus</i>
46	Noravank	24,430	<i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Panthera pardus</i>	125	Noravank	14,463	<i>Falco naumanni</i>
47	Maku and Western Iranian Border	486,480	<i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Panthera pardus</i> , <i>Aquila heliaca</i> , <i>Marmaroneita angustirostris</i>	148	Maku and Iran West Border	336,902	<i>Rhinolophus euryale</i> , <i>Myotis schaubi</i> , <i>M. bechsteini</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Falco naumanni</i>
				156	Van Dogusu Mountains	80,898	<i>Ovis ammon</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
48	Agri Dagi (Ararat) and Armash	271,669	<i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Ursus arctos</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Phalacrocorax pygmaeus</i>	145 147 149 150	Armash Armash Fish-Farm Maku Agh-Gel	16,121 5,154 84,437 27,524	<i>Myotis schaubi</i> , <i>Meriones dahli</i> <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> <i>Rhinolophus euryale</i> , <i>Myotis schaubi</i> , <i>M. Bechsteini</i> <i>Rhinolophus euryale</i> , <i>Myotis schaubi</i> , <i>M. bechsteini</i> , <i>Anser erythropus</i> , <i>Branta ruficollis</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Vanellus gregarius</i> , <i>Grus leucogeranus</i> , <i>Otis tarda</i> , <i>Crex crex</i> , <i>Aquila clanga</i> <i>Myotis schaubi</i> , <i>Marmaronetta angustirostris</i> , <i>Testudo graeca</i> , <i>Vipera wagneri</i> <i>Myotis schaubi</i> , <i>Marmaronetta angustirostris</i>
49	Khosrov	201,590	<i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Aegypius monachus</i> , <i>Pelobates syriacus</i>	120 121 145 146	Ararat Khosrov NR Gndasar Armash Goravan Sands Sanctuary	72,829 120,248 7,041 16,121 3,558	<i>Capra aegagrus</i> , <i>Ovis ammon</i> <i>Rhinolophus hipposideros</i> , <i>R. mehelyi</i> , <i>Testudo graeca</i> <i>Crex crex</i> , <i>Falco naumanni</i> <i>Myotis schaubi</i> , <i>Meriones dahli</i> <i>Myotis schaubi</i>
50	Pambak-Sevan	552,691	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Aquila heliaca</i> , <i>Tetrao mlkosiewiczzi</i>	117 118 119 173	Dsegh-Haghartsin-Pambak Chain and Dilijan NP Lake Sevan Shakhdag Range Mount Ara	188,874 155,425 28,427 4,443	<i>Barbastella barbastellus</i> , <i>Rhinolophus mehelyi</i> , <i>R. hipposideros</i> , <i>Sicista armenica</i> , <i>Aquila heliaca</i> , <i>Crex crex</i> , <i>Testudo graeca</i> , <i>Sambucus tigrani</i> <i>Lutra lutra</i> , <i>Anser erythropus</i> <i>Rhinolophus euryale</i> <i>Crex crex</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
51	Javakheti	322,994	<i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Aquila heliaca</i> , <i>Tetrao mlokosiewiczii</i>	104	Javakheti Range (Arm)	27,705	<i>Vipera darevskii</i>
				106	Amasia	30,139	<i>Aquila heliaca</i> , <i>Falco naumanni</i>
				107	Paravani Lake	5,830	<i>Crex crex</i>
				108	Javakheti Range (Geo)	65,970	<i>Vipera darevskii</i>
				109	Saghmo Lake	857	<i>Lutra lutra</i> , <i>Crex crex</i>
				110	Madatapa Lake	1,978	<i>Aquila heliaca</i> , <i>Crex crex</i>
				111	Bugdashedi Lake	397	<i>Lutra lutra</i> , <i>Crex crex</i>
				112	Khanchali Lake	2,580	<i>Crex crex</i>
				113	Kartsakhi Lake	3,619	<i>Lutra lutra</i> , <i>Crex crex</i>
				114	Aktas Lake	1,262	None
				115	Erakatar	14,993	<i>Ovis ammon</i>
				116	Cildir Lake	20,051	None
52	Igdir Plain and Armavir	403,170	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Rupicapra rupicapra</i> , <i>Marmaronetta angustirostris</i> , <i>Aegypius monachus</i>	144	Araks River	121,386	<i>Lutra lutra</i> , <i>Marmaronetta angustirostris</i> , <i>Otis tarda</i> , <i>Sambucus tigranii</i>
				154	Igdir Plain	177,767	<i>Myotis schaubi</i> , <i>Marmaronetta angustirostris</i> , <i>Testudo graeca</i> , <i>Vipera wagneri</i>
				157	Karakose	113,847	<i>Marmaronetta angustirostris</i> , <i>Testudo graeca</i> , <i>Vipera wagneri</i>
53	Sarikamis Forest	173,872	<i>Capra aegagrus</i> , <i>Ovis ammon</i> , <i>Rupicapra rupicapra</i> , <i>Aegypius monachus</i> , <i>Mertensiella caucasica</i>	151	Mt. Ziaret Forest	55,914	<i>Testudo graeca</i> , <i>Vipera wagneri</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i>
				153	Sarakamish Forest	73,706	<i>Ovis ammon</i> , <i>Testudo graeca</i> , <i>Vipera wagneri</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
54	West Lesser Caucasus	2,127,877	<i>Ursus arctos</i> , <i>Capra aegagrus</i> , <i>Rupicapra rupicapra</i> , <i>Ovis ammon</i> , <i>Aegypius monachus</i> , <i>Tetrao mlokosiewiczii</i> , <i>Mertensiella caucasica</i> , <i>Acipenser stellatus</i> , <i>A. persicus</i> , <i>Huso huso</i>	88	Borjomi-Kharagauli NP	261,312	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis emarginatus</i> , <i>M.bechsteini</i> , <i>Vipera kaznakovi</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				89	Goderdzi Pass	30,564	<i>Mertensiella caucasica</i>
				90	Shavsheti Range (1)	59,192	<i>Vipera pontica</i> , <i>Mertensiella caucasica</i>
				91	Shavsheti Range (2)	20,690	<i>Vipera pontica</i>
				92	Chorokhi	23,238	<i>Lacerta clarkorum</i> , <i>Acipenser persicus</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				93	Batumi	39,959	<i>Aquila heliaca</i> , <i>Aquila clanga</i> , <i>Falco naumanni</i> , <i>Lacerta clarkorum</i> , <i>Acipenser persicus</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				94	Mtirala	15,289	<i>Barbastella barbastellus</i> , <i>Lacerta clarkorum</i> , <i>Vipera kaznakovi</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				95	Kintrishi NR	13,315	<i>Barbastella barbastellus</i> , <i>Rhinolophus mehelyi</i> , <i>R. euryale</i> , <i>R. hipposideros</i> , <i>Myotis emarginatus</i> , <i>Lacerta clarkorum</i> , <i>Vipera kaznakovi</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i>
				102	Harsit Vadisi	186,074	<i>Lutra lutra</i> , <i>Testudo graeca</i> , <i>Lacerta clarkorum</i> , <i>Vipera ursinii</i>
				103	Dogu Karadeniz Mountains	1,260,013	<i>Barbastella barbastellus</i> , <i>Rhinolophus hipposideros</i> , <i>Myotis bechsteini</i> , <i>Ovis ammon</i> , <i>Falco naumanni</i> , <i>Lacerta clarkorum</i> , <i>Vipera kaznakovi</i> , <i>V. pontica</i> , <i>V. ursinii</i> , <i>Mertensiella caucasica</i> , <i>Pelodytes caucasicus</i> , <i>Bufo verrucosissimus</i> , <i>Acipenser persicus</i> , <i>A. stellatus</i> , <i>Huso huso</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
55	Manglisi	35,816	<i>Ursus arctos</i>		None		
56	Sifid Rud-Anzali	162,647	<i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i> , <i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. gueldenstaedtii</i>	168	Sepirud River	26,824	<i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				170	Anzali Lagoon	134,151	<i>Rhinolophus hipposideros</i> , <i>Anser erythropus</i> , <i>Marmaronetta angustirostris</i> , <i>Oxyura leucocephala</i> , <i>Vanellus gregarius</i> , <i>Grus leucogeranus</i> , <i>Crex crex</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Acipenser gueldenstaedtii</i> , <i>A. persicus</i> , <i>A. nudiventris</i> , <i>A. stellatus</i> , <i>Huso huso</i>
				172	Bojagh	84,919	<i>Anser erythropus</i> , <i>Oxyura leucocephala</i> , <i>Aquila heliaca</i> , <i>A. clanga</i> , <i>Crex crex</i>

#	ECP PRIORITY CONSERVATION AREAS AND CORRIDORS	AREA (ha)	ECP FOCAL SPECIES	#	CEPF SITES	AREA (ha)	CEPF PRIORITY SPECIES
CORRIDORS							
2	Primorsko-Akhtarsk – Kuban Corridor	122,057	<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A.gueldenstaedtii</i>	7	Prirazovsky Sanctuary	32,635	<i>Lutra lutra</i>
10	Teberdinsky Strict Nature Reserve – Svaneti Corridor	329,825	<i>Capra caucasica</i> , <i>Rupicapra rupicapra</i>	25 26 49	Svaneti (2) Abkhazia Prielbrusiye	30,208 35,058 103,247	<i>Capra caucasica</i> , <i>Vipera dinniki</i> <i>Capra caucasica</i> <i>Capra cylindricornis</i>
21	Javakheti – Igdır Plain and Armavir Corridor	221,531	<i>Capra aegagrus</i> , <i>Ursus arctos</i>	175	Ani	4,756	<i>Sambucus tigranii</i>
24	Argakhanskiy Bay – Samur-Yalama Corridor		<i>Huso huso</i> , <i>Acipenser stellatus</i> , <i>A. ruthenus</i> , <i>A.persicus</i> , <i>A.nudiventris</i> , <i>A.gueldenstaedtii</i>	79	Sulak River	44,726	<i>Acipenser persicus</i> , <i>A. nudiventris</i>
35	Igdır Plain and Armavir – Agri Dagı (Ararat) and Armash Corridor	14,661	<i>Capra aegagrus</i>	155	Tendurek Mountain	30,617	<i>Ovis ammon</i>
40	Khostov – Norovank Corridor	15,338	<i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Panthera pardus</i>	129	Sardarak Caves	8,546	<i>Rhinolophus mehelyi</i> , <i>R. euryale</i>
41	Khostov – Bichenek Corridor	92,171	<i>Ovis ammon</i> , <i>Capra aegagrus</i> , <i>Panthera pardus</i> , <i>Ursus arctos</i>	122	Djermuk	3,070	<i>Rhinolophus mehelyi</i> , <i>Crex crex</i>
43	Mount Gyamysh – Meghri – Arasbaran Corridor	427,191	<i>Cervus elaphus maral</i> , <i>Capra aegagrus</i> , <i>Ursus arctos</i> , <i>Panthera pardus</i> , <i>Tetrao mlokosiewiczii</i>	179	Dashalti NR	1,312	<i>Barbastella barbastellus</i> , <i>Rhinolophus mehelyi</i> , <i>R. euryale</i>
49	Kura-Araz (Araks) Valley – Makhmud Chala Corridor	118,171	None	74	Mil-Karabakh Steppe	56,656	

Map 1



Map 2



MAP OF NATURAL LANDSCAPES OF THE CAUCASUS REGION
(By Prof. Dr. N. Beruchashvili)

Legend

- I. PLAIN, HILL, AND FOOTHILL LANDSCAPES
- A. NORTH SUBTROPICAL HUMID

- A1. Colchic Lowland landscapes with swamp alder forests and sphagnum bogs, and foothill landscapes with hornbeam-oak forests alternating with beech-chestnut, oak-*Zelkova* and poly-dominant forests with evergreen understory
- A2. Hyrcanian plain landscapes with grasslands-shrublands and Hyrcanian forests
- A3. Sub-Colchic plain and hilly forest landscapes with Mediterranean elements

- B. SUB-MEDITERRANEAN SEMI-HUMID

- B1. Pontic (transitional to Colchic) plain and foothill landscapes with Pitsunda pine, oak, and poly-dominant forests, and fragments of Mediterranean scrublands (maquis)
- B2. Crimea-Novorossiysk foothill landscapes with oak, pine, and juniper forests and open woodlands alternating with beech forests and fragments of Mediterranean scrublands (maquis)
- B3. South-East Caucasian Sub-Mediterranean (transitional to moderate-thermophilous semi-humid) foothill landscapes with hornbeam-oak forests and woodlands and *Botriochloa* steppes

- C. MEDITERRANEAN

- C1. Pontic foothill landscapes with Mediterranean scrublands (maquis), alternating with beech and oak forests

- D. SUBTROPICAL SEMI-ARID PLAIN

- D1. East Georgian hilly and foothill landscapes with *Botriochloa* and *Stipa* steppes, dry shrublands (shibliak), dwarf shrub (phrygana) vegetation, and semi-deserts

- E. SUBTROPICAL ARID PLAIN AND HILLS

- E1. East Caucasian North subtropical lowland and foothill landscapes with *Artemisia*, halophytic deserts and semi-deserts

- F. THERMO-MODERATE SEMI-HUMID PLAIN

- F1. East Transcaucasian plain landscapes with oak and oak-*Zelkova* forests
- F2. Kuban hilly and plain landscapes with oak forests and forest-steppes

- G. TEMPERATE SEMI-HUMID AND SEMI-ARID PLAIN

- G1. North Caucasian lowland and hilly plain landscapes with mixed herb-grass steppes and semi-humid meadow-steppes

- H. TEMPERATE SEMI-ARID PLAIN

- H1. North Caucasian hilly and plain landscapes with steppes and meadow-steppes
- H2. East European hilly and plain landscapes with steppes

- I. TEMPERATE ARID PLAIN

- I1. North Caspian lowlands with *Artemisia*, *Salsola*, and halophytic deserts and semi-deserts
- J. HYDROMORPHIC AND SUB-HYDROMORPHIC
 - J1. Lowlands with wetlands
 - J2. Delta and floodplain landscapes with wetlands, swamp forests and grasslands, and salt marshes
- II. **MOUNTAINOUS LANDSCAPES**
- K. NORTH SUB-MEDITERRANEAN SEMI-HUMID
 - K1. Crimea-Novorossiysk (transitional to Colchic and moderate thermophilous) low-mountain landscapes with oak and pine forests and juniper open woodlands
- L. MEDITERRANEAN
 - L1. Pontic low-mountain and plain landscapes with Mediterranean scrublands (Maquis and pseudo-maquis), oak and pine forests and open semi-shrub evergreen vegetation, dry scrublands, and dwarf shrub vegetation
- M. SUBTROPICAL SEMI-ARID MOUNTAIN
 - M1. Southeast Caucasian low-mountain landscapes with juniper woodlands, dry shrublands (shibliak), and dwarf shrub vegetation (phrygana)
- N. SUBTROPICAL ARID MOUNTAIN
 - N1. East Caucasus low-mountain landscapes with semi-deserts and deserts
- O. THERMO-MODERATE HUMID MOUNTAIN
 - O1. Colchic low-mountain landscapes with hornbeam-oak and hornbeam-beech-chestnut forests mainly with evergreen understory, partly alternating with oak-pine forests
 - O2. Colchic middle-mountain landscapes with beech forests mainly with evergreen understory
 - O3. Hyrcanian low-mountain landscapes with chestnut-oak, oak-*Parrotia* and hornbeam-oak forests
 - O4. Hyrcanian middle-mountain landscapes with beech and oak forests
 - O5. East Georgian low-mountain landscapes with hornbeam-oak partly alternating with chestnut forests
 - O6. Southeast Caucasian (transitional to semi-humid) low-mountain landscapes with hornbeam-oak, oak forests, and secondary dry scrublands
 - O7. Southeast Caucasian middle-mountain landscapes with beech forests alternating with hornbeam-oak, partly with pine forests and secondary grasslands
 - O8. Pontic mountain landscapes with beech and oak forests partly with evergreen understory and Mediterranean elements
- P. THERMO-MODERATE SEMI-HUMID

- P1. Pontic low- and middle-mountain landscapes with oak forests, partly in combination with dry shrublands and Mediterranean elements
- P2. Anatolian middle- and upper-mountain landscapes with pine forests and secondary meadows
- P3. Alborzian middle- and upper-mountain landscapes with pine and oak forests and secondary meadows, partly with dry shrublands

- Q. THERMO-MODERATE SEMI-ARID

- Q1. Anatolian middle-mountain and upland/plateau landscapes with steppes, dry shrublands, and dwarf shrub (phrygana) vegetation
- Q2. Pontic middle-mountain landscapes with steppes, dry shrublands, and dwarf shrub (phrygana) vegetation
- Q3. Front-Asian middle-mountain and upland/plateau landscapes with steppes, dry shrublands, and dwarf shrub (phrygana) vegetation, partly alternating with stony deserts

- R. THERMO-MODERATE-ARID

- R1. Front-Asian low and Anatolian middle-mountain landscapes with desert and semi-desert elements

- S. TEMPERATE HUMID MOUNTAIN

- S1. North Caucasian low-mountain landscapes with oak and hornbeam-beech forests
- S2. North Caucasian middle-mountain landscapes with beech, partly beech-hornbeam and hornbeam-oak forests

- T. TEMPERATE SEMI-HUMID MOUNTAIN

- T1. South Caucasian middle-mountain landscapes with meadows, meadows-steppes, and steppes, dry shrublands and dwarf shrub vegetation
- T2. North Caucasus transitional to thermo-temperate oak forests, meadow steppes, steppes, shibliak and phrygana
- T3. North Caucasus low-mountain forests, shrublands, meadows, and steppes
- T4. North Caucasus middle-mountain meadows, steppes, meadow-steppes, shibliak, and phrygana
- T5. Anatolian middle- and upper-mountain steppes, meadow-steppes, in combination with pine forests in places
- T6. Iranian plateau and upper-mountain steppes, meadow-steppes, in combination with dry shrublands and phrygana

- U. TEMPERATE SEMI-ARID MOUNTAIN

- U1. South Caucasian (transitional to moderate-thermophilous) middle-mountain landscapes with steppes, dry shrublands, and dwarf shrub vegetation, partly with mountain semi-deserts
- U2. Armenian highland steppes, meadow-steppes, and dry shrublands in combination with wetlands
- U3. Armenian, transitional to high mountains meadows, steppes, and meadow-steppes
- U4. Javakheti-Armenian volcanic plateau with steppes and meadow-steppes

- U5. North Caucasian mountain-depression landscapes with steppes, dry shrublands, and dwarf shrub vegetation
- U6. Anatolian middle- and upper-mountain landscapes with steppes
- U7. Iranian upper- and middle-mountain plateau with steppes and semi-deserts

V. TEMPERATE ARID MOUNTAIN

- V1. Armenian-Iranian low-mountain landscapes with semi-deserts, dwarf shrub vegetation, partly with shrublands
- V2. Mountain flat landscapes with stony deserts, semi-deserts, and dwarf shrub vegetation

W. COLD-MODERATE MOUNTAIN

- W1. Caucasian middle-mountain landscapes with beech-dark coniferous and dark coniferous (spruce-fir) forests, partly with evergreen understory
- W2. Caucasian upper-mountain landscapes with birch and pine forests
- W3. Anatolian upper-mountain landscapes with pine forests, meadows-steppes, partly with arid vegetation
- W4. Iranian upper-mountain landscapes with pine and oak forests, meadows-steppes and with arid vegetation

X. HIGH-MOUNTAIN MEADOW

- X1. Caucasian sub-alpine landscapes with combination of meadows, tall-herb communities, elfin woods and thickets
- X2. Front Asian high-mountain landscapes with meadows-steppes and fragments of sub-alpine meadows
- X3. Caucasian alpine landscapes with grasslands and thickets
- X4. High-mountain (sub-nival) landscapes with plant micro-communities, mosses, and lichens

Y. GLACIAL-NIVAL

Map 3



Map 4



PROTECTED AREAS OF THE CAUCASUS ECOREGION

Legend

- | | | |
|---|--------------------|-------------------------|
| 1 | Tamano-Zaporozhsky | Zoological sanctuary |
| 2 | Bol'shoy Utrish | Multi-purpose sanctuary |
| 3 | Abraussky | Landscape sanctuary |

4	Krasnaya Gorka	Multi-purpose sanctuary
5	Krymsky	Sanctuary
6	Priazovsky	Zoological sanctuary
7	Novo-Berezansky	Zoological sanctuary
8	Goryache-Klyuchevskoy	Zoological sanctuary
9	Agriysky	Landscape sanctuary
10	Belorechensky	Multi-purpose sanctuary
11	Shovgenovskiy	Zoological sanctuary
12	Kuzhorskyy	Zoological sanctuary
13	Maykopsky	Zoological sanctuary
14	Tuapsinsky	Multi-purpose sanctuary
15	Sochinsky	National park
16	Sochinsky	Zoological sanctuary
17	Kavkazsky	Biosphere reserve
18	Dakhovskiy	Zoological sanctuary
19	Bol'shoy Tkhach	Landscape sanctuary
20	Psebaysky	Zoological sanctuary
21	Belaya Skala	Zoological sanctuary
22	Novotroitsky	Zoological sanctuary
23	Krasnogvardeysky	Zoological sanctuary
24	Solenoe ozero	Hydrological sanctuary
25	Burukshunsky	Zoological sanctuary
26	Urochische Peski	Botanical sanctuary
27	Russky les	Multi-purpose sanctuary
28	Kravtsovo Ozero	Botanical sanctuary
29	Vishnevaya Polyana	Botanical sanctuary
30	Besputskaya Polyana	Botanical sanctuary
31	Udachny	Botanical sanctuary
32	Buchinskaya Polyana	Botanical sanctuary
33	Novomar'evskaya Polyana	Botanical sanctuary
34	Formika	Zoological sanctuary
35	Stavropolsky Chernozem	Multi-purpose sanctuary
36	Vshivoe Ozero	Hydrological sanctuary
37	Gora Budarka	Geological sanctuary
38	Urochische Budarka	Multi-purpose sanctuary
39	Stavropolets	Zoological sanctuary
40	Saldatskaya & Malaya Polyany Gory Strizhament	Botanical sanctuary
41	Damkhurtssky	Zoological sanctuary
42	Labinsky	Zoological sanctuary
43	Cheremukhovskiy	Zoological sanctuary
44	Chiliksky	Zoological sanctuary
45	Arkhyzsky	Zoological sanctuary
46	Teberdinsky	Strict nature reserve
46	Teberdinsky (Arkhyzsky Branch)	Strict nature reserve
47	Dautsky	Zoological sanctuary
48	El'burgansky	Zoological sanctuary
49	Pryel'brusiye	National park
50	Khasautsky	Zoological sanctuary
51	Kavkazskyye Mineral'nye Vody	Specially protected ecological-recreational region
52	Burguntinsky	Multi-purpose sanctuary
53	Bol'shoy Essentuchok	Multi-purpose sanctuary
54	Malyy Essentuchok	Multi-purpose sanctuary
55	Kumagorsky	Multi-purpose sanctuary
56	Liman	Zoological sanctuary
57	Safonova Dacha	Botanical sanctuary
58	Solenoe Ozero	Zoological sanctuary
59	Blagodarnensky	Botanical sanctuary

60	Dyuna	Multi-purpose sanctuary
61	Irgaklinsky	Multi-purpose sanctuary
62	Bazhigan	Botanical sanctuary
63	Stepan-Bugor	Botanical sanctuary
64	Galyugayevskiy	Multi-purpose sanctuary
65	Zmeysko-Nikolaevsky	Zoological sanctuary
66	Kabardino-Balkarsky	Strict nature reserve
67	Alaniya	National park
68	Matsutinsky	Zoological sanctuary
69	Turmansky	Zoological sanctuary
70	Severo-Osetinsky	Strict nature reserve
71	Ceysky	Multi-purpose sanctuary
72	Zaramagsky	Zoological sanctuary
73	Ingushsky	Multi-purpose sanctuary
74	Erzi	Strict nature reserve
75	Bezhtinsky	Zoological sanctuary
76	Kosobsko-Kelebsky	Zoological sanctuary
77	Tlyaratinsky	Zoological sanctuary
78	Charodinsky	Zoological sanctuary
79	Melishtinsky	Zoological sanctuary
80	Andreyaulsky	Zoological sanctuary
81	Yangiyurtovsky	Zoological sanctuary
82	Khamamatyurtovsky	Zoological sanctuary
83	Tarumovsky	Zoological sanctuary
84	Dagestansky	Strict nature reserve
85	Agrakhansky	Zoological sanctuary
86	Kayakentsky	Zoological sanctuary
87	Kasumkentsky	Zoological sanctuary
88	Samursky	Zoological sanctuary
89	Pitsunda-Myussera	Strict nature reserve
90	Ritsa	Strict nature reserve
91	Pskhu-Gumista	Strict nature reserve
92	Kolkheti	National park
92	Kolkheti	National park
93	Kobuleti	Strict nature reserve
94	Kobuleti	Sanctuary
95	Kintrishi	Strict nature reserve
96	Katsoburi	Sanctuary
97	Sataplia	Strict nature reserve
98	Ajameti	Strict nature reserve
99	Borjom-Kharagauli	National park
100	Borjomi	Strict nature reserve
101	Tetrobi	Sanctuary
102	Ktsia-Tabatskuri	Sanctuary
103	Nedzvi	Sanctuary
104	Algheti	Strict nature reserve
105	Liakhvi	Strict nature reserve
106	Kazbegi	Strict nature reserve
107	Saguramo	Strict nature reserve
108	Gardabani	Sanctuary
109	Ilto	Sanctuary
110	Batsara	Strict nature reserve
111	Mariamjvari	Strict nature reserve
112	Babaneuri	Strict nature reserve
113	Tusheti	National park
114	Tusheti	Protected landscape
115	Tusheti	Strict nature reserve
116	Lagodekhi	Strict nature reserve

117	Lagodekhi	Sanctuary
118	Korughi	Sanctuary
119	Iori	Sanctuary
120	Chachuna	Sanctuary
121	Vashlovani	Strict nature reserve
122	Vashlovani	National park
123	Alaznis chalis bunebis zegli	Natural monument
124	Posof	Equivalent to sanctuary
125	Karagol Sahara	National park
126	Savsat-Balikli & Maden	Equivalent to sanctuary
127	Camili-Efeler	Strict nature reserve
128	Camili-Gorgit	Strict nature reserve
129	Borcka-Karagol	Nature park
130	Camburnu Nature Reserve	Strict nature reserve
131	Hatila Valley	National park
132	Camlihemsin-Kackar	Equivalent to sanctuary
133	Kackar Mountains	National park
134	Cat	Equivalent to sanctuary
135	Pazaryolu	Equivalent to sanctuary
136	Uzungol	Equivalent to sanctuary
137	Altindere Valley	National park
138	Orumcek Forest	Strict nature reserve
139	Artabel Lakes	Equivalent to sanctuary
140	Yusufeli-Coruh Valley	Equivalent to sanctuary
141	Oltu	Wild goat, Wildlife protection area
142	Sarikamis Allahuekber Mountains	National park
143	Sarikamis Kagizman Kuloglu	Equivalent to sanctuary
144	Agri Mountain	National park
145	Kars-Kuyucuk Lake	Waterfowl, Wildlife protection area
146	Giulagarak	Sanctuary
147	Rose Bay Rhododendron	Sanctuary
148	Hankavan	Sanctuary
149	Margaovit	Sanctuary
150	Arzakan & Meghradzor	Sanctuary
151	Pine of Banx or (Banx Pine)	Sanctuary
152	Dilijan	National park
153	Idjevan	Sanctuary
154	Akhnabat	Sanctuary
155	Hazelnut	Sanctuary
156	Gandzakar	Sanctuary
157	Getik	Sanctuary
158	Juniper Forests	Sanctuary
159	Sevan	National park
160	Aragats	Sanctuary
161	Vordan Karmir (Cochineal)	Sanctuary
162	Erebuni	Strict nature reserve
163	Sands of Gorovan or (Gorovan Sands)	Sanctuary
164	Khosrov Forest	Strict nature reserve
165	Eghegnadzor	Sanctuary
166	Juniper forest of Herher or (Herher Juniper Forest)	Sanctuary
167	Djermuk	Sanctuary
168	Djermuk	Sanctuary
169	Sev Lich	Sanctuary
170	Goris	Sanctuary
171	Shikahogh	Strict nature reserve
172	Planetree Grove	Sanctuary
173	Bokhaqar	Sanctuary
174	Zagatala	Strict nature reserve

175	Ilisu	Strict nature reserve
176	Sheki	Sanctuary
177	Gabala	Sanctuary
178	Ismailly	Strict nature reserve
179	Pirgulu	Strict nature reserve
180	Gusar	Sanctuary
181	Altyagaj (Altyagach)	National park
182	Absheron	National park
183	Gil Island	Sanctuary
184	Gobustan	Strict nature reserve
185	Byandovan	Sanctuary
186	Shirvan	National park
187	Shirvan	Strict nature reserve
188	Gyzylaghaj (Gyzyl-Agach)	Strict nature reserve
189	Lesser Gyzylaghaj (Small Gyzyl-Agach)	Sanctuary
190	Hirkan	National park
191	Zuvand	Sanctuary
192	Ag-Gel	National park
193	Arazboyu	Sanctuary
194	Bastichay	Strict nature reserve
195	Gubadly	Sanctuary
196	Dashalti	Sanctuary
197	Garagiol	Strict nature reserve
198	Lachyn	Sanctuary
199	Barda	Sanctuary
200	Turyanchay	Strict nature reserve
201	Ilisu Branch	Strict nature reserve
202	Korchay	Sanctuary
203	Goygol (Gey-Gel)	Strict nature reserve
204	Gyzylja	Sanctuary
205	Shamkir	Sanctuary
206	Eldar Pine	Strict nature reserve
207	Garayazy	Strict nature reserve
208	Shahbuz	Strict nature reserve
209	Ordubad	National park
210	Ordubad	Sanctuary
211	Marakan	Protected area
212	Kiamaky	Sanctuary
213	Arasbaran (Biosphere reserve)	Protected area
214	Lavandvil	Sanctuary
215	Lisar	Protected area
216	Siah keshim International Wetland	Protected area
217	Sorkhankol International Wetland	Sanctuary
218	Selkeh International Wetland	Sanctuary
219	Bojagh International Wetland	National park
220	Amirkalayeh International Wetland	Sanctuary
221	Gasht-e Rudkhan & Siahmazgy	Protected area
222	Siah Rud-e Rudbar	Protected area
223	Sarv-e lat & Javaherdasht	Protected area
224	Beles kuh	Protected area

Map 5



PRIORITY CONSERVATION AREAS (PCAS) AND CORRIDORS

Legend

Priority Conservation Areas

- 1 Abrau-Duyrso
- 2 Kuban
- 3 Primorsko-Akhtarsk

4	Yeysk
5	Don Delta
6	Veselovskoye Reservoir
7	Manych-Gudilo
8	Dadynskoye Lake
9	Kizlyarsky Bay
10	Agrakhansky Bay
11	West Greater Caucasus
12	Teberdinsky Strict Nature Reserve
13	Svaneti
14	Racha-Central Caucasus
15	Khevi-Tusheti
16	Lagodekhi-Zagatala-West Dagestan
17	Sarybash
18	Laman-Kam Area
19	Samur-Yalama
20	Aghzibir (Akzybir) Lake
21	Ismailly-Shahdagh
22	Iori-Mingechevir (Mingechaur)
23	Alazani-Ganykh
24	Kvernaki
25	Askhi-Karst Massif
26	Rioni
27	Trialeti
28	Kura-Jandari
29	Mount Gyamysh
30	Varvara-Barda
31	Gobustan-Hajigabul
32	Gobustan-Absheron
33	Shirvan
34	Makhmud Chala
35	Gyzyl-Agach (Gyzylaghaj)
36	Kura- Araz (Araks) Valley
37	Talish-Zuvand
38	Araz (Araks) Valley
39	Gilan
40	Sabalan
41	Marakan-Kiamaki
42	Meghri
43	Zangezur
44	Arasbaran
45	Bichanek
46	Noravank
47	Maku & Western Iranian Border
48	Agri Dagi (Ararat) & Armash
49	Khosrov
50	Pambak-Sevan
51	Javakheti
52	Igdir Plain & Armavir
53	Sarikamis Forest
54	West Lesser Caucasus
55	Manglisi
56	Sefid Rud-Anzali

Corridors

1	Kuban – Rioni Corridor
2	Priomorsko-Akhtarsk – Kuban Corridor

- 3 Yeysk – Primorsko-Akhtarsk Corridor
- 4 Don Delta – Yeysk Corridor
- 5 Don Delta – Veselovskoye Reservoir Corridor
- 6 Veselovskoye Reservoir – Manych-Gudilo Corridor
- 7 Manych-Gudilo – Dadynskoye Lake Corridor
- 8 Kizlyarsky Bay – Agrakhansky Bay Corridor
- 9 West Greater Caucasus – Teberdinsky Strict Nature Reserve
- 10 Teberdinsky Strict Nature Reserve – Svaneti Corridor
- 11 Svaneti – Racha-Central Caucasus Corridor
- 12 Svaneti – Askhi-Karst Massif Corridor
- 13 Racha-Central Caucasus – Khevi-Tusheti Corridor
- 14 Racha-Central Caucasus –Trialeti Corridor
- 15 Rioni – West Lesser Caucasus Corridor
- 16 Trialeti – West Lesser Caucasus Corridor
- 17 West Lesser Caucasus – Sarikamis Forest
- 18 Trialeti – Manglisi Corridor
- 19 Trialeti – Javakheti Corridor
- 20 Manglisi – Pambak-Sevan Corridor
- 21 Javakheti – Igdir Plain and Armavir Corridor
- 22 Sarikamis Forest – Igdir Plain and Armavir Corridor
- 23 Khevi-Tusheti – Lagodekhi-Zakatala Corridor
- 24 Agrakhansky Bay – Samur-Yalama Corridor
- 25 Lagodekhi-Zagatala – Laman-Kam Area Corridor
- 26 Lagodekhi-Zagatala – Alazani-Ganykh Corridor
- 27 Sarybash – Alazani-Ganykh Corridor
- 28 Alazani-Ganykh – Iori-Mingechevir (Mingecheur) Corridor
- 29 Lagodekhi-Zagatala – Sarybash – Ismailly-Shahdagh Corridor
- 30 Laman-Kam Area – Ismailly-Shahdagh Corridor
- 31 Samur-Yalama – Aghzibir (Akzybir) Lake Corridor
- 32 Pambak-Sevan – Mount Giamysh Corridor
- 33 Pambak-Sevan – Khosrov Corridor
- 34 Igdir Plain and Armavir – Agri Dagi (Ararat) and Armash Corridor
- 35 Igdir Plain and Armavir – Agri Dagi (Ararat) and Armash Corridor
- 36 Igdir Plain and Armavir – Maku and Western Iranian Border Corridor
- 37 Agri Dagi (Ararat) and Armash – Maku and Western Iranian Border Corridor
- 38 Maku and Western Iranian Border – Marakan-Kiamaki Corridor
- 39 Noravank – Bichanek Corridor
- 40 Khosrov – Noravank Corridor
- 41 Khosrov – Bichanek Corridor
- 42 Bichanek – Zangezur Corridor
- 43 Mount Gyamysh – Meghri – Arasbaran Corridor
- 44 Varvara-Barda – Kura-Aras Valley Corridor
- 45 Iori-Mingechevir (Mingecheur) – Gobustan-Hajigabul Corridor
- 46 Aghzibir (Akzybir) Lake – Gobustan-Absheron Corridor
- 47 Gobustan-Hajigabul – Shirvan Corridor
- 48 Gobustan-Absheron – Shirvan Corridor
- 49 Kura- Araz (Araks) Valley – Makhmud Chala Corridor
- 50 Kura- Araz (Araks) Valley – Araz (Araks) Valley Corridor
- 51 Makhmud Chala – Gyzyk-Agach (Gyzylaghaj) Corridor
- 52 Shirvan – Gyzyk-Agach (Gyzylaghaj) Corridor
- 53 Marakan-Kiamaki – Sabalan Corridor
- 54 Araz (Araks) Valley – Sabalan Corridor
- 55 Gyzyk-Agach (Gyzylaghaj) – Talish-Zuvand Corridor
- 56 Sabalan – Talish-Zuvand Corridor
- 57 Talish-Zuvand Marine – Sefid Rud-Anzali Corridor
- 58 Talish-Zuvand – Sefid Rud-Anzali Corridor
- 59 Sefid Rud-Anzali – Gilan Corridor
- 60 Marine Sefid Rud-Anzali – Gilan Corridor

Map 6

