Mountains of Central Asia

Contributions of civil society organizations to nature conservation and sustainable development

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The Critical Ecosystem Partnership Fund (www.cepf.net) is a joint initiative of the French development agency, Conservation International, the European Union, the Global Environment Facility, the Government of Japan and the World Bank. CEPF plays a unique role in wildlife conservation by supporting the efforts of local and international partners from non-governmental, community and scientific and educational organizations working in places of unique biodiversity at risk of extinction.

CEPF started its work in the Mountains of Central Asia in 2016 with the preparation of an ecosystem profile jointly with Zoï Environment Network, and launched a grants program for civil society organizations (CSOs) in 2019. This illustrated report summarizes the selected results of the CEPF grant program in the Mountains of Central Asia over five years and the contribution of CSOs to conservation and biodiversity goals in collaboration with governmental agencies. More information on grants and project results is available on the CEPF (cepf.net/grants/grantee-projects) and grantee websites.

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CRITICAL ECOSYSTEM PARTNERSHIP FUND

zoï environment network

Be Part of the Plan

2023 – 2027 Five Years of Action for the Development of Mountain Regions

Contents

Mountains of Central Asia Global Biodiversity Hotspot

Scientists have identified 36 global biodiversity hotspots that contain at least 1,500 endemic (unique) plant species and have lost more than 70 per cent of their original natural flora. One of these hotspots — the Mountains of Central Asia — is the centre of origin of such crops as apples, pears, apricots, pistachios, almonds, wheat, onions, tulip and others.

The Mountains of Central Asia biodiversity hotspot is formed by two major mountain systems, the Pamir and the Tien Shan. It covers an area of 800,000 square kilometres and stretches across seven countries, including south-eastern Kazakhstan, eastern Uzbekistan, western China, north-eastern Afghanistan (Wakhan), the Koytendag Mountains in south-eastern Turkmenistan and almost all of the two mountain countries of Kyrgyzstan and Tajikistan.

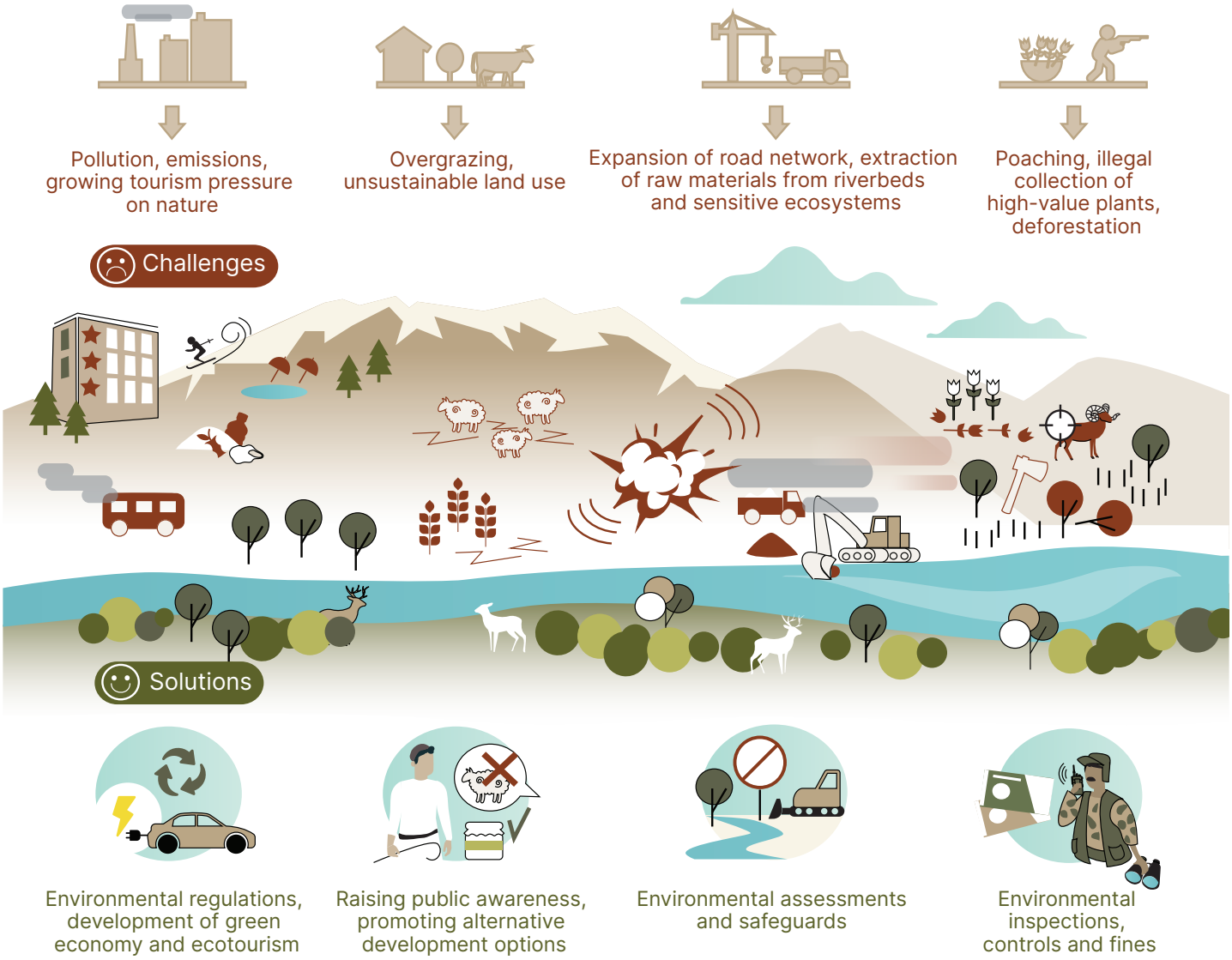
The highest biodiversity is observed at elevations between 1,000 and 3,000 metres above sea level. Some mountain peaks reach heights of 7,000 m and are covered by glaciers.

The mountains of Central Asia are home to about half of the world's population of the snow leopard (*Panthera uncia*), 500 species of birds, and more than 5,000 species of vascular plants, 1,500 of which are unique. The diversity of reptiles is greatest in the lower reaches and in the desert area, while amphibians and fish are rather scarce in the region.

In the mountains of Central Asia, local scientists identify up to 30 different ecosystems, ranging from hot deserts to the nival-glacial zone, but most of the region is covered by ecosystems of alpine steppes and shrublands, and cool temperate deserts and semi-deserts, according to the global ecosystem typology (global-ecosystems.org).

At lower elevations and in the interior of the mountains, desert, semi-desert and steppe vegetation prevails. Fruit and nut forests of wild pear, plum, apple and walnut grow in places with abundant rainfall. Spruce and birch forests are found mainly in the Tien Shan and juniper forests in the Pamir-Alai.

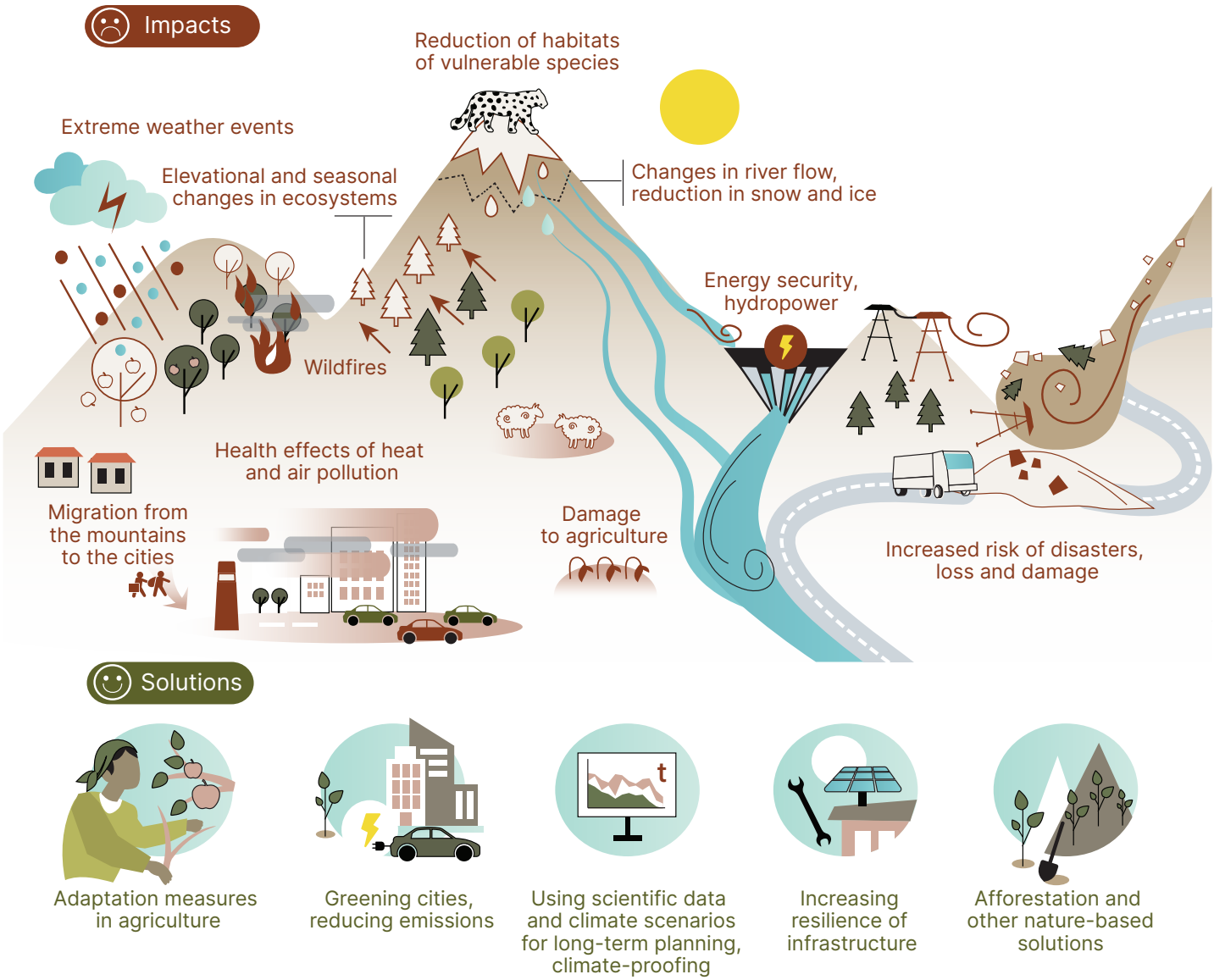
Main sources of environmental impacts in the mountains and solutions



The threats to the environment from human activities in the mountains of Central Asia are many and varied. Mining developments, poor waste management and unorganized tourism increase the risk of pollution. Increased livestock numbers and poor pasture rotation lead to overgrazing and degradation of pastures. The extraction of gold and raw materials for construction from riverbeds leads to water pollution and the destruction of riverine forests. Poaching and illegal collection of rare and unique animal and plant species lead to their decline.

Countries address these problems through environmental regulations, protected areas, environmental assessments and inspections, and regional cooperation. Outreach to local communities to reduce environmental impacts and to introduce alternatives plays an important role. Civil society organizations participate and support government agencies in environmental assessments, inform authorities and the public about problems, and work actively with the community.

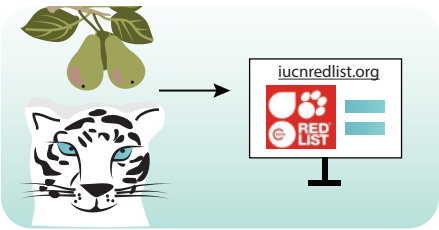
Impact of climate change in the mountains

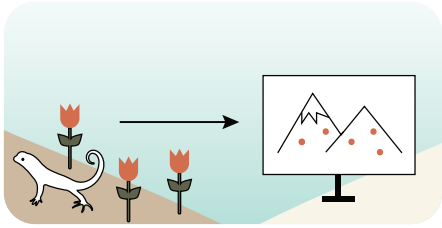


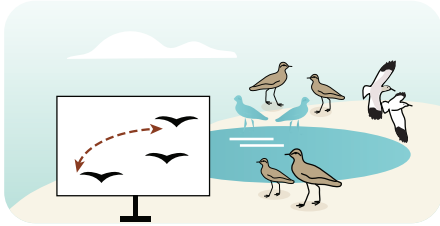
As a result of global warming, glaciers are melting rapidly and vertical climate zones and seasons are shifting in the mountains of Central Asia, changing the timing and routes of bird and mammal migrations and the conditions for vegetation growth and forests. Fluctuations in water availability, temperatures and extreme weather events have negative impacts on the fragile nature of the mountains as well as on agriculture and infrastructure.

Agricultural adaptation based on local and new varieties increases resilience. Urban greening and low-emission transport and energy systems have a positive impact on microclimates. Afforestation and reliable infrastructure protect mountain slopes and settlements from destruction. Data from scientists and climate models enable forward-looking decisions.

Key Biodiversity Areas (KBAs) as a basis for conservation

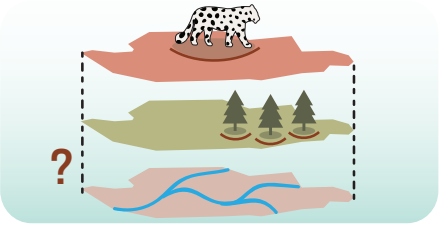


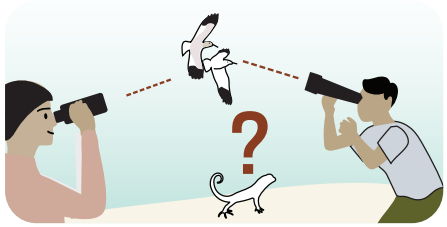


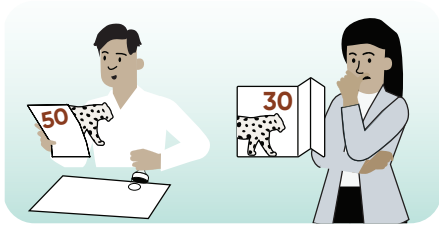


The Convention on Biological Diversity and other international instruments recommend the consideration of Key Biodiversity Areas (KBAs) in conservation planning and implementation. KBAs are identified on the basis of a global standard (IUCN, 2016). The preparation of the CEPF ecosystem profile of the mountains of Central Asia in 2016–2017 identified about 150 KBAs. These KBAs include areas with a sufficiently high presence of internationally Red Listed species (Criterion A1), habitats of unique flora and fauna species (Criterion B1), and areas with high aggregations of migratory species (Criterion D1). Some KBAs are a combination of two or more criteria. Given the dynamics in the natural environment, species populations and land-use, and the emergence of new biodiversity knowledge and goals, the number and area of KBAs may change over time.

Knowledge and data gaps



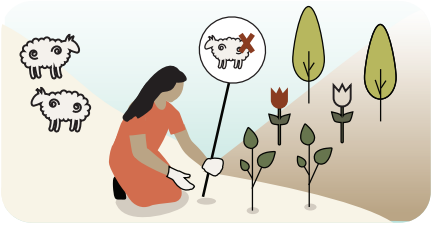


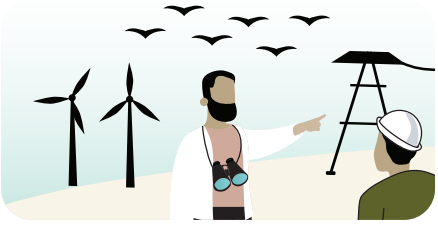


Gaps in knowledge and data limit the ability to identify and work with KBAs and species conservation. Civil society organizations do not always have the necessary level of scientific knowledge and competence to accurately identify species and the many sub-species, or to assess the ecological situation. Different species are studied to different degrees: birds and mammals are better studied and more frequently observed by scientists and volunteers than fish, insects and plants. The coverage by monitoring and research varies widely across the countries, and the data available may be out of date. Mapping, delineating and determining the boundaries and status of KBAs is challenging, especially when the candidate KBA is outside protected areas. Different agencies and groups of scientists may have different data and ideas about KBAs. The KBA concept is already broadly used in GEF and CEPF projects and environmental assessments, but is still unfamiliar or difficult to understand and use at the local level.

Approaches to species and habitat conservation

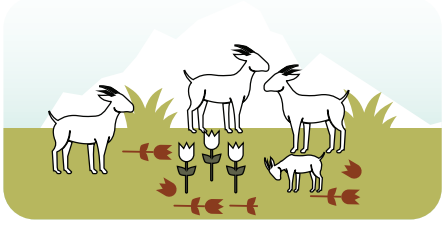
The many approaches to wildlife conservation depend on the country, location, species and environmental threats. The main approaches that are consistent with the objectives of the Convention on Biological Diversity include: conservation of unique landscapes, flora and fauna through protected areas; restoration of habitats for rare, endangered and unique species and ecosystems; and measures to reduce environmental pressures, including restrictions on grazing, gathering and hunting; economic incentives to use nature responsibly. Environmental planning and monitoring, involving all stakeholders, play a important roles.

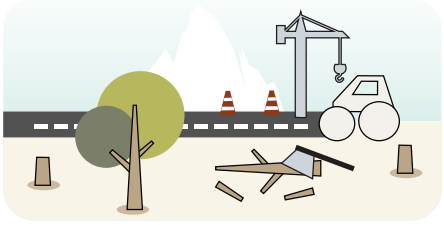




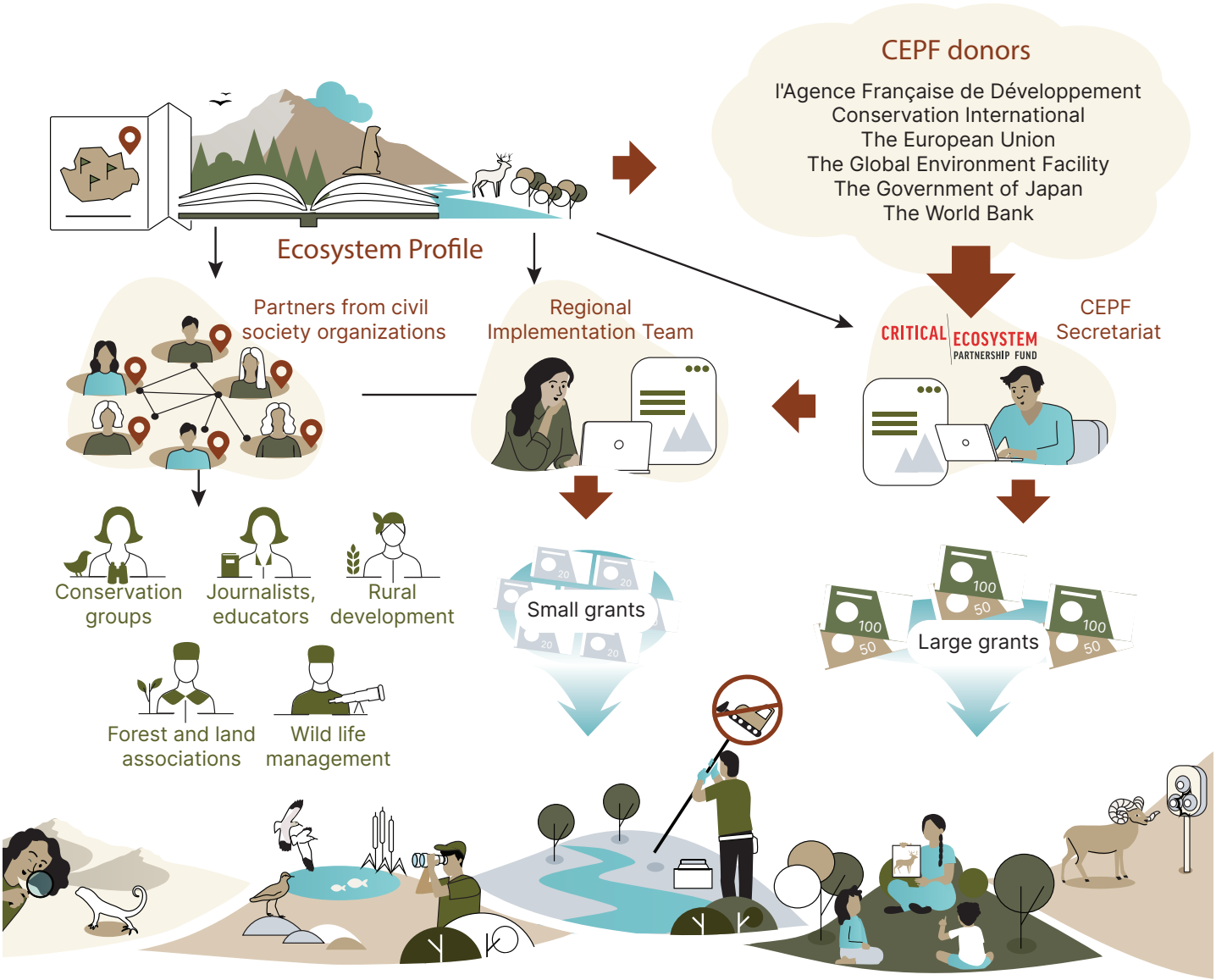
Main areas of CEPF work

CEPF determines its programme activities according to the ecosystem profile and strategy for each of global biodiversity hotspot in which it operates. In the Mountains of Central Asia, CEPF supports projects on addressing threats to priority species and the conservation and improved management of key biodiversity areas, measures to reduce pressures in ecological corridors and production landscapes, capacity building for civil society organizations in conservation, and CSOs involvement in environmental decision-making and safeguards.





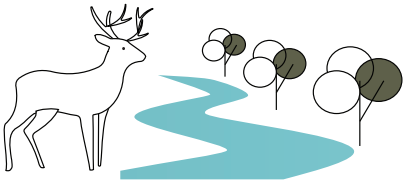
CEPF grant programme in the Mountains of Central Asia



Since 2019, CEPF has been implementing a grant programme in the Mountains of Central Asia based on the CEPF Ecosystem Profile for the hotspot prepared with the broad participation of partners in the region to identify key issues, threats and action areas. CEPF grants are awarded to diverse civil society organizations that propose innovative ideas and practical solutions and approaches to address local challenges, complementing activities funded by other international funds and from state budgets.

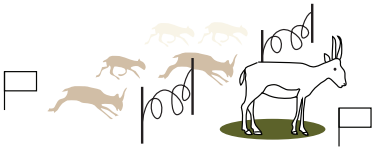
In Central Asian countries, CSOs work in cooperation and coordination with government agencies, and contribute to achieving national and global biodiversity conservation goals. CEPF projects also contribute to the implementation of decisions and objectives of the Convention on Biodiversity, Convention on Migratory Species (CMS), Convention on Wetlands, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the UNESCO World Heritage Convention and regional initiatives.

International conventions and initiatives

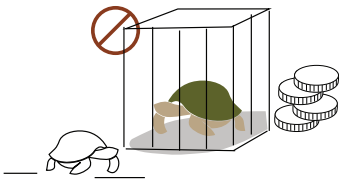


The **Convention on Biological Diversity (CBD)** is an international treaty signed by 196 countries to conserve and sustainably use biological diversity. It entered into force 30 years ago. In 2022, the 15th Conference of the Parties to the Convention adopted the Kunming-Montreal Global Framework for Biodiversity (GBF), which includes 4 long-term goals and 23 targets for 2030.

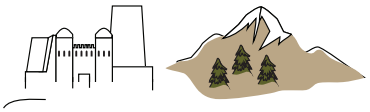
All Parties to the Convention, including Central Asian countries, are currently analysing and updating their national biodiversity strategies and targets in line with the global plan. Civil society organizations, including participants in the CEPF grant programme, provide input and share data.



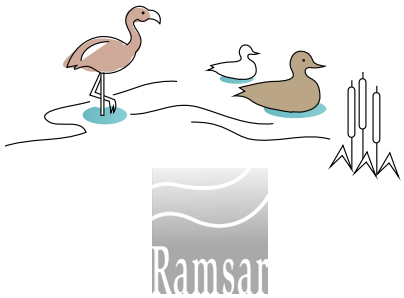
The **Convention on the Conservation of Migratory Species (CMS)** has been in force for 40 years to protect terrestrial and marine migratory animals throughout their ranges. It involves 130 countries around the world working to protect, conserve or restore habitats; reduce barriers to migration; and mitigate other threats to endangered species listed in Appendix I of the Convention. Species that require or would benefit from cooperation are listed in Appendix II. In total, the Convention covers up to 600 species and encourages regional agreements and memoranda of understanding. One of the ancient cities of Uzbekistan, Samarkand, hosted the 14th Conference of the Parties to CMS in February 2024 and plans to host CITES meeting in November 2025.



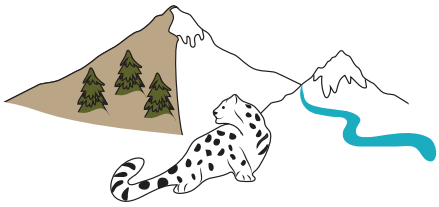
The number of species protected by **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** is growing and has already reached 6,600 animals and 34,300 plants — over 40,000 species in total. Appendix I lists the endangered species for which international trade is prohibited except in special cases for scientific research. Appendix II lists species that are not necessarily endangered at present but could become so if trade is not controlled. The Convention covers 184 countries and has been in force for almost 50 years



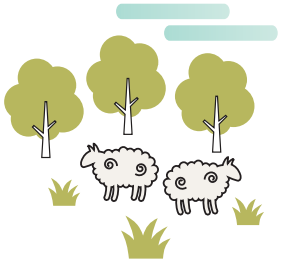
The **UNESCO Convention for the Protection of the World Cultural and Natural Heritage** includes 1,200 nominations from 168 countries. Several key biodiversity areas are World Heritage sites, including the Western Tien Shan nature reserves of three countries and the Tajik National Park and the Tigrovaya Balka state nature reserve in Tajikistan. There are also several UNESCO biosphere reserves and territories. Outside the Mountains of Central Asia biodiversity hotspot, cold desert areas were inscribed on the UNESCO list in 2023.



The **Convention on Wetlands (The Ramsar Convention)** covers 2,400 sites in 174 countries. They include lakes and river sections, swamps, oases, deltas, mangroves, coral reefs and reservoirs. In the Mountains of Central Asia, several key biodiversity areas are also Ramsar sites.



Central Asian countries propose and actively participate in regional initiatives — the Global Snow Leopard Programme (GSLEP), the Five Years of Action for the Development of Mountain Regions (2023–2027), the International Decade for Action “Water for Sustainable Development” (2018–2028), the International Year of Glacier’s Preservation (2025), and the Sustainable Development Goals. At the initiative of Tajikistan and other countries, the UN General Assembly proclaimed 24 May the International Day of the Markhor celebrated for the first time in 2024. The International Mountain Day celebrated on 11 December at the initiative of Kyrgyzstan and other countries is an occasion to educate the public on mountain issues, to mobilize political will and resources to address problems.



In addition to the conventions, other international initiatives cover conservation efforts. These include EU’s “Larger Than Tigers”, GIZ programmes such as “Green Central Asia”, Integrative and climate-sensitive Land Use (ILUCA), Central Asia Mammals and Climate Adaptation (CAMCA) project, Word Bank’s Resilient Landscapes programme. Involving civil society organisations in the implementation of these programmes can contribute to broader engagement and better results.

Contribution of state authorities to biodiversity conservation

Civil society contributions to biodiversity conservation

CEPF project activities and results at the regional level

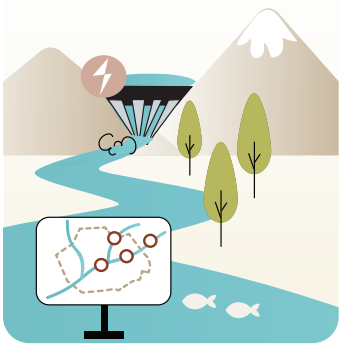
CEPF provides grants and operates through the CEPF Secretariat (which is co-located with Conservation International in the US) and the Regional Implementation Team, which is responsible for training, monitoring, reviewing grant applications and sharing information with the civil society organizations and other partners. This team is based in Almaty, Kazakhstan, with a coordinator in each participating country, and is part of the former Central Asia Programme of the WWF Russia. Afghanistan (Wakhan National Park) and western China (parts of the Chinese Tien Shan) were originally included in the ecosystem profile writing and stakeholder consultations in 2016–2017, but due to a combination of factors, the CEPF did not pursue or limited operations in both countries.

Regional and local CEPF projects in 2019–2024 were implemented in five Central Asian countries. In this period, the CEPF committed USD 6.5 million to finance nearly 100 grant projects from 70 different organizations, of which more than 50 were local and national CSOs. Some of the projects had a regional scope, while the rest were implemented at the level of priority locations and types.

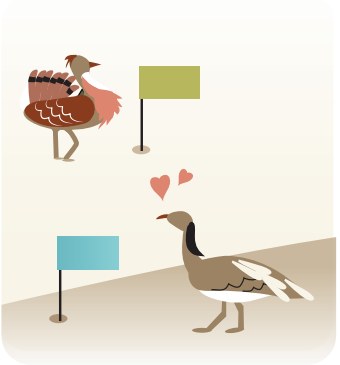
The following projects were implemented at the regional level:

The **Global Forest Coalition** helped improve the protection of selected key biodiversity areas in Kazakhstan, Kyrgyzstan and Tajikistan — Narynkol, Kassan-Sai, Dashtijum — and strengthened the capacity of six local CSOs. Training and field visits were organized, local community awareness of valuable species and KBAs was improved and conservation management plans elaborated.

The Aarhus Convention supports the important role of civil society organizations in environmental assessments, public hearings and decision-making. With the new global biodiversity framework and targets, Central Asia countries have started to analyse and develop updated national strategies and targets. **Zoï Environment Network**, together with local partners, organized meetings and consultations with CSOs and government agencies, online surveys, trainings, local community and youth engagement events and celebrations of international biodiversity days to increase CSOs involvement, produced and disseminated highly visual reports, posters in local languages to support knowledge dissemination and application of the KBA and other modern environmental approaches and safeguards.

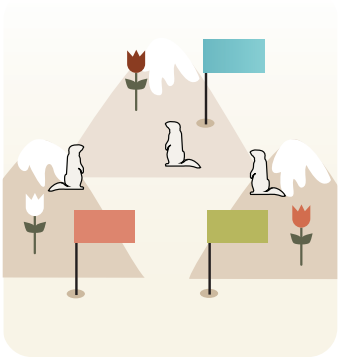


Water ecosystems in Central Asia are under high anthropogenic pressure and stress from wastewater pollution, dams, water abstraction for irrigation, and mineral extraction in riverbeds, and suffer from destruction or degradation of riverine forests. The **"Rivers Without Borders"** international coalition of CSOs has designed an online map and database of water infrastructure projects affecting key biodiversity areas and corridors to ensure that local communities, CSOs and project developers consider environmental risks and safeguards..



Transboundary cooperation between Uzbekistan and Kazakhstan for the conservation of migratory birds, including the houbara bustard (*Chlamydotis macqueenii*), is being supported through the **German Nature and Biodiversity Conservation Union (NABU)** and local community involvement.

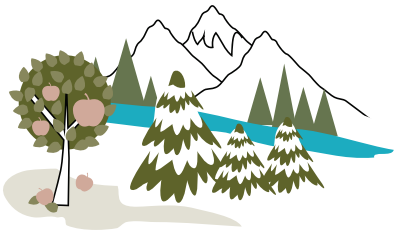
In parallel, international CSOs such as **BirdLife** and the **Agency for Technical Cooperation and Development (ACTED)** are working in Uzbekistan to build the capacity of a bird conservation society and other local CSOs..



The **Biodiversity Conservation Fund of Kazakhstan (FSBK)** supported regional cooperation, exchange of experience, and coordination in the conservation of the Western Tien Shan UNESCO World Heritage Sites in three countries — Kazakhstan, Kyrgyzstan and Uzbekistan. The second phase of the project, which focused on Kazakhstan, established coordination councils for the Aksu-Zhabagly, Karatau and Sairam-Ugam nature reserves to improve interaction with local communities, and implemented community awareness and ecotourism development activities.

The **Centre for Large Landscape Conservation** has been involved in developing the capacity of protected areas in Turkmenistan and in improving ecological connectivity between neighbouring nature reserves in Turkmenistan (Koytendag) and Uzbekistan (Surkhan), as well as adjacent wildlife refuges, buffer zones and pastures. Project results, recommendations and information can further be used in a joint nomination of the "Koytendag-Surkhan Mountains" for consideration as a UNESCO World Heritage Site.

Kazakhstan

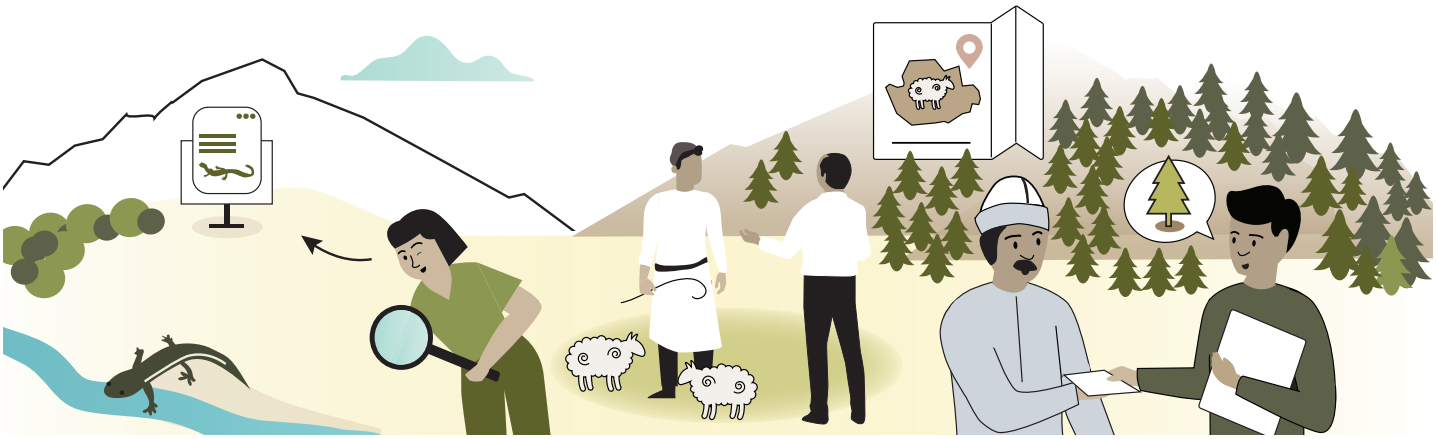


- The largest country of Central Asia with diverse nature and environmental challenges
- CSOs often work on their own geography, themes and species, engage in science and monitoring, and participate in EIAs and other assessments
- CSOs are active in collecting and sharing environmental data, contributing to country's biodiversity goals and plans formulation, and implementing conventions
- The main hubs of environmental organizations are in Astana, Almaty and the country's industrial centres
- Almaty hosts the Central Asia Regional Environmental Centre (CAREC) with offices in five countries , which has become a regional partner of the Convention on Biodiversity since 2024. Almaty is also the base for the CEPF Regional Implementation Team (RIT, www.mca.earth)

The local CSOs **Zhabagly-Manas** and **Biogen** helped develop and implement ecological education and awareness materials for schools in the mountain areas of Karatau and Western Tien Shan, as did **Eco-Atameken** in the mountains of Kentau and Turkestan. Work with local people on the identification of endangered plant and animal species has helped raise awareness and reduce environmental impacts from illegal or irresponsible plant collection and grazing. Involving local authorities in the projects improved their understanding of the value of biodiversity and their attitude toward responsible environmental management and licensing. Widespread dissemination of information through local media and social networks about rare and endangered species, threats to biodiversity and methods to reduce environmental threats contributed to the restoration and conservation of nature in the project area. To develop interest, motivation and a spirit of cooperation, the project organized excursions to the mountains, established tree nurseries, and held art competitions for schoolchildren.

Wildlife Without Borders installed up to 50 camera traps, carried out field research on the number and habitats of snow leopards and assessed their survival conditions. The study covered habitats near the country's largest city, Almaty. The scientific data were used to raise public awareness of the snow leopard, and included festivals and events for youth, art competitions and field trips. Proposals were developed to improve the ecological connectivity of snow leopard landscapes between the Tien Shan and Dzungaria.

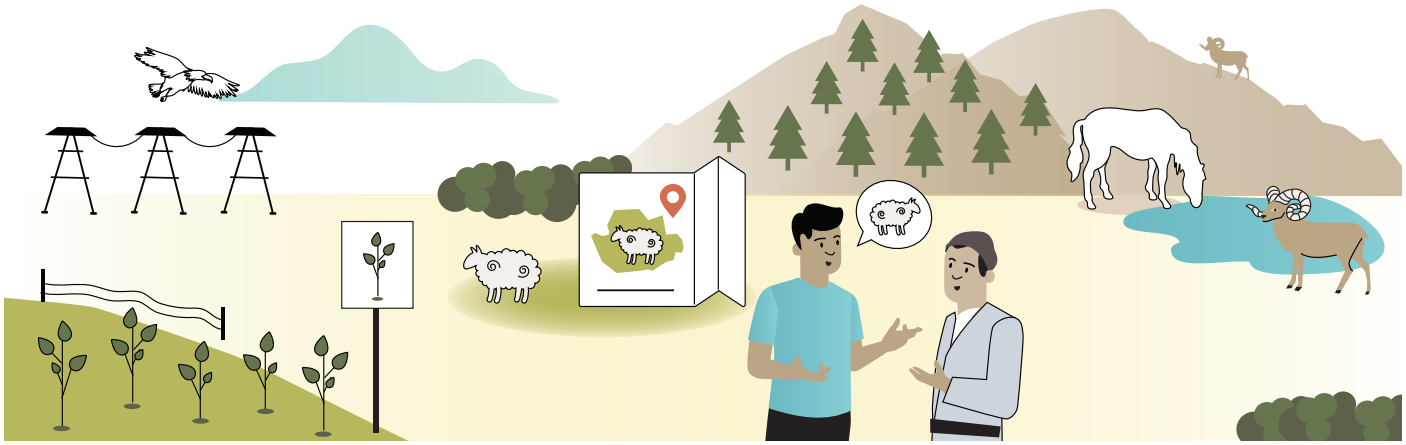
The **Association of Ecological Organizations** of Kazakhstan helped raise awareness among the population and tourists in the Almaty province on the conservation of unique biodiversity, , encouraged community members and local authorities in creating conditions for ecotourism, and in monitoring and reducing pressure from mass tourism.



The **Association for the Conservation of Biodiversity of Kazakhstan (ACBK)** conducted research on the Semirechensk salamander, an endemic amphibian species (*Ranodon sibiricus*) in Dzungaria, on the border with China, and participated in the conservation efforts with the Koksu nature reserve and other protected areas. Pasture use and nature management practices have been improved. In the same region, the **Republican Association of Hunting Farms (Tabigat)** enforced hunting regulations in accordance with legislation, supported the development of equestrian tourism, and monitored ungulates and snow leopards.

The **Biodiversity Conservation Fund of Kazakhstan** along with **Ugam**, a local CSO, supported the development of ecotourism, agrotourism, and the raising of environmental awareness and responsibility among the population living nearby the nature reserves and KBAs in the Western Tien Shan. A catalogue of eco-trails and ecotourism services has been produced, sites are equipped with waste collection bins and guesthouses with renewable energy sources. Regional meetings were held to promote cross-border cooperation.

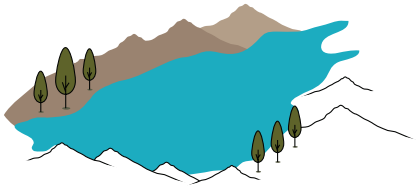
The **Socio-Ecological Fund** assessed the potential for ecotourism development in protected areas of southern Kazakhstan, developed and presented alternative approaches for ecotourism development and recommendations for filling gaps in legislation to government agencies. The **Karaganda Ecological Centre** contributed to the restoration of the ecosystem of the Yesik River and Lake in the Almaty nature reserve. **Zhasyl Azyk**, a local CSO, in partnership with Sairam-Ugam National Park, introduced integrated pasture management to reduce pressure and damage from overgrazing. Other CEPF partners implemented integrated pasture and forest management in Narynkol, and helped build the capacity of the Kolsai Lakes national park to monitor and protect rare animal and plant species and develop ecotourism routes.



The **Biodiversity Research and Conservation Centre**, in partnership with **Earth Island Institute**, conducted studies on the flight paths of globally threatened eagle species and is working with energy companies and government agencies to promote the adoption of energy infrastructure standards and good practices that reduce accidental bird mortality.

Other local CSOs and farms worked with CEPF to restore degraded pastures, establish tree nurseries, help communities develop alternatives and improve access of wildlife to water sources in key biodiversity areas of south-eastern Kazakhstan, including in the Karatau, Toraigyr, Charyn and Altyn-Emel Mountains. Actions have been undertaken to record and conserve the argali, eagle, wild apple and apricot.

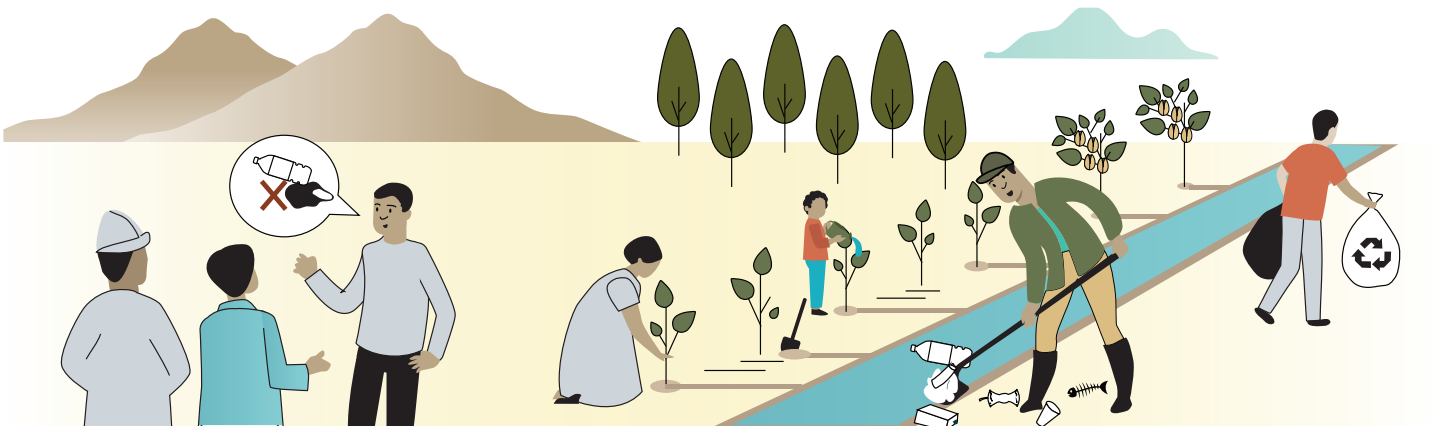
Kyrgyzstan



- Greatest diversity of environmental and other civil society organizations in Central Asia, with active participation of women and local communities
- Political, public and academic attention on pastures, forests, clean air and energy, disaster risk reduction, and sustainable development of mountains
- Active role of CSOs in legislation review, participation in public ministerial councils, introducing innovations and promoting creative economy and industries
- Frequent revisions in environmental regulations and institutions, new legislation on micro-reserves, geoparks and glaciers

A local civil society organization, **Clean Issyk-Kul**, supported by CEPF, partially cleaned the largest mountain lake of Kyrgyzstan, Issyk-Kul, of abandoned illegal fishing nets and plastic waste from tourism, and carried out environmental awareness and monitoring. The **Kyrgyz Union of Pastoralists** involved local communities in restoring degraded pastures and habitats for priority species. The **Wildlife Conservation Society of Kyrgyzstan** implemented a project called "Restaurant" for scavenging birds in the western part of Issyk-Kul.

The **Rural Development Fund (RDF)** is working with local governments, communities and organizations in the Chychkan Valley to raise awareness of the value of biodiversity, develop management plans, and provide micro-grants to demonstrate and implement good practices. The Kyrgyz Pasture Association and other community organizations are creating small artificial glaciers in high mountain areas of the country to provide additional water for pastures during the dry season and to reduce pressures on water resources. The **American University of Central Asia (AUCA)** is also working in the Chychkan and Suusamyr valleys to optimize pasture use, develop grazing plans, and protect KBAs and unique flora from livestock.



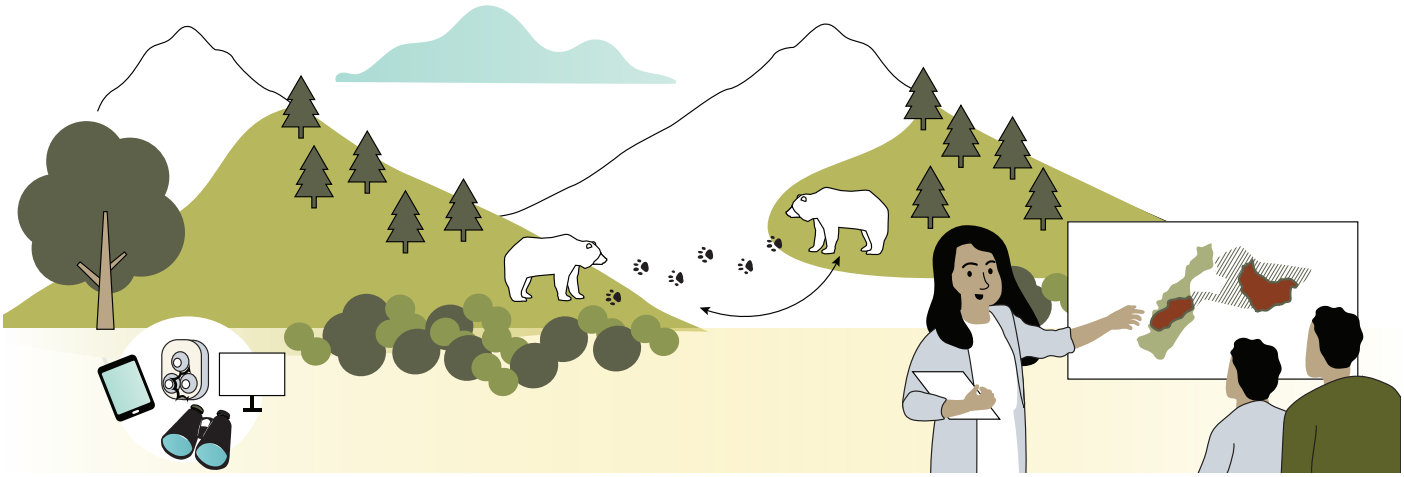
Orchun, a local CSO, has carried out extensive work to restore endemic flora and fauna in southern Kyrgyzstan; to clean the Tar River, Lake Kulun-Ata and streams from pollution; and to improve the water supply to tree nurseries. Parallel work is underway to restore pastures and develop agroforestry.

The **Kyrgyz Association of Land and Forest Users (KALFU)** carried out activities to improve forest management in the Batken province in southern Kyrgyzstan, near the Surmatash nature reserve and the Uch-Korgon forestry. The Association conducted research and prepared information for the inclusion of wild almonds and apricots in the national Red List of Kyrgyzstan.

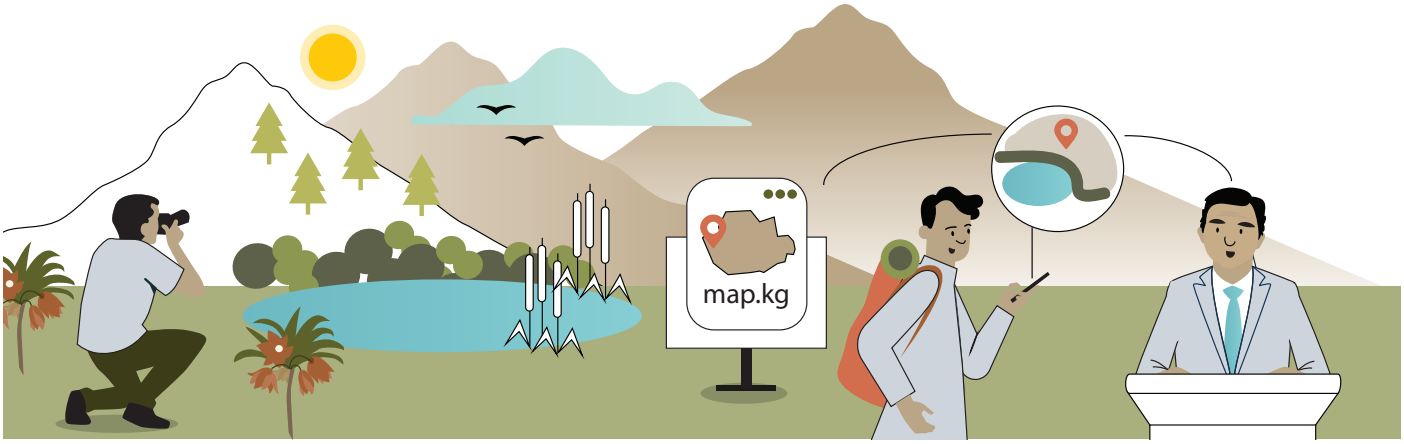
Leader, a local CSO, is promoting micro-reserves in Kyrgyzstan, and has already created five in a process involving women and young people in conservation and floodplain protection. Another local CSO, **Muztor**, is helping to develop alternative sources of income for communities living near the Sary-Chelek nature reserve in order to reduce pressures.

The **Global and Local Information Partnership (GLIP)** assessed the management effectiveness of the Kulun-Ata and Karatal-Zhapyryk state nature reserves and produced recommendations. Eco-festivals and conservation volunteer teams are being organized to reduce illegal poaching, while protected area staff are being trained in modern management plans and innovations.

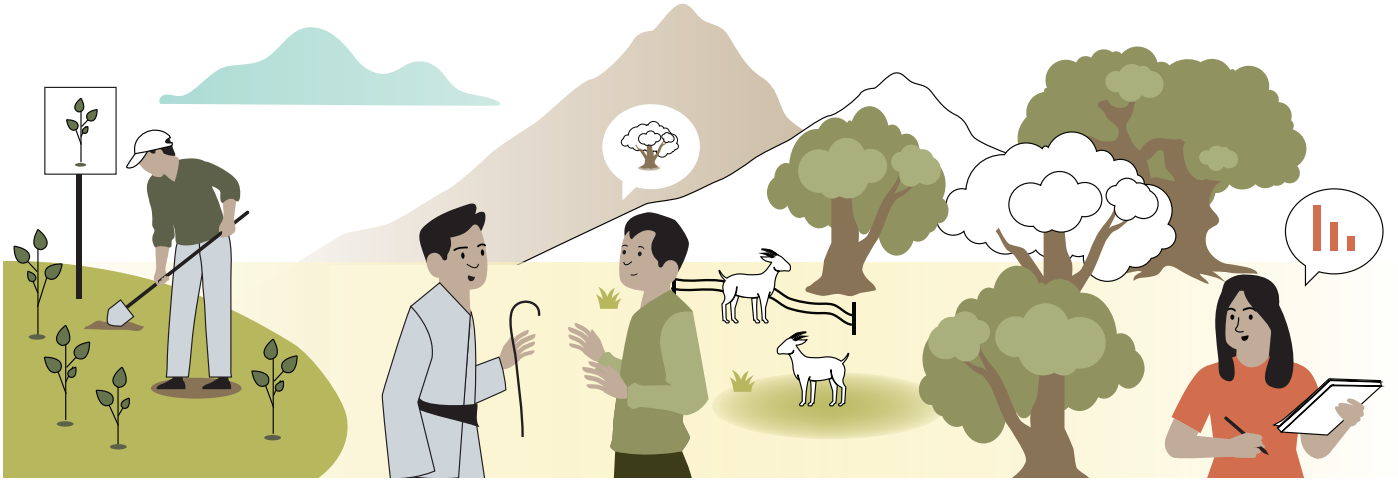
Nurmukhamed, a local CSO, has helped develop a small business for women's groups that involves planting, caring for and responsible harvesting wild apples, and restoring degraded pastures in southern Kyrgyzstan. Public awareness activities and eco-festivals were organized.



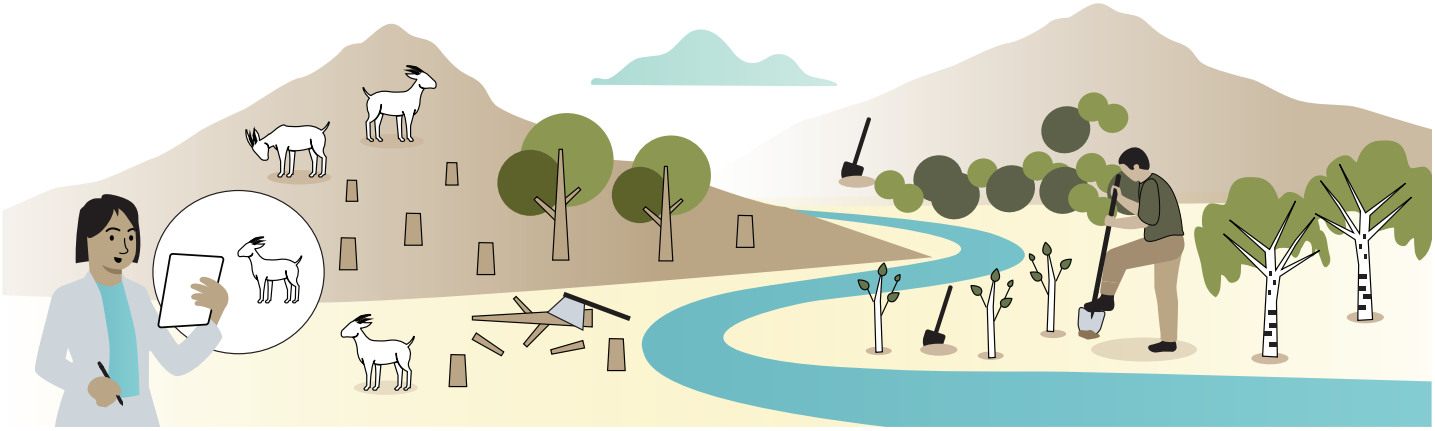
International CSOs are also involved in the implementation of CEPF projects in Kyrgyzstan. **Flora and Fauna International (FFI)** is monitoring the habitat of the endemic Menzbir's marmot in the Besh-Aral state nature reserve, training staff, and facilitating interaction with local communities to reduce grazing pressure and damage from extractive industries. The **Wildlife Conservation Society (WCS)** is implementing the Spatial Monitoring and Reporting Tool (SMART) in protected areas in eastern Kyrgyzstan, helping improve connectivity and create an ecological corridor, as well as providing technical assistance in modern monitoring techniques, and facilitating community engagement. **Zoï Environment Network** together with the **Osh Aarhus Centre** and state authorities held consultations on the establishment of a new national park in the Chon-Alai Valley, based on the KBAs, and prepared a Russian version of the IUCN tool for other effective area-based conservation measures (OECM).



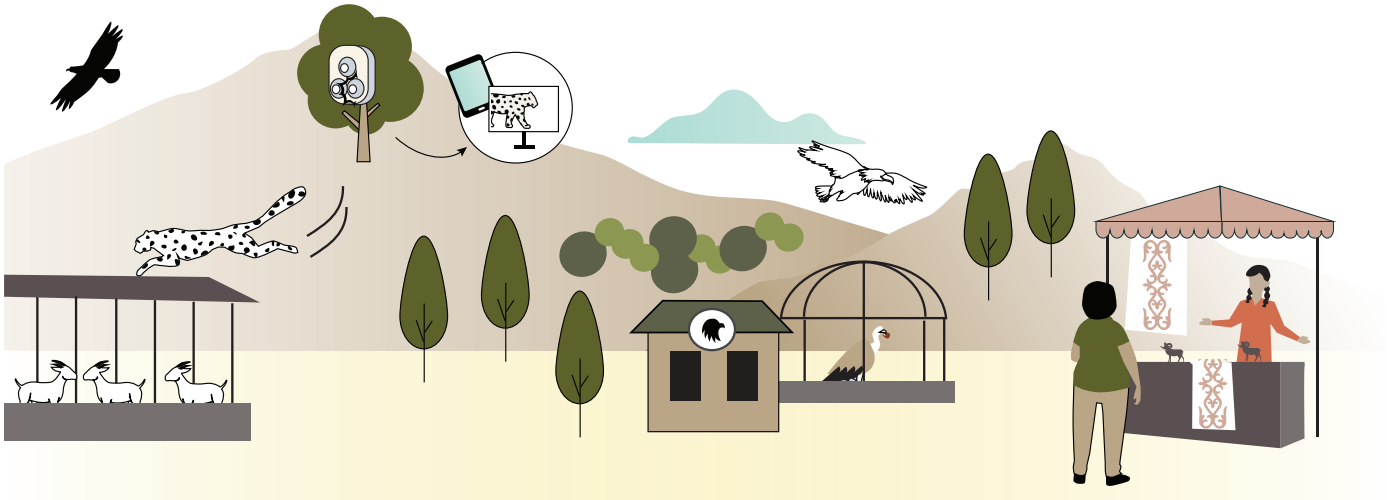
The **Union of Photojournalists of Kyrgyzstan** and **Eco-MiR** organized expeditions, exhibitions and lectures to raise awareness of key biodiversity areas in Kyrgyzstan, pollution and solutions at the national and local levels. Open and free photo database on KBAs, endangered and unique species and environmental issues in Kyrgyzstan is available through online mapping platforms (map.kg and ecomap.kg).



The **University of Central Asia (UCA)** facilitated training of local communities near the Sary-Chelek, Padysha-Ata and Kara-Alma state nature reserves on sustainable forest management and conservation of endangered wild apple and pear species. The status and distribution of these species were assessed and recommendations were made to improve the efficiency of reserve management. A local organization, **Lesik-Yug**, is restoring the key biodiversity area of Kyzyl-Unkur and working with local communities on the conservation and natural regeneration of walnut forests; low-impact forest pest and disease control methods; sustainable forest management; and the establishment of forest nurseries.

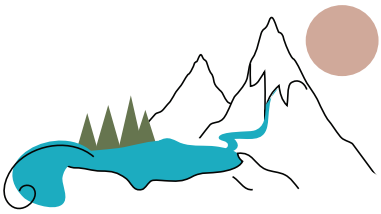


The **Green Energy Association** has assessed the effects of mining and overgrazing on the floodplain and mountain slopes in the Sumsar Valley in Chatkal. This assessment led to work on the conservation and restoration of endemic species of Knorring hawthorn (*Crataegus knorringiana*) and to the reinforcement of mountain slopes with wild almond and Tien-Shan birch plantations to reduce the risk of landslides and erosion. **Akmena** involved the local population to develop plans for the ecotourism and helped restore the ecosystems of the Chatkal damaged by extractive industries in the Kasan-Sai River. **Harmony Plus** involved local people in protecting wetlands and combating poaching and illegal logging.

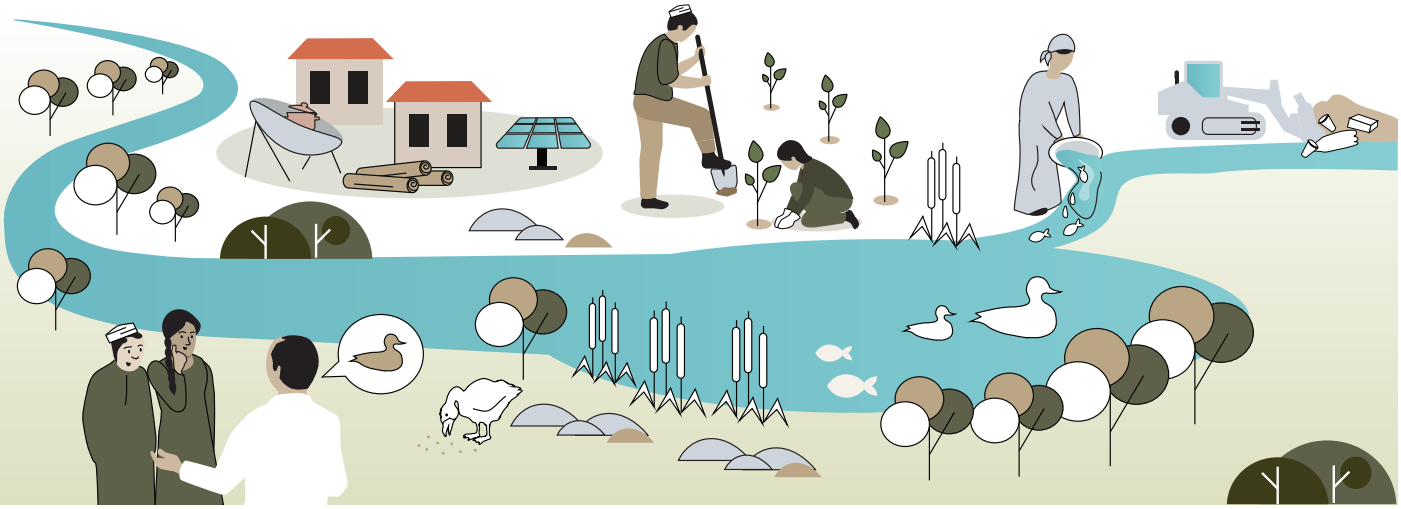


Several civil society organizations are working to reduce wildlife-human conflict. The **Bugu-Ene Foundation** supports the wildlife rehabilitation centre in Novopokrovka. The **Panthera** and **Ilbirs** work in the high mountain areas of Kyrgyzstan — snow leopard habitat — by monitoring, training herders and local communities, helping to build secure livestock pens, and using non-lethal methods to deter predators. These and other civil society organizations are also helping to develop alternatives to reduce local poverty and environmental pressures.

Tajikistan



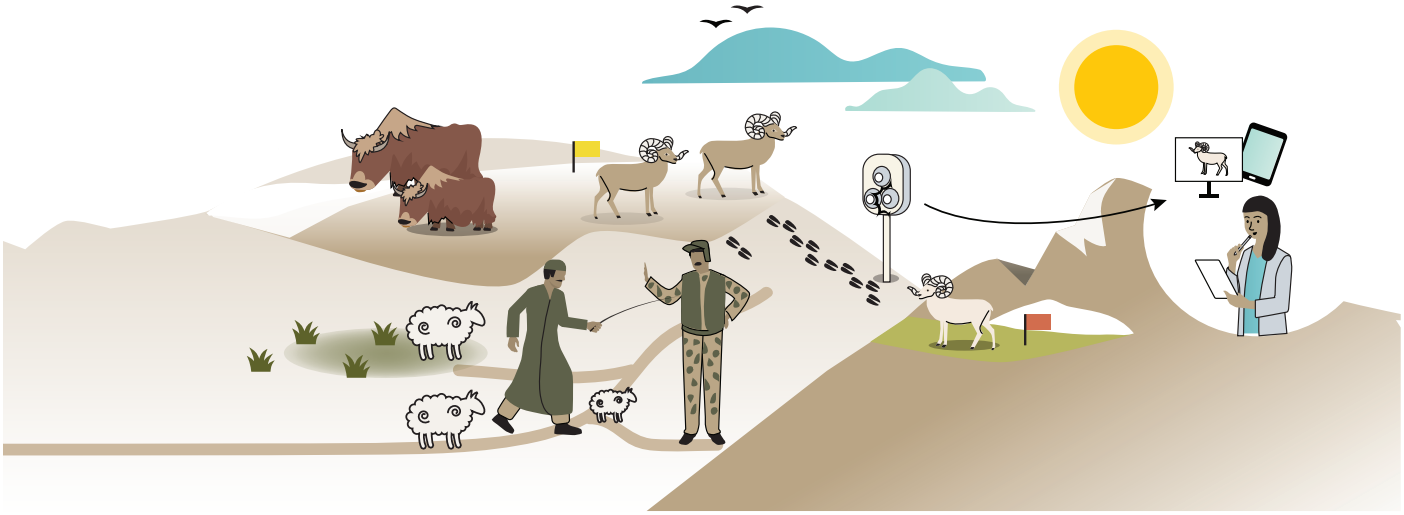
- The most mountainous country of Central Asia with low GDP, high labour migration and poverty
- Large numbers of grant projects and donor funding go to government agencies and state programmes, but the role and involvement of local CSOs is limited
- Important role of international organizations with project focus on climate change and water resources
- Women and youth organizations are interested and active in environmental issues
- Weak organizational capacity and reporting difficulties for local CSOs



The **Youth Group for Environmental Protection (YGEP)** is actively involved in the conservation of the wetland and key biodiversity area in the upper part of Bakhri Tojik reservoir on the Syrdarya River (formerly known as the Kairakkum reservoir) in northern Tajikistan. The scope of work entails the restoration of natural channels in the river floodplain and the preservation of riparian and reed vegetation, the feeding and monitoring of migratory birds, the breeding and stocking of local fish, the creation of forest protection strips, and environmental education for local communities. Proposals have been made for the creation of a local nature reserve. In southern Tajikistan, **Olima**, is working to restore and preserve natural lakes in the Tigrovaya Balka reserve in the delta of the Vakhsh River, an area inscribed on the UNESCO World Heritage List in 2023. The Youth Eco-Centre provides technical assistance and training for local population in the construction of energy-efficient stoves, solar greenhouses and installations to reduce the environmental impact on the reserve's riparian forests.

The **Association of Nature Conservation Organizations of Tajikistan (ANCOT)** worked with the **Wildlife Conservation Society (WCS)** to improve participatory conservation management between the private sector and local communities in Baljuvan in southern Tajikistan. Hunting reserve staff have been trained in better management, species monitoring and community outreach, and helped to develop alternatives. The local organization, **Nature Protection Team**, raised awareness among local populations and authorities about rare and endemic plant species in the same area, and promoted joint research between Tajik and Polish ecologists to improve scientific knowledge. The local organization, **Noosfera**, helped improve mountain forests in Sangvor and Sarikhosor in central Tajikistan for the conservation of wild fruit and high-value flora species through the establishment of ex-situ and in-situ nurseries and public awareness programme. With the support of **Ikhtidor**, similar work has been carried out in Darwaz to conserve endangered and endemic flora species — the Darwaz hawthorn (*Crataegus necopinata*) and Bukhara almond (*Prunus bucharica*).

In southern Tajikistan, a local women-led CSO, **Dunoyi Mukhabbat**, has been working to conserve biodiversity and genetic resources on the Khojamumin salt mountain. It has worked with women's groups and established cooperation with the forestry for more efficient management. In the same area, the **Youth Eco-Centre** helped establish tree nurseries and sustainable development plans to reduce local environmental pressures.

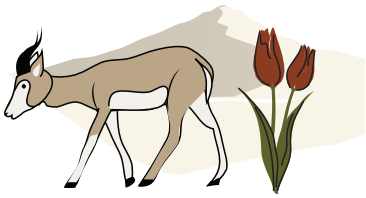


In the highest mountain part of Tajikistan, the Pamirs, the **Aga Khan Network** with support from the CEPF helped improve the management and monitoring of an ecological corridor between the high-mountain Zorkul State Nature Reserve and the Tajik National Park. Wildlife camera traps, population and migratory routes assessments for argali and snow leopards, and work with local hunters, herders and authorities on sustainable environmental management were carried out. In parallel, **Flora and Fauna International (FFI)** is building the capacity of civil society in Tajikistan to improve the implementation of conservation projects in key biodiversity areas.

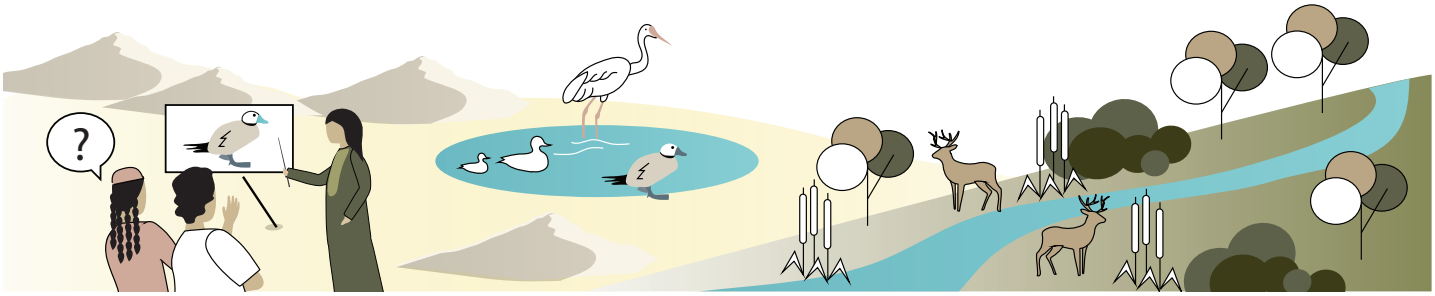
The local organization, **Khunoi Pamir**, initiated the restoration of a natural grove of endemic pear species (*Pyrus cajon*) in the Shahdarya River valley in the Pamir. In the Vanch River valley, **Agro-Ecology Zarzamin** worked to preserve the genetic diversity of rare flora species and to reduce threats to natural groves of sea buckthorn, rose hip, wild apple and almond trees. **Ganji Tabiat**'s efforts improved the conservation prospects of the Tajik pear (*Pyrus tadshikistanica*) and wild apple (*Malus sieversii*) by establishing micro-nurseries in the Childukhtaron and Dashtijum districts and storing seeds in the Kulob Botanical Garden.

Plateau Perspectives helped develop co-management of the recently established Yagnob National Park in central Tajikistan, train staff in wildlife monitoring and ecotourism. **Zoï Environment Network** organized a series of meetings for CSOs from all regions of Tajikistan to facilitate experience exchange, discuss methods and channels for communicating and raising awareness on biodiversity. Zoï also prepared information products and posters, including for the International Day of the Markhor (24 May) and the International Day for Biodiversity.

Turkmenistan



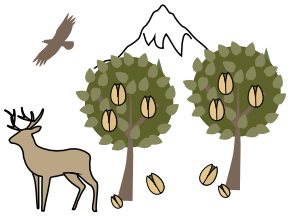
- Leading role of the state in planning, financing and implementing environmental and conservation measures
- Limited role of international funding and projects
- All projects by local and international civil society organizations must be approved by the Ministry of Foreign Affairs and other relevant state authorities
- Local CSOs and scientists are very active in CEPF grant programme in the Koytendag Mountains, species monitoring and wetland conservation



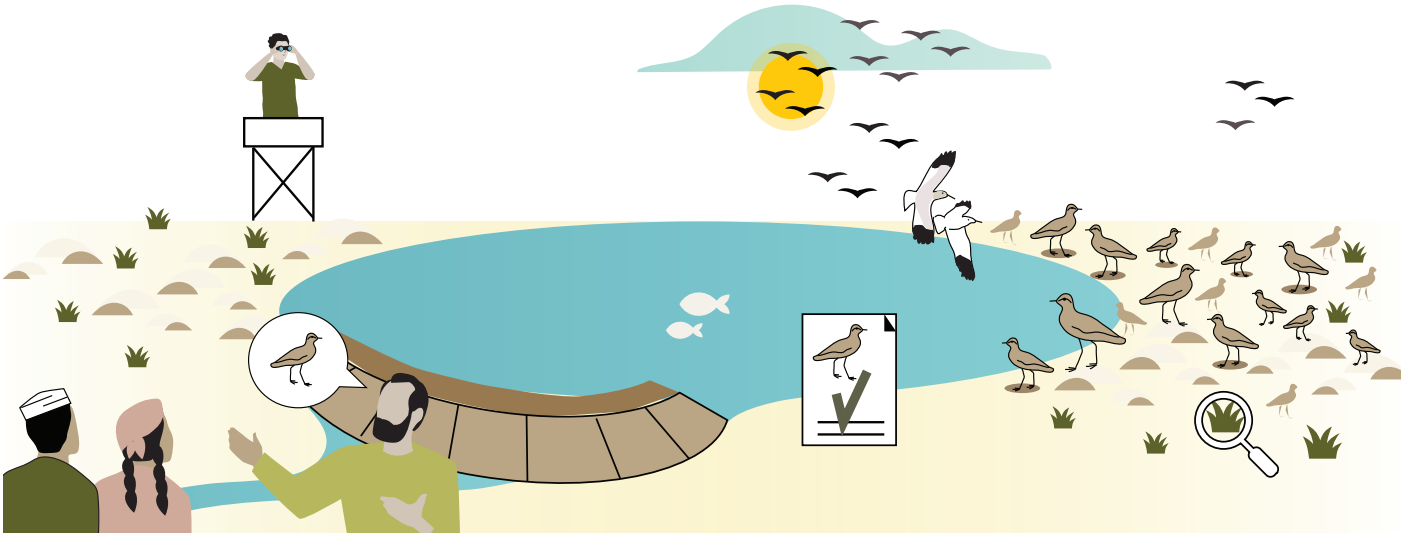
To conserve riparian ecosystems and species, the **Turkmenistan Nature Conservation Society** helped improve conditions for wildlife and fish in the Amu Darya, conducted surveys of the Bukhara deer (Cervus hanglu) population and habitats, and delivered lectures on conservation and reduction of threats. The **Agzybir Khereket** conducted the monitoring programme for migratory birds in the Talimarjan-Kelif-Zeid wetlands important for the Eurasian-African flyway, prepared reports and proposals for the establishment of a hunting farm in Lebap province of south-eastern Turkmenistan, and involved the local population in the protection of biodiversity.

In the Koytendag (Kugitang) Mountains in eastern Turkmenistan, several CSOs, in close cooperation with government agencies, are working in different niches to protect the unique biodiversity. The **Centre for Large Landscapes Conservation** has helped improve the management of the Koytendag state nature reserve by introducing the SMART monitoring, engaging with local communities on grazing issues, and preparing an assessment for the site's nomination as a UNESCO World Natural Heritage Site. The CSO **Tebigy Kuwwat** raised awareness of the ecological value and responsible tourism in Koytendag, where overtourism has recently become a major issue due to the massive influx of visitors. The analytical-and-expert centre **Jananch Vepa** organized training for the staff of the Koytendag reserve on communication with the local population and environmental awareness. The **Obadeskahyzmat** involved women's groups in the establishment and maintenance of pistachio plantations and helped improve recreational and agricultural conditions for people living nearby the Koytendag reserve. Jointly CSOs also contributed to the improved water supply.

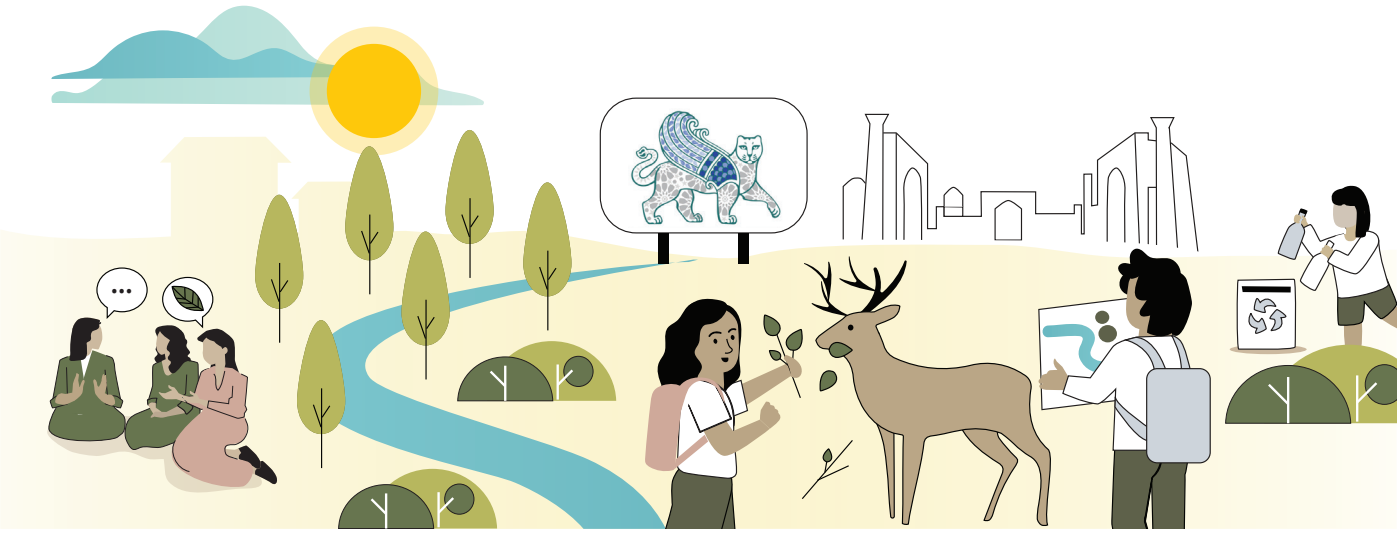
Uzbekistan



- Most populous country of Central Asia
- Reforms in environmental management system, expansion of the protected areas, establishment of the Green University of Central Asia
- Hosting the 14th Conference of the Parties to the Convention on Migratory Species and plans for CoP-20 CITES
- Environmental topics are covered in the mass media and by public activists
- Lack of diversity and weak capacity of local environmental CSOs compared to population growth and needs
- Procedures and reporting for local CSOs remain complex



The **Uzbekistan Society for the Protection of Birds (UzSPB)** monitored the sociable lapwing (*Vanellus gregarius*), an endangered migratory bird species, at the Talimarjan reservoir. Based on scientific data and observations, local population and authorities were informed and recommendations for the reduction grazing pressures and the establishment of a local nature reserve have been elaborated.



In the Zaravshan River basin, near Samarkand, **Zoï Environment Network**, in cooperation with state authorities, organized events to celebrate the International Day for Biodiversity and to exchange experiences. Activities included the planting of seedlings, clean-up, art competitions for youth in the Zaravshan and Amangutan national parks. Information materials on biodiversity and the environment of Uzbekistan were prepared and presented at the 14th Conference of the Parties to the Convention on Migratory Species held in Samarkand in 2024. The CEPF and its partners participated in this conference. Together with local CSOs, including **Eco-Maktab**, environmental awareness campaigns were carried out in Khiva, Tashkent and the Chatkal Mountains.

Under the umbrella of the **Michael Succow Foundation**, local environmentalists, scientists and journalists studied the population and habitat of endemic species of lizards — Strauch's lizard, the Ferghana sand lizard, and Rustamov's gecko — in the Yazyavan sands, a local nature monument, located in the centre of the densely populated Ferghana Valley, currently under growing pressure from sand extraction, agricultural expansion and waterlogging. Proposals based on scientific data have been developed to conserve habitats and unique species.

The **Ecological Movement of Uzbekistan** contributed to nature conservation and restoration of juniper forests and sustainable forest management in the Nuratau Mountains in central Uzbekistan. **Zhonly Tabiat** has helped improve environmental knowledge and introduce alternative livelihood options in the Nuratau Mountains and the buffer zone of the Gissar (Hissar) state nature reserve to reduce environmental pressures on local natural resources and habitats of rare and unique species.

Conclusions and recommendations

Zoï Environment Network has been collaborating with CEPF since 2016, and has been engaged in environmental information in Central Asia for more than 15 years. In 2023–2024, Zoï organized meetings, roundtables and celebrations of International Biodiversity Days in several Central Asian countries with non-profit and scientific organizations, activists, youth and government agencies to share experiences and information on conservation project results, and to increase the engagement of stakeholders in biodiversity actions.

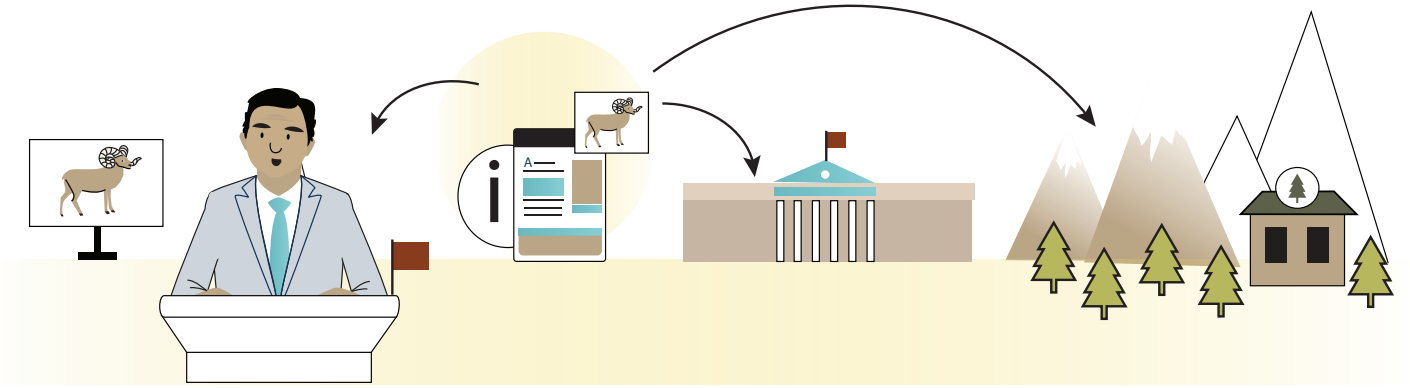
Many of the examples of CEPF projects presented in this review were showcased and discussed at these meetings and on the sidelines of the 14th Conference of the Parties to the Convention on Migratory Species in February 2024 in Samarkand. An online survey was conducted in summer 2024 to gather inputs from civil society organizations and other partners under the 2024 International Day of Biodiversity theme, "Be Part of the Plan". The 20-question survey was distributed to about 200 potential respondents, most of whom have practical experience and knowledge of biodiversity in Central Asia.

The main areas of activity of civil society organizations and CEPF partners are the following:

- Wildlife monitoring, reporting, recommendations;
- Environmental information, awareness raising, youth and women engagement, education;
- Training and capacity development for protected areas, higher efficiency of conservation;
- Sustainable rural or mountain development, local community development.

Other action areas include:

- Provision of alternative income and renewable energy to reduce pressures on wild nature;
- Regulation of livestock grazing, sustainable land use, erosion control;
- Forest- and tree-related interventions, sustainable forestry and non-timber forest products;
- Practical measures — nurseries, wildlife rehabilitation centres, micro-reserves, clean-up actions;
- KBA/IBA mapping, environmental impact assessment and analysis, safeguards ;
- Journalism, social media campaigns, online maps and web stories.



Many participants in the meetings and online survey recognized the valuable role of activists, scientists, local communities and non-governmental organizations in conserving biodiversity. The role and engagement of CSOs in conservation can be enhanced through training in key biodiversity areas, wildlife monitoring tools and techniques; assistance with grant proposal writing and fundraising; networking and collaboration; and integration of CSO-focused components in donor projects and programmes.

The quality and availability of biodiversity data and information in the countries of Central Asia leaves much to be desired. Nevertheless, many civil society organizations present or exchange data and reports on biodiversity with environmental authorities and science institutions, and are willing to participate in the formulation and implementation of the updated national biodiversity targets and strategies.

The concept of Key Biodiversity Areas, used by CEPF, GEF, IUCN and the Convention on Biological Diversity, is still little known and seldomly used at the local level, and there are gaps in regulations related to KBAs. Science and public organizations are, however, increasingly using this concept in Central Asia.

From Zoï perspective the following suggestions could be made for CSOs to improve coordination and engagement, raise the awareness of local authorities and communities of the issues and actions needed to conserve unique biodiversity.

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Information sharing and coordination with government agencies. CSOs can:

- Inform the Akimat, Hokimiyat, or Jamoat (local authorities) about the conservation project so that they are aware of it and can engage in or support its implementation;
- Provide briefings to relevant government agencies (Ministry or Committee of ecology, protected areas);
- Share recommendations, photos, information and training materials and scientific data (if any) generated by the project for further use in official reporting, scientific work and capacity building.

Environmental and biodiversity data gaps and knowledge dissemination. CSOs can:

- Engage with local scientists, promote publication of project results in science journals, and use results in national Red List updates and in environmental maps and assessments;
- Involve ornithologists, ichthyologists, botanists, zoologists and other experts to assess the state and dynamics in species and KBAs, and encourage scientific documentation and the popularization of science;
- Organize presentations, roundtables, and conferences, and facilitate interviews and the participation of journalists.

Engagement and coordination with conservation partners. CSOs can:

- ☐ Use organizational and donor branding guidelines, identity and logos in printed materials, presentations, posters, videos, and articles produced under projects; and link projects to international initiatives;
- ☐ Coordinate with partners and exchange information regularly with other grantees working in the same geographic area or on the same group of species;
- ☐ Prepare short videos and leaflets on project activities and results, and disseminate through social networks; distribute printed leaflets and posters to the local population who may not have access to the Internet, regular power supply or printing facilities;
- ☐ Create animations, cartoons, comics and infographics on thematic issues;
- ☐ Create interactive thematic websites, micro-sites, and online story maps and web scrolls on species, KBAs, environmental challenges, and solutions;
- ☐ Keep project publications and regularly update news pages and websites on relevant events;
- ☐ Participate in national and regional meetings conducted by international organizations or governmental institutions to present project results and promote experience exchange;
- ☐ Organize thematic conferences on priority species or geographic areas;
- ☐ Hold public hearings with the participation of the local population, local authorities, and experts;
- ☐ Sponsor clean-up days, public engagement events, eco-festivals and nature trips;
- ☐ Conduct activities for schools and youth;
- ☐ Celebrate international days (biodiversity, birds, snow leopard, markhor, etc.).

CRITICAL ECOSYSTEM PARTNERSHIP FUND

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