



Mongolia's diverse landscapes provide habitats for a large number of plant and animal species. This biodiversity forms the basis of Mongolia's economy, culture and development. To conserve biodiversity, the government has established a system of protected areas (PAs). However, climate change and the exploitation of natural resources are threatening the biodiversity and ecosystems of PAs.

On behalf of the German Government the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and its SPACES project assist the Ministry of Environment and Tourism and its Department for Protected Area Management in the efforts to improve the framework conditions for the sustainable development and management of its PA system. The project creates the prerequisites for environmentally responsible PA management, aiming at conserving biodiversity and safeguarding livelihoods.

Supporting Protected Areas for the Conservation of Ecosystem Services (SPACES) in Mongolia

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Currently, 21% of Mongolia are protected under IUCN categories I-V. The 118 protected areas (PAs) encompass a wide range of ecosystems and habitats that provide critical ecosystem services for the country.

But rising average temperatures that reduce permafrost, increasing extreme weather events, and changing rainfall patterns are threatening the country's most valuable life support systems.

Well-managed PAs are more resilient to natural hazards and offer opportunities for climate change adaptation. Given the challenges ahead, substantial policy and management efforts are required to strengthen Mongolia's unique mosaic of PAs.



An increasing number of people from within the country but also from all over the world are keen to experience the landscapes and natural treasures of Mongolia along with local culture and history. The combination of nature and culture is one of the fastest growing tourism segments worldwide.

About 80 % of Mongolian domestic and international tourism takes place in or around the PAs. Yet, visitors' awareness on how to avoid destructive behavior in these sensitive ecosystems needs to be fostered. This concerns, inter alia, littering, removing or damaging plants, camping outside designated spots, etc.

The PAs of Mongolia provide opportunities to train competent tourism staff, closely cooperate with local stakeholders and ensure a high quality visitor experience. This will make the country competitive in the international tourism market and improve Mongolia's proud national identity worldwide.



Not all benefits from natural ecosystems are ecologic or economic. Healthy environments provide humans with a wealth of cultural, psychological and spiritual links to the natural world. For example, the Khan Khentii Mountains are associated with Chinggis Khan and one of the first protected areas worldwide.

Unfortunately, traditional sustainable practices and spiritual attachment to nature are getting less and less important, while unsustainable practices and use of natural resources are on the rise.

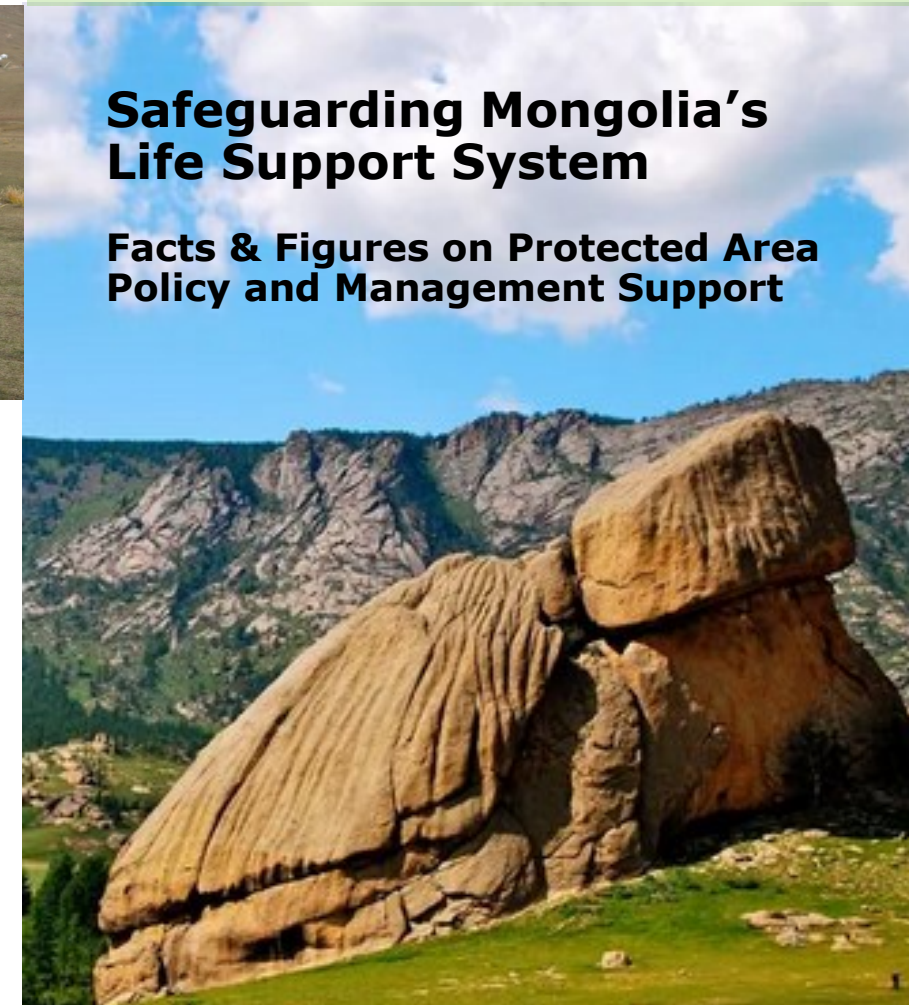
Therefore, cultural benefits and the importance of cultural identity and heritage are aspects that deserve increased attention in PA management. Cultural sites within PAs can be integrated in protection efforts. People only protect what they know. The PAs can revive people's sense of place and their acceptance of protection efforts.



Mongolian PAs have an important value for scientific research and environmental education. The ones most strictly protected in terms of access present excellent circumstances for studying ecological processes and interactions. Khan Khentii Special Protected Area, for example, is managed for wilderness preservation and research as there is no human population to interfere.

But local action research in PA buffer zones so far has not been a priority of PA management. Chances for testing adapted crops and trees, haymaking or rotational grazing, breeding of high quality livestock, or alternative income generation activities are rarely implemented.

Among the local population in and around PAs, such efforts could help create a feeling of ownership and motivation regarding protection objectives. In addition, PAs also offer hands-on opportunities for environmental education of children and youth.



Safeguarding Mongolia's Life Support System

Facts & Figures on Protected Area Policy and Management Support

1

Protected area policy & management support



Protected areas (PAs) are places where conscious efforts are made to preserve wild species and their habitats. They also provide irreplaceable eco-system services that have high economic value for Mongolian communities and enterprises in terms of food security, animal husbandry or agricultural and forestry products, building or handicraft materials, income opportunities, etc.

Without PAs, Mongolia's economic and ecological life support systems will not survive. Yet, they need more political recognition, suitable administrative structures, enforced legislation, appropriate staffing and funding, and a focus on quality rather than quantity.

Best practices worldwide demonstrate that community participation and the step-by-step creation of co-management structures can help gain long-term acceptance of protection efforts among people. Strong ownership and commitment by all stakeholders will strengthen the role of Mongolian PAs as natural life support systems for the benefit of the entire country and its population.

2

Grasslands & pasture management



Mongolian grasslands are home to a huge diversity of plants and wild animals. They are the most important life support system for traditional pastoralists, and an important economic factor for the local and national economy.

However, grasslands are increasingly threatened by over-exploitation through ever growing numbers of livestock and unsustainable pasture use. Until the early 1990s, the livestock population never exceeded 25 million animals, with a limit of 18% goats in the herd. Today, 33 million goats roam Mongolia. The average carrying capacity is exceeded by 400%. This trend makes nomadic farming impossible, and decreases the economic potential of pastures.

The PAs aim at conserving valuable meadows and steppes. Collaborating grassland users can act as role models in the revival of nomadic pastoralism by honoring the historical carrying capacities within protected areas.

3

Forest lands & deforestation risks



Forestlands are important habitats as they act as wind breakers, help stabilize the soil and increase its water retention capacity. The forests of Mongolia are also an important source for timber and non-timber forest products (NTFP).

Between 1990 and 2010, Mongolia lost 13% of its forest cover. Tree cutting for timber and firewood is one reason. The alarming decrease of permafrost areas results in a lack of water. Overgrazing in forest areas leads to damage and stress that prevents forests' natural regeneration.

Mongolian PAs have a strong forest component that protects and adapts them to changing climate conditions. An emphasis on law enforcement and environmental education can help reduce the loss of Mongolia's remaining forests and water resources.

4

Soil resources & erosion prevention



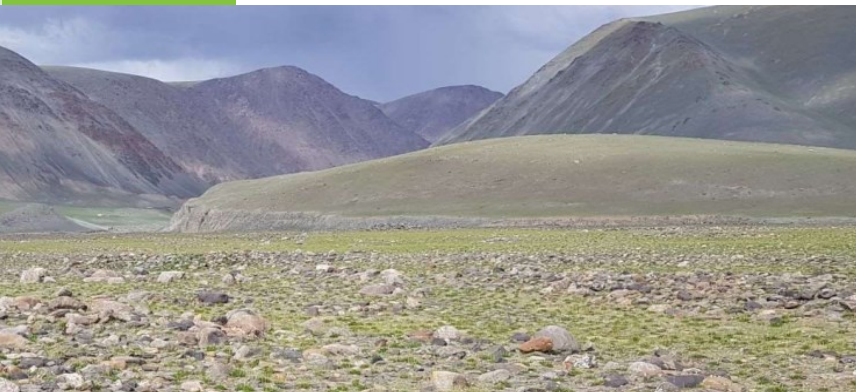
In Mongolia, pristine grass and forest steppe ecosystems have generated productive soil that supported nomadic pastoralists for centuries. Without the cover of plants and stabilized roots, soil dries out and is swept away by wind and water. Resulting soil erosion is a factor for the decreasing productivity of land.

According to the Mongolian Soil Science Society, an estimated 30-50 tons of soil has been lost to wind erosion over the last 30 years. Almost 75% of the arable land shows signs of degradation.

The PA system, including its buffer zones, can play a key role in demonstrating good practices for reducing the loss of soil. A strengthened landscape and land use approach and a prevention of soil pollution will be beneficial to reduce the loss of the country's vital soil resources.

5

Water resources & catchment area protection



All life ultimately depends on fresh water. Rivers and lakes are fed by rain, snow, permafrost melt, and groundwater. Fresh water provides drinking water, irrigation, and groundwater recharge as well as fish and other resources.

Over the past 25 years, more than 1,200 rivers and 2,600 lakes have dried up in Mongolia. The overuse of pastures and the loss of forest land gradually reduce the water-holding capacity of the landscape. Mongolian water systems greatly depend on the prevention of quick run-offs, which humans often neglect. Hence, a lot of water is wasted.

Mongolian PAs in the upper river basins put watershed protection and river basin management high on the agenda. The Gorki-Terelj and Khenti PAs are a case in point - without them the capital Ulaanbaatar would be without crucial, life-supporting water.

6

Plant & animal biodiversity protection



Mongolia has 764 known species of fish, amphibians, reptiles, birds and mammals, and at least 3,127 species of vascular plants, more than 12 rep. 197 of which exist in no other country.

But the country's biodiversity is decreasing at an alarming rate, e.g. 48 animal species are threatened, among them iconic ones such as Saiga, Mazaalai, or Khulan. Loss of biodiversity has negative implications on economic growth and local livelihoods as pollination by insects, breeding grounds for fish, medicinal plants, and the pool of genetic varieties are badly affected.

PAs function as a safety net against the loss of biodiversity. Rangers often use the PAs for outdoor environmental education in cooperation with green schools, eco-clubs, etc.