BEST OF THE WILD: WILDLIFE CONSERVATION SOCIETY and the
EASTERN STEPPE of MONGOLIA
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With its vast open plains, rolling hills and pristine wetlands, Mongolia’s Eastern Steppe is one of Asia’s last grassland wildernesses.

Great migratory herds of Mongolian gazelle roam here with grey wolves, Siberian marmots, eastern moose, red deer, roe deer, corsac foxes, Pallas’ cats, and Daurian hedgehogs, alongside six of the world’s 13 crane species, and nesting populations of golden eagle, steppe eagle, saker falcon, Amur falcon, red-footed falcon, lesser kestrel, and black vulture. Globally important populations of whooper swan and swan goose grace its clear lakes, while six-foot taimen—a trout called “river wolf” by local people—swim its rivers.

At 110,425 square miles—more than twice the size of New York State—most of the land on the Eastern Steppe is government-owned pasture used by the 200,000 nomadic herders living in small communities dotted across the landscape. These pastoralists depend directly on the fragile steppe landscape and its many ecosystem services—from grass to water to wildlife—and their low population density and traditional respect for nature have long left wildlife with the habitat they need to survive and flourish.

Unfortunately, illegal and unsustainable hunting by urban-based traders has depleted wildlife populations across the steppe. Expanding livestock production and mining, which brings new roads, railroads, and other barriers, prevents free movement of Mongolian gazelle and other migratory species. Since entering a free market economy, the number of herders and livestock has increased significantly on the Eastern Steppe—140% over five years—leading to pasture degradation and increased risk of disease interaction between domestic animals and the steppe’s wildlife.

WCS’s vision for conservation of the Eastern Steppe of Mongolia is that Asia’s last wildlife migration spectacle of over one million Mongolian gazelle thrives across the world’s largest intact temperate grassland, and a full assemblage of grey wolf, Siberian marmot, white-naped crane, saker falcon, Pallas’ cat and other wildlife species are sustained by a network of well-managed protected areas and communal lands. Two decades of leadership in understanding the steppe ecosystem and building constructive partnerships have positioned WCS to deliver on this vision in the coming decade with new investments of $20 million—just five cents per acre each year.
Eastern Steppe Landscape

Special protected areas
Community protected areas
Land cover
Ecclesial
Cropland/Rangeland
Recreational areas
Urban/built up areas
International boundary

Legend:

Background shaded represents topography
Lower Gradient of Human Influence
Higher

Site Scale Reference

New York, USA
Mongolia’s transition from Soviet-style socialism to a free market system in the early 1990s opened trade borders with China, fueling a commercial trade in wildlife across the country. Government resources have been inadequate to monitor trade and enforce hunting regulations. As a result, populations of grey wolf, Siberian marmot and other wildlife have plummeted; the marmot population alone had dropped from 6 million in 1990 to fewer than 500,000 by 2005.

Short-term economic needs are driving oil, coal, gas and mineral exploitation in the region, which is progressively dividing the grassland with roads, railroads, and fences that risk blocking gazelle migration. These graceful grazers are particularly sensitive to barriers. If the gazelle population is to be conserved, the steppe landscape must be maintained by limiting and carefully placing any roads, buildings and fences.

Plans to intensify livestock production and develop large-scale, crop-based agriculture will further fragment the landscape, leaving fewer refuges for gazelle and increasing competition between wild gazelle and domesticated livestock for high quality pasture areas. These encounters also allow diseases such as brucellosis and foot-and-mouth disease to pass from domestic livestock herds to gazelle. At the same time, traditional livestock grazing patterns have been disrupted as people congregate around small towns where they are closer to health care, education and livestock markets. This concentration of herders brings with it overgrazing, water pollution, and rangeland degradation.

Careful coordination between the private and public sectors, local communities and national government, conservation organizations and industry is necessary if we are to succeed in protecting the Eastern Steppe and managing it as a single, unified landscape for species that rely on vast tracts of continuous habitat for their survival. The steppe’s protected area system is neither large enough nor has sufficient government-dedicated resources to ensure its survival. WCS understands these threats to the Eastern Steppe and has the vision, proven record of coupling field science with sound management, and strong local partnerships needed to conserve this unique landscape.
Our vision for the Eastern Steppe Landscape is that Asia’s last wildlife migration spectacle of over one million Mongolian gazelle thrives across the world’s largest intact temperate grassland, and a full assemblage of grey wolf, Siberian marmot, white-naped crane, saker falcon, Pallas’ cat and other wildlife species are sustained by a network of well-managed national parks and communal lands.

To attain this vision, we shall hold ourselves accountable for achieving the following over the next 10 years:

- The Eastern Steppe remains a stronghold for more than 90% of the world’s Mongolian gazelle, with a stable population of at least one million individuals migrating freely through their current range.
- Populations of Siberian marmot, red deer, and grey wolf are rebounding to pre-1990 levels and repopulating most areas where they were hunted out.
- Effective community management of livestock, wildlife and the grasslands upon which they both depend extends across the Eastern Steppe.
- Key livestock diseases, such as foot-and-mouth disease and brucellosis, no longer pose a direct or indirect threat to Eastern Steppe wildlife.

Freedom of movement across an intact grassland is essential for Mongolian gazelle to survive. Like the nomadic livestock herders who share their range, the Mongolian gazelle must move in search of new grass, constantly seeking feeding and breeding areas as the seasons change. Abundant herds represent a healthy grassland ecosystem; their status will be a key measure of our success. We will attain our conservation vision when:

- The Eastern Steppe grassland is managed to allow the nomadic movement of Mongolian gazelle and sustain the steppe’s full assemblage of wildlife.
- National and local governments effectively manage all of the protected areas across the Eastern Steppe and enforce environmental laws.
- The nomadic livestock herders of the Eastern Steppe are actively involved in creating community protected areas and sustainably using their natural resources.
- The grassland is managed to promote wildlife and livestock health, limiting the negative impacts of key diseases on human and animal health.
- Business practices of major industries in the landscape (oil extraction, mining, crop production) contribute to sustainable management of these unique grasslands and the wildlife populations and herder economies they support.

Clockwise from top: The Pallas’ cat is one of the many fascinating and little-known small carnivores that live on the Eastern Steppe. The white-naped crane is one of six species of cranes – out of 15 in the world – that can be found on the Eastern Steppe. Common blue butterflies grace meadows and lake shores of the grassland.
The opportunity to conserve this vast grassland and its wildlife is unmatched in Asia, and perhaps the world.

To ensure that the full assemblage of wildlife on the Eastern Steppe grassland is sustainably managed, WCS will:

- Train wildlife managers to develop and implement landscape-scale conservation.
- Monitor the numbers, movements, and distribution of key wildlife species to answer critical questions for land use planning and management.
- Identify critical habitats that need special protection.

To ensure that governments effectively manage the Eastern Steppe and enforce environmental laws, WCS will:

- Build and train multi-agency teams, including customs officials, trade authorities, inspection officers, border guards, and rangers, to monitor hunting and prevent illegal wildlife trade.
- Reform and strengthen wildlife and environmental protection laws.

To ensure that nomadic herders are actively involved in sustainable management of natural resources, WCS will:

- Guide livestock herder groups in creating community protected areas.
- Facilitate the development of community protected area management plans.
- Train community managers in wildlife monitoring and law enforcement.
- Promote the sustainable use of natural resources through focused environmental education in communities.

To ensure that co-management by national agencies and NGOs limits the negative impacts of diseases on human and animal health, WCS will:

- Design animal health interventions for both wildlife and livestock.
- Monitor livestock and wildlife disease, and develop solutions that mitigate the risks in both populations.
- Monitor wildlife health and highlight its importance to conservation, livelihoods, and human health.

To ensure that business practices support sustainable management of the grasslands and their wildlife populations, WCS will:

- Advocate for financial system reform to channel natural resource use fees (mining licenses, land leases/concessions, trophy hunting) to wildlife protection and landscape conservation initiatives.
- Raise private sector awareness of the ecological value of the grassland to ensure sustainable business practices and develop markets for ecological services.
- Explore biodiversity offsets by industry as a revenue generating opportunity for local people who are sustainably using the steppe’s natural resources.

Clockwise from top:

An illustration of WCS’s conservation strategy for the Eastern Steppe: actions (in yellow) work to counteract threats (in pink) to achieve explicit conservation outcomes (in green). A female reed bunting pauses to eat a small caterpillar. Riparian areas of the grassland provide habitat for Mongolian toads and other amphibians. The grey wolf is the apex predator on the steppe.
Help livestock herders establish and manage community protected areas

Train partners in landscape-scale planning

Facilitate re-direction of natural resource user fees to benefit wildlife conservation

Habitat fragmentation from oil, gas and mineral extraction

Grassland degradation from overstocking of livestock

Open grassland allows nomadic movement of 1.2 million gazelle

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Open grassland allows nomadic movement of 1.2 million gazelle
Nearly two decades of conservation success position WCS to achieve its vision for the Eastern Steppe of Mongolia. We have built strong relationships with the full range of stakeholders, from government agencies to international and national donors and NGOs to local communities.

Our rigorous and credible wildlife research has guided and reinforced management policies and strategies for the Eastern Steppe. Knowledge of Mongolian gazelle behavior helped modify land use plans. WCS surveys that detected a 50% decline in Siberian marmot numbers in just three years resulted in a national policy to ban hunting that was clearly unsustainable. Identification of Important Bird Areas revised national priorities for protected areas. Our work halted aerial applications of the rodenticide Bromadiolone in Mongolia, which was implicated in the deaths of cranes, falcons, and even children. In addition, our efforts to document illegal wildlife trade have prompted international recognition of the unsustainable hunting crisis in Mongolia and a ban on commercial hunting of Mongolian gazelle.

Working with herder community groups across the steppe since 2006, WCS has helped to establish 6,000,000 acres of community protected areas. Three communities have already detected significant increases in Siberian marmot numbers as a result of their protection efforts. More than 50 community rangers and leaders, and state protected areas rangers and enforcement officers have been trained in wildlife protection and management methods. These activities are building local demand for better national-level governance, increased transparency and natural resource management strategies that benefit rural Mongolians and the wildlife upon which they rely.
WCS IS GRATEFUL TO THE FOLLOWING FOR LEADERSHIP SUPPORT OF OUR WORK IN THE EASTERN STEPPE LANDSCAPE:

Edith S. McBean
U.S. Agency for International Development (USAID)
The World Bank Netherlands-Mongolia Trust Fund for Environmental Reform

WCS’S SUCCESS IN THE LANDSCAPE CAN BE ATTRIBUTED IN PART TO OUR STRONG LOCAL PARTNERSHIPS:

BirdLife International
The Dornod, Sukhbaatar, and Khenti Aimag
Environmental Protection Agencies
Eastern Mongolian Community Conservation Association
Eastern Mongolia Protected Areas Administration
General Police of Mongolia, Inspection and Monitoring Units
Mongolian Academy of Sciences
Mongolian Central Customs Agency
Mongolian Ministry of Food, Agriculture and Light Industry
Mongolian Ministry of Nature, Environment and Tourism
Mongolian State Border Defense Agency
Mongolian State Specialized Inspection Agency
National Science Foundation
National University of Mongolia
The Nature Conservancy
RARE Conservation
The Royal Society for the Protection of Birds
Smithsonian Institution
UNDP-GEF Eastern Steppe Biodiversity Project
United Nations Food and Agriculture Organization
U.S. Geological Survey
U.S. National Institutes of Health -- Centers of Excellence in Avian Influenza
University of Massachusetts, Amherst
University of Maryland
World Wide Fund for Nature-Mongolia

JUNE 2009

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