



Briefing Note
on Mongolia

BRIEFING NOTE ON MONGOLIA

INTRODUCTION

Mongolia is of global significance from a biodiversity perspective because of its location at the convergence of the Great Siberian taiga and the Central Asian steppe and deserts. The region is home to unique transitional ecosystems and assemblages of species. Mongolia's biological wealth is closely linked to its distinct cultural and human landscape. Because urban and industrial development is concentrated in less than 1% of the country's area (Anand, 2011), Mongolia's ecosystems are still relatively intact. However, because of the country's location and extreme climate, these ecosystems are sensitive to human interference.

DEVELOPMENT POLICY SETTING



The 1995 Environmental Protection Law is the bedrock of the country's legal framework for the environment. In addition, major environmental policies have been defined in the Principles of National Security, the Universal Sustainable Development Policy, the Principles of Sustainable Development of Mongolia in the 21st Century, Government Policy on Ecology and the Millennium Development Goals of Mongolia. These overarching policy frameworks establish mechanisms for:

- Limiting environmental pollution and halting ecological degradation;
- Encouraging more responsible use of land and mineral resources;
- Protecting and ensuring sustainable use of water resources;
- The sustainable use and protection of forest reserves, reforestation and maintaining the ecological balance; and
- Limiting biodiversity loss and creating conditions for its natural recovery, including the conservation of as much as 30% of Mongolia's territory in a protected area network.

The existing suite of legislation covering natural resources, as well as recent revisions, notably the May 2012 changes in the laws on Environmental protection, Environmental Impact Assessment and Water, as well as the enactment of a new law on Water pollution payment, have substantially strengthened the legal basis for the sustainable use of water resources and the regulation of mining industries by:

- Establishing the Polluter Pays Principle as a key legal tool for water governance;
- Creating a permanent management structure for water basins;
- Legally empowering river basin authorities in the issuance of mining licences; and

- Legislating the requirement for strategic environmental assessments for major government policy, programmes and development plans submitted by the line ministries and for environmental auditing of any development proponent or investor using natural resources.

The 2012 election resulted in a coalition government consisting of the Democratic Party, the Civic Will-Green Party and the “Justice” Coalition. The ongoing re-structuring process of government is expected to have some positive environmental elements:

- The Ministry of Nature, Environment and Tourism became the Ministry of Environment and Green Development (‘MEGD’) with the status of an umbrella ministry responsible for overall policy direction and coordination.
- Mining licences are issued directly by the Ministry for Mineral Resources and the Mineral Authority and will focus on monitoring and evaluation, which is expected to help reduce allegations of corruption around mining licenses.

However, this restructuring has the potential to lead to staff turnover potentially affecting institutional memories and delays in the implementation of project programs.

KEY CHALLENGES AND DRIVERS



The Mongolian economy has experienced rapid growth in recent years. The World Bank (Mongolia Quarterly Economic Update, 2012) highlights the country’s economic growth rate of approx. 17% in 2011, with the transportation and construction sectors growing by approx. 40% and 38%, respectively, due to the mining boom.

Despite growing GDP poverty remains widespread, especially in rural areas. The 2011 National Human Development Report (NHDR) estimated that in 2010 approx. 39% of all Mongolians were considered poor with an approx. 32% level for urban residents, but an approx. 48% level for rural residents. Environmental degradation such as overgrazing, deforestation and worsening water availability is creating a vicious cycle of declining rural incomes, further exacerbating pressures on the environment.

The economic sectors most associated with adverse environmental impacts include: mining, infrastructure, animal husbandry, and energy. Aspects of these are summarized below:

A) MINING



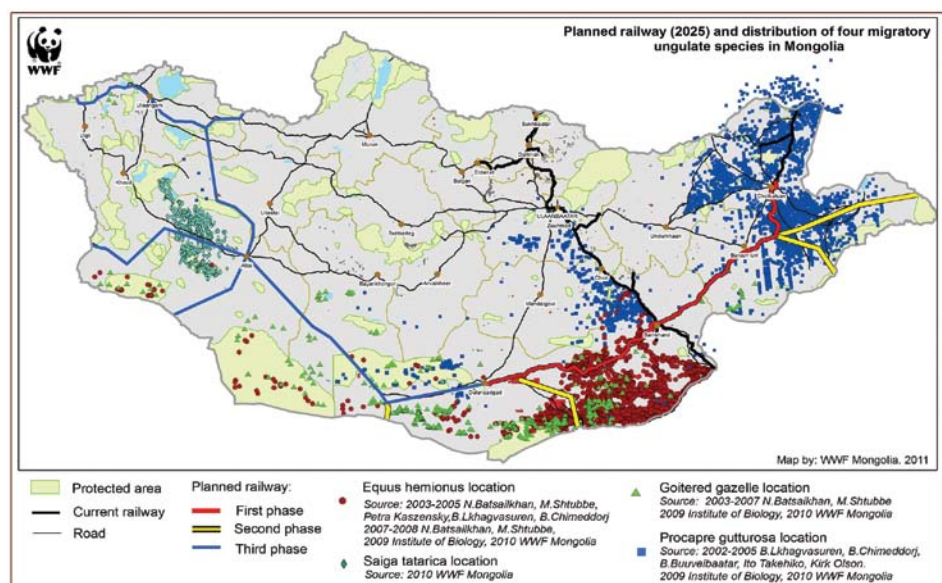
Economic growth and improving consumer and business sentiment have been fuelled in part by the development of the Oyu Tolgoi and Tavan Tolgoi mines.

In the first 7 months of 2012, total industrial output increased by 9% (at 2005 constant prices) compared to same period of the previous year. The rise in industrial output was mainly due to increases in mining and quarrying products, such as copper concentrate, molybdenum, crude oil and iron ore, as well increases in manufacturing (NSO 2012 July). In the third quarter of 2011, Mongolian exports were up by 52% year-on-year, largely driven by a 129% increase in coal exports to China (Mongolia Quarterly Economic Update, August 2011). China, the largest thermal coal consumer in the world, remains the sole destination for coal from Mongolia, and the expansion of the railway network to these mines is considered the only practical option for handling the expected coal volumes (Infrastructure, Environment, and Regional Development in South-Eastern Mongolia, 2008).

In November 2010, the Parliament of Mongolia passed the “State Policy on Railroad Transportation” and in September 2011 the government passed a resolution to finance the construction of a 1,766 km long railroad network linking Mongolia’s major coal and copper mines with China. Various mechanisms including financing from the state-owned “Development Bank” and international investments including via build-operate-transfer (BOT) are being considered for financing these railroads.

WWF recently commissioned a study at the request of the Secretariat of the Convention on Migratory Species (Lkhagvasuren et al., 2011). This study showed that the planned railroads would have serious and irreversible impacts on globally and regionally endangered wildlife unless proper and extensive planning and design works are undertaken. Habitats of wild ass, Mongolian gazelle and goitered gazelle would be fragmented and the railroad’s impact would be far greater than that of the existing trans-Siberian railroad, which has cut the migration route of the Mongolian gazelle since the 1950s leading to population declines, especially in western parts of the railway.

Map 1. Planned railway network and distribution of key migratory species





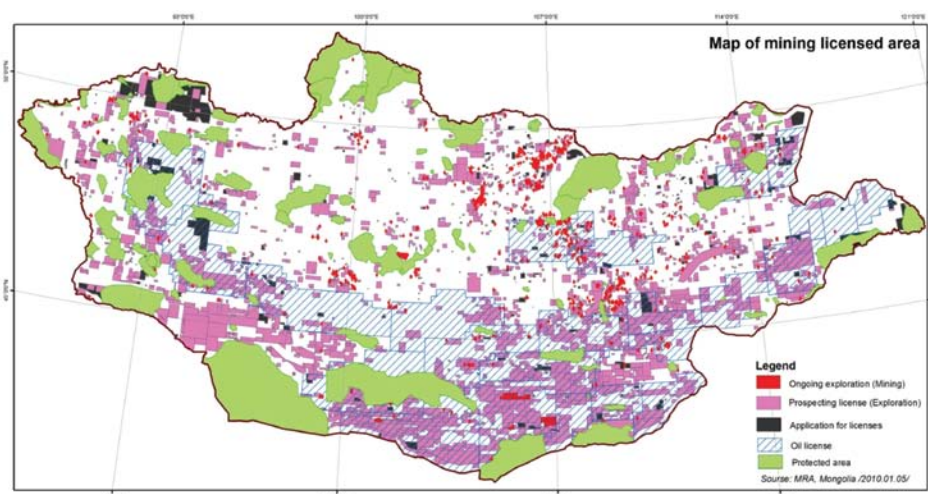
Water extraction and/or the construction of transfer facilities are also closely associated with the development of the mining sector. Despite several studies since the 1980s, the extent of underground water resources in the mining areas of the Gobi region is not well-understood. Possible alternative sources of supply could involve piping water 400-600 km from rivers to the north. The environmental and social consequences of this option are not known at this stage (Infrastructure, Environment, and Regional Development in South-Eastern Mongolia, 2008).

The impact of water extraction as a result of mine dewatering and water consumption for other mining-related purposes could lead to a reduction in local groundwater levels within and surrounding the mine areas. Local water sources such as wells and springs used by livestock, wildlife, and herder families could be affected. A WWF commissioned biodiversity gap analysis on whether protected area coverage is adequate to conserve biodiversity showed that over 70% of the perennial rivers and floodplains in the Gobi desert region are threatened by mining activities (Chimed-Ochir et al., 2010), adversely affecting fragile oasis ecosystems in Gobi desert that depend on sub-surface ground water.

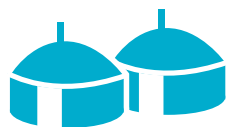
Mining and its associated infrastructure have also impacted the integrity of the protected area network. As a Party to the Convention on Biological Diversity, Mongolia has committed to increase protected area coverage to up to 30% of its entire territory and has identified potential biodiversity hotspots. However, there are concerns that mining-related economic interests could overwhelm environmental policy, thereby reducing opportunities to establish new protected areas (Chimed-Ochir et al., 2010). In response to the rapid issuance of mining licences throughout the country, local communities are increasingly resorting to legislation which enables them to establish local level protected areas (LPA) through the Provincial (aimag) and District (soum) parliaments (WWF Mongolia, 2008). Such designations effectively delay the issue of mining licences in these areas for at least 5 years.

Mining and associated infrastructure development has the potential for both immediate and long-term impacts on protected areas. Because of mining licences, some protected areas have been established in a mosaic formation consisting of multiple sections, as in the Onon-Balj and Small Gobi protected areas (Dore et al., 2006). This can threaten the integrity of ecosystems and some protected areas also have directly suffered from illegal artisanal miners ('ninja miners') carrying out their activities within protected areas, and also from the construction of road networks between protected areas. The World Bank commissioned an assessment of South Gobi (Walton, et al. 2010), which noted that the movement of wild ass and other animals between two sections of the Small Gobi protected area had become virtually impossible due to truck movements.

Map 2. Major mining licensed areas of Mongolia (Source MRA Mongolia 2010)



B) PASTORAL PRODUCTION SYSTEMS



Traditional Mongolian pastoral production systems date back at least 4,000 years. Today some 41 million heads of livestock, approx. consisting of goats: 17.5m, sheep: 18m, horses: 2.3m, cattle: 2.6m and camels: 0.3m are reared, providing jobs for approximately 40% of the national work force. This sector accounts for 14.7% of Mongolia's GDP (NSO, Statistical Bulletin, December 2011) compared to 22% in 2007, with this declining share mainly due to the rapid growth of the mining sector. The livestock sector is likely to continue to be the single most important one in the economy in terms of employment (Goodland et al., 2009) and for food security in rural Mongolia (Fernandez-Gimenez et al., 2012). The extensive livestock production system is dependent upon access to grasslands and is therefore inherently vulnerable to climatic and natural resource management risks.

Since the breakup of state farms and rural collectives in the early 1990s, the unregulated development of the livestock sector, exacerbated by climate impacts such as extreme weather events and increased frequencies of drought and dzud (harsh winter causing mass deaths of livestock), has become the main cause of overgrazing that occurs in over 70% of Mongolia's pastureland (Mongolia livestock sector adaptation project, 2010).

The World Bank commissioned Livestock Sector Study (Goodland et al., 2009) points out that the development challenge for the sector is closely linked to (i) designing and implementing measures that will mitigate the financial and environmental risks of livestock producers and (ii) the formulation of policies and programs to create a better enabling environment for those investing in the livestock sector.

Although recently approved government policies such as the "State Policy on Herders" and "Mongolian Livestock" aim to improve incomes and the sustainability of the livestock sector, these policies contain sometimes conflicting and perverse incentives and subsidy schemes. These include exempting herders from all types of taxes; subsidies on livestock products such as cashmere and wool; as well as the annual and influential "State Honored Herder" nomination which favors herd size rather than sustainable herd management.

Above all, pastureland - the biggest natural resource of the country - suffers from a lack of legal protections and is prone to a "tragedy of the

commons". The absence of proper management schemes for pastureland is leading to increasing competition between livestock and wildlife, retaliation killings of depleted carnivores like the snow leopard, grey wolf and others and the encroachment of herders into protected areas.

C) FRESHWATER



Freshwater ecosystems in Mongolia are subject to increasing and multiplying threats from: overgrazing; dams and irrigation systems; and mining and gravel extraction, all fuelled by weak enforcement of water management policies and related institutional frameworks.

By 2010 Mongolia had six hydro power plants (HPPs) with a capacity of only 3,428 kW or 0.1% of total energy production. This low capacity is due to long lasting ice coverage in these rivers which severely limit the plants' operations for much of the year.

The recently approved National Programme on "Water" (2010) envisages a review of the energy potential of all river systems, based on lessons from the existing HPPs and the incorporation of hydro energy production potentials into a national energy development plan that aims to ensure the country's energy security. The program envisages feasibility assessments of potential hydropower sites in the following major rivers: Chargait, Erdeneburen, Selenge, Eg and Orkhon. Moreover, the National Program highlights the need to assess the potential for dams and water transfer facilities on 16 rivers as a climate change adaptation option to help regulate river flows and secure the water needed for economic development e.g. mining in the Gobi region.

Considering existing HPPs mostly operate only during the short warm season and that the impacts of the Durgun and Taishir HPPs are still not known, WWF-Mongolia considers that HPP and dam construction policy development needs more careful assessment.

Climate change impacts are increasingly evident in Mongolia. According to the records from 48 meteorological stations distributed across Mongolia, the country's annual mean temperature has increased by 2.14°C over the last 70 years with linear trends of a 0.051°C/year increase during 1940-2006, 0.045°C/year during 1961-2006 and 0.018°C/year during 1981-2006. With continuing climate change, toward the end of this century Mongolia's climate is anticipated to have milder winters and drier summers. Dryness is expected to increase due to high evaporation and only a small increase in summer precipitation when compared to current patterns. As a result, Mongolia is expected to witness ecosystem shifts and landscape changes, changes in permafrost, glacier and snow cover, hydrological regimes of rivers and lakes, increased frequency of natural disasters such as extreme weather events, and desertification that will affect people's livelihoods and transhumant lifestyle (Dagvadorj et. al., 2009).

Accordingly, water-related infrastructure development will need to carefully assess all human and climate change-induced impacts under various scenarios and take account of the need to increase the natural resilience of freshwater ecosystems.



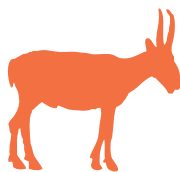
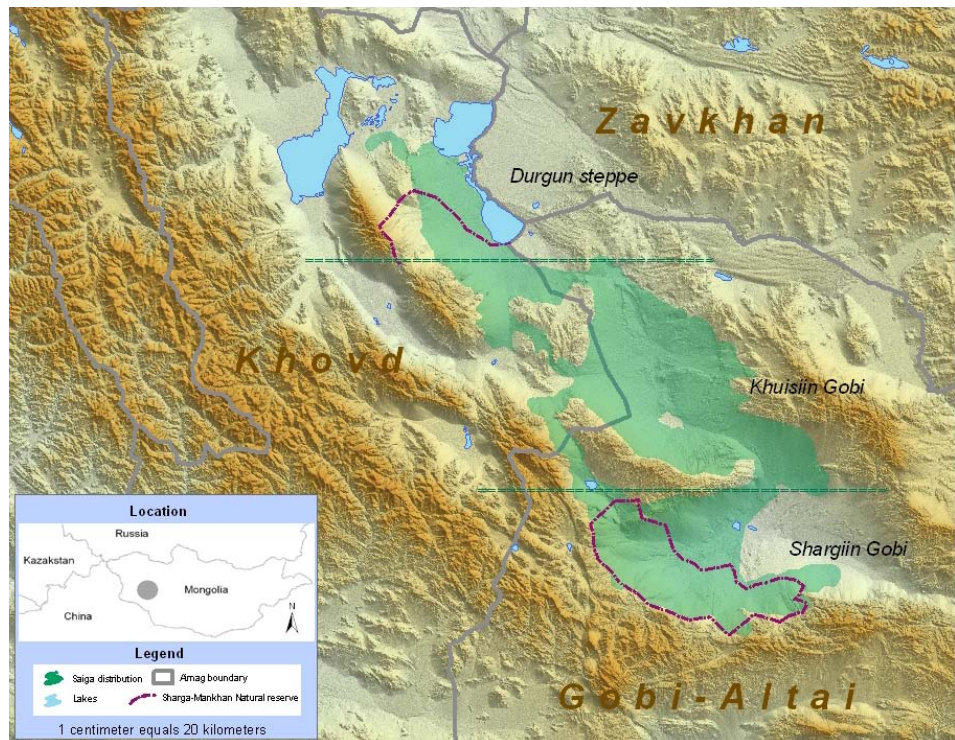
PROJECT INTRODUCTION CONSERVATION OF SAIGA ANTELOPE IN THE GREAT LAKES BASIN OF WESTERN MONGOLIA, PHASE 2

GOAL: The long-term goal of this project is to maintain and restore the Mongolian Saiga in the Great Lakes Basin and to extend its range into its former habitats.

Budget: 404503 €

Duration: 1 April 2011- 31 March 2014

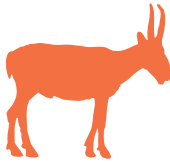
Funded by: MAVA Foundation



- The southern part of the Mongolian Altai-Sayan Ecoregion is the last refuge of the Mongolian Saiga (*Saiga tatarica mongolica*), an endemic subspecies to Mongolia.
- WWF's Global Programme Framework includes the Saiga antelope as a footprint impacted species.

It is registered by IUCN as “very rare”, and listed as such in the Mongolian Red Data Book. According to the international (IUCN, 2010) regional (IUCN, 2006) assessments the species is listed as critically endangered and endangered species respectively. The Mongolian saiga is also recorded in the Convention on International Trade in Endangered Species

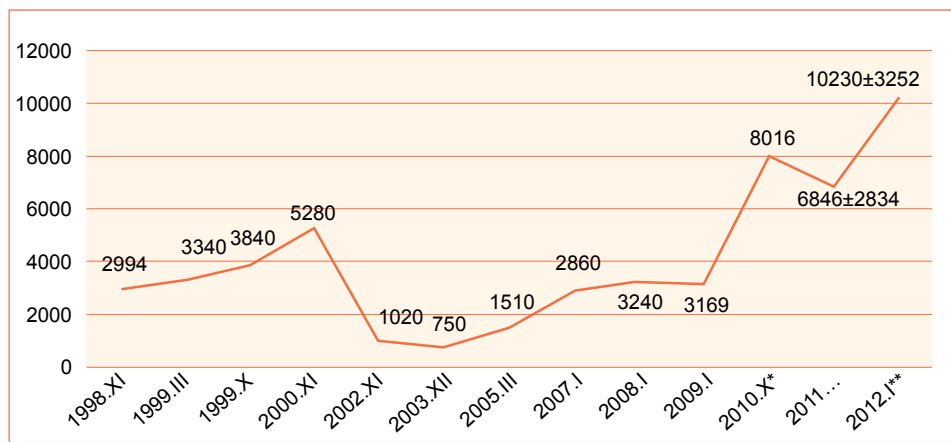
of Wild Fauna and Flora (CITES) Appendix II (UNEP-WCMC, 2006) and the List of globally endangered 100 species (Isaac NJB, Turvey ST, Col-len B, Waterman C, Baillie JEM 2007).



The species is extremely vulnerable to habitat competition with live-stock, poaching, and extreme natural disasters such as cold winters and drought.

In fact, all factors together reduced the population to about 800 animals in 2001/2002.

Numbers of Mongolian saiga (1998-2012)



* Aerial survey
** Adapted ground survey



The status of the species has improved significantly to about 6800 animals in 2012, thanks to the conservation efforts of WWF and other organizations, funded by the MAVA Foundation, which provided crucial support for the period 2007-2013. An aerial survey using internationally recognised methods was conducted in 2010 for the first time in Mongolia. The result and methodology of this aerial survey, 8000 Saigas has been accepted by Mongolian and international Saiga experts.

PROJECT OBJECTIVES



OBJECTIVE 1:

By end-2013, pressures on Saiga populations and habitats have been significantly reduced through Saiga-friendly pas-ture management.



OBJECTIVE 2:

By end-2013, the effectiveness of Saiga conservation has been upgraded through adaptive management based on science and community-based law enforcement activities.



OBJECTIVE 3:

By end-2013, support for Saiga conservation has increased at local and regional levels through a well focused education and awareness programme.

**KEY PROGRESS
TO-DATE**



The operation of a community based network of volunteer rangers, the Saiga Ranger Network (SRN), and a Mobile Anti-poaching Unit (MAPU) throughout the Saiga range, the halting of the decline of the Saiga population, and the subsequent increase in population numbers. Enhanced cooperation resulted in an increase of 70% in poaching case detection in comparison to 2003-2005.

10%

Saiga's habitat has increased by 10% compared to 2007. Effective protection measures have enabled the Saiga to extend its range in Shargiin Gobi to the south and to the east, and in Durgun Tal to the north in its historical range. A small group of animals has even been observed north of Khar Us Lake, one of the species' historical ranges.

17

The winning of support for conservation from local populations. Total of 17 herder community groups were established in critical Saiga habitats with the objective of reducing competition between livestock and Saiga for pasture and open water, by introducing environmentally-friendly pasture management.

13

13 reserve pastures have been as of 2013 established which are to be used by herders only for emergency situation and by Saiga and other wild species the rest of the time.

198,742 ha

30 percent of Saiga current distribution is covered by PA network which is 8.3% of its potential habitat. One new Protected Area has been created in 2012 on the edge of the Saiga range increasing the PA network by another 198,742 ha based on GAP analyses. The area is important habitats for Saiga movements and expansion of this species. Moreover, 123800 hectare area is under protection of CBO's in Saiga range.

550,000 USD

The project first supported the elaboration of a pasture management programme at Aimag level which has been accepted as a top priority work to be financed through the local budget of Gobi-Altai Aimag. Thanks to active support and lobbying, the Aimag parliament has allocated over 550,000 USD for implementation of the PMP at Aimag level and at 17 soums level in 2013.



The education and public awareness programme results in significant changes in knowledge, attitude and practice (K-A-P) of local residents, kids and teachers. The latest assessment suggest that only 1% of respondents consider the Saiga as a game species, compared to 5.5% in 2009 and 36.9% of respondents in January 2008, thus showing a decrease of 97%. An extensive campaigning about the ecological roles and benefits of Saiga resulted in increase of residents' pride of the animal from 15% in 2009 to 24% in 2012 The number of respondents considering Saiga as an important species which exist only in their homeland has been significantly increased.



EMPOWERING LOCAL STAKEHOLDERS TO CONSERVE AND SUSTAINABLY MANAGE GLOBALLY IMPORTANT ECOSYSTEMS AND SPECIES IN ASER

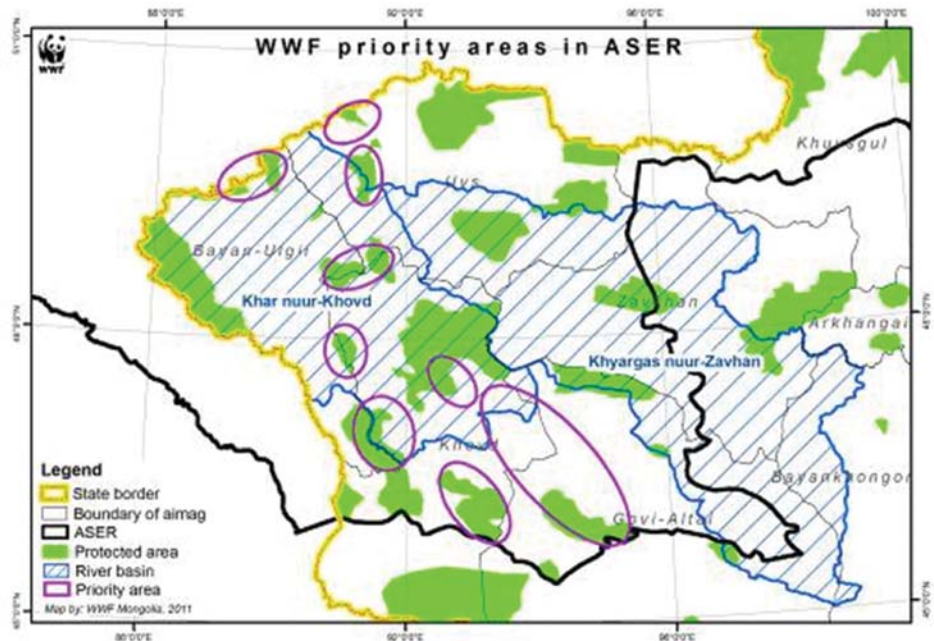
GOAL:

<p style="text-align: center;">ASER Strategy Vision “The Altai-Sayan Ecoregion harbours globally significant biodiversity and provides ecosystem services in an inexhaustible manner, as well as benefits to local communities” ASER strategy’s overarching Goal “By 2020 Species diversity and abundance is supported by the dynamic and resilience of natural ecosystems””</p>		
CONSERVATION TARGET	Related Global Programme (GPF goals, Network Initiative, Priority Programme, Global Priority Driver)	Targets specific goal for 2020
SNOW LEOPARD	<p>2020 Biodiversity Goal - Species Populations of the most ecologically, economically and culturally important species are restored and thriving in the wild</p>	Goal: By 2021, the population size of Snow Leopard in key areas remains stable in the Mongolian part and the area of occupied habitat by Snow Leopard remains stable in the Mongolian part of the ASER compared to 2010.
MOUNTAIN STEPPE OF ASER	<p>2020 Biodiversity Goal - Places Biodiversity is protected and well managed in the world’s most outstanding natural places</p>	Goal: By 2021, the area of unconverted steppe in the ASER does not decrease compared to 2010 and the percentage of steppe habitat in a favourable or high conservation status is increased by 35 % in ASER.
FRESH WATER	<p>2020 Footprint Goal - Water By 2020, humanity’s global footprint falls below its 2000 level and continues its downward trend, specifically in the area of water footprint</p>	By 2021, the freshwater ecosystem functions of the priority river basins in ASER (Khar lake – Khovd river, Khyargas-Zavkhan River Basin).

Budget: 700,000 €

Duration: 1 July 2012 – 30 June 2016

Funded by: WWF Netherlands



PROJECT OBJECTIVES

In order to achieve the conservation goals set above, WWF Mongolia will focus its effort in three intermediate sub-goals expected to be achieved during the project life.



SUB-GOAL 1

By the end of the project local communities in priority areas are fully knowledgeable about the values and benefits of globally endangered species and conflict between snow leopard and herders are minimized through increased stakeholders' participation.

SUB-GOAL 2



By the end of the project the ECONET functions are enhanced by establishing additional 326,600 hectares of LPA and increasing PA management capacity through fully functional regional training center.

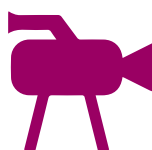
SUB-GOAL 3



By the end of the project in Khyargas Lake-Zavkhan River Basin key stakeholders' capacity to implement Integrated Water Resources Management (IWRM) is strengthened and their knowledge and attitude changed towards sustainable water resources management.

KEY ACHIEVEMENTS TO-DATE

12 HD camera traps were installed where 6 camera traps have recorded snow leopards, including female with cubs, in total 7 times. WWF-Mongolia has procured additional 40 automatic cameras to increase participatory monitoring with local herders on snow leopard population.



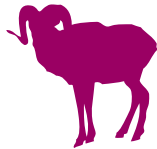
A map has been produced on snow leopard distribution in ASER covering 2,994,609 ha including 229,105 ha of potential habitat, 1,978,745 ha of current habitat, 121,517 ha of historical habitat and 665,242 ha of corridor area. The map will be used as a primary reference for the community based monitoring survey of snow leopard planning for next couple of years.



A pregnant female snow leopard was collared by satellite and GPS collar. This was a first case to collar a snow leopard in the Mongolian part of the ASER.



The NHK produced a documentary on snow leopard and WWF's conservation activities in Altai-Sayan with collaboration of WWF-Mongolia. It has been broadcasted end of February 2013 by NHK to worldwide.



Population size of Argali sheep was estimated around 2000 individual in the transboundary area of Russia and Mongolia. It means, the population has doubled in year's time.

628,986 ha

7 justification proposals prepared to extend the area of Khokh Serkh National Park and to establish one new State Protected Area as well as 5 Local Protected Area. All these proposed area covers 628,986 ha which include the important corridors for Snow leopard (*Panthera uncia*), Argali sheep (*Ovis ammon*) and Mongolian saiga (*Saiga tatarica mongolica*). These proposals were submitted to the local parliament and one of them got approved as a Local Protected Area.



By-law on hunting and catching permission of rare animals and by-law on development of hunting management were approved by Mongolian Government Cabinet Meeting. WWF-Mongolia has actively supported preparation of these by-laws based on the experience of Namibia (CBWM) and lessons learnt from Gulzat LPA where CBWLM was first time piloted.



River Basin Administration for Khar Lake-Khovd River Basin and Khyargas Lake-Zavkhan River Basin are officially established and the running cost and staff salary for the RBAs are approved by State Department Council of Ministry based on the amended Law on Water.



CC future scenarios generated in the Khyargas Lake-Zavkhan river basin using different global climate models. The modeling for Climate change projected for both current (1981-2012) and future (2013-2100) scenarios based on regional climate modeling with maps. Additionally, the project has calculated comparative modeling such as water discharge HBV modeling and TOPLATS modeling (plus biomass by CENTURE modeling) and has simulated and determined the river discharge of the Zavkhan river basin and its water balance and flow characteristic as well as future forecasting of discharge and water balance by both model.



MOBILE ANTI-POACHING UNITS

Since 2001, WWF-Mongolia supports effective operations of Mobile Anti-Poaching Units (MAPU). The initiative started with establishment of MAPU-1 in 2001 responsible for Uvs province, followed by MAPU-3 in 2004 encompassing the area of Khovd and Gobi-Altai provinces in the ASER Mongolia part and MAPU-5 in 2008 for Khentii and Dornod provinces within the AHEC Mongolia part respectively.

MAPU or “Irvess” teams (literally translated as leopard) aim to protect biodiversity and fight against environmental crimes including poaching and illegal wildlife trade.

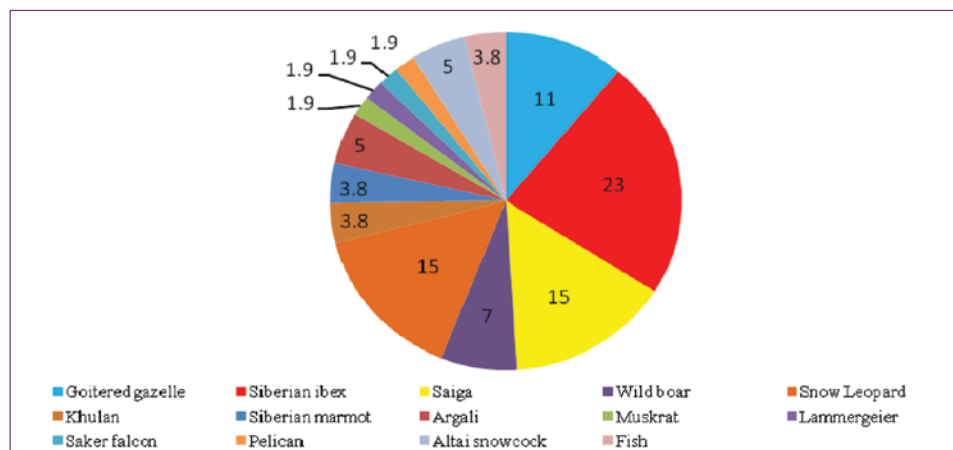
MAPUs team members are given the full authority of the State Environmental inspectors and report to the State Specialized Inspection Agency.

MAPU OBJECTIVES:

1. Reduce and eliminate illegal activities in the region and strengthen environmental inspection and supervision;
2. Increase participation of local administration and local communities in conservation by supporting informants/ volunteers through awareness raising and providing them with incentives and telecommunication means;

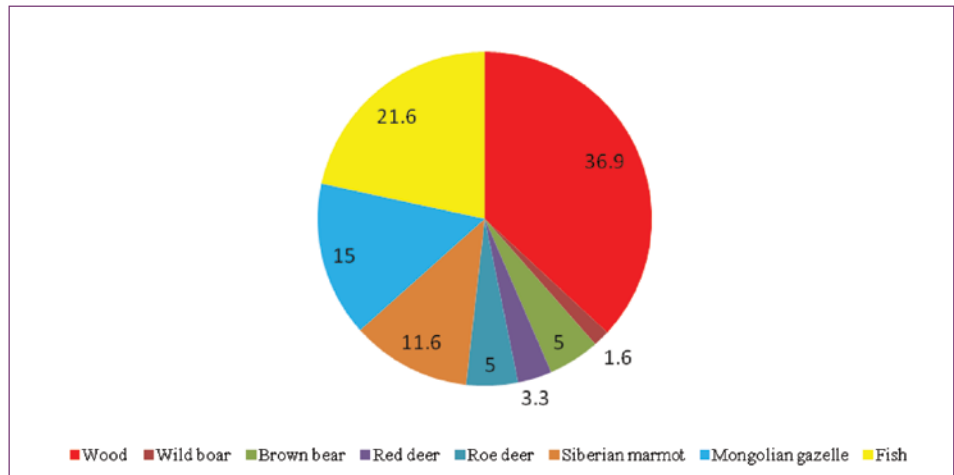
KEY ACHIEVEMENTS

During the last decade, the Irvess 3 and Irvess-5 teams have detected over 190 cases in the territories of Khovd, Gobi-Altai, Khentii and Dornod provinces and imposed fine of over USD850,000.



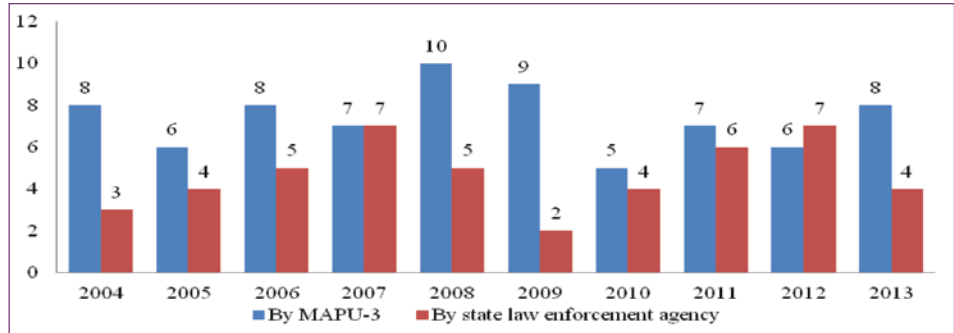
Graph 1: Origins and number of cases detected by Irvess-3 team during 2004-2013 (in percentage)

Graph 2: Origins and number of cases detected by Irves-5 team during 2009-2013 (in percentage)



The detection of environmental crimes has drastically increased in both regions and over 60% of cases in ASER were solely detected by Ires-3 team during the last decade. Enhanced cooperation with partners resulted in an increase of 70% in poaching case detection in comparison to 2003-2005.

Graph 3: Number of cases detected by Irves-3 team vs law enforcement agency during 2004-2013



MAPUs have established solid partnership with number of stakeholders which are essential to effective operations of the team. The MoU was signed by WWF-Mongolia, State Investigation Department (SID), and National Police Agency (NPA) ensuring the cooperation on detection and investigation of crimes related with illegal poaching, trade and timber preparation and their networks. The cooperation covers the territory of Bayan-Ulgii, Uvs, Khovd, Gobi-Altai, Khentii, Dornod and Ulaanbaatar.





Within their commitment to increase the participation of local communities, Irves teams carry out regular advocacy activities to about 1500 people annually in each region, reaching approximately 20000 locals as of today.

CHALLENGES

WWF-Mongolia has an agreement with State Specialized Inspection Agency to gradually take over the MAPU. Yet, the limited budget allocated to SSEA and the changing institutional setting within the government structure means immobilization of the MAPU to responding quickly to complex environmental crimes.

As such WWF-Mongolia needs to maintain the activities of MAPUs to cover its operations costs from external sources and support communications and patrolling costs to yield enhanced conservation results.

In parallel, WWF-Mongolia strives to find best solution to ensure the sustainability of MAPU operations, for example a trust fund has been established in 2010 in partnership with XacBank and Nomadic Journeys to support Irves-5 mobile anti-poaching unit. This partnership scheme is the first ever initiative among three different sectors, namely the finance & banking, tourism and nature conservation.



CONSERVATION AND ADAPTATION IN ASIA'S HIGH MOUNTAIN LANDSCAPES AND COMMUNITIES: ALTAY-SAYAN ECOREGION (ASER) OF MONGOLIA

A project on the globally important species – Snow leopard in the Asia's High Mountain Landscapes in six countries that include Mongolia, India, Pakistan, Kyrgyzstan, Nepal and Bhutan

GOAL for the Mongolia component:

To contribute in achieving WWF long term goal by i) supporting the range wide assessment of snow leopard in Altay Sayan ecoregion ii) expanding the conflict mitigation efforts to prevent retaliation killing or displacing through intentional disturbances and iii) reducing snow leopard prey species and livestock competition and herder encroachment to snow leopard home range habitats through sustainable pasture management.

Budget: 150000 USD

Duration: 1 November 2012- 30 October 2016

Funded by: USAIDS



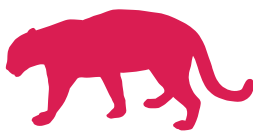
OBJECTIVE 1:

Promote climate-smart management of high mountain landscapes and snow leopard habitat for sustainable development.



OBJECTIVE 2:

Improve transnational collaboration on climate change adaptation and snow leopard conservation in Asia's high mountain landscapes.



Potential snow leopard habitat in the Mongolian portion of the ASER includes as much as 53,690 km² of territory straddling a complex network of mountain ranges, with existing protected areas already covering 20 percent of this potential habitat. At present, it is estimated that there are about 150 snow leopards in this region.



Source: Snow Leopard Conservation Foundation

Priority actions for the Asia High Mountains Project in Mongolia includes:



Assisting herding communities to improve management of their local natural resource base,
Educating these communities on methods for reducing livestock lost to human-wildlife conflict,



Developing a livestock insurance scheme to compensate herders for livestock lost to snow leopards and other wildlife,



Training herders on adaptation strategies to maintain grassland productivity in the face of a rapidly changing climate, training herders to diversify their livelihoods, and increasing community participation in snow leopard monitoring and other community-based conservation activities.

EXPECTED OUTPUTS/RESULTS:



A comprehensive human-wildlife conflict survey will be conducted at project priority sites and a report produced that describes survey findings on the scale, timing, locations, and reasons for human-wildlife conflict.



One community is selected for implementation of a linked pasture improvement/snow leopard conservation activity to be started.



The ability local people to reduce, prevent, and mitigate snow leopard conflict is improved as is their knowledge of the ecological importance of snow leopards.
Ability of the participating community to formulate and implement adaptation strategies to address climate change impacts on local pastures is greatly increased.



Local herders will be trained in snow leopard conflict prevention techniques and on how to collect monitoring data on snow leopard and prey species populations.



Protection of snow leopards and their prey species is improved at Jargalant Khairkhan and Bumbat Mountains as a result of improved monitoring and community education efforts led by local herders.



A report on the findings of the five-year review of the “Buy Goat” snow leopard conflict reduction program will be prepared that highlights lessons learned and recommendations for improving the project. Based on this review, the “Buy Goat” Program will be improved and expanded to the Jargalant, Bumbat, and Turgan Asia High Mountains.



A survey report and updated snow leopard distribution map for the entire Altai Region of western Mongolia to serve as a guide for further snow leopard conservation work in the region.



Local herders from locations of interest in western Mongolia trained to systematically conduct snow leopard sign and prey species surveys.



PROJECT CONCEPT NOTE

ASSISTING FOR INFORMED DECISION MAKING ON LINEAR INFRASTRUCTURE TO MINIMIZE IMPACTS TO ENDANGERED MIGRATORY WILD UNGULATES IN THE SOUTH EASTERN MONGOLIA

BACKGROUND AND JUSTIFICATION



The development of numerous mining projects and the associated infrastructure in the South Eastern region are in or near initial stages of development. The new mines are the copper and gold mine at Oyu Tolgoi, the coal mine being developed by Energy Resources LLC at Tavan Tolgoi, and a larger coal mining operation at Tavan Tolgoi. Large infrastructure to support these major mining in the area includes improved roads to transport coal and other mine outputs south to the China border crossings and, somewhat later, rail lines roughly parallel with the roads. Besides the mineral products themselves, the extensive deposits of thermal coal will support electric power generation in amounts considerably larger than Mongolia requires, thus available for export to neighboring China.



All these development projects present potential impact sources to unique biodiversity of the region. Especially, the development of linear projects such as road and railways present a potential barrier for migratory animals of the region. Three species of steppe and desert steppe ungulates namely Asiatic wild ass - Khulan (*Equus hemionus*), Goitered Gazelle (*Gazella subgutturosa*) and Mongolian Gazelle (*Procapra gutturosa*) conduct seasonal migrations through the area. In addition, the area is also the most north-eastern habitat of Argali sheep (*Ovis ammon ammon*) which does move among the wide dispersed low mountains. Among these ungulates Khulan is considered as an endangered, Goitered gazelle as a vulnerable and Argali sheep is considered as near threatened species by IUCN red list category.



Improved access to remote places and increased human population in the region will also negatively influence on the population of large ungulates such as Argali sheep, Khulan, Goitered Gazelle and Mongolian Gazelle through increased disturbance, poaching and habitat degradations. The region provides also important habitat some highly endangered birds such as Houbara bustard (*Chlamydotis undulata*) and Saker falcons (*Falco cherrug*) both considered as vulnerable species.



The southern Gobi Regional Environmental assessment commissioned by World Bank in 2010 highlighted that the trucks and their noise and dust already impacting movement of wildlife and gazelle and Asiatic wild ass no longer move between the two sections of the Small Gobi Strictly Protected Area because of traffic volume on the road that passes between

them to the border crossing. With truck volume expected to increase (from 600 per day in 2009) to 1,300 per day under the base-case—or nearly one per minute in the most intensively used corridor from Tavan Tolgoi to the border at Gashuun Sukhait—or 2,000 per day in the high-case, these impacts as well as the frequency of accidents involving vehicles, livestock, and wildlife is expected to worsen. Even if the railroads which would mitigate some of the pressures caused by trucks may become more significant barriers to the movement of livestock and, especially, wildlife.

NO TARGETED ASSESSMENTS WERE CARRIED OUT IN MONGOLIA TO UNDERSTAND EFFECTS OF THE CURRENT INFRASTRUCTURE DEVELOPMENTS

Key principles for conserving migrants include securing seasonal ranges, resource protection, government support and minimizing fences. Conserving mass migrants means preserving animals' freedom of movement in response to the temporal aspects of forage across seasonal extremes. This requires understanding basic parameters of the migration (e.g. location, numbers, routes, distances travelled), ecological drivers, habitat needs and threats.

To date, however, no targeted assessments were carried out in Mongolia to understand effects of the current infrastructure developments through critical habitat and migration routes of major migratory ungulates.

The research work carried out earlier on the movement of migratory ungulates were mostly around or within the Protected Areas and as such does not provide sound basis for developing adequate recommendations and appropriate measures to avoid negative impacts of linear infrastructures on migratory ungulates.

EXISTING MINING AND ROAD PROJECTS WITHIN CRITICAL HABITATS OF MIGRATORY SPECIES ARE NOT CONSIDERING THE IMPACTS OF THE INFRASTRUCTURE ON WILDLIFE

The recent desk study carried out by WWF-Mongolia at the request of CMS Secretariat and subsequent stakeholder consultation on the findings of existing and potential barriers on migratory ungulates highlighted that the major railroad and road constructions are not started yet, thus no EAs are planned or done yet, while existing mining and road projects within critical habitats of migratory species are not considering the impacts of the infrastructure on wildlife. In order to prevent and reduce these potential impacts, the desk study, the desk study and participants have concluded unanimously that detailed assessments involving remote sensing wildlife movements and migrations which should form the basis for building adequate wildlife crossings underneath auto roads and railways are needed for informed decision making by all parties.

PROJECT STRATEGY

Mongolia is facing a period of rapid change, resulting from the need to strengthen its economy, provide services to its population, and create new infrastructure. Meeting these needs will require sound planning and effective management if adverse environmental impacts - such as overgrazing and the degradation of pastures, pollution, and the fragmentation and clearing of natural habitats for roads or mining activities—are to be avoided. The importance of rigorous, high-quality scientific research cannot be underestimated in informing development decisions, as the consequences can be far-reaching, and in some cases irreversible. The current status quo approach would lead to vague or unclear state how the biodiversity particularly the khulan, goitered and Mongolian gazelle populations will survive in the future.

The main outcome of the proposed project is to **“Provide the decision makers and other interested parties with reliable information on impacts of linear infrastructure to endangered migratory wild ungulates in the south eastern Mongolia enabling informed decision making on the wild life friendly infrastructure development.”**

The proposed outcome will be reached through two interlinked objectives directly supported by the proposed project and one parallel financed outcome that will be supported through SMC. The proposed outcomes of under the projects are:

OBJECTIVE 1 Establish migration pattern of the globally threatened Asiatic wild ass and goitered gazelle in the Eastern Mongolia, and the impacts of proposed and or already built linear infrastructure on their migration.



Output 1. Selection and procurement of suitable satellite collars

The only reliable information on migration pattern of the globally threatened wild ungulates such as Asiatic Wild ass, goitered gazelle and Mongolian gazelle could be obtained through satellite tracking those animals' movement. Therefore under the proposed objective movement of 30 animals from 30 different herds will be tracked through satellite collars: It is expected that at least 16 Asiatic wild ass (8 on each side of existing road network) and 6 goitered gazelle (3 on each side of the existing road network) and 8 Mongolian gazelle (4 on each side of the existing road network) herds will be satellite tracked.

Based on the assessment of data collection from the earlier satellite collars we propose to use self dropping satellite collars GPS globstar and/or GPS Iridium because in Mongolia's case Agros collars tend to face problems with data transmission.

The satellite collars will programmed to transmit the data 1-2 time per week via UHF satellite transmitter and GPS data 3-4 times a day over two years period.

Output 2. Capturing threatened species for satellite collaring

Prior the field work WWF-Mongolia will with the Academy of Sciences and Ministry of Nature, Environment and Tourism and will develop methodology on capturing and collaring endangered species as per Mongolian Laws on Fauna and Hunting and its by-law on capturing rare and endangered animals.

Asiatic wild ass will captured using tranquilizer and an international expert will be invited considering the fact that Mongolia does not have specialized wildlife veterinarian.

The gazelles will be captured using nets and all capturing work will be done well after the breeding season.

Output 3. The information processing and dissemination

The information gathered by the satellite collars will be processed by a team of WWF specialist and researchers from the Academy of Sciences and all information will be made available to the public and decision makers via website (<http://gis.wwf.mn>).

OBJECTIVE 2 Establish local monitoring network for globally threatened wildlife with special focus on Asiatic Wild ass and Goitered gazelle in the South Eastern Mongolia



WWF early work on argali sheep and Saiga antelope in Altai-Sayan ecoregion of Mongolia showed that wildlife monitoring through border troops and local communities have dual benefits: it allows wildlife information collection with least cost and the process also increases local stakeholders’ awareness on the wildlife and induces more conservation work.

Moreover establishment of such wildlife network forms the basis for an effective anti-poaching network covering vast territory of wild life habitats.

Output 1. Establishing community based wildlife monitoring network

Under this approach local communities will be mostly carrying out wildlife monitoring in established territories such as vicinity of open water sources, oasis etc, at established intervals and time. The methodology will be focused on wildlife active periods such as coming to water sources or grazing in their preferred habitats

A series of training will be provided to selected community members and volunteer rangers and other local stakeholders on wildlife monitoring data collection and data processing (mostly oriented to PA specialists and local government environmental inspectors)

Output 2. Establishing wildlife monitoring system in border zones.

Border zones in Mongolia are most intact areas with no livestock and herder settlements thus become one of the permanent wildlife refuge. Therefore, the border troops with support from WWF Mongolia will carry out transect monitoring on wild life in the border zones. This transect monitoring will allow to collect information on wild life population and its seasonal movements.

Output 3. The information processing and dissemination

The information gathered by the local stakeholders will be processed by the Small Gobi Protected Area Administration using “BioSan” database initially with support for WWF specialists and researchers from the Academy of science. All information will be made available to the public and decision makers via website (<http://gis.wwf.mn>).

BUDGET

The below summary is only estimated cost and does not include WWF contribution which will come both in kind and cash.

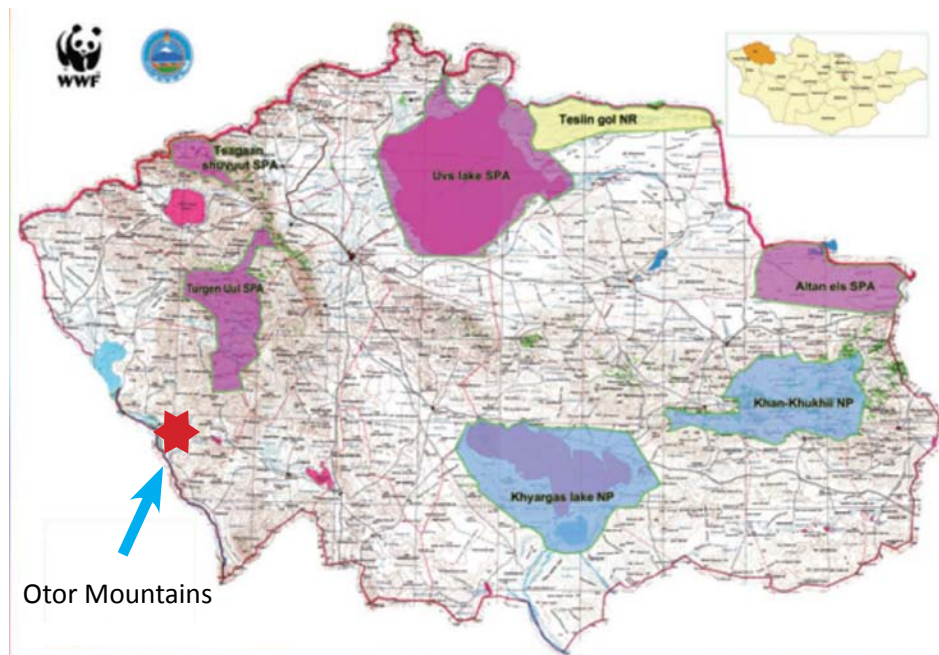
PROJECT COSTS	Objective 1	Objective 2
Individual contract	\$ 17,616	\$ 3,528
Subcontract	\$ 21,180	\$ 3,456
Training workshops	\$ 4,000	\$ 2,680
Communication/publication	\$ 8,000	\$ 1,080
Field work	\$ 7,288	\$ 6,440
Equipment and supplies	\$ 110,710	\$ 8,640
Management fee at 12.5%	\$ 21,099	\$ 3,228
Total direct cost	\$ 168,794	\$ 25,824
Total cost	\$ 189,894	\$ 29,052



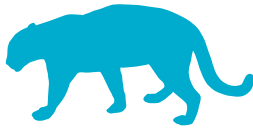
PROJECT CONCEPT NOTE

SUPPORTING LOCAL COMMUNITIES IN CONSERVATION OF GLOBALLY ENDANGERED SNOW LEOPARD IN TURGEN STRICTLY PROTECTED AREA OF UVS LAKE BIOSPHERE RESERVE

Uvs Lake SPA is located in the north-western part of Mongolia covering wide magnitude of areas in Great Lakes Depression and mountains belonging to Altai Mountain range. It is considered to be northern edge border of Central Asian desert area with unique ecological landscape, hence the area was taken under protection as an entire ecosystem. The area consists of Uvs Lake SPA, Turgan Mountain SPA, Tsagaan Shuvuut Mountain SPA and Altan Els SPA scattering over 735,845 ha. The area has a combination of Gobi desert, desert-steppe, steppe, forest steppe, mountains and glaciers featuring extreme continental climate.



Uvs Lake SPAs were recognized as Biosphere Reserve within UNESCO's Man and Biosphere Programme in 1997, listed as important site within RAMSAR convention on wetlands in 1998 and inscribed as World Natural Heritage in 2003. In addition, the areas belong to International Geo-Biosphere Research Region and serve as international standard model in Central Asia. Those features clearly demonstrate that Uvs Lake SPA is a highly valued nature zone for not only conservation but also scientific research.



1,000 snow leopards sparsely distributed over more than 130,000 km² of habitat

The high mountains surrounding Uvs nuur basin notably Kharkhiraa Turgen and Tsgaan shuvuut mountains are home of globally endangered Snow leopard (*Panthera uncia*). The global snow leopard effective population size is suspected to be fewer than 2,500 (50% of the total population, or 2,040-3,295). The species is listed as Endangered (IUCN Red List accessed 18 February 2011). Mongolia, one of 12 snow leopard range countries, supports an estimated 1,000 snow leopards sparsely distributed over more than 130,000 km² of habitat, considered the second largest population after China.

Otor Mountains are located within the buffer zone of the Kharkhiraa Turgen Strictly Protected area and considered as important habitat of snow leopard outside the protected area network and that serve as a corridor for snow leopard and mountain ungulates movement (See map). Herder communities around Otor mountains have established two Community based Organizations with objectives to conservation and sustainable management of their areas and carrying out alternative livelihoods activities such as nature based tourism. Both CBOs were established in late 2000 and could become a model CBOs for neighboring areas if properly nurtured.



Poaching and retaliation hunting are considered as the direct threats to snow leopard population. In Mongolia with the stringiest enforcement of legal system that cover all aspects of wildlife trade (poaching, storage, transportation and trade) coupled with public awareness has resulted snow leopard trade down to nil. However the habitat disturbance by herders and a lack of prey species due to increasing competition for wild ungulates from livestock for grazing are increasing the potential for retaliation killing.



WWF-Mongolia's in-house assessment on conflict resolution between snow leopard and herders that involved consultation with local communities, assessment of ongoing "buy goat" compensation scheme and discussion with national level insurance companies showed that best results can be achieved if snow leopard is understood and appreciated by local communities thanks increased knowledge on values and importance of snow leopard and community run mechanisms for compensation scheme backs their appreciation.

Therefore, proposed project will support the community based organizations around Otor mountain to increase local community awareness raising on values and benefits and importance of conservation for endangered species and protected area as well as Biosphere reserve. In particular the project will support:

- A. Participatory monitoring of snow leopard by Uvs nuur PA specialists and herders communities using camera traps;
- B. Awareness raising on values and benefits of globally endangered species and PAs throughout Uvs Nuur BR with special focus on herder group member and school children in Khovd soum;
- C. Assist CBOs around Otor mountain to establish a community managed fund that would be used in compensation of snow leopard as well as diversification of incomes.

It is expected that these interventions will prevent local communities slipping into retaliation killing and tormenting criminal cases and at the same time keep the important wildlife movement corridor open for snow leopard and other ungulates like Argali sheep and Ibex.

BUDGET

INTERVENTIONS	YEAR 1 (IN USD)	YEAR 2 (IN USD)	YEAR 3 (IN USD)	TOTAL BUDGET (IN USD)
A. Participatory monitoring of snow leopard in collaboration with herders communities that involve joint installation of camera trap;	\$48,400	\$30,400	\$30,400	\$109,200
Procurement of Camera traps for Uvs Nuur BR	\$19,800	\$4,800	\$4,800	\$29,400
Joint installation of camera traps and data collection and processing	\$28,600	\$25,600	\$25,600	\$79,800
B. Awareness raising on values and benefits of globally endangered species and PAs throughout Uvs Nuur BR with special focus on herder group member and school children in Khovd soum;	\$28,000	\$30,000	\$30,000	\$88,000
Designing and printing awareness raising material for Uvs Nuur BR	\$4,000	\$4,000	\$4,000	\$12,000
Designing and printing awareness raising material on snow leopard using camera trap results	\$4,000	\$6,000	\$6,000	\$16,000
Awareness raising on values and benefit of PA and BRs throughout Uvs Nuur BR and its surrounding area	\$8,000	\$8,000	\$8,000	\$24,000
Awareness raising among herders and school children	\$12,000	\$12,000	\$12,000	\$36,000
C. Assist herder group to establish a community managed fund	\$6,000	\$5,000	\$5,000	\$16,000
Facilitate herder group to developing CMF by laws and governing scheme	\$2,000	\$1,000	\$1,000	\$4,000
Co-funding CMF money based once herder group endow the CMF	\$4,000	\$4,000	\$4,000	\$12,000
Project monitoring and reporting	\$29,500	\$27,375	\$27,375	\$84,250
Total	\$111,900	\$92,775	\$92,775	\$297,450



THE PROJECT CONCEPT NOTE

DEVELOPMENT OF AN INTEGRATED MONITORING PROGRAMME FOR SUSTAINABLE HARVEST OF ARGALI



50-70 argali were hunted annually for foreign hunters

BACKGROUND

From 1962 onwards Mongolia began to allow the hunting of rare animals to generate foreign currency. In the past, the country allowed hunting of 50-70 argali annually for foreign hunters, sometimes reaching up to 150 argali and 300 ibex earning significant revenue. Taking the example of 2012, the state has generated MNT3.5 billion from fees deriving from special permits of trophy hunting and sport fishing only. Those include 50 argali, 102 ibex, 3 red deer, 44 Mongolian gazelle, 13 roe deer, 7 gray wolf, 150 saker falcon, 545 individuals of game birds, and reception of 260 foreign fishermen.



at least 50% of fee generated from the wildlife should go back to the conservation

The legal framework for wildlife management was put in place in 2000 and included “Law on Fauna” and “Law Hunting”. Over the past decades the these law were revised several times (law on hunting in 2002 and 2010 law on Fauna in 2010). Yet these laws needed consistencies and room for providing legal environment for conservation and sustainable management of wildlife with involvements of local stakeholders.

In May 2012, Mongolia has revised the “Law on Fauna” that supersede “Law on Hunting” and “Law on Fauna” and ensures the integrity of legal environment on fauna and wildlife management. The provision of the law is also backed by the 2012-revised “Law on Environmental Protection” that has put strong emphasis on co-management of natural resources whereby the local communities that organize themselves into Community Based Organizations will have preferential right over the natural resources in their area. Likewise the 2012-revised “Law on Fees from Natural Resources Use” stipulate that at least 50% of fee generated from the wildlife should go back to the conservation and management of the wildlife in the given area and in compliance with the provision will result administrative case that would include full refund of misused fund and penalty of 5-6 time of minimum salary.

The major changes in the legal framework on wildlife management and especially the involvement of local stakeholders such as local communities, cooperatives that work on conservation restoration of wildlife in their areas is summarized below.

Comparative analysis of former and new regulatory mechanisms on trophy hunting

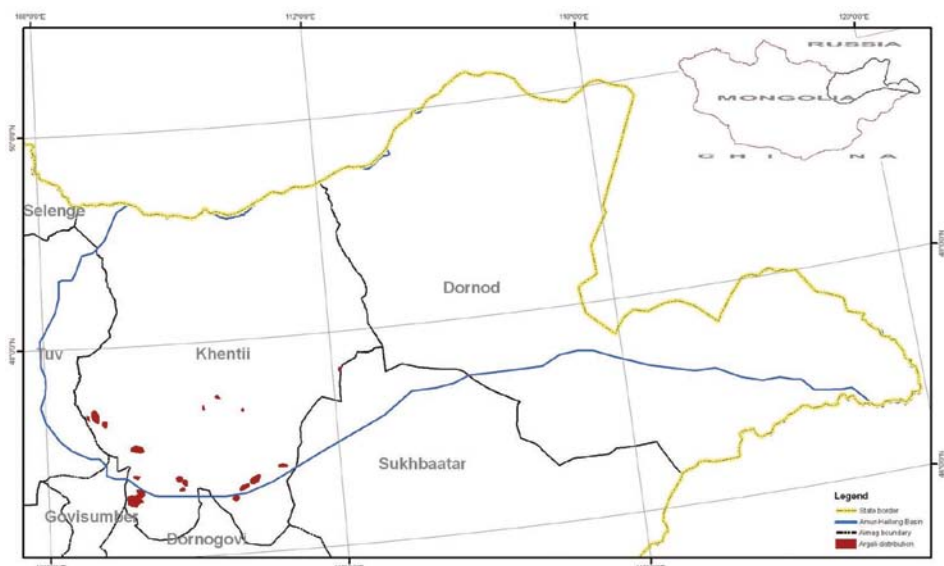
	Previous mechanisms (since 2000)	Revised hunting management (2013)
1	Quotas issued based on previous years record and business companies request and Provincial government recommendation	Quota is based on the hunting management plan
2	Trophy hunting companies submit their request to the Ministry	Legal entity responsible for managing HMP submit their request to the local environmental protection organization.
3	The Ministry issue quotas to the trophy hunting companies	Ministry issue the quotas to the hunting areas (Provincial level)
4	Special permit is issued by Ministry to trophy hunter based on hunting company contract with County governor	Special Permit is issued by Ministry based on trilateral agreement between responsible entities for HMP, local governor and trophy hunting company
5	Permits issued almost everywhere, except PAs	Hunting and catching can only be done in designed areas with Hunting management
6	80% of the revenue from the permit was allocated to state budget and 20% to the local government budget	All revenue from the permit goes to the local budget out of which at least 50% should be allocated to the implementation of wildlife management plan of the area.



the most north eastern edge of Argali population in the world

2009 steppe and mountain ungulates assessment highlighted, based on information from the local government, that in Khentii province some 180 argalis sheep are spread over 14 fragmented habitats that cover 682.5 sq. km. 12 habitats out of those fragmented habitats are located within the Amar eco-regional watershed and this argali population is viewed as the most north eastern edge of Argali population in the world. Moreover, in 2009 local governor of Binder soum located in Onon river basin reported sighting of Argali sheep in the middle mountains in his soum. Although this might have been an ad hoc migration, it showed that possible extension of Argali sheep population to the north. The closest main population of Argali sheep, to those fragmented population is found in neighboring Dornogobi provinces with estimated 2773 animals. However, the report also pointed out that this population is already being threatened by habitat fragmentation.

Map 1. Argali habitats in Amur ecoregion (Kherlen river basin).



CHALLENGES



Dramatic decline of Argali (*Ovis ammon* Linnaeus, 1758) populations in the recent decades is linked to a combination of environmental, management, and governance factors.

In the past the annual number of hunting permits issued by the Ministry of Nature and Environment were in general based on anecdotal data and vocal communications between the authorities and local herders and were disconnected from actual age-, and sex-structure of local Argali populations.

For decades local people and district (soum) authorities did not benefit in any form from Argali trophy hunting and in fact the state subsidies that cover the public services were deducted in correlation to expected income from the trophy hunting. This often meant at local level that the substantial portion of soum's budget disbursement is delayed till the end of fiscal year if hunting occurs on the soum's territory. Finally, there has been anecdotic evidence of financial mishandling of trophy hunting revenues and collusion between the Government officials and private firms in the process of hunting permits' distribution.

Despite the fact that the legal framework of the trophy hunting was revised and put more power and room for involvement from local communities, the 2013 experience show that hunting companies and other who has better access to information are trying to use of the changes in the law and lobbying hard to take over the management right of wildlife in most attractive areas and traditional hunting ground.

At the same time due to better access to these sites Argali habitats compared to those in Altay mountains, more and more trophy hunting companies and tourist companies have become attracted to those sites.

JUSTIFICATION FOR WWF INVOLVEMENT



WWF-Mongolia has initiated a community based wildlife management (CBWM) project in Uvs province in 2007. Its objectives are (i) to blend families into a number of local communities, (ii) shift wildlife management responsibilities and conservation efforts from regional and national authorities to the recognized communities, (iii) establish a financial mechanism for compensation of their management and conservation activities, and thus (iv) reverse open-access regime of use of Argali and Marmot to a contractual territorial use of wildlife resources. Members of the established seven community groups elaborated their own objectives: nature protection and conservation, improvement of the livelihood, co-operation and information exchange between the communities and have already begun to benefit from the community based wildlife management principles introduced the in the area.

Moreover, WWF has been one of the key player in lobbying the changes of the legal framework and now realizing that without proper awareness raising among local communities, their rights will be at a jeopardy because the communities lack both bargaining power and in-depth knowledge of revised legal framework against well informed and well connected hunting companies.

OBJECTIVES

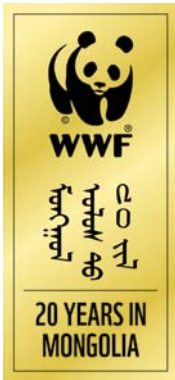
1. Carry out national wide awareness raising on law hunting and CBWLM and targeted capacity building for local communities in selected areas;
2. Design/adapt event-book system for wildlife monitoring appropriate for local communities;
3. Develop policy recommendations for estimation of sustainable use levels of local Argali

EXPECTED SIGNIFICANCE OF THE PROPOSED WORK

Continuous and statistically robust estimates of the populations will provide quantitative, not anecdotal, data for estimation of sustainable use levels within regions and local populations. Finally, learning and training project component will be focused on transfer of methodology, skills, and established mechanisms to Mongolian staff to insure continuity of essential monitoring activities.

EXPECTED BUDGET FOR 3 YEARS:

COMPONENT	FY 1	FY 2	FY 3	TOTAL
Objective 1. Carry out national wide awareness raising on law hunting and CBWLM and targeted capacity building for local communities in selected areas	50,000	30,000	30,000	110,000
Objective 2. Design/adapt event-book system for wildlife monitoring appropriate for local communities	10,000	10,000	10,000	30,000
Objective 3. Support local communities and/or entities in developing and implementing game management plan and business plan for sustainable management of wildlife.	60,000	60000	60000	180,000
Project management (including management fee 12.5%)	24,600	22,100	22,100	68,800
Total	144,600	122,100	122,100	388,800



INTRODUCTION TO WWF-MONGOLIA

Vision statement: Mongolia is a safe home for wildlife and a place where present and future generations enjoy a high quality of life, living in harmony with nature.

In 1992, WWF first opened its office in Mongolia. Since 1997, under the Mongolian Law of NGO, the office has obtained an official status as an independent representative office of the WWF International. Over the past 20 years, WWF Mongolia has grown substantially both in terms of size and conservation achievements: from a modest 2 person-office into the largest conservation organization staffed with 35 professionals.

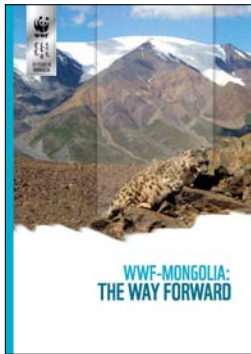
The scope of WWF's programme in Mongolia is bounded by the Global Programme Framework (GPF) – the strategic guide for what WWF offices around the world aim to achieve collectively, and the tool to measure progress against identified goals. The Framework has set for WWF programme two interlined meta-goals and goals that address issues of biodiversity conservation and ecological footprint.



In order to contribute to these ambitious and yet vitally important meta-goals and goals, WWF Mongolia programme focuses on conserving two priority places, namely the Altay-Sayan Montane Forests (referred as Altay-Sayan Ecoregion or ASER) and the Amur/Heilong Ecoregional Complex (AHEC), and three priority species (snow leopard, argali sheep and saiga antelope), as well as reducing water footprint in the two priority places. Working towards achieving the biodiversity goals, WWF Mongolia will also contribute to the energy/carbon and commodity footprint goals.



In South-Eastern Gobi and Mongol-Manchurian grassland, where pressure on the fragile biodiversity including globally endangered wildlife have increased drastically over the past decade due to the rapid expansion of mining, WWF Mongolia will be working on the prevention of irreversible impacts of linear infrastructures on connectivity of key habitats of migrating wild ungulates such as Mongolian gazelle and Asiatic wild ass.



In close consultation with the partners, WWF Mongolia has developed its strategic plan for 2012-2016 that identified 7 interlinked conservation targets which include three ecosystems (forest, steppe and freshwater), three species (snow leopard, argali sheep and saiga antelope), and one habitat for migratory ungulates in the Eastern Gobi and Mongol-Manchurian grassland.

To continue and scale up its conservation efforts, WWF Mongolia has developed five overarching strategic approaches which integrate the global and national priorities. These include



(i) Advancing the stewardship of local communities in sustainable use and management of natural resources: building on the previous experiences in Community Based Natural Resources Management (CBNRM), WWF-Mongolia will scale up at the policy level for an improved legal framework for natural resources management by the local communities;



(ii) Safeguarding landscape integrity through functional network of protected areas will be reached by creating a legal environment that ensures sound management of protected areas, both in terms of human and technical capacity and financial sustainability;



(iii) Addressing climate, energy and water footprint through Integrated River Basin Management (IRBM), WWF will collaborate with key stakeholders and government to revise the legal framework for IRBM to introduce mechanisms for financial sustainability of the basin level management authorities;



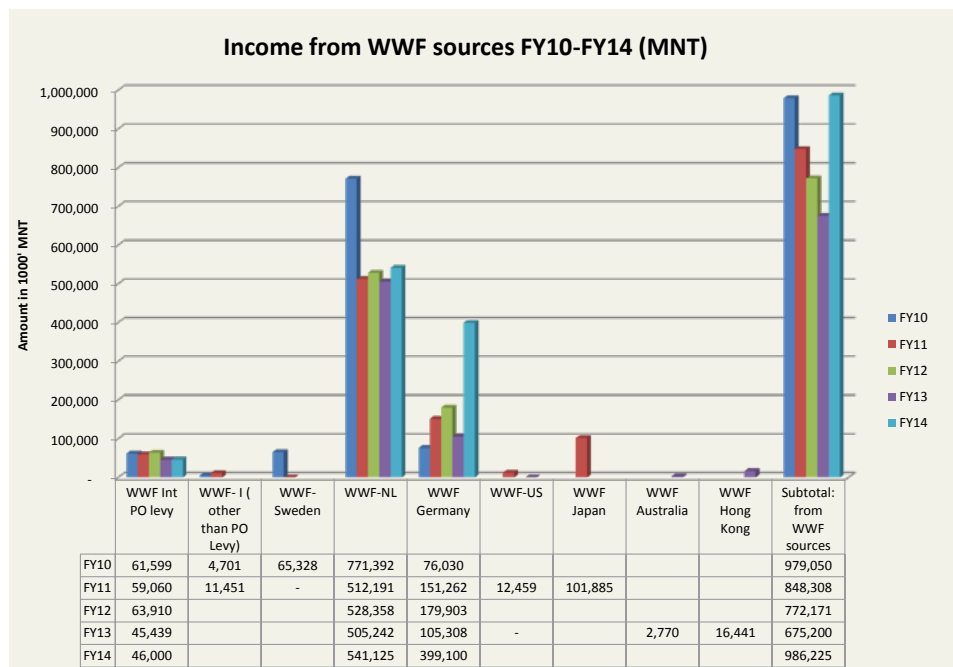
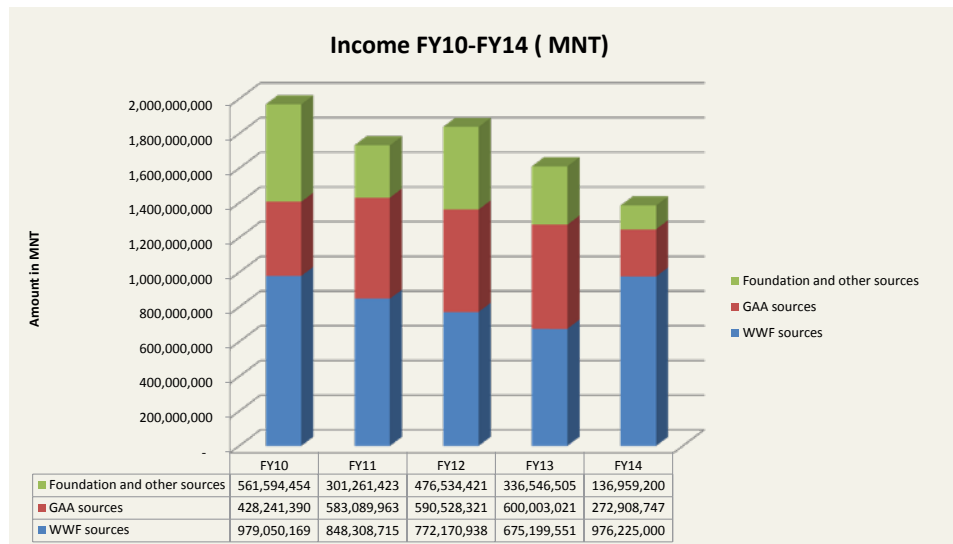
(iv) Catalyzing effective law enforcement in priority areas for priority species will be reached through close work with the State Specialized Inspection Agency, police and border patrol units. This work will be complemented by active anti-poaching efforts at the local community level and increasing local stakeholders' knowledge and attitudes toward conservation values and the benefits of wildlife;



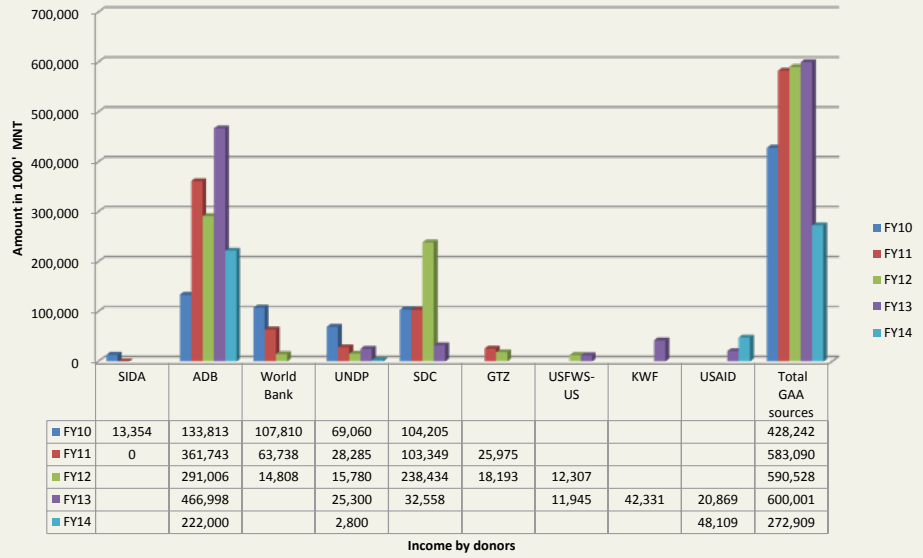
(v) Reducing impacts of mining in priority areas through lobbying to establish a sound legal framework for responsible mining and mining-associated infrastructure development which help to minimize the current and potential threats from mining and mining associated infrastructures in the priority areas.

Implementation of these strategies will be supported by the four pillars of operational strategies: a) Partnerships – critical to our success from community level to political level to ensure impact; b) Communications to catalyse the change through focused public outreach and target groups; c) Fund raising to ensure sufficient funds for conservation and d) high performing in both conservation and operation's management.

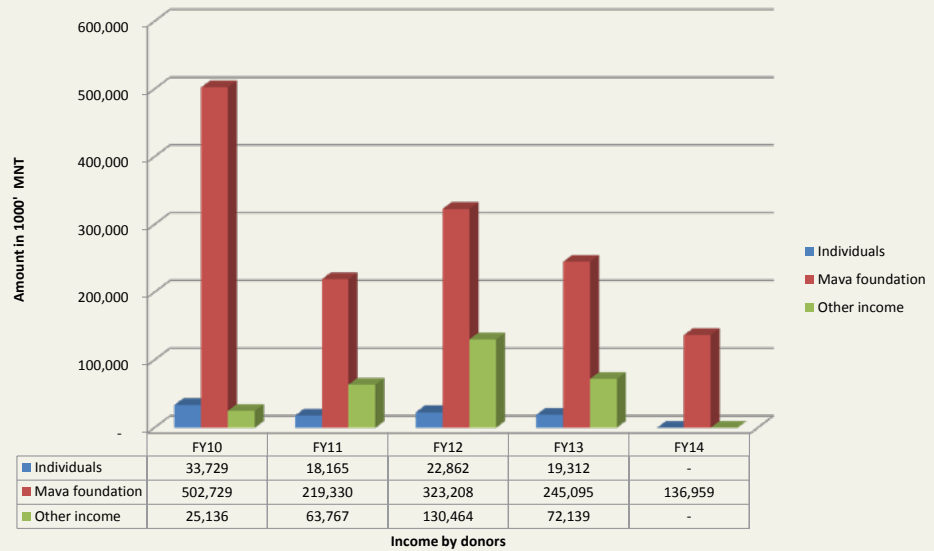
Financial situation at a glance



Income from GAA FY10-FY14 (1000'MNT)



Income from Foundation and other sources FY10-14(1000'MNT)





THE PROJECT CONCEPT NOTE

MARKET INCENTIVES FOR HERDERS AROUND TAKHI HORSE AND SAIGA HABITATS IN MANAGING PASTURELAND

BACKGROUND AND JUSTIFICATION

SITUATION ANALYSIS ENVIRONMENTAL CONTEXT



187 glaciers with a total area of 54,000 km²

187 glaciers with a total area of 54,000 km² A WWF Global 200 Site, the Altai-Sayan Ecoregion stretches east-west for 2,000 km from the eastern-most tip of Kazakhstan to north-central Mongolia and south-central Russia and south-north for 1,500 km from western Mongolia and north-western China to south-central Russia. Within the Mongolian Altai Range, there are 187 glaciers with a total area of 54,000 km². The Mongolian part of Altai-Sayan is a home of a diverse habitat mosaic of grazing pastures, mountain forest patches, mountain meadows, free flowing streams, each with different aquatic regimes, vegetation cover and soil type.



The Mongolian Altai is known to provide an intact habitat for a number of internationally recognized priority species such as the globally endangered snow leopard (*Panthera uncia*) and its main prey species the Siberian ibex (*Capra sibirica*). The globally threatened argali sheep (*Ovis ammon*), is the world's largest wild sheep with horns weighing up to 34 kilograms, inhabits the lower ridgelines and higher foothills.



An aggregation of several closed inland depressions where surface runoffs remain inside its boundaries creating lakes or open wetlands. These depressions serve a last haven of the Mongolian Saiga (*Saiga tatarica mongolica*), a distinct endemic subspecies that once roamed from the British Isles through Central Asia and the Bering Strait into Alaska and the Yukon.



Starting from 2004 MAVA foundation has also started re-introduction of takhi horse (*Equus Przewalskii*) – a species that were wiped out from the wild in the middle of last century. Argali sheep and saiga antelope habitat in the Altai-Sayan are becoming increasingly fragmented as incidents of habitat encroachment by domestic stock and poaching.

SOCIO-ECONOMIC CONTEXT



over 40 million heads of livestock

Mongolia's vast grasslands constitute approximately 70 percent of the country's 1.5 million square kilometers and fall into three major ecological zones: mountain-steppe, steppe, and desert-steppe. All three of these zones occur in the Altai-Sayan region. Mongolia's grasslands, including those in forested areas, high mountain pastures and true desert, these rangelands are the basis of livestock production and support over 40 million heads of livestock (camels, cattle, yaks, horses, sheep and goats). With increased share from mining and other sectors livestock sector share in the national GDP has decreased down to 22 percent over the last decade. Nonetheless the sector still play important role in the socioeconomics of the country by directly engaging approximately 40 percent of the work force at national level.

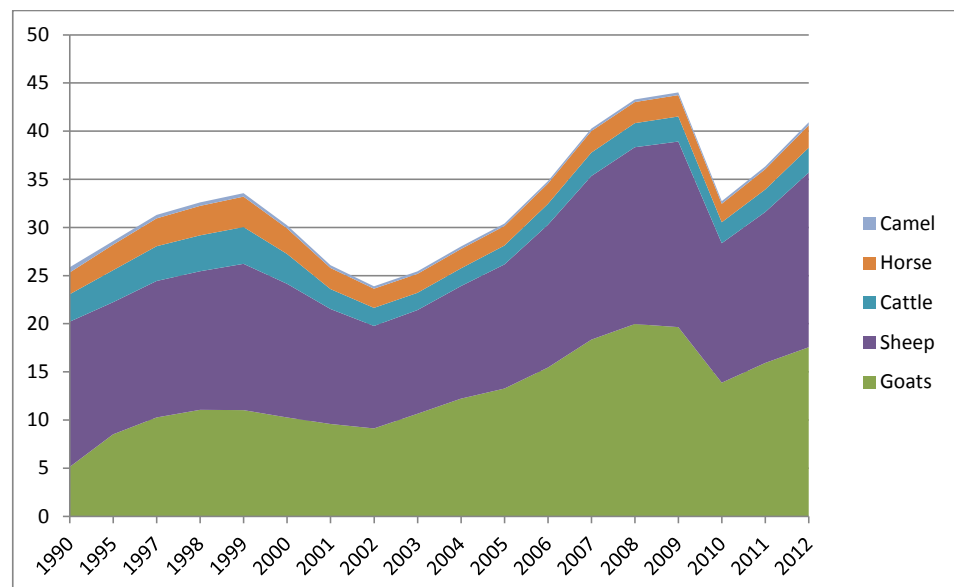


animal husbandry constitute 58.4% of the GDP

In the Altai mountain region the agriculture sector, dominated by animal husbandry, constitute 58.4% of the GDP which much higher than other parts of the country. At the same time industry and construction sector contributes only 5.2%, which indicates too much dependence of its economy from livestock sector (NSO 2010). The livestock sector in turn relies entirely on rangeland, causing overgrazing and land degradation around settlement areas and few accessible water sources. At national level the pasture degradation constitute over 87 percent of all degraded land mass.

In the absence of regulatory framework on pasture management not to mentioning its market based incentive and overlooked enforcement scheme, the number of livestock in country is being left to the mercy of natural fluctuation. Since the collapse of centralized planning system, Mongolia has already witnessed two large scale disaster where tens of million livestock perished due to combined impact of droughts, harsh winter and lack of fodder and available winter pasture.

Number of livestock 1990-2012



Yet the herders continue to rebuild the livestock in-between the collapses, especially the number of goats, which provide much needed cash during the leanest season and by the fact that the cashmere industry is widely regarded as a sector with the most revenue and export potential, despite a number of internal and external constraints continue to hamper its growth.

Despite the good potential of other livestock products such as meat and leather at international level, the low quality of raw materials and quarantine concerns hamper individual herders benefiting from these opportunities.

TWO FACTS TO DIGEST:

Japanese and South Korean pet food markets are promising venues for Mongolian meat processors. The pet food market is estimated at about \$3 billion in those two countries and almost \$50 billion worldwide.

Leather and leather products are among the most widely traded and universally used commodities in the world. The worldwide total value of annual trade of leather and leather products are estimated at:

- (i) one and half times the value of the meat trade;
- (ii) more than five times that of coffee; and
- (iii) more than eight times that of rice.

Source: ADB report of private sector of Mongolia 2009

The situation is further exacerbated by the limited financial services available to herders in rural areas. Although financial sector Mongolia is expanding in general their outreach to rural population is hindered by a low population density that does not provide enough support for further service expansion and associated high administration costs. Non-bank financial institutions currently constitute a small percentage of the financial sector, but close to 30 NBFIs serving rural areas of Mongolia are playing important role in increased access to credit in rural areas.

Recent assessments, including the WB assessment on livestock sector is proposing interventions that focus on developing and implementing programs that improve capacity of the livestock producer to provide products for the market place with mitigation of financial and environmental risk of livestock producers in a gradually commercializing livestock production system. Such interventions require differentiated approaches for herder types and geographical locations as the challenges facing livestock herders vary depending its geographic location and distance from market.



CHALLENGES AND THREATS

Current pastoral land-use in Mongolia including the Altai-Sayan region can be characterized as a downward spiral of decreasing herder mobility and increasing out-of-season grazing leading to unsustainable use of grassland. Several factors serve as drivers to this problem including:

- a. Climate change impact and decreasing pasture carrying capacity and its access due to availability of water,
- b. Worsening livelihoods due to climatic fluctuations and droughts as well as overall economy impacted by populist policy of government and downsizing remittance from abroad,
- c. Need for introducing alternative approaches in adaptation to climate change and climatic fluctuations as the only practiced mechanism based on shifting all risks to open access grassland are becoming not viable option,
- d. Concentration of herder families around settlements reflecting the herder families' interest to have an easy access to education, health services, market, etc.

Unsustainable pastureland management in Altai-Sayan mountain is increasing the competition between livestock and wild ungulates, such as argali, saiga antelope and the takhi horse that are being re-introduced in the Khom depression. These competitions are surfacing in form of habitat deterioration and displacement of wildlife onto marginal habitat and habitat encroachment accompanied by expanding livestock numbers. Impact on wildlife needs to be more developed.

The government goodwill attempts to conserve the biodiversity through network of Protected Areas is also putting pressure to the herder communities. As of today 16.9 percent or 1.7 million hectares of area is designated as a State protected area and although weak but still limit the use of pasture in these area. An additional 7.4 percent of the pastureland (767,000 ha) are designated as a local protected area and/or reserve pasture. Thus the total pasture area that limit the access to livestock has taken up as much as quarter of rangeland in saiga and takhi habitat areas and absence of awareness raising and alternative livelihoods options are undermining local communities' acceptance and appreciation of PA network values.



RATIONALE OF WWF INVOLVEMENT

Altai-Sayan Montane Forests has been identified by WWF as one the 35 priority place that shall be conserved contributing to a more secure and sustainable future for all. In addition Altai mountains hosts snow leopard - one of asian big cat flagship species and argali sheep and saiga antelope both identified by WWF as human footprint impact species that require special conservation effort. Moreover, with support from MAVA foundation the reintroduction of takhi horse is also being carried out in the hearth of ASER Mongolia.

WWF Mongolia considers that only an integrated approach for managing rangelands will ensure both the local communities livelihoods and conservation of above mentioned globally endangered wildlife and other species associated with it in the area. Based on its past experiences starting from 2008 WWF MPO has also succeeded to convince herder families to join herder communities and larger producer groups to empower the herder communities both in bringing their voice in decision making and increasing bargaining power.

PROJECT STRATEGY

Three interlinked approaches will form the backbone of the proposed project assisting the herders manage its pastureland in sustainable manner and becoming an integral part of market economy. They include:

Focus: Selected rangelands in the ASER with particular attention to Saiga and Takhi habitats. Cooperation will focus on herder families which are already involved with WWF in herder groups and rangeland management initiatives.



Organization of herders: In 2009 with direct support and coaching from WWF Mongolia, the herder communities in Khovd have established a "Altay Nuudelchid" (translated as Nomads of Altay) NGO and subsidiary cooperative both of which are legally registered entities. The NGO is working with herder community groups to introduce joint-tenure of pastureland that will form the basis for better management of its pasture, improving its business management skills and by scaling up its products will have a negotiation power with other market players. This initiative is widely appreciated by herder communities but needs support to scaling up and expanding its coverage.



Investment in community owned small scale meat processing plant: in 1995 with the very first Takhi horse re-introduction in Khustai NP the Dutch government via UNDP has supported establishment of a “cheese factory” to compensate the herders who have released their traditional pastureland in favor of Takhi horse. During the implementation period UNDP has created a primitive shareholding scheme where directly impacted herders not only benefitted from the milk sale but also receive end-of-the year dividend. Under the scheme the share of plan based on the capital assets were divided among directly impacted herders, local government and the team running the plant and also power balanced to avoid any overtaking.

The legal environment on shareholding and stock exchange as well as people’s understanding on it has drastically improved over the past decades and “**community owned meat processing plant**” will have a multiple benefits in terms of pasture management, local livelihoods and employment and wildlife conservation.



In order to ensure local communities’ acceptance and appreciation of PA network values and importance of sustainable pasture management in their livelihoods a well designed “**Awareness raising in sustainable pasture management**” shall also be an important part of the project. Appreciating the fact that people’s behavior change is a vital and yet long term process the project will work with three main target groups, the local decision makers who has gained substantial power from the ongoing nation level decentralization process and revised environmental laws of May 2012; local communities, especially the youth groups within the community who are most active and often vulnerable to external influence and need for short term gains and yet open to new ideas and keen to be part of social activities, and; school children through the wide coverage of ecoclub networks.

While support to the local government will be more of advisory and capacity building nature WWF will provide both herder community groups and processing entities in technical backstopping in creating green business models and mobilizing new and or additional funds for expanding its business.

Participatory planning and participatory decision making process applied during the project implementation are considered as important as reaching the project objectives itself. The proposed project will be implemented for 5 years with possible expansion considering the lengthy process of people’s attitude and behavior change.

VISION

Overarching goal of this project is to help maintain and where possible improve productivity of rangeland in the Altai-Sayan Mountain ecosystem to secure a sustainable future for man and wildlife.

MAIN OBJECTIVES AND OUTPUTS

The main objective of the project is to “**Support local communities in their wildlife conservation by developing and implementing a market oriented sustainable livestock production system**”. The project is expected to reach its objectives through three interlinked outcomes:

1. Herders capacity is and benefits from joint management of its natural resources:

- Build local hub for training and providing technical backstopping for local communities and business entities in collaboration with other partners such as MercyCorps, WVI
- Capacity building for herders joint management of NR
- Support for establishing herder groups and grazing plan
- Joint marketing/alternative livelihoods

2. Soft and hardware investment in “Community owned small scale meat plant:

- Assist herder communities identifying its niche in the local, regional and national market economy
- Assist herder communities in developing vision and business plan for integrating into market
- Assist herder communities in identifying potential business partners
- Assist herder communities and local government in creating co-funding scheme of running the small scale meat plant.
- Involve the identified workers of the plan in professional training and and business skills
- Identification and procurement of hardware based on the business plan and market niche.
- Investment in small scale meat processing plant.

3. Awareness raising in sustainable pasture management

- Carry out KAP survey for the three main targets groups: local decision makers, local communities, especially youth and school children
- Design detailed behavior change intervention tailored to the target groups.
- Ensure smooth implementation of the programme
- Carry out regular monitoring on the progress of KAP, and adapt the programme as needed.
- Make a documentary other awareness raising materials for project lessons sharing

ESTIMATED BUDGET

COMPONENT	FY 1	FY 2	FY 3	FY 4	FY 5	TOTAL
Outcome A - Herders capacity is and benefits from joint management of its natural resources	50,000	30,000	30,000	30,000	20,000	160,000
Outcome B - Soft and hardware investment in “Community owned small scale meat plant:”	35,000	200,000	75,000	100,000	50,000	460,000
Outcome C - Awareness raising in sustainable pasture management	60,000	50000	80000	50000	80000	320,000
Project management (including management fee 12.5%)	42,125	59,000	47,125	46,500	42,750	237,500
Total	187,125	339,000	232,125	226,500	192,750	1,177,500



CONSERVATION AND SUSTAINABLE MANAGEMENT OF AHEC HEADWATERS

PROJECT VISION:	Conserve and promote sustainable management of headwaters of Amur-Heilong River as a part of the WWF intervention at Eco-regional level.	
FUNDING PERIOD FOR THE PROPOSAL:	FY 2012-2014	
TOTAL SECURED BUDGET:	WWF DE	€418,000
	WWF NL	€150,000
	GAA (ADB)	€ ~426,670 (\$576,005)

BIODIVERSITY GOALS

In order to achieve sound conservation and sustainable management of grassland steppe, fresh water ecosystem and boreal forest ecosystems and address human pressure on these targets, WWF Mongolia have set three overarching conservation goals.

BIODIVERSITY TARGET	CONSERVATION GOALS
Freshwater ecosystems (rivers & wetlands)	By 2020, in the Mongolian part of the AHEC all river basins are soundly managed through IRBM principles and 449.8 thousand hectares of freshwater habitats are protected through PA network.
Steppe/ Grassland	By 2020, the integrity of the grassland ecosystems in the Mongolian part of the AHEC will be maintained through expansion PA network reaching 12% of the grassland steppe (1.74 mln. hectares) and linear infrastructures designs that ensure connectivity of the key habitats of Mongolian gazelle.
Boreal Forest	By 2020, boreal forest ecosystems in the Mongolian part of the AHEC is protected and well managed through PA network that cover 40% of the area and participatory forestry scheme that ensure sustainable use of 778 thousand hectares of boreal forest.

KEY ACHIEVEMENTS TO-DATE



- The ‘Onon River Fishing Club’ became an official NGO in May, 2013. The club established 4 years ago with a purpose to disseminate proper fishing management, research and monitoring of taimen (*Huho taimen*) in Onon River Basin. This year 12 fishermen joined to the club as a member and the clubs now has 54 members in total. The amendment made in the MoU between the club and local decision makers to provide sustainable activities of the club by allowing the club to manage the fishing activities in their areas.
- The campaign “King Fish of the Fresh Water-Pride of Mongolia” launched in more than 40 soums of 8 aimags outside AHEC ecoregion based on the best practice of WWF-Mongolia to protect taimen of Onon River Basin. The value of taimen is promoted during the campaign and



- Education for Sustainable Development (ESD) principles has been streamlined into the existing training curriculum as result of 5 series of in-service teacher training using the “whole school approach”. Survey findings suggest that, 84% of teachers have been using their knowledge and skills that learned during the trainings to their lesson. Teachers form a team by their own initiative and jointly develop curriculum of different topics that integrated with ESD principles for different grades. The survey shows that pupils’ motivation to contribute to the nature conservation activities increased, collaboration among the teachers improved, both teachers and pupils self-learning capacity increased and pupils are more active at classroom than before.
- Seven eco clubs were established and are now functional in 7 soums underlying the Onon River Basin. They regularly carry out small scale activities to focus on nature conservation not only at their schools, but also at soum level for local community acting as agents for change. Around 20 activities are carried out annually by eco-clubs and reaching



Japan
Fund for
Poverty
Reduction

The project “Poverty reduction through community based natural resource management” funded by JFPR/ADB has been successfully implemented in the Onon River Basin during 2009-2013. Stakeholders at all levels of this project pointed that the project is a most effective project. MEGD, Governor of Khentii Aimag and Governor of Dornod Aimag have signed a MoU to provide a long-term sustainability of the project results.

Major success include:

- CBOs steward totally 600.6 thousand hectares of land including 413.4 thousand hectares of forested areas: There are totally 125 community based organizations (CBO) joined by 3,200 members of 1,644 households in Onon River basin and 110 out of the CBOs are forest user groups. The CBOs steward totally 600.6 thousand hectares of land including 413.4 thousand hectares of forested areas.
- A festival “Community & Development” has been organized for last three years for the CBOs in the basin and consequently, 20 (2-3 in each project beneficiary soum) model communities dealing with natural resource management have been selected during the annual festivals.
- 105 CBOs have implemented small actions and sub-projects with USD 100,000 grants to upgrade their environmental conservation efforts, their livelihoods, and capacities of their members.

- Direct beneficiaries are 1,625 households and indirect about 6000 households: The project benefits have been accessed directly by 1,625 households and indirectly by about 6000 households in the CBOs. As a result of the project activities, totally 902 households have improved their livelihoods and 1,039 households have had their savings in commercial banks. Moreover, 208 poor households out of 417 poor households joined the community based organizations have been out poverty.
- To develop small and medium enterprises and increase job opportunities and livelihoods of local communities in the basin, 79 sub-projects with funding of USD 240.0 thousand were implemented by local economic entities, groups, women's groups, and residents have implemented.
- Buffer Zone Councils established in seven soums in Onon River basin have been issued with USD 186.0 grants for implementation of management plans and improvement of local community livelihoods.
- Onon River Basin Council has been established and its management and institutional structure has been strengthened to certain level.
- Four leveled management plans including management plans of 83 forest user groups, buffer zone management plans of seven soums, Onon Balj National Park management plan, and Onon River Basin's integrate water resource management have been developed, approved, and put in implementation.
- Eight main consumer products "Zonoi" of six types have been bar-coded and registered with the Intelligent Property Office in their geographical



- PA network in AHEC increased by 124,866 ha and a proposal to include 222,518 ha mountain area into the national protected area network
- As result of long term efforts that given by WWF-Russia and WWF-Mongolia, the Heads of the two States approved the establishment of a trans-boundary protected area 'Source of Amur'. It is expecting an official designation of the trans-boundary protected area during the Inter-Governmental Environmental Committee meeting expected to be held in fall 2013.



WWF-Mongolia
is taking over the
management of the
Khar Yamaat Nature
Reserve

The agreement to develop Khar Yamaat Nature Reserve as a model NR in Mongolia has been signed by MEGD, Governor's Office of Sukhbaatar and Khentii aimags and WWF-Mongolia in July, 2013. WWF Mongolia aims to create a model NR where PA mission is fulfilled without jeopardizing PA's financial sustainability and local communities' need for sustainable use of natural resources. Participatory planning and participatory decision making process and long term commitment from WWF are considered the most critical elements to achieve the ambitious project strategy.

The short term goal of the project is to "Establish sound management structure for Khar-Yamaat NR for creating model protected area". The project is expected to reach its short term goal through five interlinked objectives, including (i) Creating NR management structure; (ii) Planning the conservation work; (iii) Implementing management plan; (iv) Creating network of long term ecological monitoring and research sites; and (v) Creating long term adaptive management scheme.