GOVERNING 'FUGITIVE RESOURCES' ACROSS NATIONAL BOUNDARIES: WILDLIFE MIGRATIONS, ILLEGAL TRADE AND HABITAT FRAGMENTATION IN THE DAURIAN STEPPE

The open grasslands and rolling hills of the Mongolian portion of the Daurian Steppe where Mongolian gazelle and livestock herders move nomadically across the landscape
Photo: Amanda Fine/WCS

Scaling up Conservation Success with SCAPES
A program of the Wildlife Conservation Society
supported by the USAID/EGAT SCAPES Program

WILDLIFE CONSERVATION SOCIETY

Annual Report
September 2011

USAID
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Abbreviations

AHEAD	Animal and Human Health for the Environment And Development
BBOP	Business and Biodiversity Offsets Programme
CCBA	Climate, Community and Biodiversity Alliance
CITES	Convention on International Trade in Endangered Species
CMS	Convention on Migratory Species
CS-NY	(WCS) Conservation Support staff in New York
DIPA	Dauria International Protected Area
DS	Daurian Steppe
EMCCA	The Eastern Mongolian Community Conservation Association
EMPAA	Eastern Mongolian Protected Area Association
EPTA	Environmental Protection and Tourism Agency
ES	Eastern Steppe (Mongolia)
FAO	(United Nations) Food & Agriculture Organization
FMD	Foot and Mouth Disease
FY11	(USAID) Fiscal Year 2011 (October 1, 2010 – September 30, 2011)
GASI	General Agency for Special Inspection
GIS	Geographic Information System
GLTFCA	Great Limpopo Transfrontier Conservation Area
HCG	(Livestock) Herder Community Conservation Group
INGO	Informal name for a consortium of International NGOs
IP	Implementation Plan
KAZA	Kavango-Zambezi (a policy-based WCS SCAPES project in Africa)
LLP	Living Landscapes Program
LSA	(WCS-developed) Landscape Species Approach
MNET	Ministry of Nature Environment and Tourism
MoU	Memorandum of Understanding
NGO	Non-Governmental Organization
OIE	the World Organization for Animal Health
RWPS	Range-Wide Priority Setting
SBDA	State Border Defense Agency
SCAPES	Sustainable Conservation Approaches for Priority EcosystemS
SPA	Strictly Protected Area
SSIA	State Specialized Inspection Agency
TAD	Transboundary Animal Disease
TNC	The Nature Conservancy
TTC	(Choibalsan) Technical Technology College
UNDP/GEF	United Nations Development Programme/Global Environment Facility
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
USAID/GCP	United States Agency for International Development's Global Conservation Program
VECTOR	the State Research Center of Virology and Biotechnology (Russia)
WCS	Wildlife Conservation Society
WHO	World Health Organization
WWF	World Wildlife Fund
WWF-Mongolia	World Wide Fund for Nature - Mongolia
ZSL	Zoological Society of London

I. SUMMARY OF ACTIVITY STATUS AND PROGRESS

A. Introduction

The Daurian Steppe, stretching across Russia, Mongolia and China, is one of the last intact temperate grassland ecosystems in the world. The grasslands of Mongolia's Eastern Steppe are at the heart of the Daurian Steppe ecosystem. Home to over one million migrating Mongolian gazelle, the Eastern Steppe grasslands provide essential resources and ecosystem services to livestock herders whose livelihoods depend on the steppe and its wildlife. The Daurian Steppe SCAPES (DS SCAPES) project is one of three areas in which WCS is working with USAID to conserve biodiversity and secure the livelihoods of the rural poor through targeted site-based and policy initiatives at globally important sites for biodiversity conservation. The primary objectives of the Daurian Steppe project are to: (1) build a transboundary political constituency for collaborative conservation and development planning and implementation across the Daurian Steppe; and (2) reinforce and scale up an effective community-based model for wildlife and livestock management.

In FY11, the Daurian Steppe project worked to incorporate the SCAPES four main elements: (1) threats-based approach; (2) sustainability at the ecological, social and economic levels; (3) adaptive management; and (4) scaling-up. The project continued to focus on the conservation of migratory species, supporting transboundary protected areas, facilitating the implementation of existing transboundary agreements that safeguard the Daurian Steppe ecosystem, building community-based natural resource management and conservation capacity, addressing the livestock/wildlife disease interface and working to prevent illegal cross-border trade in wildlife. Investment in mining and the development of extractive industries in Mongolia is progressing rapidly and along with the promise of rapid economic growth, the development of the mining sector challenges efforts to conserve large intact ecosystems like the Daurian Steppe. In FY11, to address this growing challenge, the project extended its areas of focus to include the extractive industries in an effort to engage more effectively with both private and public sector actors to mitigate the impact of mining, oil extraction and associated infrastructure development on biodiversity, provision of ecosystem services and local herder livelihoods across the Daurian Steppe.

Planned DS SCAPES project activities were carried out in FY11 which addressed specific threats across the landscape. An in-depth analysis of the Foot and Mouth Disease (FMD) outbreak which occurred in Mongolia and neighboring Russia and China in 2010, provided a global perspective on FMD at the livestock/wildlife interface, linking lessons learned in KAZA, Southern Africa to disease control strategy development initiatives on the Daurian Steppe. Tri-lateral working group meetings were convened focused on the transboundary conservation of the white-naped crane and Mongolian gazelle, species which migrate across the Russian, Mongolian and Chinese portions of the Daurian Steppe. Work with local stakeholders and communities of livestock herders in the landscape also continued with training of volunteer rangers from community protected areas in wildlife monitoring method implementation, outreach focused on strengthening community governance structures for natural resource management, and providing a series of hunting and protected area legislation training sessions in advance of the fall hunting and winter wildlife trade seasons.

The capacity of the DS SCAPES project and WCS Mongolia Program to deliver conservation across the landscape was strengthened in FY11 as relationships were formalized with individuals and partner organizations in the Russian and Chinese portions of the Daurian Steppe. Tri-lateral meetings with representatives from Russia, Mongolia and China, and joint implementation of activities proved to be important mechanisms for strengthening these relationships and building a sustainable network of decision makers and conservation practitioners with a unified vision for transboundary management and conservation of the Daurian Steppe.

B. Highlights

- The cull or destruction of large numbers of Mongolian gazelle during a regional outbreak of Foot and Mouth Disease (FMD) was avoided in Mongolia by engaging with local and national-level decision makers and providing science-based evidence that disease control measures should be focused on the livestock population and ensuring disease immunity through vaccination.

- DS SCAPES project veterinarian, Dr. Sh. Enkhtuvshin, attended the 11th Animal & Human Health for the Environment And Development (AHEAD) Great Limpopo Transfrontier Conservation Area (GLTFCA) Working Group Meeting in South Africa, March 2 - 4, 2011.

- Three new groups of livestock herders on the Eastern Steppe of Mongolia have taken the first steps to register their traditional grazing lands as official community managed and protected areas or "nokhorlol" extending the network of EMCCA herder community groups (HCGs) across the Daurian Steppe.

- Andrew Tobiason, DS SCAPES AOTR, and Anila Jacob from the USAID Office of Natural Resource Management in Washington, D.C., visited Mongolia's Eastern Steppe and Daurian Steppe SCAPES project partners March 8 - 11, 2011. Their visit included attending two workshops and a conservation partners' dinner in Choibalsan, Dornod Aimag, and an overnight in Toson Hulstai Nature Reserve where the group was hosted by the Hotont Herder Community Group (HCG) and the opportunity to view steppe wildlife including multiple herds of Mongolian gazelle.

- April 25 - 28, 2011, the DS SCAPES project hosted a workshop series in Ulaanbaatar focused on Russian-Mongolian transboundary collaboration in the conservation and management of the Mongolian gazelle and avian species of the Daurian Steppe ecosystem in partnership with the UNDP/GEF Russian Steppe Project.

- May 27 – June 3, 2011, WCS and the DS SCAPES project organized the inaugural meeting of the White-Naped Crane Transboundary Working Group in Onon Balj National Park of Khentii Aimag. Partner organizations represented included the Onon Balj NP, WWF-Mongolia, Sokhond State National Biosphere Reserve of Russia, Dalai Lake Biosphere Reserve of China, Dornod Mongol Strictly Protected Area, Mongolian Academy of Sciences, Birdlife International, International Crane Foundation, and the Wildlife Science and Conservation Center of Mongolia. Over 30 individuals participated in the workshop from the Mongolian, Russian and Chinese Daurian Steppe ecosystem as well as the wintering range of white-naped cranes in Korea, Japan and southern China.

- Mr. Turkhuu Bilegt was selected for a Conservation Leadership Program (CLP) Internship with the WCS Mongolia Country Program in June 2011. CLP is a partnership of WCS, Conservation International, BirdLife International and Fauna & Flora International focused on programming that supports the development of future conservationists. The internship will run for 1 year and Mr. Turkhuu will be exposed to the broad range of conservation activities implemented by WCS in Mongolia including the USAID-funded Daurian Steppe SCAPES project.

- Attendance continued to be "standing room only" at the monthly conservation networking event hosted by WCS in Ulaanbaatar, and regularly attended by members of the academic and research community, NGO representatives, government officials and interested members of the general public. A list of speakers and topics is provided in Appendix 1.

C. Challenges

- ***Foot and Mouth Disease (FMD) Outbreak:*** Outbreaks of FMD virus were first recorded on Mongolia's Eastern Steppe in early May 2010, and the outbreak was not declared under control by the authorities until December. The DS SCAPES project was able to respond to the outbreak by providing technical expertise in the area of FMD control at the wildlife/livestock interface; however, the outbreak had a direct impact on planned DS SCAPES project activities in the Eastern Steppe region. The authorities restricted land-based travel and banned meetings, conferences and workshops in an effort to reduce vehicle movements across the steppe, a known means of spreading the FMD virus. Some of the field-based activities with livestock Herder Community Groups (HCGs) were shifted from the fall to the spring and summer months making for a very busy second half of FY11.

- ***Community-Based Natural Resource Management (CBNRM) Legislation:*** A MNET order issued in July 2010 changed a number of the provisions for the establishment of Herder Community Groups (HCGs) for the management of community areas in Mongolia. The new order was issued without guidance for implementation and awareness of the changes among local governments and communities on the Eastern Steppe is limited. The amendments include changes in the way in which the size of HCG areas are determined, linking the total area to the number of individual families who are members of the HCG. Boundaries of HCGs will need to be redrawn and existing agreements registering HCGs as "nokhorlols" or community managed and protected areas have been nullified. As described in more details under Activity 2.1, these changes resulted in the DS SCAPES project investing considerably more time and effort on governance issues in FY11 and establishing new partnerships with organizations and NGOs with more CBNRM governance experience to address this challenge.

- ***Railroad and Infrastructure Development:*** Limiting fragmentation and maintaining connectivity across Mongolia's Eastern Steppe is the primary strategy for conserving what is left of the Daurian Steppe ecosystem. In FY11, a series of plans for developing and expanding Mongolia's national railway were published. The plans include laying rail across the Eastern Steppe to connect the South Gobi Desert region of Mongolia, and its large deposits of coal, gold and copper, with Russia and markets in Japan and South Korea. WCS, the DS SCAPES project and the conservation community will need to engage in the planning to ensure that the railway is designed and routed in a way that minimizes the barrier effect for migratory species like Mongolian gazelle. An updated map of the DS SCAPES including the planned railroad is provided in Appendix 2.

- ***Discoveries of Mineral Deposits on Mongolia's Eastern Steppe:*** A Canadian company, Centerra Gold Inc., announced the discovery of a significant precious and base metal deposit on its 100%-owned Altan Tsagaan Ovoo (ATO) property in

northeast Mongolia in July 2011. The lease area, covering 77,000 hectares, is located just to the north of Toson Hulstai Nature Reserve on the Eastern Steppe and has been described as "a new emerging mineral district" by Mr. Steve Lang, President and CEO of Centerra. Mineral exploration on the Eastern Steppe has seen an upsurge in activity over the past year and this discovery is likely the first of many. Landscape-level planning that ensures adequate protection of biodiversity and best practices that avoid and minimize the negative impacts of mining will be essential or this challenge could prove devastating to the Daurian Steppe's wildlife and the human culture that has defined the region for centuries. A map and brief description of the ATO project is provided in Appendix 3.

D. Adaptive Management in Action

To effectively address each of the challenges listed above the DS SCAPES project has sought new information, consulted with subject experts and in multiple cases we have shifted project resources to hire short-term consultants or enlist the assistance of new partners to enable us to address these challenges more effectively. We have also sought and secured additional financial and technical support to address some of these issues. This adaptive management process is ongoing and will continue to evolve but a number of specific examples are provided below illustrating the ways in which this flexibility has impacted programming and supported conservation success.

Transboundary Disease at the Interface of Livestock and Wildlife Health: The outbreak of Foot and Mouth Disease (FMD) virus on the Eastern Steppe in the spring of 2010 resulted in increased interest and a sense of urgency among Mongolian veterinary officials focused on the need to address this economically important transboundary disease. Increased levels of concern about FMD were also voiced by officials from the Chinese and Russian portions of the Daurian Steppe and the debate about the role of the Mongolian gazelle in FMD transmission was highly publicized. Recognizing that WCS and the DS SCAPES project team was uniquely positioned to guide FMD disease control policy development across the region, resources were devoted to engaging stakeholders through meetings and workshops and providing international-level technical expertise. International FMD expert, Dr. Gavin Thomson, was recruited to complete a consultancy in FY11, in Mongolia which examined current disease control policies and 'knowledge gaps' in the epidemiology of Foot and Mouth Disease on Mongolia's Eastern Steppe and made recommendations for improving the transboundary management of diseases at the interface of livestock and wildlife health across the Daurian Steppe. Dr. Thomson's consultancy, described in more detail under Activity 2.3, has influenced the way in which Mongolia is developing its strategies for FMD surveillance and control. This input has also established WCS and the DS SCAPES project as a resource and partner in the development of regional FMD strategy allowing for the opportunity to advocate for the consideration of the value of Mongolian gazelle and mainstreaming conservation of biodiversity and ecosystem services in a decision making process that has historically been limited to input from the agricultural and trade sectors. The DS SCAPES project has also played a role in raising awareness of FMD as an important transboundary disease at the livestock/wildlife interface on the DS with FAO and CMS.

Community-Based Natural Resource Management (CBNRM): A recognized need to more frequently and more effectively engage with local communities across the Daurian Steppe led us to continue a partnership with Rare to extend and expand the Eastern Steppe

Rare Pride Campaign[1], and incorporate the Rare approach of using social marketing techniques to change awareness, attitudes and behaviors toward conservation at the local level by inspiring people to take pride in the natural assets that make their communities valuable and take action to protect them. This has proven to be a successful approach, cementing our relationship with local stakeholders and inspiring not only local communities but also DS SCAPES staff and project partners to take conservation action locally. A summary of the Rare Campaign is provided in Appendix 4. The changes in CBNRM legislation in Mongolia, which we became aware of in early FY11, required a level of expertise and advisory capacity we did not possess within our own project team so we reached out to a local NGO, People Centered Conservation (PCC), with extensive experience working with livestock herder-based community organizations to establish governance structures for the sustainable management of natural resources. PCC and CBNRM expert, Sabine Schmidt from the New Zealand Nature Institute (NZNI), worked with the DS SCAPES project team and the EMCCA leadership to adapt activities with livestock Herder Community Groups (HCGs) planned for FY11 to more effectively address the new challenges faced by community managed and protected areas.

A Changing Landscape: Mining & Infrastructure Development on the Daurian Steppe:
The rapid rate of mining and infrastructure development across Mongolia will require WCS and the DS SCAPES project to develop stronger relationships with both the government and private sector if we are to play a significant role in shaping policy and ensuring that projects are designed in ways which limit the negative impacts on biodiversity and local communities and offset those impacts where possible. WCS has worked to promote the *Business and Biodiversity Offsets Programme (BBOP)* in Mongolia through a series of meetings, workshops and informal engagement with industry and local and national governments focused on mining and infrastructure development. This work has been supported by sources of funding outside the USAID DS SCAPES program (Trust for Mutual Understanding, World Bank Netherlands Mongolia Trust Fund for Environmental Reform and the European Bank for Reconstruction and Development) but the progress made in identifying opportunities for implementing a biodiversity offset program in Mongolia through government policy development and/or a private sector voluntary pilot project is very relevant to the Daurian Steppe region, where there is a critical need to identify ways in which development can proceed while the biodiversity and ecosystem services of the region are preserved. The announcement of the discovery of a “rich deposit” of minerals at the Altan Tsagaan Ovoo site on Mongolia’s Eastern Steppe was followed immediately by meetings between the project leadership and the DS SCAPES project staff and a site visit in August of 2011. The broader engagement through BBOP combined with focused work with companies currently operating in the DS SCAPES landscape should help establish the kind of relationships necessary to influence site-based and regional planning so conservation is achieved on a landscape scale. WCS has initiated a process designed to raise more resources to provide the project team in Mongolia, and WCS programs in the region, with more capacity to engage effectively with the extractive industries. We anticipate that the threats to biodiversity and local communities associated with the extractive industries will only increase during the implementation of the DS SCAPES project and we will continue to look for opportunities and resources to address this threat more effectively. The major BBOP activity in Mongolia was focused on the South Gobi Desert region where some of the countries largest deposits of coal, copper and gold have been discovered. A summary and meeting notes from the April 2011 BBOP South Gobi Stakeholder Workshop is provided in Appendix 5.

[1] More information about the campaign can be found at: http://www.rareplanet.org/en/campaign/campaign-sustainable-hunting-practiceseastern-steppe.

Miradi & Adaptive Management

Throughout FY11, the DS SCAPES project team actively used Miradi in the strategic planning, monitoring and adaptive implementation of the DS SCAPES project by monitoring the effectiveness and progress of activities and discussing needs for adaptation. After the initial training provided by Dr. Karl Didier of WCS Conservation Support at the end of FY10, the WCS Mongolia team held a series of sessions to apply the lessons learned during the intensive training and these were used to review threats and goals for conservation targets, examine result chains and brainstorm conservation strategies. At the end of FY11 a review of current and future conservation strategies was conducted with support from Dr. Karl Didier. An updated conceptual model for the Daurian Steppe with targets, threats and strategies is presented in Appendix 6.

E. Table of Activity Status

II. DESCRIPTION OF PROGRESS ON SITE-BASED OR POLICY INITIATIVES

A. Key Short and Long-term Program Objectives

The Daurian Steppe SCAPES project strives to conserve the Daurian Steppe ecosystem, one of the last intact temperate grasslands in the world. In FY11, the project carried out activities in support of the longer-term program objectives of: (1) building a transboundary political constituency for the collaborative planning and implementation of conservation and development activities across the Daurian Steppe; and (2) reinforcing and scaling up an effective community-based model for wildlife and livestock management across the steppe. In FY11, the DS SCAPES project built on existing partnerships with local and national stakeholders within Mongolia and established partnerships with transboundary stakeholders in the Russian and Chinese portions of the Daurian Steppe by convening joint conferences, establishing species-focused transboundary working groups and creating and staffing a China DS SCAPES project coordinator position with plans to extend this model of management to Russia in FY12. The Eastern Mongolian Community Conservation Association continued to be the main project partner in promoting effective community-based wildlife conservation and management of natural resources across the Mongolian portion of the Daurian Steppe. Significant progress was made in expanding the network of community

managed areas and strengthening the governance structures of these community-managed and protected areas in Mongolia with assistance from a new partner, the Mongolian NGO People Centered Conservation. The project has played a critical role in the on-going development of strategies for addressing transboundary diseases at the livestock/wildlife interface with a focus on Foot and Mouth Disease. Mineral exploration and the rapid expansion of the extractive industries sector in Mongolia are putting greater and greater pressure on efforts to conserve large intact ecosystems like the Daurian Steppe. With the expansion of mining and the construction of railroads and other infrastructure, the need for coordinated development planning across the region has become even more critical since the inception of the DS SCAPES project. Additional emphasis on addressing this particular threat as a critical component of our two main project objectives is expected in the remaining years of the DS SCAPES project implementation with the establishment of a sustainable mechanism to support community engagement and coordinated conservation and development planning into the future. Efforts to link communities in the transboundary region and scale up the community-based model for wildlife and livestock management across the Daurian Steppe are in the early stages and will continue to develop over the course of the DS SCAPES project's implementation. Key short-term objectives for FY11 are described in more detail in the Activity Descriptions below.

B. Summary of Progress for Site

In FY11, the DS SCAPES project was able to make up for the delayed initiation of activities in FY10 and is now "on track" for the majority of activities designed to meet the overall DS SCAPES project objectives. A number of specific activities took place at the end of FY11 including a training of volunteer rangers from community protected areas on the Eastern Steppe, stakeholder workshops associated with the establishment of two new herder community groups and a collaborative wildlife protection training in the Mongol Daguur SPA, the Mongolian portion of the Dauria International Protected Area, with participation from the State Border Defense Agency of Mongolia. The finalization of some of the reports from these activities, follow-up and assessment of conservation impact will carry over into FY12.

C. Activity Descriptions

OBJECTIVE 1
Build a transboundary political constituency for collaborative conservation and development planning and implementation across the Daurian Steppe.

The establishment of effective transboundary management of natural resources is critical to the conservation of the Daurian Steppe ecosystem. Effective transboundary management ensures that the steppe is not fragmented and that landscape and migratory species, such as the Mongolian gazelle and white-naped crane, are able to access necessary habitat across the entire steppe. Transboundary management is also crucial to abate over-hunting for trade and reduce the risk of wildlife-livestock disease transmission. Building a political constituency for the collaborative planning and implementation of conservation and development activities across the Daurian Steppe will ensure that threats are addressed and efforts are sustained over the long-term.

To meet this objective, WCS and the DS SCAPES project team focused on activities designed to (1) make decision-makers aware of the importance of the transboundary landscape for local people and biodiversity; and (2) to create a network of people and institutions with the capacity to support conservation planning and implementation of conservation strategies across the region. In FY11, the project focused on bringing Daurian Steppe species experts from Russia, China and Mongolia together, combining components of the Landscape Species Approach and Range-Wide Priority Setting, to identify and begin implementation of priority strategies for transboundary conservation of the Daurian Steppe. Time was also devoted to reviewing current transboundary agreements initiated by DS

SCAPES countries that might be used to support conservation. The first training of wildlife managers and enforcement officers from the regions only transboundary protected areas, the Dauria International Protected Area, took place at the end of FY11, and a multi-agency collaborative approach to reducing the illegal transboundary trade of steppe wildlife was initiated in Mongolia.

In addition to the efforts described in detail in the Activity sections below, WCS and the DS SCAPES project team took advantage of opportunities to promote the Daurian Steppe and raise awareness of the global importance of this eco-region within the DS SCAPES countries and internationally. Activities in support of this overall objective included the following:

- Promoting the Daurian Steppe and building support for its conservation through a series of meetings and conferences held in Mongolia in FY11 with a focus on natural resource management, the environment or conservation policy. These included: (1) Climate Change Adaptation and Challenges hosted by GTZ and MNET; (2) the Business Council of Mongolia's Environmental Working Group; (3) A workshop series for stakeholder input into the development of criteria for Mongolia's Environmental Master Plan hosted by MNET and Eco-Asia Environmental Institute; and (4) the on-going meetings among the leadership of WWF, WCS, and TNC in Mongolia in an effort to coordinate conservation efforts and policy initiatives under the "Zuun Bus" Eastern Steppe partnership MoU

- Holding a special meeting with the Directors of the Protected Areas on Mongolia's Eastern Steppe to coordinate DS SCAPES project plans for wildlife monitoring, training and capacity building, wildlife trade detection and conservation planning with any on-going activities planned by the PA Directors.

- Promoting the conservation of key Daurian Steppe landscape species by participating in a conference organized by the Chairman of the Mongolian Parliament's Standing Committee on Nature, Environment, Food and Agriculture, Mr. P. Altangerel. The conservation of the Gray Wolf (*Canis lupus*) in the grasslands of eastern Mongolia was the focus of the conference. Policy outputs included a proposal to institute a ban on hunting wolves across the grassland regions of Mongolia's three eastern provinces in an effort to control the overhunting currently taking place for domestic use and trade with China.

- Highlighting the rapid growth of activities related to natural resource extraction in Mongolia and the infrastructure projects (road, rail, and electrical grids) designed to support the development of the sector at the WCS Asia Regional Meetings held in New York July 24 - 29, 2011. The need for increased capacity and resources to adequately address this challenge to conservation of the Daurian Steppe ecosystem as a single, unified landscape for species and communities of livestock herders was discussed.

Activity 1.1
Develop an adaptive, participatory and spatially explicit strategy for threat abatement and landscape conservation across the Daurian Steppe using the WCS Landscape Species Approach.

Building a transboundary political constituency for collaborative conservation and development planning across the Daurian Steppe (DS) requires the development of a clear and concise plan for threat abatement strategies, with the participation of stakeholders from across the Daurian Steppe, including partners from the Russian and Chinese portions of the steppe.

In 2010, we decided to focus our efforts to build a transboundary constituency on two species, Mongolian gazelle and white-naped crane because they are iconic, highly valued from cultural perspectives, and migrate to and rely on habitat in all three countries of the Daurian Steppe. More importantly, they will help us address most of the critical threats facing the steppe, including overhunting (gazelle), habitat competition and habitat degradation by livestock (gazelle and cranes), barriers to movement (gazelle), habitat destruction by mining/oil industry (gazelle and cranes), clearance for crop-based agriculture (cranes), human-mediated wildlife diseases (gazelle), climate change and drying of the steppe (gazelle and cranes). We believe that focusing on these two species will most effectively allow us to launch transboundary collaboration because there is a strong existing constituency in the Daurian Steppe that is interested in their conservation.

At the beginning of FY11, our ultimate aims were (1) to assemble strong teams of representatives from across the Daurian Steppe (working groups) (2) to produce a concise and broadly agreed-upon set of priority places for gazelle and white-naped crane conservation and priority activities to implement across the DS and (3) based partially on these first two aims, to complete an internal strategic planning process that would guide the project over the next 3 years. In 2011, the DS SCAPES team made substantial progress in all of these aims.

Major Achievements and Progress

The DS team continued efforts started in 2010 to identify potential working group participants and to initiate and strengthen relationships with individuals and agencies. In particular the DS staff implemented a major effort to develop relationships with partners in the Chinese portion of the steppe. In October 2010, WCS and Daurian Steppe project staff met with a delegation from the "Biodiversity Conservation and Sustainable Management of the Hulunbeir Grasslands" project visiting Mongolia from Hulunbuir, China. The Hulunbeir grasslands are the best preserved portion of the Daurian Steppe eco-region within China. The meetings held in the WCS Mongolia program offices provided an important opportunity to identify common conservation goals for the region and plan joint initiatives. Representatives from the Hulunbeir grasslands project agreed to serve on the Daurian Steppe transboundary working groups for the Mongolian gazelle and white-naped crane and support the implementation of transboundary conservation and management of these two key Daurian Steppe landscape species. The discussions and information presented during the visit provided important insight into our partners' conservation goals and objectives in the region.

On the back of such efforts to develop relationships and comprehensive lists of possible representatives, the DS team was able to co-host initial working group meetings for both gazelle and white-naped cranes. In April 2011, the DS SCAPES team, in partnership with the UNDP/GEF Russian Steppe Project, hosted a workshop series in Ulaanbaatar focused on Russian-Mongolian transboundary collaboration for the conservation and management of the Mongolian gazelle and avian species. Chuck Howell, USAID Mongolia Representative,

and Onno van den Heuvel, UNDP Program Officer for Biodiversity Conservation, provided opening remarks at the workshop. The agenda included a series of presentations by species experts and conservationists working in the region as well as contributions from private sector companies and Mongolian government-led regional development projects. Russian participants included representatives from the Dauria International Protected Area, Russian Steppe UNDP/GEF project, the A.N. Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences and the Russian-Mongolian Expedition. Working group sessions were held in the afternoon and second day of the Mongolian gazelle and avian species workshops to set goals and detail the "next steps" for projects, institutions and individuals involved in the collaborative effort. A significant output was a decision to update Mongolian gazelle range-wide maps with both ecological/species data and the current and planned development in the region with an emphasis on the infrastructure associated with the planned expansion of the railway network in Mongolia. A summary of presentations from the workshop and a full list of "next steps" identified is provided in the Workshop Report (see Appendix 7).

In June 2011, the DS SCAPES team organized the inaugural meeting of the White-Naped Crane Transboundary Working Group in Onon Balj National Park of Khentii Aimag. Partner organizations represented included the Onon Balj NP, WWF-Mongolia, Sokhond State National Biosphere Reserve of Russia, Dalai Lake Biosphere Reserve of China, Dornod Mongol Strictly Protected Area, Mongolian Academy of Sciences, Birdlife International, International Crane Foundation, and the Wildlife Science and Conservation Center of Mongolia. Over 30 individuals participated in the workshop from the Mongolian, Russian and Chinese Daurian Steppe ecosystem as well as the wintering range of white-naped cranes in Korea, Japan and southern China. During the initial two days of the workshop participants created up-to-date range maps (see Appendix 8) and worked together to identify and prioritize four specific places (see Appendix 9) and a set of specific activities for increased conservation investment. Priority places included some in Mongolia, Hulunbuir region of China, and even portions of the wintering range in southern China (Poyang and Shenjin Lakes) that are heavily threatened but support nearly 50% of the crane population through the winter months. The working group recommended increasing conservation investment within the next three years for a total of ten strategies (spread amongst the four priority places; see Appendix 10.

After the workshop, the DS staff discussed the expert recommendations and plan to begin implementation of three strategies in FY12 using SCAPES resources, including:

- Piloting the formation of a cooperative committee to implement sustainable & wildlife (crane)-friendly agriculture development activities in the Naoli He area of China,
- Organizing a joint (Russian, Chinese, Mongolian) field assessment of crane populations in the transboundary breeding regions of the Ulz, Onon, and Hurkh Rivers, to validate critical habitat, establish breeding population sizes, and develop common monitoring protocols amongst the partners
- Pilot the use of fencing to protect critical nesting areas, streams, and rivers from disturbance and grazing by cattle, and exploring the placement of wells to compensate herders for loss of water access.

The DS SCAPES team will support proposal development to fund several other recommended strategies and support implementation of other strategies by partners, including several strategies to conserve cranes on their wintering grounds in China. If wintering habitats in China continue their rapid decline, Mongolia's populations of cranes, many of which winter in China, will also decline.

The priority setting activities of the workshop were followed by three days of field surveys to determine areas occupied by cranes in the Onon Balj region, and expose workshop participants to rigorous monitoring methods for cranes. Since June, workshop follow-up has

included communication with Russian and Chinese scientists to collect information regarding white-naped crane distribution in the far eastern portion of its range in order to finalize the range-wide distribution maps. A White-Naped Crane Working Group Wiki site was created which currently includes content from the meeting and will hopefully serve as an open access depository of information on white-naped cranes, facilitate communication and information sharing across the range and improve the transboundary conservation of the species. Data from the survey and range maps are still being validated and analyzed, and will be included in a full workshop report to be completed within the next 1-2 months.

This workshop was a critical step in the implementation of transboundary management and conservation of this key Daurian Steppe landscape species and represented a unique opportunity for scientists and conservation practitioners from across the white-naped crane range to share information and make important decisions about conservation priorities for the species.

In June, the DS SCAPES team also completed a strategic planning process to guide the program over the next 3-5 years. Over the course of 2011 and following on a strategic planning short- course held in September 2010, the team completed the following project planning steps outlined in the Conservation Measures Partnership's Open Standards for the Practice of Conservation. The products are summarized in Appendix 11.

1. The team revised its vision statement and goals for conserving nine conservation targets across the Daurian Steppe
2. The team revised the set of direct threats to the steppe, rated those threats for several criteria, and ranked the threats in terms of how important they were to mitigate
3. The team built new conceptual models, described social, economic, political, or cultural factors that contribute for each of seven prioritized threats
4. Using the conceptual models, the team brainstormed a set of possible strategies (nearly 50) to mitigate threats or recover targets
5. As a guide to prioritizing among these brainstormed strategies, the team rated them for a series of criteria (e.g., impact on threats, financial feasibility, political feasibility, etc.)
6. Based on rating criteria, the team placed strategies into intuitive priority categories, including:
    A. Existing strategies that will be continued using secured resources (SCAPES and others), at or below current levels of investment
    B. Existing strategies or new ones that should be scaled up or started within the next 3 years using secured resources (SCAPES and others), and
    C. Existing strategies or new ones that should be scaled up or started, but for which new funds need to be raised within the next three years.

In total, the team identified four strategies in category A, three in B, and 15 in category C. Over the course of the next six months, the team plans to complete a plan for monitoring the effectiveness of the seven strategies in category A and B, including results chains, threat reduction objectives and near-term versions of the goals (e.g., 3 year milestones), and measurable indicators.

Key Management Issues and Challenges

The vastness of the Daurian Steppe and the fact that it spans three countries makes communication among the various stakeholders particularly challenging both due to

language barriers and the limited opportunities for face-to-face meetings. A number of bi-lateral and tri-lateral meetings and events were held in FY11, with participation from representatives from two or more of the Daurian Steppe countries. To build on and maintain the relationships established at these meetings, and formalized through the creation of transboundary working groups for the white-naped crane and Mongolian gazelle, the DS SCAPES project has appointed a DS SCAPES coordinator for China and will soon identify a similar coordinator for Russia. Ms. Lishu Li, formally of the WCS China Program and having recently completed a Masters degree in wildlife conservation at the University of Montana (with research work in Mongolia), has been hired as the DS SCAPES China coordinator. Lishu Li will be based in China, working out of the WCS China Program office in Beijing. A similar approach is being pursued in Russia with a number of discussions underway with the WCS Russia Program and colleagues in the region, to identify an individual with the interest and skills necessary to play a coordination role in the context of transboundary conservation.

Activity 1.2
Promote the adoption and implementation of transboundary agreements that support wildlife conservation and facilitate collaborative conservation and development planning at the landscape scale.

In recognition of the fact that transboundary agreements are the primary mechanism for implementing transboundary conservation regulating the management of natural resources and controlling the spread of disease across international borders, the DS SCAPES project followed developments in this area for the Daurian Steppe countries of Mongolia, Russia and China throughout FY11. The most relevant and significant development in FY11 was the signing of the MoU between the Hulunbeir Environmental Protection Bureau of China and Dornod Aimag Environmental Protection and Tourism Agency of Mongolia on "Transboundary cooperation on biodiversity conservation action plans in the Daurian Steppe region". Agreements focused on joint action planning were also signed between Russia and Mongolia, facilitated by a UNDP/GEF project, to work on "actions planned for improving coverage and management efficiency of protected areas in the steppe biome of Russia" that included transboundary grassland regions on the border of Russia and Mongolia. The Daurian Steppe countries' participation in international treaties was also followed including the Convention on International Trade in Endangered Species (CITES), the Convention on Migratory Species (CMS) and the Global Framework for the Progressive Control of Transboundary Animal Diseases led by the World Organization for Animal Health (OIE) and the United Nations Food & Agriculture Organization (FAO).

Major Achievements and Progress

- Contact was made with international organizations, agencies and institutions in Russia, Mongolia and China to identify transboundary agreements relevant to conservation, natural resource and disease management.
- A list of 30 transboundary agreements signed between 1986 and 2010 were collected and reviewed (Appendix 12).
- Announcements of conferences and meetings with a focus on transboundary conservation or management of natural resources or disease were followed to identify opportunities for the participation of DS SCAPES project staff or partner organizations.
- The DS SCAPES project supported MNET's effort to present Mongolia's Eastern Steppe, the heart of the Daurian Steppe eco-region, as a globally important landscape at the 10th Conference of the Parties to the Convention on Biological Diversity (CBD) held in Nagoya, Japan, October 18 - 29, 2010.
- DS SCAPES project veterinarian, Dr. Sh. Enkhtuvshin, presented a talk entitled "Challenges Managing Foot and Mouth Disease at the Wildlife Livestock Interface

Level on Mongolia's Eastern Steppe" at the 11th Animal & Human Health for the Environment And Development (AHEAD) Great Limpopo Transfrontier Conservation Area (GLTFCA) Working Group Meeting at Mopani Rest Camp, Kruger National Park, South Africa, March 2-4, 2011. Dr. Enkhtuvshin's visit to southern Africa and her engagement with veterinarians and conservationists from the region dealing with transboundary disease issues represented an opportunity for her to learn from the Southern Africa experience and strengthen the link between the Daurian Steppe and Kavango-Zambezi Transfrontier Conservation Area SCAPES projects.

Key Management Issues and Challenges

With a larger project team at the start of FY11, the DS SCAPES project was able to expand the list of transboundary agreements relevant to the region and access original language copies and in some cases translations. Unfortunately, the staff member tasked with completing the analysis of these agreements and writing up an assessment left her position before completion of the output. In short the list of 30 agreements spanning the past quarter century cover the major natural resources of the region including water, forests, grassland habitat, specific wildlife species like the Mongolian gazelle and general biodiversity. These agreements, however, are primarily focused on joint planning or joint research and monitoring with very little evidence that the work on the ground has ever taken place or that development planning is informed by information collected and shared by the parties of the agreements. More work will need to be done to determine which, if any, of these agreements should be revitalized in an effort to build a transboundary political constituency for collaborative conservation and development planning and implementation across the Daurian Steppe.

Activity 1.3
Strengthen the capacity of transboundary protected areas to implement sustainable conservation initiatives and adaptive mechanisms to strategically address threats across the Daurian Steppe.

The DS SCAPES project works to strengthen the capacity of transboundary protected areas with a focus on the Dauria International Protected Area (DIPA), established in 1994, as a transboundary protected area uniting the Mongol Daguur Strictly Protected Area of Mongolia, the Daursky Nature Reserve of Russia and Dalai Nuur Nature Reserve of China. In FY11, the project's major achievements included implementation of activities in collaboration with and inside the DIPA, strengthening the PA's patrolling, management and wildlife monitoring capacity. DIPA staff attended and co-hosted the Daurian Steppe Transboundary Conservation Cooperation workshop and the White-Naped Crane Transboundary Working Group meetings described in Activity 1.1. There was also the opportunity in FY11 to support a more recent transboundary relationship between Mongolia's Onon Balj National Park and Russia's Sokhond State National Biosphere Reserve located in the western portion of the Daurian Steppe, an important nesting area for white-naped cranes and a region that has seen more frequent use by Mongolian gazelle over the past 3-5 years. The joint field surveys in Onon Balj NP are detailed under Activity 1.1.

Major Achievements and Progress during Reporting Period

- In October 2010, WCS staff completed a training needs assessment for Mongol Daguur SPA after a successful visit to the region. Input was provided by EMPAA and the senior command of the State Border Defense Agency (SBDA). The SBDA guards are the only year round residents of Mongol Daguur SPA and their involvement in wildlife protection and management within the SPA is critical. An

agreement outlining the SBDA's willingness to collaborate with EMPAA rangers was confirmed during our October field visit. Both agencies committed to participating in joint trainings and supported a collaborative approach to wildlife protection within the SPA.

- In March of 2011, WCS worked with EMPAA to update maps of Mongol Daguur SPA and facilitated the planning for the establishment of a Wildlife Picture Index (WPI) site within the PA and buffer zone. WPI uses grids of camera stations to record wildlife presence and assess population trends over time. The camera stations were set up in July 2011 and photo data processing is currently underway. A sample of photos is provided as part of the FY11 photo presentation in Appendix 13.
- A *Collaborative Wildlife Protection* program was initiated in FY11, in Mongol Daguur SPA. The program promotes information sharing and coordination among the multiple agencies operating within these border regions (border guards, environmental inspectors, rangers, etc.) to increase the efficiency and effectiveness of wildlife protection activities. The program was launched with a joint field-based training September 5 - 11, 2011, to promote site-based collaboration, to improve skills for wildlife monitoring, to address the threat of cross-border poaching and to provide an opportunity for individuals from the different agencies and institutions to interact and work together. A full report on the training is available in Appendix 14.

Key Management Issues and Challenges

The effort put into establishing relationships with DIPA partners in China and Russia in FY10 allowed us to plan joint events in FY11 and understand some of the current gaps in the management and resources available to the DIPA. Communication among the DIPA partners continues to be a challenge due to language barriers and limited access to internet and phone lines within the PAs. The hiring of Lishu Li as the DS SCAPES China coordinator has already and will continue to facilitate communication and coordination with our Chinese partners in DIPA and across the DS SCAPE. A similar arrangement is being pursued in Russia with site visits to the Russian and Chinese portions of DIPA planned for FY12. Working within Mongolia Daguur SPA requirements and getting the permission of the SBDA and the participation of border guards is critical to implementing wildlife monitoring and management within these border region SPAs. Working with the SBDA necessitates a certain degree of additional attention since they are not accustomed to working with a conservation organization. In addition we have been required to vet all training participants through the US Embassy as part of the Leahy and INVEST requirements.

Activity 1.4
Promote "Collaborative Wildlife Protection" along the Daurian Steppe's international borders to prevent poaching and unsustainable transboundary trade in wildlife products at key frontier crossings from Mongolia into China and Russia.

The DS SCAPES project was successful in FY11 in facilitating the establishment of a multi-agency team on Mongolia's Eastern Steppe to address illegal hunting and the illegal trade of wildlife in an effort to control cross-border wildlife trade from Mongolia to China and Russia. Non-USG funds were used to support the piloting of active patrolling of trade routes and markets by multi-agency teams. Local citizens and university student groups voluntarily performed observational surveys of markets and followed local advertisements, collecting information that led to enforcement action. The Rare Pride approach was successfully incorporated into these activities resulting in much broader awareness of the laws regulating hunting and trade and local support for preventing illegal activity.

Major Achievements and Progress

- Meetings were held October 25 - November 1, 2010, on the Eastern Steppe with representatives from the multiple agencies with jurisdiction over wildlife trade to plan a series of wildlife law enforcement trainings and the formation of a multi-agency team to address the threat of overhunting of wildlife throughout the Daurian Steppe region with a focus on the illegal and unregulated cross border trade of wildlife. The multi-agency team was formed in advance of the major wildlife trade season which always coincides with the opening of border points on the Chinese-Mongolian and Russian-Mongolian borders in January. The multi-agency team was made up of representatives from EPTA, EMPAA, Customs, General Intelligence Agency and the Police.

- The Eastern Mongolian Protected Area Administration (EMPAA) and EPTA partnered with the Rare Pride campaign to inform the public about laws and regulations related to the trade in wildlife and wildlife products. Outreach included TV broadcasts, distribution of flyers, posters and grocery bags printed with hunting and wildlife trade regulations and the use of mobile phone technology and text messaging (for more information on the use of text messaging follow *http://www.rareplanet.org/en/campaign-blog/photo-essay-how-sms-works-field?type=campaign*. Small workshops and trainings were also held with self-identified hunters, traders and meat sellers and buyers at the central market in Choibalsan, a regional collection point for raw materials bound for border trade.

- Students from the local technical college surveyed markets for signs of illegal wildlife trade and volunteer rangers from community managed areas distributed information on obtaining permits for hunting and certificates of origin for wildlife products destined for trade. Citizen reports led to enforcement action on at least two occasions during the 2010/2011 trade season.

- The multi-agency team organized a series of inspections of trade routes and border points along Mongolian-Chinese and Mongolian-Russian borders of the Daurian Steppe in January and February. Trade in wolf pelts and Mongolian gazelle meat was detected and the multi-agency unit reported intercepting two shipments of wildlife bound for China from Mongolia. The wildlife products were confiscated, fines were issued and two cases were turned over to the Police for criminal investigations. "Lessons Learned" from the piloting of this multi-agency approach to wildlife trade law enforcement was drafted along with a presentation shared with the directors of the agencies involved.

Key Management Issues and Challenges

The Daurian Steppe is vast, making it difficult for a single enforcement agency to successfully control hunting and illegal wildlife trade across the region. Within Mongolia there is not a single agency with both the skill/knowledge to identify illegally traded wildlife and the authority to take enforcement action. The multi-agency team approach is a strategy for addressing this issue. Although working with multiple agencies is always more challenging than working with a single agency, in this instance representatives from the

different agencies seemed motivated by the opportunity to work together. Raising the resources to sustain the patrol efforts of the multi-agency team will continue to be a challenge as none of the agencies have committed to self-funding the level of effort required to achieve the conservation impact desired.

OBJECTIVE 2
Reinforce and scale up an effective community-based model for wildlife and livestock management.

Working with communities across the Daurian Steppe to build a strong local constituency for conservation and sustainable use of natural resources remained a focus of our engagement in FY11. Much of our effort was dedicated to strengthening and expanding a network of community-managed and protected areas across the Mongolian portion of the DS where nomadic livestock herding is still practiced by the majority of steppe residents, Although challenged by changes in the legislative environment, progress was made in Mongolia on the short-term objectives of increasing the number of Livestock Herder Community Conservation Groups or "*Nokhorlols*" and strengthening capacity to monitor wildlife populations and address threats across the landscape. Progress in the Russian and Chinese portions of the DS was more limited. To date our engagement has been with conservation practitioners and biodiversity experts in the Russian and Chinese portions of the DS and direct links with community organizations have not been made. A number of strategies identified by stakeholders for addressing threats to biodiversity conservation in the Russian and Chinese portions of the DS involve interventions at the community level and working with local people. Having DS SCAPES coordinators in place in Russia and China in FY12 will facilitate the scaling up of effective community-based approaches to wildlife and livestock management in those regions.

One of the biggest successes in FY11 was the incorporation of the Rare Pride approach into our community-based activities. Activities included "wildlife festivals" featuring the Mongolian gazelle mascot, sports competitions, parades and contests; trainings for hunters from 5 livestock herder community groups on wildlife hunting laws and regulations; and a round table discussion and planning meeting with the Eastern Steppe Pride campaign partners to review progress to date and outline the co-sponsored activities in preparation for the 2011/2012 hunting and trade season. Local communities have repeatedly expressed their appreciation of the information provided through the Rare outreach events and the opportunity to discuss the tradition of hunting, the role hunting plays as a source of income from the trade in wildlife products, their own consumption, and the need to strengthen practices that support the sustainable use of wildlife. Initial conversations have begun with Rare about the potential of developing a SCAPE-wide Rare Campaign that would span international boundaries and link communities across the ecosystem.

Activity 2.1
Expand the network of effective community-managed and protected areas and increase the effectiveness of wildlife conservation and monitoring activities within these areas across Mongolia's Eastern Steppe in the heart of the Daurian Steppe grasslands.

Activities carried out in FY11 fall into three general categories which include 1) strengthening community-based governance structures for the sustainable use of natural resources and management of community protected areas; 2) improving methods, skills and capacity to effectively monitor wildlife and 3) building local support for conservation and pride in community efforts to protect nature by incorporating components of the Rare Pride Campaign approach to conservation into all engagement with communities and outreach activities.

Major Achievements and Progress

- Three training modules (Protecting Biodiversity: Field Skills & Law Enforcement; Wildlife Trade & Managing Wildlife Harvest for Sustainability; and Wildlife Monitoring: An Overview) were completed in FY11, in collaboration with the National University of Mongolia (NUM) and the Network of Conservation Educators and Practitioners (NCEP) program of the American Museum of Natural History (AMNH). April 23-24, 2011, the modules were delivered by NUM faculty at the Technical Technology College (TTC) in Choibalsan, Dornod Aimag, on the Eastern Steppe to 26 workshop participants representing 9 different environmental organizations and academic institutions. Five volunteer rangers from the network of community managed and protected areas supported by the Daurian Steppe SCAPES project were among the workshop participants. It is anticipated that these training modules, and the collaborative approach in their development, will provide the foundation for the wildlife conservation training and capacity building components of the Daurian Steppe SCAPES project.

- Work plans and a strategy for expanding the number of Livestock Herder Community Conservation Groups or "*Nokhorlols*" on Mongolia's Eastern Steppe was put together in collaboration with the Eastern Mongolian Community Conservation Association (EMCCA). Specific events including informational meetings, conservation planning workshops and intensive work with a subset of communities are detailed below.

- The Rare social marketing for conservation approach was incorporated into all of the DS SCAPES outreach work with communities under the leadership of WCS staff member Ms. Bolortsetseg who successfully completed the Rare training program in December 2010, earning a Masters degree in Communications and much praise for her work on the Eastern Steppe. In FY11 the campaign focused on raising awareness about hunting laws and regulations with an emphasis on the procedures for obtaining hunting licenses and the certificates of origin necessary for the legal trade of wildlife products. The campaign organized talk shows with local officials on FM Radio and programming for children on local television stations. The media work was coupled with community events (Nadaam festival participation, parades, visits to local markets, etc.) at which print brochures, t-shirts and bags with the hunting and trade laws were distributed. To date the public interest in the campaign has been very high and initial results in the area of awareness building and dissemination of the message (person-to-person communication) have indicated that the campaign has been very successful.

- The Daurian Steppe SCAPES project organized a workshop June 6 – 9 at Shazan Nuur Camp in Dornod Aimag with local officials, leaders and members of livestock herder community groups (Nukhurluls) and the leadership of the Eastern Mongolia Community Conservation Association (EMCCA). There were a total of 24 participants (10 women; 14 men). The workshop provided the opportunity to discuss a new version of the Ministry of Nature and Environment order (A-250) which provides guidance on establishing livestock herder community-led "Nukhurlul" or partnerships for nature conservation and discuss issues related to community governance of natural resources. The EMCCA leadership and WCS staff were

supported by the Mongolian NGO, People Centered Conservation (PCC), in conducting breakout sessions and focus groups designed to facilitate the development of a shared vision for conservation, natural resource management, livelihood development and cooperation among all stakeholders. The workshop report is provided in Appendix 15.

- WCS and the DS SCAPES project conducted surveys for Siberian marmots in Toson Khustai Nature Reserve on Mongolia's Eastern Steppe in June. The surveys were designed to estimate the population of Siberian marmots in the region and are part of a continued effort to develop monitoring protocols that can be conducted by livestock herder communities in cooperation with local wildlife management officials. A full write up of this work and the updated protocol is provided in Appendix 16.

- DS SCAPES project staff followed up on the Ministry of Nature, Environment and Tourism order A-250 which outlines revisions to the regulations associated with community partnerships for nature conservation and the management of livestock herder community protected areas in Mongolia. A full English translation of the order was completed (Appendix 17) and meetings were held with other projects and NGOs promoting CBNRM as an approach to biodiversity conservation in Mongolia.

- WCS in collaboration with the NGO, People Centered Conservation, visited four livestock herder community groups on the Eastern Steppe in August. The purpose of the visit was to hold meetings with community group members and local government representatives to facilitate the process of formally establishing these herder groups as *Nukhurlul* or community managed and protected areas. The feedback from these meetings was used to inform the planning of a stakeholder workshop scheduled for September designed to improve the knowledge and understanding of all parties and promote cooperation between local communities and local governments in support of Community Based Natural Resource Management and Conservation.

- WCS hosted a workshop August 9 – 12 at Chukh Lake camp in Dashbalbar Soum of Dornod Aimag to meet objectives of both the DS SCAPES project and the USAID-funded Livestock & Climate Change Collaborative Research Support Program (CRSP) project entitled "Increasing the Adaptive Capacity of Mongolian Livestock Herders under a Changing Climate through Rangeland Ecosystem Monitoring and Community-based Conservation". The workshop combined a training program on wildlife monitoring techniques with sessions devoted to discussing local communities' observations and impressions of the impacts of climate change on pasture and the distribution and abundance of wildlife species. Workshop participants (6 women, 23 men) included Volunteer Rangers from Livestock Herder Community Groups, Environmental Inspectors and Protected Area Rangers. Livestock herders reported a number of changes they attributed to climate change including the drying up of surface water sources, an increase incidence of steppe fire, changes in the patterns of wildlife migration and an increase in disease and infertility in livestock. An analysis of pre- and post-training surveys indicated a high degree of learning (20% - 80% increase in skills mastered) as well as an overwhelming interest among livestock herders from community managed and protected areas to continue wildlife monitoring and explore more formal pasture and climate change monitoring to provide an information base for adaptive management. The workshop report is provided as Appendix 18.

Key Management Issues and Challenges

In FY11 we became aware of a new MNET order which changed a number of the provisions for the establishment of Herder Community Groups (HCGs) or *Nukhurlul* for the management of community protected areas in Mongolia. The amendments included changes in the way in which the size of HCG areas are determined requiring the redrawing of boundaries of HCGs and resubmission of materials for Nukhurlul registration. HCGs and local officials on Mongolia's Eastern Steppe were not aware of the new regulation and no guidance was provided by MNET on the implementation of the new regulations. Additional work was required in FY11 to revise legislative guidelines for HCGs, discuss the implications of the changes and create new strategies for the expansion of the HCG network on the Eastern Steppe. To assist the DS SCAPES project with this work, and to fill our gap in technical capacity left by the departure of Dr. Orhon Mydar, we partnered with Mongolian NGO, People Centered Conservation (PCC) and CBNRM expert, Sabine Schmidt.

Orhon Mydar, the DS SCAPES project CBNRM advisor left her position in April 2011 but we were able to hire Mr. B. Buuveibaatar in July as the project's senior wildlife biologist. Mr. Buuveibaatar completed a Masters degree in Wildlife and Fisheries Conservation within the Department of Environmental Conservation at the University of Massachusetts Amherst, in 2011. Mr. Buuveibaatar began supporting the DS SCAPES project in August with field work on the Eastern Steppe and is currently analyzing data from white-naped crane and marmot monitoring activities under the supervision of Dr. Samantha Strindberg from WCS Conservation Support. His presence will significantly increase our capacity to address the wildlife monitoring and management components of the DS SCAPES project and improve our ability to provide technical assistance in wildlife monitoring to HCGs.

Activity 2.2
Scale up the community-based model for wildlife and rangeland management to Daurian Steppe transboundary partners in Russia and China.

As in Mongolia, the transboundary regions of the Daurian Steppe in Russia and China are large expanses of territory with relatively low human population densities. A community-based approach to wildlife and rangeland management in the region has the advantage of placing the capacity and authority for natural resource management with the people living on the land and dependent on the natural resources for their livelihoods. Scaling up the community-based model for wildlife and livestock management from Mongolia to the Daurian Steppe regions of Russia and China is not, however, a simple task as the community-based governance structures and land-use policies vary significantly from country to country.

Major Achievements and Progress

In FY11, the project made progress in identifying areas where engagement with communities would likely advance conservation in the Chinese and Russian Daurian Steppe. One of the priority actions coming out of the White-Naped Crane Transboundary Working Group Meeting was to pilot the formation of a cooperative committee to implement sustainable & wildlife (crane)-friendly agriculture development activities in the Naoli He area of China. Discussions with protected area personnel, wildlife species experts and staff of internationally funded projects active in the Chinese and Russian Daurian Steppe left us with the impression that although individuals and projects are interested in engaging communities in wildlife conservation and addressing threats to grasslands and biodiversity across the region, very little has been done to date. With very little already underway in the Russian and Chinese portions of the Daurian Steppe it has been difficult to "scale up" and enlarge the network of community managed and protected areas across the DS SCAPE and this activity is largely delayed.

Key Management Issues and Challenges

It is possible that rural-based natural resource user groups or community organizations that focus on wildlife conservation or natural resource management exist in the Russian and Chinese portions of the DS and we have not yet made the local contacts necessary to understand where these organizations exist and how they operate. The identification of a DS SCAPES coordinator for China in FY11 has allowed us to plan site-based visits to the Chinese portions of the DS SCAPES in FY12 to establish and maintain the kind of relationships with local officials and protected area managers necessary to secure introductions to community groups and establish a link with rural-based communities. We hope to implement a similar approach in the Russian portion of the DS and be able to move forward more significantly with the scaling up of a community-based model for wildlife and rangeland management across the SCAPE in FY12.

Activity 2.3
Explore the implementation of the Animal and Human Health for Environment And Development (AHEAD) approach at the community level, linking herders' livestock health and productivity concerns with interventions to secure resources for wildlife and livestock in community protected managed areas.

The AHEAD approach provides a framework for designing strategies which address conservation, health and associated development challenges across the landscape. With a focus on scaling up the community-based model for natural resource management across the Daurian Steppe we have designed activities that deliver on both livestock health and production goals (critical to improving livelihoods in livestock herder communities while decreasing or maintaining livestock densities) and conservation targets, which are often the elements of biodiversity that provide the ecosystem services that rural communities rely upon (e.g., rangelands, hunted wildlife and water). In FY11, the DS SCAPES project focused both on learning from AHEAD programs implemented in east and southern Africa and addressing the on-going challenge of Foot and Mouth Disease (FMD) in the DS region.

DS SCAPES project veterinarian, Dr. Sh. Enkhtuvshin, attended the 11th Animal & Human Health for the Environment And Development (AHEAD) Great Limpopo Transfrontier Conservation Area (GLTFCA) Working Group Meeting in South Africa, March 2 - 4, 2011, where she presented a talk on the challenges of controlling FMD at the wildlife/livestock interface on Mongolia's Eastern Steppe, strengthening the links between the Daurian Steppe and Kavango-Zambezi Transfrontier Conservation Area SCAPES projects.

The DS SCAPES project focused on addressing the challenge of FMD in the landscape by facilitating the travel of veterinary specialists from southern Africa to Mongolia to provide guidance on the development of a holistic strategy to address the occurrence FMD in the DS region. Details of these activities are provided below along with a number of additional activities (i.e. funding for FMD vaccine from the US Embassy disaster funds) for which the program leveraged support.

Major Achievements and Progress

- WCS and the DS SCAPES project played a significant role in coordinating the international response to the FMD outbreak on the Eastern Steppe of Mongolia which continued to spread through the fall of 2010 affecting six provinces in the eastern portion of the country. The project facilitated a U.S. Government donation of approximately $30,000 of support for livestock vaccination that was followed by a

Japanese initiative (expert technical assistance and a pledge of $200,000) and an official visit from United Nations FAO animal health experts in December 2010.

- WCS and the DS SCAPES project worked with the Mongolian Veterinary and Breeding Agency of the Ministry of Food, Agriculture and Light Industry and the State Central Veterinary Laboratory to design an FMD consultancy and identify an international FMD expert to complete an assessment of the situation and provide immediate recommendations on FMD control at the livestock/wildlife interface, facilitating the development of a strategy to manage this important transboundary disease across the Daurian Steppe eco-region.

- Dr. Gavin Thomson, a veterinarian with a long career and international expertise in the area of FMD control at the wildlife/livestock interface in southern Africa arrived in Mongolia in January as a DS SCAPES veterinary consultant. He completed his FMD consultancy in February which examined current disease control policies and 'knowledge gaps' in the epidemiology of foot and mouth disease on Mongolia's Eastern Steppe. Dr. Thomson's report highlights the fact that outbreaks of FMD in Mongolia over the last 11 years, all but two of which occurred on the Eastern Steppe, have clearly demonstrated that the livestock and wildlife of the eastern grasslands are at high risk of contracting FMD. Dr. Thomson points out that until the cross-border risk of FMD introduction declines significantly, Mongolia will need to institute measures to better protect its borders against FMD penetration and also ensure that on occasions when the infection breaches the perimeter defenses, the impact is limited. To address the threat of FMD to livestock and gazelles on the Eastern Steppe systematic, routine vaccination of livestock needs to be conducted with regular auditing to ensure that adequate levels of herd immunity are maintained against FMD viruses circulating in south-east Asia. If this is done, even if gazelles became infected, they would be incapable of spreading FMD to livestock. Dr. Thomson provides a series of specific recommendations in his report related to the selection of vaccines for FMD prevention and the "modified stamping out" practices used as a component of the FMD outbreak response in Mongolia. Dr. Thomson concludes his report by underscoring the need to design a FMD control strategy which supports and is in line with Mongolia's future rural development plans. The report is available as Appendix 19.

- The DS SCAPES project convened a workshop on January 31, 2011, to discuss FMD epidemiology and control strategies in livestock and wildlife. The workshop provided a unique opportunity for interaction among wildlife biologists, veterinary professionals, conservation organizations and representatives from government agencies tasked with the control and prevention of FMD. International FMD expert, Dr. Gavin Thomson, provided an overview of the global strategies to control FMD in wildlife and livestock and presented his observations related to the 2010 outbreak of FMD in Mongolia. Key issues including vaccine selection, appropriate "stamping out" policies and aligning FMD control strategies with the country's trade policy were discussed. Approximately 30 individuals participated in the workshop from the following organizations: The National Emergency Management Agency, Ministry of Food, Agriculture and Light Industry, Veterinary and Animal Breeding Agency, State Central Veterinary Laboratory, Inst. of Veterinary Medicine, Inst. of Biology, US Embassy, WWF, EU Animal Health and Livestock Marketing Project, Risk Free

Animal Husbandry Center, FAO, WCS and the State Emergency Commission. This workshop set the stage for a follow-up workshop sponsored by FAO and held in August 2011, to further efforts in the area of FMD surveillance, epidemiological research and the development of control strategies.

Key Management Issues and Challenges

In the framework of the DS SCAPES project the resources available under this activity have forced the project team to focus on addressing FMD and facilitating the establishment of links between the KAZA and DS SCAPES to promote the sharing of information, technical expertise and approaches to conservation in landscapes where health and livestock production are important to the local population. The focus on FMD, a true transboundary disease, has been very successful to date but few resources have been leftover to explore some of the other applications of the AHEAD approach at the community-level on the DS. Contacts have been made with potential partners, primarily the international development NGOs operating in Mongolia, but limited progress on the development of joint plans of action or proposals for projects designed to deliver both on livelihood improvement and biodiversity outcomes has been made.

OBJECTIVE 3
Ensure technical and coordination support services for the program.

ACTIVITY 3.1
Ensure coordination and communication services for the program.

Conservation Support staff (CS-NY) communicate regularly with WCS SCAPES field staff to ensure appropriate development and administration of the WCS SCAPES Cooperative Agreement, Implementation Plans and Performance Measures, as well as proper compliance with USAID regulations. In addition to attending and reporting back on quarterly meetings, CS-NY also serves as a general communication hub regarding issues from the field that need to be brought to the attention of USAID (such as the ongoing political situation in Bolivia), and vice versa. CS-NY staff have also helped to coordinate feedback on learning activities and annual meeting participation.

This year CS-NY staff have played a leadership role in the development of the Natural Resource Governance Assessment learning activity; and were the principal speakers in the first Climate Adaptation learning activity workshop.

ACTIVITY 3.2
Provide ongoing tool development and technical guidance to the program.

During FY11, Conservation Support staff (CS-NY) continued to use their technical expertise and their experience in conservation planning, GIS, and performance monitoring to provide direct assistance to WCS SCAPES and to scale up SCAPES learning across WCS and to the broader conservation community.

The CS-NY wildlife monitoring specialist has been working with colleagues in the WCS Mongolia Program to set up systematic and robust monitoring systems with herder communities for wildlife of conservation concern and of interest to the communities (e.g. gazelle, wolves, foxes, marmots, raptors, cranes, etc). In particular, pilot studies in a protected area were designed and conducted to evaluate methods to estimate marmot numbers and marmot range contraction or expansion over time in community areas. Analysis of the resulting data and further application of the method in three herder communities has permitted further refinement and more extensive adoption of the monitoring

methods by herder communities. Technical support has also been given for monitoring of other conservation targets, namely Mongolian gazelle and white-naped cranes.

In April 2011, CS-NY helped facilitate two strategic planning workshops: one for Mongolian gazelle and one for Avian species in the Durian region. Both of these workshops focused on strategic planning for cross-boundary conservation and included conservationists from Russia and Mongolia, officials from the Mongolian government and industry representatives. Each workshop included a review of the current status of the species, a discussion of significant threats and methods to reduce those threats and next steps for conservation of Mongolian gazelle and Avian species across their entire range.

In June 2011 the Conservation Leadership Program (a joint venture of WCS, BirdLife, CI and FFI) awarded WCS Mongolia $8,000 in support of the year-long "WCS Eastern Steppe Internship" (June 2011 - May 2012). The intern, Bilegt Turkhuu, is working with supervisors Amanda E. Fine and Sanjaa Bolortsetseg in support of the Rare Pride Campaign. During the first half of the internship Bilegt will shadow the campaign manager and will be involved in all of the pre-planned activities including radio programming, community outreach events, community surveys and analysis. During the second half of the internship Bilegt will be mentored through the planning of a series of campaign events to be carried out with residents of Choibalsan City and surrounding communities. Bilegt will also engage in activities related to reducing illegal wildlife trade, as well as wildlife monitoring in community managed areas.

This will be the first formal internship established for a Mongolian national within the WCS Mongolia program, building on opportunities we have provided for students to volunteer and work on our field-based projects over the past 15 years. The WCS Mongolia program benefits from the opportunity to engage with and train a recent graduate of the National University of Mongolia with a strong interest in conservation and leadership potential. The intern candidate is also from the Eastern Steppe region so we have the added benefit of providing a local constituent from our primary site focus in Mongolia with an in depth understanding of WCS work in the region.

The success of last year's launch of an online distance-learning introduction to Conservation GIS encouraged CS-NY to work with The Nature Conservancy and Foundations of Success to develop an online course on strategic planning, effectiveness monitoring and adaptive management using the CMP Open Standards for the Practice of Conservation. Story-board and draft scripts have been developed and we expect to launch this course in 6-8 months. CS-NY also continues to support and guide the evolution and roll-out of adaptive management software for conservation projects (Miradi software, downloadable from www.miradi.org).

CS-NY staff completed the first conservation biology distance learning program for pre-college level WCS national staff. The course was designed to provide professional development opportunities for WCS staff unlikely to pursue higher education.

CS-NY recently helped establish a new consortium lead by WCS to coordinate and finance the creation and pilot testing of a new open-source, conservation-commons, user-friendly, law enforcement monitoring software tool. Financed by consortium members (WCS, WWF, ZSL, CITES, North Carolina Zoo and the Frankfurt Zoological Society) the SMART software will provide a user friendly tool for park rangers to plan, implement and monitor the effectiveness of their law enforcement patrols. The consortium has already leveraged $700,000 (GEF) to support ranger training and pilot testing in Tiger source sites, and $300,000 (USAID BATS) to support ranger training and pilot testing in Central and East Africa.

CS-NY has continued to scale up the use of ecological and livelihoods monitoring tools developed by WCS with USAID support. Specifically, we have a first draft of a "Decision Tree for Monitoring Wildlife and Assessing the Effectiveness of Conservation Interventions" and continue to work with the Climate, Community and Biodiversity Alliance (CCBA) to identify community-relevant methods for developing baseline and trend data on local livelihoods. We are seeking funding from DFID/ESRC and 3IE to undertake analyses of modified Basic Necessities Surveys (livelihood surveys with a locally relevant index of poverty) at three or four WCS landscapes. Lastly we completed a draft survey of approaches to monitoring illegal extraction of natural resources, and are exploring the development of a standardized approach for field staff to employ the Randomized Response Technique to conduct interviews of illicit natural resource use behavior.

IV. Photos

Photos from the Daurian Steppe SCAPES project are provided in Appendix 13; high resolution copies of the individual images will be made available if requested.

V. Other Appendices

Appendix 1 Summary: A list of speakers and topics covered at the monthly conservation networking event hosted by WCS in Ulaanbaatar in FY2011

Appendix 2 Map: Daurian Steppe SCAPE with details of planned railroad expansion

Appendix 3 Presentation: Altan Tsagaan Ovoo Mineral Exploration

Appendix 4 Summary: Eastern Steppe Rare Pride Campaign Activities

Appendix 5 Summary: Business & Biodiversity Offsets Programme Southern Gobi Workshop Minutes

Appendix 6 Conceptual Model: Updated Conceptual Model for the Daurian Steppe SCAPE

Appendix 7 Report: Daurian Steppe Transboundary Conservation Cooperation Workshop, Ulaanbaatar, Mongolia, April 2011

Appendix 8 Map: White-Naped Crane Range

Appendix 9 Map: Priority Sites for Conservation of the White-Naped Crane; 2 versions

Appendix 10 Summary: Strategies for Range-Wide Conservation of the White-Naped Crane

Appendix 11 Report: Strategic Planning Outputs for the Daurian Steppe SCAPE

Appendix 12 Summary: Database of Daurian Steppe Transboundary Agreements

Appendix 13 Photographs: Presentation of Photographs from the FY11 Daurian Steppe SCAPES Project Activities

Appendix 14 Report: Collaborative Wildlife Protection Training; Mongol Daguur Strictly Protected Area, September 2011

Appendix 15 Report: Community-Based Natural Resource Management Governance Workshop, Eastern Steppe, Mongolia, June 2011

Appendix 16 Report: Siberian Marmot Monitoring Assessment, Eastern Steppe, Mongolia, June 2011

Appendix 17 Regulation: English Translation of Ministry of Nature, Environment & Tourism Community-Based Natural Resource Management Regulation A250

Appendix 18 Report: Community-Based Natural Resource Management Volunteer Ranger Wildlife Monitoring Training, Eastern Steppe, Mongolia, August 2011

Appendix 19 Report: FMD Consultancy "Current Disease Control Policy and 'Knowledge Gaps" in the Epidemiology of Foot and Mouth Disease on Mongolia's Eastern Steppe, February 2011