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## Sustainable Conservation Approaches in Priority Ecosystems (SCAPES)

### Ustyurt Landscape Conservation Initiative (ULCI) - Final Report

|                                |  |
|--------------------------------|--|
| <b>PREPARED FOR</b>            | USAID  |
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## Foreword

This document represents the final closeout report for the Ustyurt Landscape Conservation Initiative (ULCI), a USAID-funded activity under the Sustainable Conservation Approaches in Priority Ecosystems (SCAPES) program from 2009-2014. ULCI was implemented by a consortium led by Pact in close partnership with Fauna & Flora International (FFI), the Association for the Conservation of Biodiversity in Kazakhstan (ACBK) and other local partners. Much of the success of ULCI is owed to the outstanding work and dedication of FFI and ACBK on the ground.

ULCI was part of a larger SCAPES program which aimed to conserve globally important biodiversity in priority ecosystems. SCAPES was a partnership between USAID and four NGOs, including the Pact consortium. Beyond the ULCI, the broader Pact consortium consisted of Pact as lead, Fauna & Flora International (FFI), ACDI/VOCA and BirdLife International. Although ACDI/VOCA and BirdLife International did not participate in the ULCI activity, they were valuable members of the larger Pact consortium under SCAPES and contributed immeasurably to the strategic thinking and planning around SCAPES and the initiatives around global learning.

On behalf of the entire Pact consortium, we would like to thank Dr. Diane Russell and the SCAPES team at USAID for their visionary leadership and tireless support.

Shari Bush  
SCAPES Program Manager  
Pact Consortium



## List of Acronyms

|        |   |
|--------|---|
| ACBK   | Association for the Conservation of Biodiversity in Kazakhstan                  |
| AWF    | African Wildlife Foundation   |
| CITES  | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CMS    | Convention on Migratory Species   |
| FFI    | Fauna & Flora International   |
| GCC    | Global Climate Change   |
| GHG    | Greenhouse Gas  |
| GIS    | Geographic Information System   |
| IUCN   | International Union for Conservation of Nature                                  |
| LOE    | Level of Effort   |
| LWA    | Leader with Associates  |
| MEFL   | Monitoring, Evaluation, Feedback and Learning                                   |
| MERC   | Mobile Environmental Resource Center  |
| MoU    | Memorandum of Understanding   |
| PMP    | Performance Monitoring Plan   |
| REDD   | Reduced Emissions from Deforestation and Degradation                            |
| SCA    | Saiga Conservation Alliance   |
| SCAPES | Sustainable Conservation Approaches in Priority EcoSystems                      |
| TOC    | Theory of Change  |
| TRNA   | Training and Resource Needs Assessment  |
| ULCI   | Ustyurt Landscape Conservation Initiative                                       |
| UNDP   | United Nations Development Program  |
| USAID  | United States Agency for International Development                              |
| WCS    | Wildlife Conservation Society   |
| WWF    | World Wildlife Fund   |

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# I. Executive Summary

The Ustyurt Plateau is a temperate desert lying between the Caspian and Aral Sea in a landscape shared between Uzbekistan and Kazakhstan. Ecologically, the Plateau is globally significant and has a high degree of endemism. Many of the species found in the Ustyurt are threatened, including the flagship species for the Ustyurt - the Saiga antelope (*Saiga tatarica*) – which is categorized as critically endangered by the IUCN.

Historically, the Ustyurt was the realm of nomadic cattle-breeders and a major route on the Silk Road. The Soviet period with its collectivized agriculture almost brought an end to nomadic traditions on the Ustyurt. The major threats facing the Ustyurt landscape today stem from changes in land use management after the breakdown of the Soviet Union, indiscriminate and unsustainable development of extractive industries and high unemployment. As a result, degradation, reduction and fragmentation of habitats are common as is poaching, primarily of ungulates such as the Saiga antelope. Recent road and rail network development and the construction of gas pipelines and associated infrastructures are taking place with little consideration for the mitigation of environmental impacts and are damaging and fragmenting habitat in some of the most sensitive areas of the Plateau.

Within this context, the Ustyurt Landscape Conservation Initiative (ULCI) was born, a USAID-funded activity under the Sustainable Conservation Approaches in Priority Ecosystems (SCAPES) program, implemented by Pact, Fauna & Flora International (FFI), the Association for the Conservation of Biodiversity in Kazakhstan (ACBK) and other local partners. The conservation objectives for the Ustyurt Landscape Conservation Initiative (ULCI) were to:

- Improve the ecological and social scientific understanding of the Ustyurt landscape.
- Reinforce the capacity of state agencies involved in the conservation of the Ustyurt.
- Engage with and support local communities to participate positively in conservation while improving the quality of their lives.
- Engage with the private sector to mitigate their impact on the Ustyurt landscape.

The overarching results of ULCI helped lay the foundation for more effective conservation:

## Foundation built for more effective conservation

| <b>Knowledge</b>   | <b>Motivation</b>   | <b>Capacity</b>   |
|--|---|---|
| <ul style="list-style-type: none"><li>• Scientific knowledge increased and informing activity</li></ul>  | <ul style="list-style-type: none"><li>• Improved operating environment and more stakeholders supporting conservation</li></ul>  | <ul style="list-style-type: none"><li>• Increased capacity available for conservation</li></ul>   |
| <ul style="list-style-type: none"><li>• Baseline ecological surveys</li><li>• Baseline social surveys</li><li>• Tracking of saiga movement</li><li>• Climate impact assessments</li><li>• Carbon value assessments</li><li>• Saiga mortality project</li><li>• Rangeland survey</li><li>• Assessed border fence and rail infrastructure</li><li>• Saiga trade chain research</li></ul> | <ul style="list-style-type: none"><li>• Awareness raising campaign</li><li>• Eco-youth clubs created</li><li>• Eco-youth club exchanges</li><li>• Saiga day supported</li><li>• TB ranger event</li><li>• Mobile Environmental Resource Center established</li><li>• Workshops with business held</li></ul> | <ul style="list-style-type: none"><li>• Assessed rangers / customs needs</li><li>• Provided resources</li><li>• Provided training</li><li>• TB ranger event</li><li>• Supported Saigachy Reserve designation (UZ)</li><li>• Draft Biodiversity monitoring strategy</li><li>• Customs dogs program</li></ul> |



## II. Summary of Landscape

The Ustyurt Plateau is a temperate desert lying between the Caspian and Aral Sea. Covering an area of about 200,000 km<sup>2</sup> the landscape is shared between the territories of NW Uzbekistan and SW Kazakhstan. The landscape consists of an elevated ancient seabed with eroded hills and shallow basins, which makes up the Plateau, surrounded by extensive escarpments (Chinks) up to 150m in height. The Chinks are a defining landmark for the Ustyurt. Permanent fresh surface water springs are rare and numerous shallow hyper saline water bodies of varying sizes are scattered across the landscape.

A mosaic of vegetation communities occurs, determined by microclimatic variations, lithology, substrate, ground water availability and salinity. Gypsum-tolerant dwarf shrubs dominate on grey soils, including many endemic and endangered plant species. There are at least 724



species of vascular plants known to occur across the Plateau several of which are on the IUCN red list. Approximately 300 vertebrate species have been recorded including 30 different reptiles and amphibians, 45 mammals and 50 species of breeding birds. Many more bird species stop over for rest and food during migration. Many of these species are threatened internationally or regionally, including the most predominant and characteristic - the Saiga antelope (*Saiga tatarica*). The Saiga is a flagship species for the

Ustyurt and is categorized as critically endangered by the IUCN. Ecologically, the Plateau is globally significant and has a high degree of endemism owing to its geological age and relative isolation resulting from the formation of the surrounding mountains during the late Tertiary.

Historically, the Ustyurt was the realm of nomadic cattle-breeders and a major route on the Silk Road. The Soviet period with its collectivized agriculture almost brought an end to nomadic traditions on the Ustyurt in both Uzbekistan and Kazakhstan countries. However, the Plateau's isolated location and harsh climate meant that much of the Ustyurt remained 'undeveloped'. Since the development of the first gas pipelines in the 1970's, the region has experienced significant periods of in and out migration. Perestroika marked the beginning of the largest and most damaging flux in the local population. Since 2000 Uzbek and Kazakh urbanites have migrated to the Ustyurt seeking work in the gas, oil and associated infrastructure industries.

In both Uzbekistan and Kazakhstan chief socio-economic activities relate to seasonal shepherding and oil and gas companies, which provide significant employment in the region. Parts of the Kazakh Ustyurt are considered to be the fastest developing regions of Kazakhstan, fuelled primarily by extractive industries. Bosoï village, a former Kazakh fishing village now 60km from the Aral Sea, stands out from neighbouring villages by its relative wealth, with the largest provider of employment being the energy sector. Other industries in Kazakhstan include

mining, construction and food production. Nevertheless, rural areas remain poor and undeveloped with a rural poverty incidence of 35.5% in 2003.

Farming is predominantly subsistence, with fodder crops (sorghum, alfalfa, millet) also grown for livestock. Livestock grazing is still an important element on the Ustyurt, both for local communities and for seasonal grazing of livestock from State farms outside the Ustyurt. Animals include sheep, cattle, goats, camels and horses.

Besides the issue of the Aral Sea's near demise, which will continue to have significant impacts on climate, ecology and socio-economy of the region, the major threats facing the Ustyurt landscape today stem from changes in land use management after the breakdown of the Soviet Union, indiscriminate and unsustainable development of extractive industries and high unemployment. As a result, degradation, reduction and fragmentation of habitats are common as is poaching,



primarily of ungulates such as the Saiga antelope. Recent road and rail network development and the construction of gas pipelines and associated infrastructures are taking place with little consideration for the mitigation of environmental impacts and are damaging and fragmenting habitat in some of the most sensitive areas of the Plateau. Localized pollution due to poor disposal of waste materials also has a detrimental impact on the quality of surrounding habitats. An increasing matrix of structures is forcing change of ancient migration routes and breeding grounds of migrating species. In addition, change in the quality of people's life since the collapse of the Soviet Union have been dramatic and characterized by high levels of unemployment and a loss of social support systems, thus forcing an increasingly unsustainable reliance on natural resources.

The remoteness and harsh climate of the Ustyurt makes daily life a constant challenge for local communities. Limited opportunities for employment causes households to overuse natural resources and drive illegal activities such as hunting and trade in Saiga horn and meat. Saiga have been persecuted for their valuable horns and as subsistence at an unprecedented scale, resulting in a drop from nearly 250,000 individuals in the mid-1990's to less than 2,000 today.

Within this context, the Ustyurt Landscape Conservation Initiative was born, a USAID-funded activity under the Sustainable Conservation Approaches in Priority Ecosystems (SCAPES)

program, implemented by Pact, Fauna & Flora International (FFI), the Association for the Conservation of Biodiversity in Kazakhstan (ACBK) and other local partners. The conservation objectives for the Ustyurt Landscape Conservation Initiative (ULCI) were to:

- Improve the ecological and social scientific understanding of the Ustyurt landscape.
- Reinforce the capacity of state agencies involved in the conservation of the Ustyurt.
- Engage with and support local communities to participate positively in conservation while improving the quality of their lives.
- Engage with the private sector to mitigate their impact on the Ustyurt landscape.

### III. Summary of Outputs (PMP Metrics)

The project's initial focus was on the Ustyurt in Uzbekistan, the country with the greatest perceived need for support. However, due to registration issues in Uzbekistan, all physical activity in that country ceased in year 2 of the project. At the same time, the project's baseline surveys and initial results engaging state rangers, the satellite tracking of Saiga, engagement with local communities, etc., clearly indicated that the Saiga antelope, the project's keystone and flagship species, spent the greater part of its time on the Kazak Ustyurt. It also became clear that the key drivers of change were having a more immediate impact on the Kazak Ustyurt. Activities were thus phased entirely to focus on Kazakhstan. The project maintained a transboundary focus by continuing to engage the Uzbek authorities and teams in its activities wherever possible during its duration. All attempts to register in Uzbekistan ceased in year 4. Due to this complex history the original project targets evolved and are not completely comparable with the fifth and final year's targets.

The Ustyurt Landscape Conservation Initiative tracked 7 Standard Performance Indicators, 2 SCAPES Custom Performance Indicators and 4 SCAPES Custom Performance Measures. The Standard Performance Indicators are as follows:

#### *1. Number of hectares of biological significance and/or natural resources under improved management as a result of USG assistance.*

In year 1 the project did not set a target, in year 2 the target was 500,000 ha, in year 3 the target was 700,000 ha, in years 4 and 5 the target was 4,000,000 ha. The project achieved actual targets of 500,000 ha in year 2, 700,000 ha in year 3, 4,000,000 ha in year 4 and 5,000,000 ha in year 5.

The project originally focused on improving the management status of the Saigachy Nature Reserve (Uzbekistan) which was on schedule for re-designation with support from the project. As noted above in year 2 the project focused its efforts more widely to feature the Kazakh Ustyurt. By year 4 100% of the projects efforts were concentrated in Kazakhstan. The indicator measured within Kazakhstan was the total known range used in a single year by GPS collared Saiga. The justification for this was that the mapped territory provided solid



justification for improved protection of this range and assisted the State agency in refining their anti-poaching efforts.

*2. Number of hectares of biological significance and/or natural resources showing improved biophysical conditions as a result of USG assistance.*

The project did not set targets for this indicator until year 4 of the project. The year 4 target was 3,000,000 ha and year 5 was 4,000,000 ha. The project was unable to show progress in this category as the population of Saiga decreased during both years. An increasing Saiga population would indicate that the Ustyurt landscape was undergoing improved biophysical conditions as a result of project activities.

- 3. Number of people receiving USG supported training in natural resources management and/or biodiversity conservation; and*  
*4. Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance.*

The project set a target to train 70 people in year 1, 140 people in year 2, 100 people in year 3, 45 people in year 4, and 45 people in year 5; for a total of 400 people trained. The actual number of people trained was 65 in year 1, 47 in year 2, 39 in year 3, 62 in year 4 and 50 in year 5; for a total of 262.

Given that: the project switched the primary country of focus for activities mid-point; the target landscape is extremely remote; training events require a significant investment of time to secure permissions for staff attendance; in Uzbekistan permissions were sometimes not given, the project did well to achieve 66% of the overall targeted goal. Further, the project exceeded the target for both of the final 2 years when training programs were shifted entirely to Kazakhstan. Training topics over the project period were diverse and consisted of, amongst others, Saiga population monitoring in Uzbekistan, training of customs officers in CITES regulations and identification of wildlife products, GPS use for rangers, biodiversity and ecosystem services mitigation and biodiversity assessment .

Performance indicator 4 is correlated with PI3 and is merely a multiplication of number of hours of training by the numbers of persons trained during that event. Typically trainings were planned to last 7.5 hours in a day. The standout exception to this figure was the support for the training of a wildlife biologist from Kazakhstan in analytical tools at the Smithsonian Conservation Biology Institute in the USA where two 3 month study tours were taken and a full 40 hour work week assumed during this period.

*5. Number of individuals with increased economic benefits derived from sustainable natural resource management and conservation as a result of USG assistance.*

The project did not track this indicator.

6. *Quantity of greenhouse gas (GHG) emissions, measured in metric tons of CO<sub>2</sub>e [equivalent], reduced or sequestered as a result of USG assistance.*

The project did not track this indicator.

7. *Number of stakeholders with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance.*

The project did not track this indicator during its first two years. The project used this time to conduct a study on what regional changes could be expected from climate change and how this may affect the availability of natural resources and thus people's lives in the region. Once completed, the study informed climate change workshops, which were targeted to regional authorities, to enable them to better understand and then communicate climate change issue in policy for a, discussions with key players and local communities and larger audiences.

Year 1 and 2 were not tracked. In year 3 the project set a target of 7, year 4 the target was 6, and year 5 the target was 12 totaling 25 people with increased capacity to adapt to the impacts of climate variability and change. The project reached 8 people in year 3, 29 people in year 4, and did not conduct climate change specific efforts in year 5. A total of 37 people therefore increased their capacity to adapt to the impacts of climate variability and change. These stakeholders typically held decision making positions and thus, through their daily work responsibilities, would have the potential to reach out and communicate climate messages with many more people than tracked by the project.

The project's strategy to address climate change adaptation shifted in year 5 as no longer able to work in Uzbekistan and climate change issues were considered locally to be largely secondary to the population in Kazakhstan in the near term. As a result, the project shifted its emphasis on climate change adaption to the creation of a Mobile Environmental Resource Center (MERC), which would have responsibility for communicating climate change and environmental messages to local people. The MERC commenced activities late in year 5 and thus the project is not able to report on its achievements against this indicator at this time. However, the project managed to exceed the set target of 25 stakeholders by nearly 150%.

The SCAPES Custom Performance Indicators are:

1. *Funds leveraged for conservation.*

The project was able to leverage total non-USG funds amounting to \$628,265. The project obtained funds from 10 different sources, many of which provided multi-year support which continues beyond the SCAPES project. The amounts ranged from private donations of a few hundred dollars to a Darwin Initiative award of over \$300,000. USAID SCAPES support provided reassurance to other donors that their funds would leverage significant impact.

2. *Number of Policies, Laws, Agreements or Regulations promoting sustainable natural resource management and conservation that are implemented as a result of USG assistance.*

In the first year, the project aimed to assist in the implementation of 2 policies, agreements, or regulations, in the second year 1, the third year 2, the fourth year 0, and fifth year 1 giving a total of 6 *policies, laws, agreements or regulations to be implemented*. The project nearly met its goal with a total of 5 policies, agreements, and regulations implemented during the full 5 year period. The project focused efforts on implementing policies related to strengthening the status of protected areas for Saiga and Ustyurt biodiversity and facilitating transboundary agreements and policies associated with improving habitat connectivity for migrating Saiga. There was less emphasis placed on this indicator during the middle phase of the project as work in Uzbekistan ceased and the program shifted its emphasis to Kazakhstan. As a result it took time to re-assess needs and possibilities under this indicator.

The SCAPES Custom Performance Measures are:

1. *Conservation Target Viability Analysis (Miradi).*

There was little change in the desired rating for conservation targets during the project period. The change in rating from ‘good’ to ‘fair’ for Ecological Connectivity is a reflection of the attention placed on newly built barriers such as the border fence and a railroad. The project helped negotiate an agreement with the authorities to modify the fence to improve connectivity. Additionally, results from habitat degradation studies from the Uzbek portion of the Ustyurt indicate that there is little long term evidence of damage from off road driving and that the effects of multiple dirt tracking did not extend far beyond the road.

| Indicator Ratings       |      |      |      |      |      |
|-------------------------|------|------|------|------|------|
|                         | 2010 | 2011 | 2012 | 2013 | 2014 |
| Saiga                   | Poor | Poor | Poor |      | Poor |
| Key Bird Species        | Fair | Fair | Fair |      | Fair |
| Ecological Connectivity | Good | Good | Fair |      | Fair |

2. *Biodiversity Threat Ranking Analysis (Miradi).*

The overall threat ranking dropped from ‘very high’ in the first 2 years of project assessment to ‘high’ during the 3<sup>th</sup> and 5<sup>th</sup> year of the project.

| Overall Project Threat Rating |           |
|-------------------------------|-----------|
| 2010                          | Very high |
| 2011                          | Very high |
| 2012                          | High      |
| 2013                          | ND        |
| 2014                          | High      |

There was no change to the target threat ratings for key bird communities and Saiga antelope. The threat to ecological connectivity decreased from a 'high' rating to a 'medium' rating.

| Summary Target Ratings |                      |       |                         |
|------------------------|----------------------|-------|-------------------------|
|                        | Key Bird Communities | Saiga | Ecological Connectivity |
| 2010                   | Low                  | High  | High                    |
| 2011                   | Low                  | High  | High                    |
| 2012                   | Low                  | High  | Medium                  |
| 2013                   |                      |       |                         |
| 2014                   | Low                  | High  | Medium                  |

During the final year of the project activity period the threat ratings remained unchanged from the first year. Poaching, industrial development, and transport infrastructure remain 'high' threats. The threat from mass die-off events was ranked as 'medium', and habitat degradation and climate change were rated as 'low' threats.

| Summary Threat Rating           |        |
|---------------------------------|--------|
| Poaching                        | High   |
| Mass Die-Off                    | Medium |
| Habitat Degradation             | Low    |
| Future Industrial Development   | High   |
| Future Transport Infrastructure | High   |
| Climate Change                  | Low    |

### 3. SCAPES Policy Success Index.

The project ceased activities related to policy implementation in Uzbekistan during the second year of activities. The policy successes achieved in Kazakhstan resulted from efforts to adapt to and address emerging issues rather than as a result of a premeditated policy change activity. This is highlighted by the agreement made with the Kazakh Border Agency to modify the border fence to include a wildlife friendly design.

| Custom Measure 3: POLICY SUCCESS INDEX  |                 |   |   |  |  |
|---|-----------------|---|---|--|--|
|   | Steps Completed |   |   |  |  |
| Policy Initiatives  | Policy analyses | Communication and educational activities to improve policies and their implementation | Improved policies adopted by national, regional, and local institutions | Improved policy implementation (* this is the step where you can now report on policy indicators #4 and 7) | Documented improvements in conservation as a result of policy implementation |
| Re-designation of Saigachy Reserve  | Completed FY 10 | FY 11   | FY 12   | activity cancelled due to withdrawal from Uzbekistan   | activity cancelled due to withdrawal from Uzbekistan                         |
| Governmental resolutions at the national level in support of increased joint actions of all relevant law enforcement agencies against poaching and illegal trade of saiga   | Completed FY 10 | Completed FY 10   | Completed FY 10   | Completed FY 10  | FY 11  |
| Governmental resolutions at the Karakalpak level in support of increased joint actions of all relevant law enforcement agencies against poaching and illegal trade of saiga | Completed FY 10 | Completed FY 10   | Completed FY 10   | Completed FY 10  | FY 11  |

#### 4. SCAPES Activity Baselines.

The project did not track activity baselines.

## IV. Major Impacts

### Impact: Improved wildlife law enforcement capacity.

The project placed great emphasis on supporting efforts that reduced poaching and trafficking of Saiga not only on the Ustyurt, but throughout their range. This support came in the form of training and resource provision, awareness-raising and the facilitation of exchange, targeted at agencies charged with documenting and enforcing hunting and illegal trade laws. As a result of the project, there is now greater collaboration between agencies on efforts to deter and detect poachers. Rangers on the Ustyurt are also better equipped to be in the field and have improved skills and capacities to take advantage of the new technology and data available to them. The Kazak customs agency also has greater capacity to halt the flow of smuggled Saiga horns as a result of the world-class Saiga detection dog program established with the support of the project.

### **Capacity building:**

The first project activities included the delivery of Training and Resource Needs Assessments for enforcement and customs teams. Training and resources were then provided based on the needs identified. Trainings supported rangers to build their field and patrolling skills. Training also enabled customs officials, local police and border guards to better understand illegal



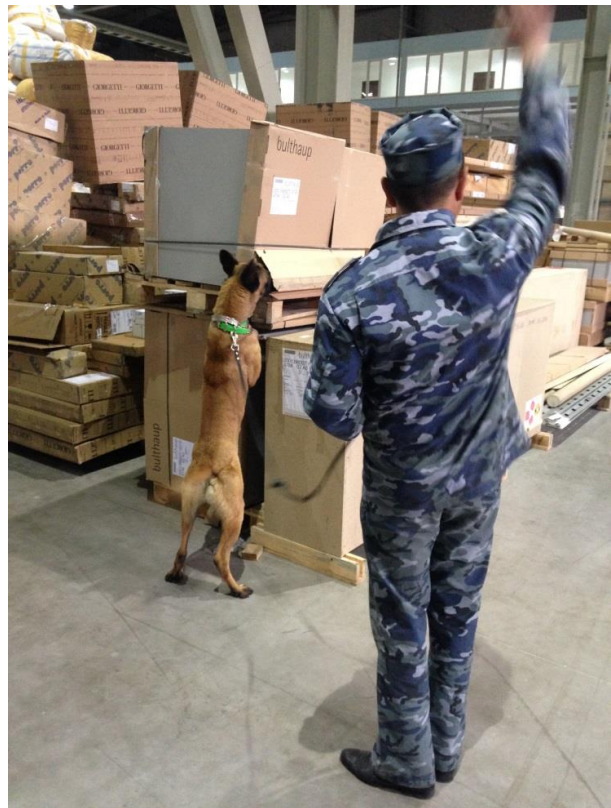
wildlife product trade chains, to build skills in identifying illegal wildlife products and understanding of the national and international laws that regulate wildlife trade. These included regulations and approaches to meeting the requirements of the CITES Convention and the Convention on Migratory Species (CMS) Memorandum of Understanding (MoU) and Medium Term Work Program on Saiga conservation. Training was delivered via workshops coupled with practical activities and case material. During and post training emphasis was also placed on promoting interagency collaboration and actions. The project initiated these efforts in Uzbekistan and repeated them in Kazakhstan.

This early practical support also raised the awareness of policy makers who then felt motivated to promote joint actions between law enforcement agencies on poaching and the illegal trade of Saiga products. As a result, actions to reduce poaching were increased including greater collaboration between nature protection agencies and local police, who held joint raids and public relations events. In

Uzbekistan two seizures of Saiga horn, both at border crossing between Uzbekistan and Kazakhstan, were made public emphasizing the need for greater transboundary cooperation between agencies within and between countries to effectively detect and identify smuggled wildlife.

***Wildlife detection dog program:***

The project's assessment of capacity needs to address the cross-border trade in Saiga products identified a strong interest to establish a wildlife detection dog program to strengthen border controls. The project identified the Regional Dog Training Center in Almaty, Kazakhstan as a suitable partner for this activity. A study tour was arranged between officers of the Regional Dog Training Center and the Czech Republic's World Customs Organization certified Canine Training Facility. The latter is a global leader in combatting illegal wildlife trafficking. After this exchange, the project worked with the Regional Dog Training Center to develop a sniffer dog program for Kazakhstan, using dogs trained to detect Saiga horn odor. Four detection dogs, which were pre-trained in the USA to detect drugs, were transported to Kazakhstan and trained to detect Saiga horn during an intensive dog handling training program held at the Regional Dog Training Center. Upon graduation, the k9 teams were deployed to their posts and began their work. Within two months, two finds of Saiga horn, one at the Uzbek-Kazakh border and one at the Kazakh-Kyrgyz border had been made. The program is viewed as highly successful and is a symbol of what can be achieved through effective collaboration between different government



agencies and International and local NGO's. The program was so successful that it was featured at an International Saiga Ranger Summit, also delivered by the project, and at the October 2014 regional CITES meeting, hosted by the Government in Kazakhstan.

***Transboundary and international cooperation promoting Saiga conservation:***

The Ustyurt Saiga population migrates between summer and winter grazing in Kazakhstan and Uzbekistan respectively. This shared range means that international cooperation is required if the Ustyurt Saiga population is to be effectively protected. The demand for Saiga horn, the common challenges faced in protecting the Saiga, the differing sizes of each Saiga sub-population and their historical migrations, dictate that transboundary efforts need to be expanded beyond the Ustyurt to include other Saiga range countries and regions within countries.

The Convention on Migratory Species (CMS) facilitates Saiga conservation across the range states through the promotion of the Saiga MoU, which has been in effect since 2006, and was signed by all range state countries. In 2013, the project supported two major CMS facilitated events: 1. the development of a bilateral action plan between Uzbekistan and Kazakhstan on conserving the Ustyurt Saiga; and 2. a technical workshop aimed at increasing cooperation and coordination in implementing activities outlined in the Saiga MoU. Both of these events pointed towards the need to improve transboundary cooperation between wildlife law enforcement groups charged with protecting the Ustyurt Saiga. The project followed these events up with the first ever 'International Saiga Rangers Summit', bringing together rangers tasked with protecting the Saiga from all range states.

The summit enabled the different ranger teams to present the status of Saiga antelope in the region in which they work, to highlight their successes, to discuss methodologies they employ to patrol, monitor and protect Saiga. The rangers then worked together to assess what is



needed to improve the situation for the Saiga and their operations. This provided a forum for rangers to observe and discuss the practices employed by other ranger teams, a chance for rangers to connect with a larger peer group and to start the process of detailing needs from across all Saiga range areas.

In addition, to providing new skills, knowledge and resources, training programs also incorporated, where possible, a training of the trainers approach to facilitate the programs

to becoming self-sustaining. Further, the success achieved by rangers with the practical support of the project stimulated a greater investment in rangers by the host Government, as

evidenced by the significant increase in ranger capacity and resourcing on the Kazak Ustyurt currently being funded by the Kazak Government.

The international ranger summit will almost certainly require further external support to ensure a repeat summit takes place. But the rangers are motivated and it is anticipated that in time and with the value of such events becoming clear to the Secretariats of CITIES and CMS, for example, and the respective Governments, rangers will be empowered and financially supported to hold future events.

The success of the sniffer dogs and regional dog center has stimulated a greater interest in the use of dogs elsewhere in Kazakhstan. The State customs agency is fully behind this program and has taken full ownership of its operation. This ownership was evident with the Government's presentation of the program to the international community at the 2014 regional CITES meeting, which was held in Kazakhstan.

**Impact: Improved knowledge of the Ustyurt landscape guiding its management.**

Capacity to make informed management decisions relies on there being a good knowledge base for the ecosystem. At the start of the project, there was very little information available on the Ustyurt with data being limited to a few species lists and geological descriptions. The key exception being the annual Saiga population surveys, which have been conducted for decades. Basic questions could not be answered without more and updated data: What are the risks of fragmentation to the Ustyurt Plateau and the Saiga antelope? What is the grazing status of the Ustyurt? How does the oil and gas industry affect the Ustyurt Plateau? What is the relationship between communities on the Ustyurt and biodiversity? What are the predicted impacts of climate change and how will communities be affected?



The project team and partners together with a range of specialists undertook a raft of surveys and studies to answer these and other questions. These included baseline surveys of biodiversity and the socio-economic position on the Ustyurt; satellite collaring of Saiga antelope; assessment of rangeland condition, carbon values, climate change impacts and market chains for the illegal trade in Saiga products. As a result, a much stronger baseline data set exists against which future management strategies and decisions can be taken. Building upon the biodiversity and Saiga

baselines, the project started the process of developing a biodiversity monitoring protocol, which feeds into other nationwide (Kazakhstan) biodiversity monitoring schemes and will be used by the Authorities to guide future management decisions.

***Rangelands:***

The state of the Ustyurt rangelands was unclear as most work was conducted during the Soviet period when livestock grazing was intensively managed by the state. There was also much less pressure from development at that time. Was biodiversity on the Ustyurt being degraded from too much grazing pressure? The project recruited an internationally recognized rangeland expert to conduct an ecosystem wide survey to answer this. This resulted in one of the first systematic attempts to quantify rangeland conditions on the Ustyurt. The results were that the rangelands were experiencing localized grazing pressure around settlements but much of the Ustyurt has remained ungrazed by domestic livestock for long periods of time and is in relatively good condition.

***Climate and carbon studies:***

The project also engaged climate change and carbon specialists from FFI to develop a climate change adaptation plan for the region and to assess the relative carbon values of the Plateau ecosystem and feasibility of using carbon finance as a means to protect the Ustyurt's threatened grasslands.

For the climate change planning, initial base information was collated through desk study. Planning was then undertaken through workshops with local specialists and actors. The results (preliminary and requiring further work) indicate that the general trend is warming. However, it was considered that, as the Ustyurt already has an extreme climate in terms of aridity, seasonal temperature differential, and inter-annual variability in precipitation, both the biodiversity and local communities will prove quite resilient to a changing climate. It was considered that climate change may not be as serious a threat as other issues such as the poaching of Saiga or the impact of the Aral Sea drying out. Although it was recognized that these threats could be exacerbated by the direct and indirect consequences of climate change.

In respect to species, amongst others, it was thought that there could be changes in plant growth and vegetation community composition coupled with further limited access to drinking water. As a result some species migrations could shift and breeding success reduced; both of which could increase species vulnerability. Anecdotally, there are already reports of shifting species range on the Ustyurt, with southern species moving further north.

Anticipated increased aridity might be balanced by increased productivity due to increased temperature and an extended growing season. But hotter drier summers will mean livestock suffer so shepherds may try to move north but will be inhibited by a lack of water. Livestock numbers may therefore decrease, leading to an increase in the price of meat. This in turn could lead to increased pressure on wild hoofed animals through hunting. Given the high reliance on employment at the gas compressor stations, soda factory, the rail road and increasingly extractive and energy industries, as well as on remittances from abroad, it was thought that local communities are less vulnerable than they would otherwise be to climate impacts on the Ustyurt.

In respect to carbon values, the study estimated an overall (average) figure for carbon storage of the Ustyurt Plateau (16.9 million ha) of 695 MtC and concluded that the main requirements for a successful emissions reduction project in both Kazakhstan and Uzbekistan were not yet in place.

***Biodiversity assessment:***

Biodiversity assessments are critical for establishing a baseline that can be used to assess future changes and guide management decisions. The project facilitated biodiversity surveys on the both the Uzbek and Kazakh Ustyurt, an approach that had not been undertaken for several decades. The project supported the development of a draft biodiversity monitoring program for the Kazak Ustyurt, which should enable changes in key biodiversity to be measured over time and for better decisions to be made to allow management to be adapted.

***Saiga mortality study:***

In 2010 and 2011 two consecutive Saiga mass-die offs were reported in NW Kazakhstan involving more than 10,000 animals. The cause was a mystery. The Ustyurt population was unaffected but with such critically low numbers any additional mortality would be a grave threat to their future. One of the world's leading wildlife epidemiologist was contacted and supported using emergency funds leverage by the project to conduct an investigation as to the probable cause and to provide recommendations for the future. The conclusion was that pathogens were probably not the cause of death rather it was likely that due to intensifying land-use related to hay cutting forage types were altered to include forage which promotes bloating and this may have affected Saiga capacity to breathe and succumb to the symptoms.

***Socio-economic study:***

Providing context for how communities and the Ustyurt landscape are associated was an important component for the project. Biodiversity conservation cannot take place without the support and participation of local people. Little information was available about the lives and economic situation of the local communities which call the Ustyurt home. What pressures do the communities face in their lives? What concerns them? What importance does biodiversity have on their livelihoods? How are key aspects of Ustyurt biodiversity valued?

These are some of the questions the project sought to answer through delivery of a socio-economic survey. The results of this survey have been important in guiding the project's conservation actions to ensure that they are acceptable to and supported by the communities. The design concept for the Mobile Environmental Resource Center (MERC) was influenced by the results from this survey.

***Saiga movement study:***

The annual Saiga migrations are a widely documented global ecological phenomena. Despite this, uncertainty about the transboundary nature of the Ustyurt Saiga movements remained. Understanding the scale and nature of these movements was critical for the project. The project therefore supported the capture, satellite collaring and release of Saiga on the Ustyurt. The resulting data was added to ongoing research on Saiga movements in other Saiga



populations, thereby leveraging learning and expanding the scale of impact of this research. The results of this research have been powerful. It is now indisputable that Ustyurt Saigas are transboundary and depend on habitat in Uzbekistan during the winter months to survive. Data on Saiga movement clearly demonstrates how the continued development of roads, railroads, and fences serve to fragment the Ustyurt by acting as barriers to Saiga movements. These results were used to justify recommendations that the existing border fence be modified to a more wildlife friendly fence design.



#### ***Associated academic studies:***

The project provided a platform for academic advancement while also addressing practical conservation issues. Partnering with Imperial College, London and a long establish research laboratory focused on Saiga ecology and conservation, the project was able to utilize 2 decades of research experience and the dedication and energy of a number of young conservation scientists. A number of honors and master's thesis were completed with project support and these efforts helped summarize issues and delve into topics in greater depth than would have been possible for the ULCI team alone. Additionally, the project provided partial supporting funds for a PhD dissertation on evaluating biodiversity offset mechanisms on the Ustyurt.

These works provide an invaluable resource not only for the project but to the global community of conservationists. This institutional collaboration resulted in 5 peer-reviewed publications and MSc thesis that as public documents will have the chance to influence policy long after the project has faded into the record books.

The following is a list of publicly accessible research papers resulting from project support at the time of writing:

#### **Peer Review:**

- Bull, J.W., Milner-Gulland, E.J., Suttle, K.B., Singh N.J. 2014. Comparing biodiversity offset calculation methods with a case study in Uzbekistan. *Biological Conservation*, 178:2-10.
- Bull, J.W., Gordon, A., Law, E., Suttle, K.B., Milner-Gulland, E.J. 2014. The importance of baseline specification in evaluating conservation interventions and achieving no net loss of biodiversity. *Conservation Biology*, 28:799-809.

- Jones, I.L., Bull JW, Milner-Gulland, E.J., Esipov A.V., Suttle, K.B. 2014. Quantifying habitat impacts of natural gas infrastructure to facilitate biodiversity offsetting. *Ecology and Evolution*, 4(1): 79-90.
- Bull, J.W., Suttle, K.B., Gordon, A., Singh, N.J., Milner-Gulland, E.J. 2013. Biodiversity offsets in theory and practice. *Oryx*, 47(3): 369-380.
- Bull, J.W., Suttle, K.B., Singh, N.J., Milner-Gulland, E.J. 2013. Conservation when nothing stands still: moving targets and biodiversity offsets. *Frontiers in Ecology and the Environment*, 11(4): 203-210.

**Master's Thesis:**

- Dorward, Leejiah. 2013. Assessing the effectiveness of participatory monitoring of Saiga *Saiga tatarica* in Kalmykia. MSc. Thesis, Imperial College, London.
- Marsden, Emma. 2012. Conservation of migratory species in the face of new threats and limited data availability: Case study of Saiga antelope in Uzbekistan. MSc. Thesis, Imperial College, London.
- Jones, Izzy. 2011. Oil and gas development in Uzbekistan: vegetation responses to disturbances on the Ustyurt Plateau. MSc. Thesis, Imperial College, London.
- Offord, Suzanne. 2011. An Evaluation of Potential Monitoring Strategies for Saiga Antelopes on the Ustyurt Plateau. MSc. Thesis, Imperial College, London.

**Impact: Greater community involvement in Ustyurt environmental issues.**

As stated above, for biodiversity conservation to be successful activities need to take into account the needs of local people and facilitate their participation in activities wherever possible. The project used research, consultations, study tours and the development of local infrastructure to engage local people. Conservation and environmental messaging were informed and shaped by these interactions to ensure they were appropriately targeted and have the greatest impact possible.

**Public awareness campaigns:**

The project used public mass media outlets to reach a larger audience. Using video footage of Saiga the project produced a short film that appealed to the audience to consider that the fate of the Saiga is in their hands and to dissuade others from poaching. This clip was broadcast on regional TV outlets and a link to the video is available to view on You Tube:

<https://www.youtube.com/watch?v=GATRX8EbBqA>

The project also produced posters and large billboard signs that highlighted the importance of



protecting Saiga and asked people not to purchase Saiga horns or meat. These also provided information on laws regulating the sale of Saiga products and hunting. These were placed on billboards along major roads/motorways leaving the regional capital and in train stations and airport terminals.

***Inspiring the future:***

The project established and supported the development of eco-clubs on the Ustyurt. Initially these efforts were focused on establishing clubs within villages on the Uzbek side of the Ustyurt. Although the project was not able to continue activities with these clubs; they remain active and are supported locally. In Kazakhstan, the project supported the establishment of an eco-club in the town of Shalkar at school No.5. In two years over 100 students have participated in eco-club activities, which include two international Saiga day celebrations. The project also supported an international exchange of students between Uzbekistan and Kazakhstan during the first Saiga day festival. This positive exchange provided an opportunity to share views and opinions, to bust myths on who was responsible for poaching and create a more positive conservation message.

International Saiga day was established in 2011 as a way to promote the Saiga and their conservation across all communities living in Saiga range areas. In addition to the international exchange described above, the project also supported a well-known Kazak comic book illustrator to visit the Ustyurt to work creatively with local children to draw



pictures of Saiga and write stories using the images created.

Also with project support, one eco-club teacher (Ms. Gulsizam) developed a wildlife conservation curriculum, the quality of which was recognized by the Ministry of Education and Science and she was awarded a 'Talented Teacher' award. This curriculum promotes environmental awareness and gives an introduction to the Ustyurt ecology, animal habitat and lifecycles; the aim being to promote respect, responsibility and gratitude towards the environment, animal welfare and humanity. The course continues to be taught to all school children attending Shalkar School No. 5.

Prior to the close of the project leaders of the Shalkar eco-club travelled to an additional 4 villages along the Ustyurt and established agreements to set-up eco-club activities with other schools.

***Mobile Environmental Resource Center:***

The communities on the Ustyurt are small and remotely located. Opportunities for upward mobility are extremely limited. Communities have lost many of their traditions and ties to the land and increasingly rely on government support or employment primarily in the energy and extractive sector. Agriculture is limited to small garden plots and livestock grazing to ‘pastures’ close to population centers.

The concept behind the Mobile Environmental Resource Center (MERC) emerged from the socio-economic survey and participatory meetings held with local community members and leaders. Communities on the Kazakh Ustyurt have low levels of knowledge about the role of wildlife management institutions. Although they are knowledgeable about some environmental problems and how these might affect their lives, they were not able to access further information on these or other issues. There was a clear need for access to information outside of the informal networks that existed. This included information on employment opportunities, on the availability of credit and skills training.



The MERC was established to provide information and support of value to the communities while also providing information on environmental issues. In this way, the project aimed to enable local people to see a positive link between their improved livelihoods and the state of their environment through raised awareness and, thus begin to be more proactive in engaging on protecting the environment, species and habitats. The Centre is based around a traditional yurt that travels

between 5 villages on the Ustyurt on a regular basis, providing training on micro loans, developing business plans, employment opportunities and lectures on local environmental issues. The use of a traditional yurt and the mobility of the center allows it to reach a larger audience than would be possible at a fixed site. The yurt is also a strong symbol of the mobile and resilient nomadic culture that Kazakhs take great pride in.



## V. Principal Strategies and Corresponding Results

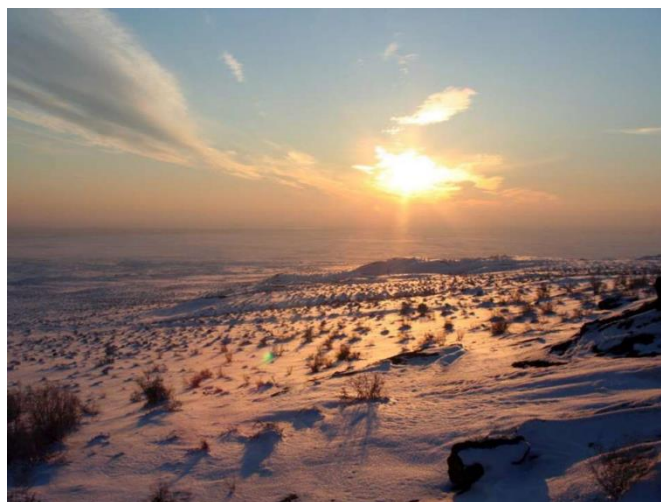
### Limiting Factors Analysis

For the initial design of the ULCI project, a threats based approach to conservation based on a 'Limiting Factors Analysis' was used, resulting in clear conservation objectives. A Limiting Factors Analysis allows us to generalize the kinds of threats faced in landscapes and seascapes. The approach requires rating each factor or threat based on its impact on biodiversity conservation. Factors which greatly constrain conservation efforts in a given landscape may receive more attention in the implementation of activities. Alternatively, factors which are outside the manageable control of the project may require partnerships with institutions that can better address those factors.

We use a refined, generalized list of limiting factors from Gullison and Hardner (2009), as follows:

1. Scientific understanding that is inadequate to formulate appropriate management actions to sustain the conservation target
2. Public policy and legislation that does not support conservation of the target, and insufficient enforcement of existing laws and regulations
3. Institutional capacity that is inadequate to perform conservation activities
4. Social, cultural and economic pressures that cause the destruction/degradation of the conservation target
5. Stakeholder support that is inadequate to conserve the target.
6. Funding that is insufficient to establish an adequate level of conservation management

These limiting factors were then applied and analyzed in the context of the Ustyurt Landscape and used to define our initial proposed actions under the project, as represented in the table below.





| Limiting Factors<br>(adapted Gullison & Hardner 2009)   | Status Score * |   |   |   | What has been achieved?  | Gaps  | Proposed Actions<br>(letter in brackets indicates overlap with other limiting factor)   |
|---|----------------|---|---|---|--|---|---|
|   | 1              | 2 | 3 | 4 |  |   |   |
| <b>A. Scientific understanding that is inadequate to formulate appropriate management actions to sustain the conservation target</b>                    |                | X |   |   | <ul style="list-style-type: none"> <li>- Social survey work has been undertaken and there is a good understanding of issues.</li> <li>- Ecological survey work ongoing especially on Saiga antelope.</li> <li>- Telemetric survey of Saiga ongoing in Kazakhstan.</li> <li>- FFI / local partners only active groups in Ustyurt for last 5 years.</li> </ul> | <ul style="list-style-type: none"> <li>- Ecological and social survey &amp; mapping limited to small areas of landscape within each nation state.</li> <li>- No mapping / assessment of landscape / ecosystem, habitat integrity, connectivity, corridors (B).</li> <li>- Insufficient data on ungulate migratory patterns limits planning species conservation.</li> <li>- Insufficient data on keystone and threatened species.</li> <li>- Lack of predictive models of impacts of climate change on ecological and socio-economic factors.</li> <li>- No assessment of industrial 'development' impacts undertaken.</li> </ul> | <ul style="list-style-type: none"> <li>A1. Landscape baseline ecological survey and habitat mapping, incl. scenario planning for climate change.</li> <li>A2. Research into migration patterns of the ungulates species coordinated with Kazakhstan.</li> <li>A3. Intensive research of 3 keystone species.</li> <li>A4. Develop and implement biodiversity monitoring strategy for the landscape.</li> <li>A5. Periodic monitoring of socio-economy and demography (D).</li> <li>A6. Develop landscape database and GIS resource.</li> <li>A7. Facilitate cross-border cooperation in science and research and build case for transboundary protected area (B).</li> </ul> |
| <b>B. Public policy and legislation that does not support conservation of the target, and insufficient enforcement of existing laws and regulations</b> |                | X |   |   | <ul style="list-style-type: none"> <li>- Uzbek state rangers engaged.</li> <li>- Process to develop Saigachy Reserve. ongoing and designation proposal with Ministry.</li> <li>- Bi/multi-lateral agreements supporting cross-border cooperation for Saiga protection in place, e.g. under CMS.</li> <li>- Discussions to create a transboundary</li> </ul>  | <ul style="list-style-type: none"> <li>- Saigachy Reserve (UZ) is a paper park.</li> <li>- Conservation not considered in land-use/development planning.</li> <li>- Lack of inter-departmental cooperation.</li> <li>- Endemic corruption inhibits policy implementation.</li> <li>- Low impetus for transboundary designation (C).</li> </ul>  | <ul style="list-style-type: none"> <li>B1. Support institutional and operational development of Saigachy Reserve (C) and engage with Ustyurt Reserve (KZ).</li> <li>B2. Harmonize land-use/zoning plan across the Plateau (C).</li> <li>B3. Ensure that conservation planning is integrated into land-use plans.</li> <li>B4. Raise awareness of wildlife impact mitigation amongst planners/developers.</li> <li>B5. Facilitate cross-border cooperation between states at all levels on conservation and development of Ustyurt.</li> <li>B6. Ensure transparency of activities –</li> </ul>  |

|   |  |  |   |  |  |  |
|---|--|--|---|--|--|--|
|   |  |  |   | protected area ongoing.  |  | publicity and oversight groups.<br>B7. Raise awareness of laws and role of conservation agencies.  |
| <b>C. Institutional capacity that is inadequate to perform conservation activities</b>                  |  |  | X | <ul style="list-style-type: none"> <li>- Four community ranger groups supporting Saiga awareness and protection.</li> <li>- Effective anti-poaching teams in Kazakhstan.</li> <li>- Regional capacity building models available.</li> <li>- Competencies available to be adapted for rangers.</li> </ul> | <ul style="list-style-type: none"> <li>- Lack of effective anti-poaching ranger teams in Uzbekistan (B)</li> <li>- Existing ranger teams under capacity (B).</li> <li>- Undermining of enforcement as a result of endemic corruption (B).</li> <li>- No inter-departmental or cross-border co-ordination of anti-poaching and protection (B).</li> </ul>                                 | <ul style="list-style-type: none"> <li>C1. Build technical and resource capacity of agencies responsible for anti-poaching in Uzbekistan.</li> <li>C2. Establish and resource 1 new state ranger team in Uzbekistan</li> <li>C3. Develop joint Kazakh/Uzbek training and patrol exercises</li> <li>C4. Develop inter-departmental nature protection strategy in Uzbekistan</li> <li>C5. Create and co-ordinate cross-border anti-poaching program.</li> <li>C6. Mobilize communities through 6 new local Saiga local monitoring groups.</li> <li>C7. Build links between state rangers &amp; local groups.</li> <li>C8. Develop ranger competencies and train to these standards.</li> </ul> |
| <b>D. Social, cultural and economic pressures that cause the destruction of the conservation target</b> |  |  | X | <ul style="list-style-type: none"> <li>- Platform for community engagement in place.</li> <li>- Alternative livelihoods approach piloted on Ustyurt</li> <li>- Community Saiga ranger groups employ locals (former poachers).</li> <li>- Small-grant program funded alternative livelihoods</li> </ul>   | <ul style="list-style-type: none"> <li>- Lack employment/livelihoods forces locals overuse natural resources.</li> <li>- Poor communications, infrastructure and services mean that communities need to build self-reliance.</li> <li>- Collapse of Saiga and other species populations because of poaching.</li> <li>- Lack of coordination of rangeland use and management.</li> </ul> | <ul style="list-style-type: none"> <li>D1. Support the development of alternative livelihoods and small-scale infrastructure projects (e.g. alternative energy, etc.).</li> <li>D2. Assess agriculture/rangeland management and pasture condition.</li> <li>D3. Develop rangeland management strategy to address issues.</li> <li>D4. Develop integrated approach to address the trade in Saiga horn.</li> </ul>   |
| <b>E. Stakeholder support that is inadequate to conserve the target</b>                                 |  |  | X | <ul style="list-style-type: none"> <li>- Awareness-raising ongoing.</li> <li>- Communities engaged</li> <li>- Ten Saiga Friends groups established in 3 villages.</li> <li>- Discussions with</li> </ul>   | <ul style="list-style-type: none"> <li>- Lack of local understanding of causes of landscape degradation and Saiga decline.</li> <li>- Extractive industry not engaged enough on conservation issues and key drivers of biodiversity loss</li> </ul>  | <ul style="list-style-type: none"> <li>E1. Develop advocacy amongst communities through program of awareness raising and education</li> <li>E2. Establish a further 20 Saiga Friends groups (10 in each country)</li> <li>E3. Evaluate creation of regional label for marketing of cultural activities and</li> </ul>  |

|   |  |  |   |   |  |   |
|---|--|--|---|---|--|---|
|   |  |  |   | <p>industry ongoing.</p> <ul style="list-style-type: none"> <li>- Strong concern for Saiga and culture interwoven with nature.</li> </ul> |  | <p>products.</p> <p>E4. Proactively engage local and foreign industry for mitigation of impacts on landscapes and species.</p>  |
| <p><b>F. Funding that is insufficient to establish an adequate level of conservation management</b></p> |  |  | X | <ul style="list-style-type: none"> <li>- Some co-finance available through ongoing FFI projects.</li> </ul>                               | <ul style="list-style-type: none"> <li>- Lack of awareness of the region – not on donor radar screens.</li> <li>- International relations limit ability of international aid sector to engage in Uzbekistan.</li> <li>- Kazakh internal policy is suffocating local NGOs of funds.</li> <li>- Immediate resource needs to upscale to landscape conservation, e.g. vehicle, powerful radios, field bases, inhibited by lack of funding.</li> <li>- Sustained presence (min 5 to 7 years) required to build sustainability.</li> </ul> | <p>F1. Undertake study into options for generating finance for the Saigachy protected area.</p> <p>F2. Build synergy with UNDP to support the Saigachy protected area.</p> <p>F3. Engage local and foreign oil and gas companies for mitigation of impacts on landscapes and species and financing conservation activities.</p> <p>F4. Lobby and support for local people to be engaged as employees of protected area and conservation.</p> <p>F5. Build resilience within communities by ensuring skills/knowledge from projects embedded.</p> <p>F6. Develop wider role advocacy and community for Saiga Friends groups.</p> |

\* Status Score: 1 = Not Limiting, 2 = Manageable Problem, 3 = Serious Impediment to Conservation, 4 = Impasse to Conservation

## **Monitoring, Evaluation, Feedback and Learning (MEFL)**

During the first year of implementation, we developed a Monitoring, Evaluation, Feedback and Learning (MEFL) plan for ULCI. The MEFL process was conducted in both Uzbekistan and Kazakhstan in order to ground truth the Limiting Factors Analysis with our local partners and to get more details and in depth knowledge. The MEFL process combines more traditional PMP development with conceptual modelling and outcome mapping. The MEFL is intended to meet the needs of a PMP combined with processes and protocols for ensuring timely feedback on the outcomes the project is achieving. This feedback provides management at all levels with the information needed to assess progress and determine the need for adapting goals, objectives and activities to improve outcomes.

The MEFL plan is used to operationalize Adaptive Management. Adaptive management is the systematic testing of hypotheses and the elucidation of the underlying conceptual model -- clarifying the critical preconditions of the programs and the assumptions about the impacts of our work *based on what we have learned* and are learning from our innovations, failures and successes. Adaptive management is based on *real* learning which flows from active and regular evaluation of results based on quantitative and qualitative data. *Real* learning comes from processes that provide honest, routine and timely feedback to managers and stakeholders who are empowered to adjust the vision, goals, objectives, and activities to refine program delivery.

Early on during the MEFL process, the conceptual model of the ULCI project was discussed and revised with key stakeholders. While the overall scope of the project remained unchanged, the objectives and activities of the ULCI were slightly modified and, as a result, the project's activities were more cohesive, locally relevant and logical. As part of the process, a data collection and management system was also created and a follow-up training on how to implement the plan was also conducted.

As the team worked together to refine the conceptual model it became clear that the Limiting Factors approach used to guide project design initially did not have the specificity needed to adequately address the root causes of the threats facing the Ustyurt. The Limiting Factors approach is still a valuable tool, but for site specific work it is necessary to develop a more detailed conceptual model to guide the development of results, objectives and activities. The table below shows the original objectives and the revised, more concise objectives.

| Original Objectives   | Revised Objectives  |
|---|---|
| 1. To improve ecological and social scientific understanding to better inform the design, implementation and monitoring of landscape management interventions and to provide a basis for adaptive management.   | 1. To improve ecological and social scientific understanding of the Ustyurt landscape.  |
| 2. To support State Agencies to develop and implement robust protected area, conservation and development control policies for the Ustyurt Plateau.   | 2. To reinforce the capacity of state agencies involved in the conservation of the Ustyurt.   |
| 3. To develop the capacity of the State nature protection agencies to deliver effective wildlife protection supported by an active and robust local advocacy network.   | 3. To engage with and support local communities to participate positively in conservation while improving the quality of their lives. |
| 4. To empower local communities and other stakeholders to address their needs in ways which also mitigate the key sociocultural drivers of landscape degradation and species loss.  | 4. To engage with the private sector to mitigate their impact on the Ustyurt landscape.   |
| 5. To build the local constituency and advocacy for the Ustyurt Plateau and its species through a program of active engagement and awareness-raising.   |   |
| 6. To support the engagement of the international conservation, development and business sector and to develop the fundraising capacity and long-term funding base available to key Actors responsible for the sustainable management of the Ustyurt Plateau and its species. |   |

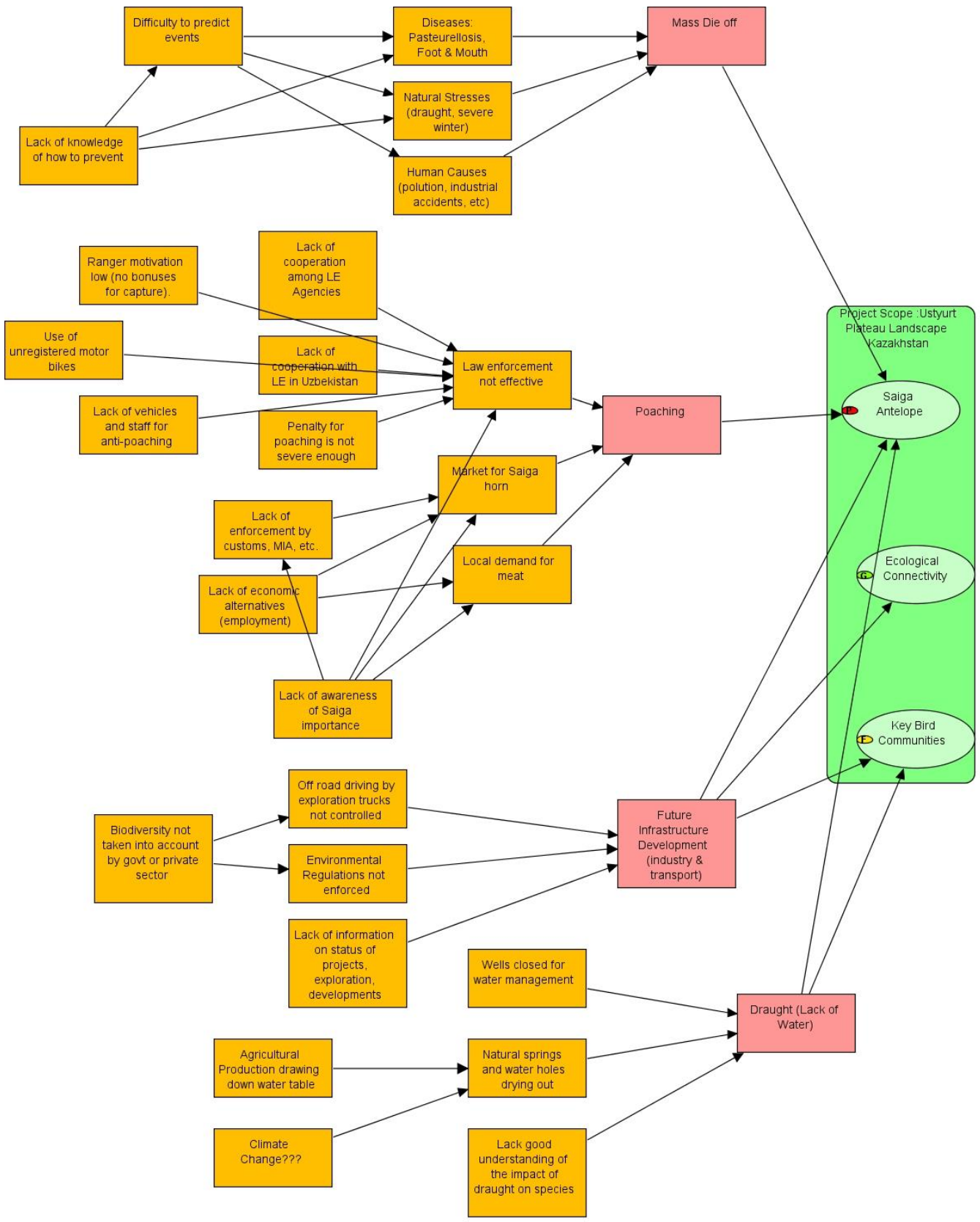
In year 3 of ULCI, FFI received notice from the Ministry of Justice of Uzbekistan that their registration application to work in Uzbekistan was rejected. At the same time, results from studies undertaken on the Ustyurt through the project were indicating that the Saiga actually spend the majority of the year on the Kazakhstan side of the Ustyurt, thus shifting importance of project interventions to the Kazakhstan side. These two points taken together culminated in a revision to the project with a much greater focus on Kazakhstan and very little on Uzbekistan.

### **Conceptual Modeling**

The MIRADI system was used to build a conceptual model of conservation targets, threats and root causes. Miradi is project management software designed by conservation practitioners, for conservation practitioners. It was built as a tool to implement planning and measure best practices. The models were developed for both the Uzbekistan and Kazakhstan portions of the landscape. While very similar the two countries are facing distinct threats that will each require custom approaches to improving conditions for the conservation targets.







The MEFL process had laid the conceptual foundation for the next stage in the evolution of the project approach – the Theory of Change (TOC).

### **Theory of Change**

In year 4 of ULCI, USAID initiated a Theory of Change exercise with all SCAPES partners, across all landscapes/seascapes. At the same time, the Pact Consortium made refinements to its overall approach and interventions based on the Theory of Change. The progression from Limiting Factors Analysis, to MEFL to Theory of Change was very linear, with each building off of and validating the other.

For the Theory of Change process, the landscape level goal was defined as: ***Ustyurt Plateau biodiversity conserved for the long-term***. To realize the TOC Goal, the project focused on activities that would contribute to the achievement of the following Key Preconditions. These three key pre-conditions must be in place for this Goal to be achieved.

1. Reduced human caused Saiga mortality.
2. A more biodiversity friendly and accountable private and public sector.
3. Improved ecological knowledge integrated into management of the Ustyurt Plateau

Below is a summary of the different actions taken under the project for each of the three pre-conditions, as defined by the Theory of Change.

#### **Pre-condition 1. Reduced human caused Saiga mortality**

- 1.1 Strengthen law enforcement to reduce poaching and trafficking and mitigate the impact of the border fence.

*TOC: If the project can reduce poaching and trafficking of Saiga while maintaining migration patterns then their numbers will increase because Saiga are very fecund and their main sources of human caused mortality will be reduced.*

#### **Actions:**

The border fence was believed to be a major threat to the survival of the Saiga. Monitoring of individual Saiga using GPS technology confirmed that Saiga overwinter in Uzbekistan. The project employed the services of a migration and infrastructure consultant to provide best practice recommendations for modifying the fence. These were presented to the Forest and Hunting Committee of Kazakhstan for review. These recommendations in turn were passed on to the Border Defence Agency for approval and action. The final recommendations were modified by the Border Defence Agency to comply with their border security concerns. They agreed to modify over 130 kilometers of border fence to facilitate Saiga migration.

Rangers working to enforce hunting regulations on the Kazakh Ustyurt were involved in skills training such as map reading and GPS use. A Needs Assessment was conducted and identified

the need for quality equipment as a priority so that rangers would have proper equipment identify and pursue poachers. This included GPS units, binoculars and spotting scopes, digital cameras, camping supplies, and two off-road motorcycles.



The project provided training on CITES regulations and produced training visuals for assisting with identification of species on Appendix I or II of CITES. Training was provided for both Uzbek and Kazakh customs officers. Around the same time the feasibility and interest in using detection dogs to identify smuggled Saiga horns at borders was assessed. A study tour was organized and members of the Kazakhstan Customs Committee Regional Dog Training Center travelled to the Czech Republic and were briefed by officials from the WHO certified Czech Customs Authority and the Dog Training Center on their approaches to using dogs to identify wildlife products. Upon return it was agreed that that Regional Dog Training Center would support a Saiga detection dog program and the project provided 4 malinois detection dogs including training in Saiga scent imprinting and dog handling for each k9 team.

The project fostered transboundary dialogue and cooperation by establishing an international ranger summit. Rangers representing all 5 recognized Saiga populations were invited to attend and present on the status of Saiga in their jurisdiction, methods of enforcement, challenges and needs.

#### 1.2 Build a local constituency for conservation of the Ustyurt.

*TOC: If we can build a local constituency for conservation of the Ustyurt then law enforcement and biodiversity protection in public and private sector development will be more effective because there will be watchdogs looking out for the conservation of the Ustyurt and communities will be mobilised to engage actively in conservation measures.*

#### Actions:

An eco-club at School No. 5 in Shalkar (the largest town in the region) was established. Activities supported included a 'Saiga Day' exchange with eco-clubs which existed in villages on the Uzbek portion of the Ustyurt (supported through the Saiga Conservation Alliance after ULCI support stopped). The club received books on Kazakhstan natural history, wildlife identification guides and binoculars to help encourage learning about the natural history of the surrounding region. Club members were inspired to take the streets and interview people about their recollections of how the Ustyurt used to be when they were younger and compared with the



situation today. Kids have been taught artistry skills using Saiga as the model for telling stories through images. Building on the successes and enthusiasm from this initial eco-club 4 new eco-clubs were established in the villages which lie along the NE Ustyurt Plateau.

An environmental resource center was developed to serve the communities on the Ustyurt in the capacity of improving livelihoods and as an information hub to increase public knowledge about environmental issues which exist in the region. This center moves between the communities on the Kazak Ustyurt Plateau and is thus referred to as the Mobile Environmental Resource Center, or MERC. The MERC staff provides technical assistance in preparing loan applications for small agricultural loans, provides information on employment opportunities, information on academic institutions, and brings in spokespersons and experts to present on environmental topics which are of interest to the communities.



### 1.3 Reduce demand and market in Saiga products.

*TOC: If we are able to reduce the demand and markets for Saiga horn in China then poaching and illegal trade in Kazakhstan and on the Ustyurt will be reduced because the price for Saiga horn will decrease.*

#### Actions:

The project created informative posters which pointed out that everyone has a role to play in Saiga conservation and advised the reader to not purchased Saiga horn or Saiga meat as it is illegal. These posters were printed and distributed to public transportation hubs and in other high visibility locations, including on a large roadside sign leading into Aktope City.

A short video clip was produced which showed the shooting of a Saiga while a narrator spoke of the fate of wildlife being in the hands of people. The scene changed to an image of a newborn calf struggling to stand and walk through tall grass while the narrator commented on the beauty of Saiga, their importance to the ecosystem, and their struggle to survive with a final message to help protect Saiga.

### **Pre-condition 2. A more biodiversity friendly and accountable private and public sector.**

*TOC: If public and private sector investments take into account biodiversity protection when planning and implementing then the Ustyurt will be more*



*sustainably managed because a major potential threat to biodiversity will be mitigated.*

2.1 Improved policy and practice of biodiversity protection within private and public sector investment.

*TOC: If Kazakhstan's private and public sector are held accountable for ensuring biodiversity protections within their investments then the biodiversity of the Ustyurt will be better protected because infrastructure and other projects will not block migration routes or disturb key habitats.*

Actions:

Two workshops on engaging extractive industry to adopt operational strategies which have no negative effects and in some cases positive effects on biodiversity and ecosystem services. Many of the attendees appreciated that they need to adhere to environmental regulations but were less aware of the concept of 'no net loss/net positive impact' and the mitigation hierarchy in operational planning. These concepts were introduced at both workshops.

The Forest and Hunting Committee announced that they will take measures to create a series of reserves for the purpose of protecting the Saiga migrations on the Ustyurt Plateau.

There are no companies involved in the extractive industry operating on the Ustyurt that are taking measures to mitigate their impact on biodiversity in addition to following environmental regulations mandated by law as a result of project influence.

**Pre-condition 3. Improved ecological knowledge integrated into management of the Ustyurt Plateau.**

*TOC: If the FHC systematically collects and uses scientific knowledge of the Ustyurt in their management planning then the landscape will be better protected because managers will be able to better understand and react to a changing natural and human environment.*

3.1 Improved response to Saiga mass die-offs.

*TOC: If the GOK better understands the cause(s) of Saiga mass die-offs then the impact of these events will be lessened because actions will be taken to mitigate the causes.*

Actions:

One of the world's most respected and leading wildlife disease epidemiologist was contracted to work with Kazakhstan authorities to investigate possible causes of death and propose actionable solutions. This resulted in debunking of previous suspicions of pasteurellosis and formation of a novel leading hypothesis for the cause of death- the overconsumption of toxic forage species due to agricultural encroachment and intensive hay production practices on remaining habitat. Veterinarians were given best practice trainings, and rangers were trained in identification and reporting of incidences as they are first observed.

The concept for an interagency emergency response unit was developed. The conditions and terms for an interagency emergency response team are being drafted and considered by the Kazakh authorities. This is a closed door process and progress made to date cannot be assessed.

3.2 Improved understanding of climate change impacts on the ecology and people of the Ustyurt.

*TOC: If we understand the likely range of impacts from Global Climate Change (GCC) on the people and ecology of the Ustyurt then we will make better management decisions because those decisions will take into account potential ecological and human responses to climate change.*

Actions:

A climate change adaptation study was conducted for the Ustyurt which involved literature review, and model scenario comparisons followed by a community consultation (Uzbek communities) process to determine what perceptions communities have towards climate change and what they believe will be the greatest challenge to their lives due to climate change.

A grassland carbon value desk study was produced by the project to assess the practicalities of pressing for placing additional Ustyurt lands under greater protection on the basis of their value as carbon storage banks.

A climate change adaptation plan for communities on the Kazakh Ustyurt was developed and presented at a climate change adaptation workshop. However there were no follow up actions to take.

3.3 Biodiversity monitoring system in place

*TOC: If the GOK puts in place a biodiversity monitoring system then decision making will be improved because they will have access to up to date information on the ecological "state of the Ustyurt" and the threats to it.*

Actions:

The project sponsored initial surveys to assess the status of biodiversity and to record its distribution across the Ustyurt. This served to compile decades of natural history literature as well as provide a current status portrait for a landscape which receives scant research attention.

The project held a workshop on biodiversity survey methodologies and prepared an initial species list which would serve as indicator species on the Ustyurt. A team of experts has been contracted to prepare a biodiversity monitoring protocol which can be used by rangers on the Ustyurt. The Forest and Hunting Committee has pledged to review and adopt the protocol as an official activity to support.

## VI. Challenges

- At the start of the project, there was no significant prior conservation presence on the Ustyurt landscape. Knowledge of biodiversity on the Ustyurt was scant, incomplete, and outdated. Capacity on the ground to support planned activities was extremely limited. The challenge of starting off with the most basic information, and limited prior local experience in place, meant that implementing activities designed to directly target threats would take time to set up systems and build local capacities, resulting in delivery happening later than originally planned in the project. This then limited the use of indicator data to measure success. That said, in a relatively short time frame, the project did switch its portfolio of activities from those involving information gathering, assessing needs, and community consultations to implementing activities which produce tangible conservation results.
- A simple but nonetheless significant challenge is that the Ustyurt landscape is remote and vast with a harsh climate making travel to and between project sites long and arduous. Local conditions are very basic beyond the few villages, water is in short supply and weather conditions are extreme and dangerous without adequate preparation and experience. Temperatures vary between minus 50 degrees and plus 50 degrees; this and other environmental stresses place great demands on teams working in the region. All project field trips required two vehicles loaded with sufficient water, fuel and food to cope with mechanical breakdown. Visits to the landscape require a significant investment of time, equipment and logistical planning, consequentially making field operations expensive. The remoteness of the landscape also limited the availability of equipment, vehicles and resources locally, often requiring all such materials to be driven from major centres significant distances away. These very conditions are also what makes the landscape so special and worthy of the effort to get there and to protect it.
- Winters on the Ustyurt Plateau are not only extremely cold but also very long. Snow can cover the ground from October through May and the only time access to the Plateau can be guaranteed is between May and September. This short operational window limited activities, e.g. surveys, community visits, etc. primarily to the spring and summer months.
- The requirement for registration of one of the lead organisations in Uzbekistan caused significant delay with some activities and halted other activities already commenced in their tracks. Despite approval for the project at the highest levels, registration was not forthcoming and ultimately, and sadly, the project had to withdraw from Uzbekistan. There are many state and non-state actors in Uzbekistan that positively engaged with the project as it sought to establish itself and they would have benefited greatly from its implementation. We remain grateful for their support and made every effort to engage Uzbek colleagues in project activities in Kazakhstan thereafter. A possible future solution would be to engage the authorities responsible for registration more directly in the conception of the project.

- With Uzbek operations closed the project team had to up-scale operations in Kazakhstan. While strategy adaptations had been considered and deeper relations with Kazak colleagues were in the process of being built, both the project team and Kazak colleagues needed time to develop a shared understanding of and commitment to the project. The situation on the Kazakh Ustyurt differed in many ways from that to be found in Uzbekistan (politically, socio-economically and biodiversity-wise) and our knowledge and understanding of the Kazak Ustyurt and wider operational environment was limited due to our shorter history of engagement there. The project thus lost delivery time during the new setting-up phase. Ultimately, local partners in the state and non-state sectors rose to the challenge of delivering the project and worked with the project team to ensure its smooth delivery to closure. Any mistakes made during the switching phase were quickly addressed and learnt from.
- The Ustyurt Plateau is a transboundary landscape with keystone species migrating and people moving across international borders. Conservation at the transboundary scale requires effective cooperation between the responsible Governments and agencies. Steps have been taken by both Governments to improve cross-border cooperation through the signing of international and regional protocols and agreements on conservation of the Ustyurt Plateau, and participation in CITIES and CMS fora. Projects such as the ULCI provide a platform for facilitating and intensifying cooperation. The challenge is to secure funding to enable such transboundary projects to continue with the buy-in of both countries and joint commitment to delivery.
- In 2010 and 2011 two consecutive Saiga mass-die offs were reported in NW Kazakhstan involving more than 10,000 animals. The Ustyurt population was unaffected but with such critically low numbers any additional mortality would be a grave threat to their future. This was an unexpected threat to the project's keystone species. The project team thus, together with global Saiga conservation community, mobilized support to conduct an investigation as to the probable cause and to provide recommendations for the future.
- A further challenge arose from the construction of an international border fence between Uzbekistan and Kazakhstan on the Ustyurt Plateau. As this directly impacted on the migration of Saiga between the two countries this required immediate attention. As part of a consortium of actors, the project funded an assessment of the status of the fence and submitted recommendations to the Kazak border agency for its amendment to facilitate Saiga movement. These recommendations were taken on board and are being put in place at this time.

## VII. Sustainability

We said we would build ecological and social sustainability through:

### **Developing institutional, technical and resource capacities of state conservation departments, local communities and other civil society members on the Ustyurt:**

What we did:

- Support provided to re-designate the Saigachy reserve Uzbekistan. This work later led to the approval of the re-designation of the reserve by both the Karakalpak and National Governments.
- Training and resource needs assessment conducted for ranger forces in Uzbekistan.
- Training and resource needs assessment conducted for customs and police forces in Uzbekistan. Uzbek customs service, border and local police then trained in national legislation and international law and conventions on illegal trade in Saiga and other wildlife.
- Adoption of governmental resolutions at the national and Karakalpak (both Uzbekistan) levels in support of increased joint actions of law enforcement agencies against poaching and illegal trade of Saiga.
- Uzbekistan and Kazakhstan ratified an international agreement on combining efforts for conserving the Saiga on the Ustyurt. The project actively supported the development of an action plan under this agreement.
- Set up a transboundary agreement on exchanging results of the renewed Saiga collaring which secured the support of Uzbekistan in retrieving collars in cases where collared animals cross to the Uzbek Ustyurt.
- Training and resource needs assessment conducted for ranger forces in Kazakhstan. Then trained Kazak Ustyurt rangers in use of GPS, arrest and seizures and international laws and conventions. Also provided field gear and basic equipment to Kazak ranger forces including sleeping bags and tents, GPS units, binoculars, cameras, night and defender car vision and two motorbikes. State rangers are now more active on the Kazak Ustyurt and Government funding has been increased for their operation and resourcing
- Trained Kazak customs officers on status of the Saiga, national and international laws and conventions and agreements related to their protection.
- Held an international ranger summit bringing together rangers protecting all 5 recognized Saiga populations. Each ranger team presented on the status of the Saiga population they patrol, ranger protocol, and challenges to overcome. This is the first time an international Saiga ranger meeting has been held.
- Established a Saiga detection dog program in Kazakhstan. Four malinois dogs cross-trained on drugs and Saiga horn have been deployed and operating. Two separate smuggling incidences have been documented using these dogs, the first in 15 years.



**Engage with developers and land-use planners to integrate ecosystem impact mitigation methods into land use planning, informed by adaptive management:**

- Conducted a corporate sector analysis to gain a better understanding of the current scale and impact of operation and potential future threats to the Ustyurt.
- Mapped corporate activity and associated infrastructure and identified companies and affiliates active on the Ustyurt.
- Developed a roadmap for engaging with corporate and the public sector. Worked with Government to align approach with their efforts to promote green economic development.
- Held two workshops with corporates on incorporating biodiversity needs and maintaining ecosystem services into the planning and operations of the extractive industry.
- Convinced the Kazak border security authority to modify over 130 km of border fence between Kazakhstan and Uzbekistan to be wildlife friendly facilitating the continued migration of Saiga between the two countries (this is ongoing).

**Building the scientific knowledge base, future biodiversity action plans and transboundary strategies will be informed and strengthened:**

- Rapid three-week baseline biodiversity survey in both countries completed consisting of a combination of point and transect sampling methods.
- Conducted the first systematic rangeland assessment on the Ustyurt.
- Provided Saiga monitoring training in Uzbekistan.
- Supported the capture, satellite collaring and release of Saiga on the Ustyurt. The resulting data was added to ongoing research on Saiga movements in other Saiga populations, thereby leveraging learning and expanding the scale of impact of this research.
- Collaring of Saiga on the Kazakh Ustyurt was attended by representatives of both Institutes of Zoology from Uzbekistan and Kazakhstan facilitating cross-border exchange in Saiga research.
- Saiga collaring data and their locations subsequently shared with Kazakh authorities to inform their ranger patrols.
- Analysis of Saiga movement data provided indisputable evidence that Ustyurt Saigas are transboundary and depend on habitat in Uzbekistan during the winter months to survive. Data on Saiga movement clearly demonstrates how the continued development of roads, railroads, and fences serve to fragment the Ustyurt by acting as barriers to Saiga movements. These results were used to justify recommendations that the existing border fence be modified to a more wildlife friendly fence design.
- Local counterparts trained and then conducted six-week socio-economic and demographic surveys in the main settlements of the Ustyurt in both countries. Special attention was given to evaluating economic dependencies on natural resources and Saiga in particular, socio-economic drivers of poaching and illegal Saiga trade, organization of illegal trade and trade routes, and an assessment of alternative income/ livelihood opportunities.
- Two x two day climate change scenario planning workshops held focusing on the Uzbek and Kazak Ustyurt. The results reveal a lack of information regarding possible climate change impacts and the capacity to adequately respond and adapt to the change. Workshop

participants identified the need for promoting local business & markets and for facilitating livelihood diversification (e.g. through accessing micro-credits and soft loans). Access to information and capacity building through resource centers that provide information on climate change and ecology was regarded as high priority.

- Responded to two mass die-off of Saiga in 2010 and 2011 by providing support to research investigating the probable cause. Although not directly linked to the Ustyurt, the Kazakh government explicitly requested international support and assistance to meet challenges associated with the Saiga mass mortality in the Ural which potentially pose a threat as well to the Ustyurt. Follow-up project in the pipeline.
- Supported the publication of 5 peer reviewed papers and 4 MSc thesis.
- New information gathered and published by the project will always be available and facilitate an easier path for future conservation programs in the region.

**Development of new livelihood opportunities, the project will contribute directly to local economic sustainability. Local people will be proactively engaged and resilience will be built within communities by embedding relevant skills and knowledge directly in local civil society:**

- Mobile Environmental Resource Center (MERC) established and completed an introductory tour through the 5 communities in Northeast Ustyurt it is intended to serve.
- Three eco-youth clubs established on the Ustyurt, two in Uzbekistan (total number of members 72) and one in Kazakhstan (total number of members 77).
- First Saiga Day celebrated on the Kazakh Ustyurt in May 2012, with the participation of members of local communities from Uzbekistan. This activity was continued in 2013 with the participation of Russian (Kalmykia) colleague from Steppe Club.
- Eco-youth club exchange workshop and fundraising training for youth clubs conducted, exchange visits of youth clubs to other schools, presenting their work

**Explore sustainable financial support mechanisms and investigating innovative opportunities such as carbon markets to fund work on the Ustyurt. Seek to mobilize international and national partners and locally operating companies to provide financial, logistic and in kind support to the landscape conservation effort:**

- Completed carbon studies to assess the relative carbon values of the Plateau ecosystem and feasibility of using carbon finance as a means to protect the Ustyurt's threatened grasslands, in both countries. The study estimated an overall (average) figure for carbon storage of the Ustyurt Plateau (16.9 million ha) of 695 MtC and concluded that the main requirements for a successful emissions reduction project in both Kazakhstan and Uzbekistan were not yet in place.
- The Association for the Conservation of Biodiversity (ACBK), Kazakhstan's leading conservation NGO partnered on the project engaging for the first time on the Ustyurt. ACBK remains committed to conservation of the Ustyurt Plateau and the Ustyurt Saiga.
- Held a number of bi- and multilateral meetings and consultations with representatives of state agencies, the Institute of Zoology, UNDP, USAID and NGOs in Uzbekistan and

Kazakhstan to enlist their support for conservation of the Plateau and the Ustyurt Saiga. Several multi and bi-lateral donors and NGOs are exploring opportunities for working on the Plateau.

- Cooperated with the UNDP/GEF/ Uzbek government medium-sized project on 'Mainstreaming biodiversity into Uzbekistan's oil and gas sector policies and operations'.
- CMS Central Asia Large Mammals Initiative continues to work to raise awareness and promote activities which increase permeability across the Ustyurt.
- SCA – the Saiga Conservation Alliance – were engaged on a number of project activities especially related to illegal trade and socio-economic studies and remain active on Saiga conservation issues on the Ustyurt.
- Secured follow-up funding to continue with some key activities, albeit at a reduced level.

## VIII. Recommendations for Future Action

Below are the areas we collectively recommend for future action. Many of these activities will be continued into 2015/2016 by the project partners:

1. Intensify work to address the illegal trade in Saiga including poaching; activities to include expanding the sniffer dog programme and more support to ranger patrolling on the Ustyurt.
2. Check that the border fence mitigations have been completed and monitor for other developments that could impact on landscape connectivity
3. Support further transboundary rangers meetings
4. Continue with monitoring of Saiga movement (satellite collaring) and biodiversity on the Plateau
5. Support further research into biodiversity on the Ustyurt.
6. Support the implementation of the biodiversity monitoring strategy for the Ustyurt.
7. Support the operations of the MERC and establishment of a further centre
8. Further researching and practical solutions to Saiga mortality (mass-die offs)
9. Exploring options to strengthen planning control at the landscape scale
10. Follow-up and engage with corporates, energy and extractive industry operational on the Ustyurt
11. Further exploration of the use of carbon and ecosystems services funding to support projects on the Plateau
12. Continue to support activities that engage local people in a positive way including Saiga day celebrations, the eco-youth clubs and embedding of environmental education into school curricula.

## IX. Annexes - Success Stories

### Success Story: Sniffer Dogs Join the Fight Against Wildlife Trafficking in the Ustyurt

Nestled between Uzbekistan and Kazakhstan, the Ustyurt Plateau is a temperate desert globally recognized for its ecological importance and high number of endemic species. The Ustyurt is home to one of the last remaining critical habitats for the Saiga antelope. Extensive poverty-driven poaching threatens the critically endangered Saiga whose population has declined 95 percent in the last 20 years, making it one of the most sudden and massive declines of any mammal on record. The Saiga's decline is largely fueled by high demand for their horns and meat. Substances contained in Saiga male horns are used in traditional medicine in China where they fetch up to \$100 per kilogram (2.2 pounds).



To help curb the illegal trafficking of Saiga horn, a detection dog program was created with support from the Ustyurt Landscape Conservation Initiative, a USAID Sustainable Conservation Approaches in Priority Ecosystems (SCAPES) program, implemented by Pact, Fauna & Flora International (FFI), the Association for the Conservation of Biodiversity in Kazakhstan (ACBK) and other local partners. The Saiga detection dog program was endorsed by the Forest and Wildlife Committee (former Forest and Hunting Committee) in Kazakhstan and developed in collaboration with the Regional Dog Training Center under the State Revenue Committee (former Customs Committee) within the Ministry of Finance.

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*"This is going to be a big step forward in law enforcement in saving the Saiga antelope which is an endangered species, and as far as we know this is the first time any place in the world that this program has ever been used to train dogs to detect Saiga horn. So, we feel that it's going to be very, very important and we're so happy to be working with the customs agencies and all the other agencies involved in making this happen."*

*-- Mark Rispoli, Lead trainer General Counsel at California Narcotic and Explosive Canine Association*

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In the spring of 2014, the training program began. Four malinois (Belgium shepherd dogs) were acquired from the USA and Czech Republic and first trained to detect the scent of four different drugs (heroin, cocaine, methamphetamine and marijuana) which are commonly searched for at border crossings. Upon arrival in Kazakhstan, the dogs (named Ginny, Artic, AIA and Dac) and their new handlers underwent training together to detect the smell of Saiga horns. After graduation, the dogs and their handlers were deployed to their new duty stations where they quickly

proved their effectiveness. Within just a few months of being deployed, the dogs uncovered two major finds of smuggled Saiga horn at border crossings.

According to lead trainer, Mark Rispoli, founding Board Member of the California Narcotic Canine Association and owner of the Makor-K9 training center, this is the first use of detection dogs for Saiga horns; even more unique is the combination of training for both Saiga horns and narcotics detection. A new cooperation has been fostered between the Forestry and Hunting Committee and the Regional Dog Training Center and Customs Committee to promote the use of detection dogs to fight wildlife smuggling. The use of dogs to detect Saiga and other smuggled wildlife is now planned for border customs stations throughout Kazakhstan.



## **Success Story: Establishment of A Mobile Environmental Resource Center On The Ustyurt Plateau**

Lying between Uzbekistan and Kazakhstan, the Ustyurt Plateau is a temperate desert globally recognized for its ecological importance and high number of endemic species. The harsh environment of the Ustyurt Plateau makes living in the region particularly difficult. Poverty



rates are high due to low employment, the limited diversity of employment opportunities, and an agricultural sector that relies mostly on antiquated farming practices to get by. Communication exists mostly through informal networks, and there is limited access to knowledge that could improve their prospects. Information shared through such networks is often exclusive, incomplete, or delayed; thus failing to meet the needs of the most marginalized.

In response, the Mobile Environmental Resource Center (MERC) was established to operate in five communities in the Northwestern region of the Ustyurt Plateau to assist communities in accessing information that offers guidance on how to secure opportunities that could improve their livelihood. The MERC is also meant to serve as a central messaging center where information about environmental issues can be obtained and concerns voiced.

The MERC's identifying feature is a yurt, a symbol of the nomadic lifestyle which was successfully adapted to the conditions of the Ustyurt. The yurt is mobile, and travels with the MERC staff on rotation between 5 villages on the Northeast edge of the Ustyurt. The total

population of the region is 44,700 with just over 75% of the total population living in the 5 villages served by the MERC.

The MERC will offer assistance in procuring low-interest loans for new income generating initiatives; provide skill-specific training; help bridge the gap in understanding the importance of healthy ecosystems and livelihoods; and serve as a community gathering point to raise awareness, voice concerns, and ask questions about the current state of the environment.

It is hoped that by drawing in community members with assistance to improve their economic situation the MERC will also facilitate a greater understanding of relevant environmental issues and create a platform to discuss community-based solutions.

