



Convention on the Conservation of Migratory Species of Wild Animals



THIRD RANGE STATE MEETING OF THE CMS CENTRAL ASIAN MAMMALS INITIATIVE (CAMI)

24-26 June 2025, Tashkent, Uzbekistan

UNEP/CMS/CAMI3/Inf.2

IMPLEMENTATION OF THE CENTRAL ASIAN MAMMALS INITIATIVE (CAMI) REPORTING FORM PAKISTAN

CAMI Species: Argali Sheep (*Ovis ammon*); Asiatic Cheetah (*Acinonyx jubatus*); Asiatic Wild Ass / Khulan (*Equus hemionus*); Bukhara Deer (*Cervus elaphus yarkandensis*); Gobi Bear (*Ursus arctos isabellinus*); Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*); Kiang (*Equus kiang*); Mongolian or White-Tailed Gazelle (*Procapra gutturosa*); Persian Leopard (*Panthera pardus saxicolor*); Przewalski's Horse (*Equus ferus przewalskii*); Saiga Antelope (*Saiga* spp.); Snow Leopard (*Uncia uncia*); Urial (*Ovis vignei*); Wild or Bactrian Camel (*Camelus bactrianus*); Wild Yak (*Bos grunniens*).

QUESTIONNAIRE TO ASSESS THE IMPLEMENTATION OF THE CAMI PROGRAMME OF WORK 2021-2026 IN THE RANGE STATES.

Please provide the name, position and e-mail address of the person(s) who coordinated the completion of this form.

Name: Muhammad Samar Hussain Khan

Position: Conservator Wildlife

Department:

Agency/Ministry: Ministry of Climate Change & Environmental Coordination, Government of Pakistan

1. Transboundary Cooperation

1.1 Please list transboundary cooperation agreements and projects in your country that are relevant to CAMI species in the following table.

Project/agreement title	Wildlife species covered	Start date	End date	Link to project website	Does this correspond to an identified hotspot in the study Transboundary conservation hotspots for the Central Asian Mammals Initiative?	Have workshops taken place? (provide dates and links to website, if applicable)	Has a transboundary working group been established?
Global Snow Leopard and Ecosystem Protection Program (GSLEP)	Snow Leopard and its prey species	2013	N/A	https://globalsnowleopard.org/what-is-gslep/timeline/	To some extent	Yes	N/A
South Asia Wildlife Enforcement Network (SAWEN)	All wildlife species	2011	N/A	https://www.sawen.org/	To some extent	Yes	N/A

1.2 Do the National focal points of your country for CMS, CITES, UNCCD and CBD meet regularly to exchange information on the different MEAs and identify synergies?

- Yes
 Yes, but not regularly
 No

1.3 Since 2021, have activities taken place to strengthen information exchange and coordination of conservation activities between your country and other Range States for the following species? (Please select species)

- Argali Sheep (*Ovis ammon*)
 Asiatic Cheetah (*Acinonyx jubatus*)
 Asiatic Wild Ass / Khulan (*Equus hemionus*)
 Bukhara Deer (*Cervus elaphus yarkandensis*)
 Gobi Bear (*Ursus arctos isabellinus*)
 Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)
 Kiang (*Equus kiang*)
 Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
 Persian Leopard (*Panthera pardus saxicolor*)
 Przewalski's Horse (*Equus ferus przewalskii*)
 Saiga Antelope (*Saiga* spp.)
 Snow Leopard (*Uncia uncia*)
 Urial (*Ovis vignei*)
 Wild or Bactrian Camel (*Camelus bactrianus*)
 Wild Yak (*Bos grunniens*)
 No

1.4 a) Have networks of well-managed protected areas been established in your country for the ranges of any of the species listed below? Please select.

	Does it include transboundary areas, shared with other countries?	Does it include land managed by local communities?	Name of the protected area network	Links to online resources
<input checked="" type="checkbox"/> Argali Sheep (<i>Ovis ammon</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Khunjerab National Park	https://fwegb.gov.pk/khunjerab-national-park/
<input type="checkbox"/> Asiatic Cheetah (<i>Acinonyx jubatus</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Asiatic Wild Ass / Khulan (<i>Equus hemionus</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Bukhara Deer (<i>Cervus elaphus yarkandensis</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Gobi Bear (<i>Ursus arctos isabellinus</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Protected areas of Gilgit-Baltistan and Khyber Pakhtunkhwa: Khunjerab National Park Central Karakoram National Park Chitral Gol National Park	Brown Bear (<i>Ursus arctos isabellinus</i>) is reported different protected areas of Pakistan https://fwegb.gov.pk/khunjerab-national-park/ https://fwegb.gov.pk/cknp/ https://lowerchitral.kp.gov.pk/page/chitral_gol_national_park

			Broghil National Park Qurumbar National Park	
<input type="checkbox"/> Goitered or Black-Tailed Gazelle (<i>Gazella subgutturosa</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Kiang (<i>Equus kiang</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Mongolian or White-Tailed Gazelle (<i>Procapra gutturosa</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input checked="" type="checkbox"/> Persian Leopard (<i>Panthera pardus saxicolor</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Protected areas of Balochistan, Sindh and Khyber Pakhtunkhwa provinces mainly: Hingol National Park Chiltan Hazarganji National Park Ziarat National Park	

			Kirthar National Park	
<input type="checkbox"/> Przewalski's Horse (<i>Equus ferus przewalskii</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Saiga Antelope (<i>Saiga</i> spp.)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
<input checked="" type="checkbox"/> Snow Leopard (<i>Uncia uncia</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Khunjerab National Park Central Karakoram National Park Chitral Gol National Park Broghil National Park Qurumbar National Park	https://fwegb.gov.pk/khunjerab-national-park/ https://fwegb.gov.pk/cknp/ https://lowerchitral.kp.gov.pk/page/chitral_gol_national_park
<input checked="" type="checkbox"/> Urial (<i>Ovis vignei</i>)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<input type="checkbox"/> Wild or Bactrian Camel (<i>Camelus bactrianus</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		

<input type="checkbox"/> Wild Yak (<i>Bos grunniens</i>)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No		
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2. Illegal Hunting, Possession and Trade
<p>2.1 Please describe any measures of your country to strengthen the technical capacity of rangers and other relevant enforcement personnel to counteract illegal hunting, possession and trade.</p> <p>Ans. Training and capacity building of field staff and provision of field gears.</p>
<p>2.2 Is SMART (Spatial Monitoring and Reporting Tool) being used in your country?</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> Only in some areas (please specify)</p> <p><input type="checkbox"/> No</p>
<p>2.3 a) Please rate inter-agency cooperation on illegal trade in your country. (1- poor, 10-excellent)</p> <p>What measures were taken to improve it?</p> <p>Ans. 7, CITES Management Authority of Pakistan has representation of all stakeholders including federal and provincial organization, NGOs and civil society. It is an apex policy-making body to ensure effective implementation of CITES in collaborative manner.</p>

2.3 b) Please rate cooperation of your country with agencies of other countries to address illegal trade (1- poor, 10-excellent)

Ans. 7

What measures were taken to improve it?

Ans. Active liaison is maintained with the CITES Parties regarding verification of CITES documents to regulate international trade in wildlife species. Moreover, Pakistan is a member of the South Asia Wildlife Enforcement Network (SAWEN) which is a regional support body for wildlife law enforcement.

2.3 c) Please rate the level of cooperation between nature protection agencies, customs, border control, police and judiciary on issues of poaching and illegal trade in wildlife in your country (1- poor, 10-excellent)

Ans. 7

2.4 Have any awareness campaigns been conducted for local communities on law enforcement in relation to wildlife?

Yes (please provide details)

No

2.5 a) Do citizen informant networks to address illegal wildlife trade exist in your country?

Yes

No

2.5 b) How else are local communities involved in protecting wildlife in your country?

Ans. Wildlife guards/watchers hired under the community-based trophy hunting programme help government department in watch and ward.

2.6 What measures to stop illegal wildlife trade on the internet have been taken in your country?

Ans. There is no proper mechanism to tackle this issue. However, field staff carry out surveillance on internet to check any illegal activity to take legal action accordingly.

3. Industry and Infrastructure Development / Barriers to Movement
<p>3.1 Does your agency have GIS maps of the following (please select):</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Up to date distribution maps of all CAMI species <input checked="" type="checkbox"/> Nationally designated protected areas <input type="checkbox"/> Internationally designated protected areas <input type="checkbox"/> Key Biodiversity Areas (KBAs) <input checked="" type="checkbox"/> Areas managed by local communities/ local community organizations <input type="checkbox"/> Corridors for each species <input type="checkbox"/> Existing and planned barriers for wildlife movement
<p>3.2 Has your agency conducted any meetings with the neighbouring countries to exchange knowledge on infrastructure as a barrier to wildlife migration and possible mitigation measures?</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Yes (please list meetings) <input type="checkbox"/> No <p>Ans. Pakistan has been part of various meetings held for the development of guideline on Development of Linear Infrastructure in Snow Leopard Landscape under GSLEP: https://globalsnowleopard.org/wp-content/uploads/2024/02/Linear-Infrastructure-in-Snow-Leopard-Landscapes-final.pdf</p>
<p>3.3 a) Have the impacts of linear infrastructure on large mammals (CAMI species) and its cumulative effects been assessed at a landscape-level (with particular relevance to Asiatic Wild Ass and the Gobi-steppe ecosystem),</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Yes (please provide links to any reports or publications) : https://globalsnowleopard.org/wp-content/uploads/2024/02/Linear-Infrastructure-in-Snow-Leopard-Landscapes-final.pdf <input type="checkbox"/> Partially (please explain) <input type="checkbox"/> No <p>3.3 b) Have mitigation measures been put in place, including development and implementation of wildlife friendly infrastructure standards?</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Yes (please provide links): https://globalsnowleopard.org/wp-content/uploads/2024/02/Linear-Infrastructure-in-Snow-Leopard-Landscapes-final.pdf <input type="checkbox"/> Partially (please explain)

No

3.4 Is information on mitigating the impacts of linear infrastructure on wildlife included in university curricular for civil engineers?

Yes

No

This information is not available to my agency

3.5 Has information on spatial planning and climate change impact modelling in your country been compiled in any reports or other publications?

Yes (please attach the report or provide an electronic reference)

Kazmi, F.A., Shafique, F., Hassan, M. orcid.org/0000-0002-5524-9765 et al. (6 more authors) (2022) Ecological impacts of climate change on the snow leopard (*Panthera unica*) in South Asia. Brazilian Journal of Biology, 82. e240219. ISSN 1519-6984. <https://doi.org/10.1590/1519-6984.240219>.

Ali H, Din JU, Bosso L, Hameed S, Kabir M, Younas M, Nawaz MA. Expanding or shrinking? range shifts in wild ungulates under climate change in Pamir-Karakoram mountains, Pakistan. PLoS One. 2021 Dec 31;16(12):e0260031. doi: 10.1371/journal.pone.0260031. PMID: 34972110; PMCID: PMC8719741.

Hameed S, Din JU, Ali H, Kabir M, Younas M, Ur Rehman E, Bari F, Hao W, Bischof R, Nawaz MA. Identifying priority landscapes for conservation of snow leopards in Pakistan. PLoS One. 2020 Nov 5;15(11):e0228832. doi: 10.1371/journal.pone.0228832. PMID: 33151925; PMCID: PMC7644022.

Din, J. U., Nawaz, M. A., Norma-Rashid, Y., Ahmad, F., Hussain, K., Ali, H., & Adli, D. S. H. (2020). Ecosystem Services in a Snow Leopard Landscape: A Comparative Analysis of Two High-elevation National Parks in the Karakoram–Pamir. Mountain Research and Development, 40(2), R11–R19. <https://www.jstor.org/stable/27002396>.

Rashid, W., Shi, J., Rahim, I. u., Dong, S., Khurshid, M., Ali, A., & Yousafzai, M. T. (2023). Spatial and seasonal variation of livestock depredation by large carnivores in the Pamir Mountains of northern Pakistan. Conservation Science and Practice, 5(7), e12951. <https://doi.org/10.1111/csp2.12951>.

Khan, T. U., Mannan, A., Hacker, C. E., Ahmad, S., Amir Siddique, M., Khan, B. U., Din, E. U., Chen, M., Zhang, C., Nizami, M., & Luan, X. (2021). Use of

GIS and Remote Sensing Data to Understand the Impacts of Land Use/Land Cover Changes (LULCC) on Snow Leopard (*Panthera uncia*) Habitat in Pakistan. *Sustainability*, 13(7), 3590. <https://doi.org/10.3390/su13073590>.

Islam, M., Sahana, M., Areendran, G., Jamir, C., Raj, K. & Sajjad, H. (2023) Prediction of potential habitat suitability of snow leopard (*Panthera uncia*) and blue sheep (*Pseudois nayaur*) and niche overlap in the parts of western Himalayan region. *Geo: Geography and Environment*, 10, e00121. Available from: <https://doi.org/10.1002/geo2.121>.

Rashid, W., Shi, J., Rahim, I. u., Qasim, M., Baloch, M. N., Bohnett, E., Yang, F., Khan, I., & Ahmad, B. (2021). Modelling Potential Distribution of Snow Leopards in Pamir, Northern Pakistan: Implications for Human–Snow Leopard Conflicts. *Sustainability*, 13(23), 13229. <https://doi.org/10.3390/su132313229>.

e Hani, U., Haq, S. M., Shabbir, R., Waheed, M., Jabeen, A., Hussain, M., ... & Bussmann, R. W. (2024). Geospatial assessment of climate and human pressure on Snow Leopard habitat in the Trans-Himalayan region of Pakistan. *Global Ecology and Conservation*, e03024.

No

3.6 Have meetings between infrastructure developers and conservation workers in your country taken place to develop risk management plans?

Yes (please provide details)

Ans. EIAs are conducted for infrastructure development project in which all stakeholders are involved.

No

3.7 Does your country have national standards for mitigating the impacts of infrastructure on wildlife?

Yes (please provide titles of specific laws/guidelines)

No

3.8 Have the Guidelines on Mitigating the Impact of Linear Infrastructure and Related Disturbance on Mammals in Central Asia been taken into consideration in the national standards/guidelines?

<p><input checked="" type="checkbox"/> Yes (please provide titles of specific laws/guidelines): Ans. There is no specific guidelines or standards at national level, however the guidelines developed by GSLEP and CMS Guidelines on Mitigating the Impact of Linear Infrastructure are considered in the EIAs of the relevant projects.</p> <p><input type="checkbox"/> No</p>
<p>3.9 Are the Guidelines on Mitigating the Impact of Linear Infrastructure and Related Disturbance on Mammals in Central Asia being used in environmental impact assessment in your country?</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>3.10 Since 2021, have inter-agency consultations taken place to gain an understanding of corridors and barriers to connectivity and to develop mitigation options that include protection of movement corridors? Collaborations could be national and/or transboundary, including border security agencies, customs, ministries of foreign affairs, environmental agencies, and transboundary areas.</p> <p>On a national level?</p> <p><input checked="" type="checkbox"/> Yes (please list the meetings, species concerned and their main outcomes) Ans. A national workshop on "Exploring Other Effective Area-based Conservation Measures (OECMs): Opportunities and Challenges". was held on 23-24 December in Islamabad, Pakistan. The concept of corridors and connectivity to reduce barriers was widely discussed at the workshop. As a follow-up of the workshop a strategy is being developed to designate OECM in Pakistan which will cover the concept of corridor and ecological connectivity.</p> <p><input type="checkbox"/> No</p> <p>Involving other countries?</p> <p><input type="checkbox"/> Yes (please list the meetings, species concerned and their main outcomes)</p> <p><input checked="" type="checkbox"/> No</p>
<p>3.11 Does landscape planning include considerations for wildlife needs in your country?</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> Partially (please explain)</p> <p><input type="checkbox"/> No</p> <p>If yes, please list specific laws and how they include considerations for wildlife:</p>

Ans. Under the Global Snow Leopard & Ecosystem Protection Programme (GSLEP), three priority landscapes are identified in Pakistan. Wildlife needs have been duly considered in the management planning of the referred snow leopard landscapes. To help range countries design conservation action for the 23 identified landscapes to be secured under the GLSEP program, the GSLEP secretariat has released (in 2014) – and revised in 2018 – general Guidelines for Management Planning of Snow Leopard Landscapes. <https://globalsnowleopard.org/capacity-center/management-planning-toolkit/>.

3.12 Did your Government conduct any awareness-raising activities with participation of the transportation, infrastructure and environmental sectors to explain the needs of wildlife and environmental implications of barriers?

Yes (please explain)

No

Ans. No specific activity was carried out during the reporting period. However, different international days related to species and conservation are celebrated at national level in which peoples from all segments of society are involved and different issues related to wildlife are highlighted.

3.13 Have multi-agency task forces been established in your country to conduct an impact assessment of big infrastructure projects?

Yes (please list)

No

3.14 Are there any obligatory standard evaluation criteria for assessing potential impacts of infrastructure projects on migratory species in your country?

Yes

No

3.15 Are infrastructure developers in your country required to apply International Finance Corporation Performance Standard 6 (IFC PS6)?

Yes

No

3.16 Are companies that build infrastructure in the habitat of CMS-listed species required to adopt best practices in line with CMS Guidelines on Mitigating the Impact of Linear Infrastructure and Related Disturbance on Mammals in Central Asia?

Yes

No

Explain other requirements for such projects in CAMI species habitat (please provide links and reports or explain the procedure)

Ans. There are no specific guidelines or standards at national level, however the guidelines developed by GSLEP and CMS Guidelines on Mitigating the Impact of Linear Infrastructure are considered in the EIAs of the relevant projects.

3.17 Are companies that build infrastructure in the habitat of CMS-listed species required to allocate funds for conservation as part of their mitigation or off-setting plans?

Yes (please explain)

No

Ans. In EIAs of the relevant projects' mitigation measures are proposed for which appropriate allocations are made for implementation.

4. Overgrazing and Livestock Competition

4.1 Has research been undertaken on the following topics and their impact on CMS-listed species? (Please select)

- Productivity and suitability of pasture in wildlife habitat
- Seasonal pasture use
- Livestock-transmitted diseases
- Grazing and livestock management
- Extent and scale of standing herds as investments
- Feasibility and advantages and disadvantages of traditional pastoralism
- Livestock vs. wild grazers and soil / rangeland carbon sequestration
- Human-wildlife conflicts
- Effects of climate change on pasture use

Please provide links to any reports and publications

- **Ans.** Ahmad, S., Ali, H., Asif, M., Khan, T., Din, N., Rehman, E.U., Hameed, S., Din, J.U. and Nawaz, M.A., 2022. **Spatial Density Pattern of Himalayan Ibex (*Capra sibirica*) in Pakistan.** Global Ecology and Conservation, p.e02288.
- Ahmad, S., Rehman, E. U., Ali, H., Din, N., Haider, J., Din, J. U., & Nawaz, M. A. (2022). **Density Pattern of Flare-Horned Markhor (*Capra falconeri*) in Northern Pakistan.** Sustainability, 14(15), 9567.
- Din, J. U., Bari, F., Ali, H., ur Rehman, E., Adli, D. S. H., Abdullah, N. A., ... & Nawaz, M. A. (2022). **Drivers of snow leopard poaching and trade in Pakistan and implications for management.** Nature Conservation, 46, 49-62.

- Ali, H., Din, J. U., Bosso, L., Hameed, S., Kabir, M., Younas, M., & Nawaz, M. A. (2021). **Expanding or shrinking? range shifts in wild ungulates under climate change in Pamir-Karakoram mountains, Pakistan.** *PloS one*, 16(12), e0260031.
- Din, J.U., Hameed, S., Ali, H., Norma-Rashid, Y., Adli, D.S.H. and Nawaz, M.A., 2021. **On the snow leopard Trails: Occupancy pattern and implications for management in the Pamir.** *Saudi Journal of Biological Sciences*.
- Nawaz, M.A., Khan, B.U., Mahmood, A., Younas, M., Din, J.U. and Sutherland, C., 2021. **An empirical demonstration of the effect of study design on density estimations.** *Scientific Reports*, 11(1), pp.1-9.
- Shoab Hameed, S.A., Din, J.U. and Nawaz, M.A., 2021. **Human Perceptions about the Himalayan Brown Bear and other Carnivores in Chitral District in the Hindu Kush Range, Pakistan.** *Pakistan Journal of Zoology*, 54(3).
- Rehman, E.U., Din, J.U., Ahmad, S., Hameed, S., Shah, K.A., Mehmood, T. and Nawaz, M.A., 2021. **Insight into occupancy determinants and conflict dynamics of grey wolf (*Canis lupus*) in the dry temperate zone of Hindukush Range.** *Global Ecology and Conservation*, 25, p.e01402.
- Hameed, A., Tariq, M., Buerkert, A. *et al.* Constraints and prospects of utilising mountain pastures in Gilgit-Baltistan, Pakistan. *Pastoralism* **12**, 41 (2022). <https://doi.org/10.1186/s13570-022-00253-5>.
- Ahmad, Z., Postigo, J. C., Rahman, F., & Dittmann, A. (2021). Mountain pastoralism in the eastern Hindu Kush: the case of Lotkuh valley, Pakistan. *Mountain Research and Development*, 41(4), R16-R28.
- Islam, M., Razzaq, A., Zubair, M. *et al.* Impact of rangeland enclosure and seasonal grazing on protected and unprotected rangelands in Chakwal region, Pakistan. *J. Mt. Sci.* **19**, 46–57 (2022). <https://doi.org/10.1007/s11629-021-6761-z>.
- Khan, M. Z., Khan, B., Awan, S., Khan, G., & Ali, R. (2013). High-altitude rangelands and their interfaces in Gilgit-Baltistan, Pakistan: current status and management strategies. *High-altitude rangelands and their interfaces in the Hindu Kush Himalayas*, 66.
- Muhammad, K. 2024. Accounting for pas-toralists in Pakistan. League for Pastoral Peoples and Endogenous Livestock Development, Ober-Ramstadt, Germany.
- Omer, R. M., Hester, A. J., Gordon, I. J., Swaine, M. D., & Raffique, S. M. (2006). Seasonal changes in pasture biomass, production and offtake under the transhumance system in northern Pakistan. *Journal of Arid Environments*, 67(4), 641-660.
- Hameed, K., Angelone-Alasaad, S., Din, J. U., Nawaz, M. A., & Rossi, L. (2016). The threatening but unpredictable *Sarcoptes scabiei*: first deadly outbreak in the Himalayan lynx, *Lynx lynx isabellinus*, from Pakistan. *Parasites & vectors*, 9, 1-3.
- Hameed, K., Ch, F. R., Nawaz, M. A., Naqvi, S. M. S., Gräser, Y., Kupsch, C., ... & Peano, A. (2017). *Trichophyton verrucosum* infection in livestock in the Chitral district of Pakistan. *The Journal of Infection in Developing Countries*, 11(04), 326-333.
- Ishaq, S., Ali, H., Ahmad, B., Khan, M. Z., Begum, F., Hussain, A., ... & Hassan, M. (2019). Dynamics of above ground herbaceous biomass in high altitude rangelands of Pakistan. *J Anim Plant Sci*, 29, 521-530.
- Ahmad, S., Hameed, S., Ali, H. *et al.* Carnivores' diversity and conflicts with humans in Musk Deer National Park, Azad Jammu and Kashmir, Pakistan. *Eur J Wildl Res* **62**, 565–576 (2016). <https://doi.org/10.1007/s10344-016-1029-6>.
- Danish, M., Mahmood, T., Akrim, F., Nadeem, M. S., Noreen, S., Munawar, N., ... & Arshad, M. (2023). Spatio-temporal patterns of human-carnivore conflict and mitigation in Pakistan. *Journal for Nature Conservation*, 76, 126479.

- Bano R, Khan A, Mehmood T, Abbas S, Khan MZ, Shedayi AA, Zaman S, Nawaz MA. Patterns of livestock depredation and Human-wildlife conflict in Misgar valley of Hunza, Pakistan. *Sci Rep.* 2021 Dec 7;11(1):23516. doi: 10.1038/s41598-021-02205-2. PMID: 34876595; PMCID: PMC8651803.
- Khan, L. A., Ahmad, B., Chaudhary, A. A., Minhas, R. A., Awan, M. S., Dar, N. I., ... & Bibi, S. (2022). The human-wildlife conflict in Musk Deer National Park, Neelum Gureze Valley, Azad Jammu & Kashmir, Pakistan. *Brazilian Journal of Biology*, 84, e261655.
- Usman, M., Ali, A., Rosak-Szyrocka, J., Pilař, L., Baig, S. A., Akram, R., & Wudil, A. H. (2023). Climate change and livestock herders wellbeing in Pakistan: Does nexus of risk perception, adaptation and their drivers matter?. *Heliyon*, 9(6).
- Jamil, M., Shakeel, I., Ullah, H., Ahmad, M., Ullah, S., Rasool, I., ... & Ali, M. (2022). Livestock in Pakistan: An Insight into Climate Changes and Impacts. *Journal of Bioresource Management*, 9(4), 10.
- Ali, A., Khattak, M. N. K., Nawaz, M. A., & Hameed, S. (2021). Conflicts involving brown bear and other large carnivores in the Kalam Valley, Swat, Pakistan.
- Khan, B., Nawaz, R., & Hussain, I. (2022). First record of Persian leopard (*Panthera pardus saxicolor* Pocock, 1927) from Chitral Gol National Park, Pakistan.
- Bleyhl, B. E. N. J. A. M. I. N., Gerngross, P. E. T. E. R., Askerov, E. L. S. H. A. D., Farhadinia, M. S., Ghoddousi, A. R. A. S. H., Heidelberg, A. U. R. E. L., ... & Kuemmerle, T. O. B. I. A. S. (2022). Mapping the distribution and habitat of Persian leopard across its historical range. *Cat News*, 15, 9-18.
- Haider, J., Khan, M.Z., Anwer, M., Ali, S. and Ali, H., 2018. Population status and migration trends of Marco Polo argali (*Ovis ammon polii*) in Pakistan. *Mammalia*, 82(5), pp.481-485.
- Ali, H., Younus, M., Din, J.U., Bischof, R. and Nawaz, M.A., 2019. Do Marco Polo argali *Ovis ammon polii* persist in Pakistan?. *Oryx*, 53(2), pp.329-333.

4.2 Does the following have implications for pasture use regulations?

- Pasture carrying capacity
- Presence of CMS-listed species habitat in this territory

Yes (please explain): The findings of the pasture carrying capacity are reflected in the rangeland management policies. The KP government has developed its rangeland management policy while the Gilgit-Baltistan government is drafting the policy.

http://kp.gov.pk/uploads/2019/10/KHYBER_PAKHTUNKHWA_RANGELAND_POLICY_2014.pdf

Partially (please explain)

No

4.3 What strategies or mechanisms are being implemented in your country to incentivize livestock owners to prioritize investments in quality, such as breed

improvement over increasing herd size?

Ans. Snow Leopard Foundation, Pakistan in collaboration with government departments is working in the snow leopard habitat areas in the northern Pakistan to improve livestock management. The Ecosystem Health Program (EHP) is operational in 50 valleys (30,075Km²). Over 100 Ecosystem Health Workers (EHWs) trained to administer livestock vaccination. Over 400,000 livestock belonging to 39,748 households are vaccinated biannually. As a result of the programme, there is ~60% reduction in the mortality rate of livestock in the program sites. Livestock Insurance Schemes have been introduced by Snow Leopard Foundation and government department to compensate the annual losses of livestock to the predators. Livestock owners are being provided by Predator Proof Corral by Snow Leopard Foundation to protect the attack from large predators.

4.4 Have awareness and educational programmes for herding communities been developed on the following topics? (Please select)

- Wildlife protection
- Human-wildlife conflict resolution
- Unintended impact of livestock intensification on wildlife and environment
- No

4.5 Have any strategies to reduce the dependence of rural population on livestock been applied? (Please select)

- Alternative livelihoods projects
- Temporary grazing restrictions
- Others (please describe)

4.6 Have working groups been established in your country, involving relevant organizations and pastoralist communities, to address pasture use and wildlife protection issues?

- Yes (please list)
- No

Ans. Communities have been mobilized under the community-based trophy hunting programme by establishing community-based conservation organization. These organizations are actively engaged in wildlife conservation activities including pasture management at some locations.

4.7 Are there any mechanisms in your country to limit livestock grazing on wildlife migration routes?

- Yes, but they are voluntary
 Yes, there are obligatory restrictions
 No, but such mechanisms have been explored

Please provide links to any reports or publications

Ans. Livestock grazing is prohibited in certain categories of protected areas like national parks and wildlife sanctuaries. Voluntary restriction is observed in other areas depending upon communities.

4.8 Is it possible for livestock owners to insure their livestock against natural disasters?

- Yes
 Partially
 No

Ans. Livestock insurance and compensations schemes are in place in limited areas but they are mostly focussing on livestock killed by predators such as snow leopards.

4.9 Are there certification schemes in your country for sustainably produced livestock products?

- Yes (please list)
 No

4.10 Have the risks of ungulate-livestock disease transmission been studied?

- Yes (please explain which species have been studied and provide links to any reports or publications)
 No

Ans. There are limited studies in this regard.

- Ullah, S., Ilyas, M., Ullah, S., Ullah, H., & Yasir, A. (2024). Gastrointestinal Parasitic Infections in Markhor Wild Goat (*Capra Falconeri*) at Chitral National Parks, Khyber Pakhtunkhwa, Pakistan. *American Journal of Aquaculture and Animal Science*, 3(1), 1-8.
- Ijaz, M., Ali, M. M., Awan, F., Ishaq, M., & Ahmad, A. (2022). FMD virus spillover from domestic livestock caused outbreak in captive wild ungulates: First report from Pakistan. *Acta Tropica*, 231, 106439.
- Hameed, K., Angelone-Alasaad, S., Din, J. U., Nawaz, M. A., & Rossi, L. (2016). The threatening but unpredictable *Sarcoptes scabiei*: first deadly outbreak in the Himalayan lynx, *Lynx lynx isabellinus*, from Pakistan. *Parasites & vectors*, 9, 1-3.

- Hameed, K., Ch, F. R., Nawaz, M. A., Naqvi, S. M. S., Gräser, Y., Kupsch, C., ... & Peano, A. (2017). Trichophyton verrucosum infection in livestock in the Chitral district of Pakistan. *The Journal of Infection in Developing Countries*, 11(04), 326-333.
- Awan, G. A., Ahmad, T. A. H. I. R. A., & Festa-Bianchet, M. A. R. C. O. (2005). Disease spectrum and mortality of Punjab urial (*Ovis vignei punjabiensis*) in Kalabagh Game Reserve. *Pakistan Journal of Zoology*, 37(3), 175.
- Aslam, M., & Alkheraije, K. A. (2023). The prevalence of foot-and-mouth disease in Asia. *Frontiers in Veterinary Science*, 10, 1201578.

4.11 Do response protocols exist in case of disease outbreaks in wild ungulate populations in your country?

Yes (please explain to which species this applies and provide links to relevant documents)

No

4.12 Does your government support vaccination of livestock in wildlife habitat?

Yes (please explain)

Government in collaboration with NGOs trained community workers and involved its own staff members who vaccinate livestock even in pastures.

No

4.13 Does your government support vaccination of herder dogs?

Yes (please explain)

No

4.14 What methods to reduce the number of herder dogs and feral dogs are used in your country?

Culling

Castration and release

Other (please describe)

No method used

But it is at a very limited scale, mostly in human settlements.

4.15 Are the following measures being promoted and used in your country to avoid wildlife-livestock conflicts? (Please select)

<input checked="" type="checkbox"/> Predator-proof corrals <input checked="" type="checkbox"/> Land use planning, taking into account seasonal aggregations of wildlife <input type="checkbox"/> Fencing <input type="checkbox"/> Other (please describe)
<p>4.16 Select from the following options to describe rangeland management plans in your country.</p> <input type="checkbox"/> They are based on scientific research (please provide links to any reports and publications) <input checked="" type="checkbox"/> They involve local communities (outside of protected areas)

5. Community Engagement and Sustainable Use
<p>5.1 Are sustainable livelihood schemes, linked to conservation and local conditions, being promoted in your country to benefit both conservation efforts and entire communities?</p> <input checked="" type="checkbox"/> Yes (please explain) <input type="checkbox"/> No <p>Ans. Snow Leopard Foundation, Pakistan in collaboration with government departments has so far engaged up to 10,000 households in social entrepreneurship including Snow Leopard Enterprises (SLE), conservation tourism, Liquefied Petroleum Gas (LPG) promotion, fodder, and fruit trees cultivation, apiculture, fruit processing, etc.</p>
<p>5.2 Does your Government support any projects which combine local community development and conservation?</p> <input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No <p>Ans. Community engagement is always encouraged by the government in all projects funded by the government or donors.</p>
<p>5.3 Does your country have regulations on water use by livestock to allow wildlife access to water points?</p> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

<p>5.4 What kind of community-based insurance schemes exist in your country for farmers? (Please select)</p> <p><input checked="" type="checkbox"/> Against predation by wild animals <input type="checkbox"/> Against wildlife-related economic losses <input type="checkbox"/> Against extreme weather <input type="checkbox"/> Other (please describe) <input type="checkbox"/> None of the above</p>
<p>5.5 What kind of projects for local communities living close to wildlife exist in your country? (Please select)</p> <p><input checked="" type="checkbox"/> Rewards for motivated community members and teachers <input checked="" type="checkbox"/> Wildlife clubs <input checked="" type="checkbox"/> Species days (e.g. Saiga Day, Snow Leopard Day, etc.) <input type="checkbox"/> Other (please describe)</p>
<p>5.6 Have functional associations been established between local communities living along migration routes of CAMI species?</p> <p><input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No</p> <p>Ans. Community-based conservation organization are functional under the community-based trophy hunting programme. These organizations are actively engaged in wildlife conservation activities. There are also valley level organisations and Snow Leopard Landscape Coordination Committees which organize different communities at a common platform</p>
<p>5.7 Do local community-based management plans exist in your country which incorporate local knowledge and participatory research?</p> <p><input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No</p> <p>Ans. A community-based trophy hunting programme is being implemented in Pakistan since early 1990s. Local communities get 80% of the revenue generated under the programme. Such hunting is carried out in designated community-based conservation areas which have dedicated management plans. Community-based conservation organization are functional in each area which are actively engaged in community-bases conservation activities as per the management plans. There Valley Conservation and Sustainable Development Plans have also been developed</p>

<p>for specific valleys.</p>
<p>5.8 Is community-based conservation integrated into protected area legislation and practice?</p> <p><input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No</p> <p>Ans. There are a designated categories protected areas which are managed by local communities. The Community Managed Conservation Areas (CMCAs) or Community Controlled Hunting Areas (CCHAs) are IUCN Category-VI PAs managed by the local communities.</p>
<p>5.9 a) Does your country's development agency integrate biodiversity conservation issues (for migratory species) into the strategies for rural development?</p> <p><input checked="" type="checkbox"/> Yes (please list specific national documents) <input type="checkbox"/> No</p> <p>Ans. The National Biodiversity Strategy and Action Plan of Pakistan provides biodiversity conservation is duly reflected and considered in all strategies.</p> <p>5.9 b) Are there any development projects of foreign development agencies which integrate biodiversity conservation issues (for migratory species) into rural development programmes in your country?</p> <p><input checked="" type="checkbox"/> Yes (please list specific projects) <input type="checkbox"/> No</p> <p>Ans. Biodiversity conservation is duly considered in all development projects and requisite EIAs are mandatory to consider their impacts on biodiversity including migratory species.</p>

5.10 a) Is the involvement of local communities and benefit-sharing, through engagement in the following, being promoted in your country? (Please select)

- Private reserves
- Wildlife monitoring
- Combatting poaching
- Ecotourism

5.10 b) Do local communities have an official role in wildlife management?

- Yes (please explain)
- No

Ans. Under the community-based trophy hunting programme, communities are actively engaged in wildlife management activities like; watch and ward, wildlife monitoring and surveys and ecotourism activities.

5.11 Are there any investments from NGOs and business, especially local large industries (e.g. oil, gas, mining), which support community initiatives that contribute to conservation of CAMI species?

- Yes (please list specific projects/NGOs and companies)
- No

Ans. NGOs like Snow Leopard Foundation Pakistan, WWF Pakistan and Baltistan Wildlife Conservation and Development Organization etc. have their project-based activities to engage local communities which contribute to conservation of CAMI species. Moreover, private sector including tour operators are engaged in ecotourism activities.

5.12 a) Which of the CAMI species can be legally hunted in your country? (Please list)

Ans. As per the nomenclature adopted by the Convention on International Trade in Endangered Species of Wildlife Fauna and Flora (CITES) three species of Urial are reported in Pakistan:

- i. Ladakh Urial (*Ovis vignei*) CITES Appendix-I
- ii. Afghan Urial/ Blanford's Urial (*Ovis cycloceros*) CITES Appendix-II
- iii. Punjab Urial (*Ovis punjabiensis*) CITES Appendix-II

Two species of Urial; Afghan Urial/ Blanford's Urial (*Ovis cycloceros*) and Punjab Urial (*Ovis punjabiensis*) are legally hunted through a quota system under the community-based trophy hunting programme.

5.12 b) Is this hunting sustainable?

Yes No

5.12 c) Are their populations regularly and soundly monitored, and their wide-ranging movement (where applicable) considered when monitoring?

 Yes No

5.12 d) Has the option of sustainable use involving local communities to incentivize conservation of huntable species and their habitats been explored in your country?

 Yes In progress No

Please provide links to any reports or publications

Ans. Community based trophy hunting of ungulates; including Urial (*Ovis sp.*) is being successfully implemented in Pakistan and is world recognized. The local communities get 80% shares of the revenue generated, which is used for community-based conservation activities and socio-economic uplift. 20% of the revenue goes to government as administrative fee. In return the communities protect wildlife with a sense of ownership. Allocation of trophy hunting quota is made at federal level by Ministry of Climate Change & Environmental Coordination, in the meeting of CITES Management Authority in consultation with stakeholders. Provincial/territorial wildlife authorities have designated community managed conservation areas in key habitat of the species. The areas have Conservation Management Plans in which role of local communities is clearly defined through recognized community organizations. After allocation of annual quota, marketing of trophies is done at provincial/territorial level through open auction. Hunting of trophies is arranged by registered trophy hunting outfitters, the process is monitored by provincial/territorial wildlife departments in collaboration with local communities. Monitoring of species including surveys and watch and ward to control poaching is done by provincial/territorial wildlife departments in collaboration with local communities. There is active presence of NGOs like; WWF-Pakistan, IUCN-Pakistan, Wildlife Conservation Society, Snow Leopard Foundation, Pakistan and others which support government and local communities in conservation activities. On recommendation of provincial/territorial wildlife department Ministry of Climate Change & Environmental Coordination allows export of hunting trophies in accordance with the provisions of CITES.

5.13 Has the feasibility of sustainable use of any of the CAMI species been assessed in your country since 2021?

Yes (please list and provide links to reports)

No

Ans. Allocation of trophy hunting quota is decided at federal level by Ministry of Climate Change & Environmental Coordination, in the meeting of CITES Management Authority in consultation with stakeholders based on population assessment of the species.

5.14 What kind of community-based practices (including hunting, photography, eco-tourism) create incentives for conservation of CAMI species in your country? (Please list)

Ans.

- **Trophy hunting of species (Urial species only)- 80% of the revenue goes to the communities**
- **Photography**
- **Ecotourism**
- **Snow Leopard Enterprises (SLE)**
- **Other incentives (Livestock vaccination, compensation/insurance and alternative livelihoods etc.)**

5.15 Are CAMI-listed species (specifically the Asiatic Wild Ass, Goitered Gazelle, and Urial), being promoted as flagship species in their current and former habitats, for wildlife and ecosystem conservation, and functional connectivity of (desert-)steppe ecosystems in Central Asia?

Yes (please give examples)

No

Ans. Urial is being promoted in habitat areas as flagship species as communities are getting incentive through trophy hunting of the species. Other species like charismatic snow leopard is widely accepted flagship species of high mountains.

5.16 Have CAMI-listed species been promoted as symbols of local, subnational, and national identity to promote conservation of these species and their habitats? (Please select the species)

Argali Sheep (*Ovis ammon*)

Asiatic Cheetah (*Acinonyx jubatus*)

Asiatic Wild Ass / Khulan (*Equus hemionus*)

Bukhara Deer (*Cervus elaphus yarkandensis*)

Gobi Bear (*Ursus arctos isabellinus*)

Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)

- Kiang (*Equus kiang*)
- Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
- Persian Leopard (*Panthera pardus saxicolor*)
- Przewalski's Horse (*Equus ferus przewalskii*)
- Saiga Antelope (*Saiga spp.*)
- Snow Leopard (*Uncia uncia*)
- Urial (*Ovis vignei*)
- Wild or Bactrian Camel (*Camelus bactrianus*)
- Wild Yak (*Bos grunniens*)
- No

6. Good Governance of Natural Resource Management

6.1 What kind of 'best practice' policy guides for governance issues that affect CAMI species exist and are being used in your country? (Please list)

Ans. Best practice in Pakistan is community engagement through community-based trophy hunting programme (As detailed above).

6.2 Have workshops for conservation of CAMI species, with participation of agriculture ministry and natural resource extraction companies or representatives of other industrial sectors which affect conservation of CAMI species, been conducted in your country?

Yes (please list such workshops and explain what kind of industry representatives were involved)

No

6.3 Has legislation affecting CAMI species been reviewed and adjusted? For example, in relation to supporting Asiatic Cheetah and Persian Leopard conservation.

Yes (please explain)

No

Ans. The CAMI species reported in Pakistan are already protected under the relevant laws.

6.4 Has the management of protected areas been reviewed to improve protection of wildlife and introduce management plans? For example, relevant for Asiatic Cheetah.

Yes (please explain)

No

7. Capacity Development

7.1 Are there any funding schemes and training programmes developed in cooperation with national scientific institutions and the IUCN Species Specialist Groups to train students and emerging conservationists in wildlife monitoring, participatory involvement, conservation planning etc.?

Yes (please list)

No

Ans. Training workshop were organized on wildlife monitoring and wildlife law enforcement. Students were involved in different projects to conduct their research to complete M.Phil and PhDs degrees. They were proved with both financial and technical support. Community members were trained in Livestock husbandry and disease management at NARC to vaccinate livestock in mountain communities. They are provided with vaccines and money to vaccinate each animal. Wildlife Department guards were given survey trainings and wildlife surveillance kits and communications devices were provided to them to efficiently perform their duties. Community Wildlife Guards were hired in different projects to assist wildlife department. SMART trainings were conducted in different area and trainees were provided with kits and smart phones to collect and share data. Snow Leopard Foundation provided Crime Scene Investigation trainings the staff of Wildlife Departments and handed over CSI kits to the Wildlife department. Workshops were conducted on management planning with all stakeholders.

7.2 Have protected area rangers and, where applicable, community rangers received training on the following topics? (Please select)

Wildlife Management

Human-wildlife-conflict resolution

Combatting illegal hunting

Developing participatory conservation projects

Please provide details

Ans. Besides routine professional trainings, training workshops are organized under projects being implemented by the government and NGOs. Wildlife Department guards were given survey trainings and wildlife surveillance kits and communications devices were provided to them to efficiently perform their duties. Community Wildlife Guards were hired in different projects to assist wildlife department. SMART trainings were conducted in different area and trainees were provided with kits and smart phones to collect and share data. Snow Leopard Foundation provided Crime Scene Investigation trainings the staff of Wildlife Departments and handed over CSI kits to the Wildlife department.

7.3 Please list the most important activities conducted to strengthen the capacity of rangers and other government personnel to counteract illegal hunting and trade and secure necessary funding (i.e. human resources, equipment, training).

Ans. Training workshops were organized by Snow Leopard Foundation on disrupting poaching and enhancing wildlife crime scene investigation. WWF Pakistan organized trainings on use of SMART for wildlife rangers SMART trainings were conducted in different area and trainees were provided with kits and smart phones to collect and share data. Snow Leopard Foundation provided Crime Scene Investigation trainings the staff of Wildlife Departments and handed over CSI kits to the Wildlife department.

7.4 What has been done to improve the capacity of implementing organizations to undertake participatory and technically sound conservation and management planning, research and sustainable use? (Please list)

Ans.

For revival of forestry and wildlife sectors in Pakistan a mega project, Ten Billion Tree Tsunami Programme/ Green Pakistan Upscaling Programme is being implemented in with a focus on capacity building of the line departments for effective conservation of natural resources in Pakistan.

<https://tbttp.gov.pk/>

7.5 Have measures been taken to ensure adequate funding, technical support and equipment for rangers and protected area staff for conservation activities, including wildlife monitoring, surveys, and poaching prevention?

Yes (please explain)

No

Ans.

Under the Green Pakistan Upscaling Programme capacity of field staff of wildlife departments has been improved through provision of training and field gears for effective law enforcement.

<https://tbttp.gov.pk/>

Moreover, capacity building activities have been carried out for the field staff under different projects being implemented by NGOs. Wildlife Department guards were given survey trainings and wildlife surveillance kits and communications devices were provided to them to efficiently perform their duties. Community Wildlife Guards were hired in different projects to assist wildlife department. SMART trainings were conducted in different area and trainees were provided with kits and smart phones to collect and share data. Snow Leopard Foundation provided Crime Scene Investigation trainings the staff of Wildlife Departments and handed over CSI kits to the Wildlife department.

8. Scientific Knowledge

8.1 a) Has research been conducted to determine the following? (Please select)

- Population size
- Distribution
- Connectivity and demography
- Taxonomy clarification/genetic diversity
- Habitat quality
- Ecosystem function
- Landscape permeability
- Land use change

Please list species covered

Snow leopard

Persian leopard

8.1 b) Were the following techniques utilised? (Please select)

- Camera trapping
- Satellite telemetry
- DNA sampling
- No

8.1 c) Was the data obtained used in the following? (Please select)

- IUCN red list assessments
- National assessments
- Regional conservation planning
- National conservation planning
- No

8.2 a) Have any activities to foster collaboration between CAMI scientists from neighbouring countries taken place? (Including universities and scientific institutes)

Yes (please explain)

No

Researchers and scientist from different countries were involved in assessment of snow leopard habitat maps and population estimates. Several collaborative publications were produced to address the global issues faced by conservationist working on snow leopard and community-based programs.

8.2 b) Have these collaborations supported next-generation scientists?

Yes

No

8.3 a) Have range-wide monitoring and research programmes been developed and implemented for the following species? (Please select)

Argali Sheep (*Ovis ammon*)

Asiatic Cheetah (*Acinonyx jubatus*)

Asiatic Wild Ass / Khulan (*Equus hemionus*)

Bukhara Deer (*Cervus elaphus yarkandensis*)

Gobi Bear (*Ursus arctos isabellinus*)

Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)

Kiang (*Equus kiang*)

Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)

Persian Leopard (*Panthera pardus saxicolor*)

Przewalski's Horse (*Equus ferus przewalskii*)

Saiga Antelope (*Saiga* spp.)

Snow Leopard (*Uncia uncia*)

- Urial (*Ovis vignei*)
 Wild or Bactrian Camel (*Camelus bactrianus*)
 Wild Yak (*Bos grunniens*)

8.3 b) Have these programmes been used to explore future pathways and scenarios?

- Yes
 No

8.4 Has a climate change vulnerability and resilience assessment been conducted for the following species? (Please select)

- Argali Sheep (*Ovis ammon*)
 Asiatic Cheetah (*Acinonyx jubatus*)
 Asiatic Wild Ass / Khulan (*Equus hemionus*)
 Bukhara Deer (*Cervus elaphus yarkandensis*)
 Gobi Bear (*Ursus arctos isabellinus*)
 Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)
 Kiang (*Equus kiang*)
 Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
 Persian Leopard (*Panthera pardus saxicolor*)
 Przewalski's Horse (*Equus ferus przewalskii*)
 Saiga Antelope (*Saiga spp.*)
 Snow Leopard (*Uncia uncia*)
 Urial (*Ovis vignei*)
 Wild or Bactrian Camel (*Camelus bactrianus*)
 Wild Yak (*Bos grunniens*)

Please provide links to any reports or publications

- Kazmi, F.A., Shafique, F., Hassan, M. orcid.org/0000-0002-5524-9765 et al. (6 more authors) (2022) Ecological impacts of climate change on the snow leopard (*Panthera unica*) in South Asia. *Brazilian Journal of Biology*, 82. e240219. ISSN 1519-6984.

- Khan, T. U., Mannan, A., Hacker, C. E., Ahmad, S., Amir Siddique, M., Khan, B. U., Din, E. U., Chen, M., Zhang, C., Nizami, M., & Luan, X. (2021). Use of GIS and Remote Sensing Data to Understand the Impacts of Land Use/Land Cover Changes (LULCC) on Snow Leopard (*Panthera uncia*) Habitat in Pakistan. *Sustainability*, 13(7), 3590. <https://doi.org/10.3390/su13073590>.
- Farrington, J. D., & Li, J. (2024). Climate change impacts on snow leopard range. In *Snow leopards* (pp. 81-93). Academic Press.
- e Hani, U., Haq, S. M., Shabbir, R., Waheed, M., Jabeen, A., Hussain, M., ... & Busmann, R. W. (2024). Geospatial assessment of climate and human pressure on Snow Leopard habitat in the Trans-Himalayan region of Pakistan. *Global Ecology and Conservation*, e03024.
- <https://snowleopard.org/how-pakistan-is-building-a-climate-resilient-future/>
- <https://fwegb.gov.pk/wp-content/uploads/2024/07/2022-23-Markhor-Ladakh-urial-in-Gilgit-Baltistan.pdf>

8.5 For which species have suitable habitat and possibility of reintroduction been assessed, since 2021, in your country?

- Argali Sheep (*Ovis ammon*)
- Asiatic Cheetah (*Acinonyx jubatus*)
- Asiatic Wild Ass / Khulan (*Equus hemionus*)
- Bukhara Deer (*Cervus elaphus yarkandensis*)
- Gobi Bear (*Ursus arctos isabellinus*)
- Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)
- Kiang (*Equus kiang*)
- Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
- Persian Leopard (*Panthera pardus saxicolor*)
- Przewalski's Horse (*Equus ferus przewalskii*)
- Saiga Antelope (*Saiga* spp.)
- Snow Leopard (*Uncia uncia*)
- Urial (*Ovis vignei*)
- Wild or Bactrian Camel (*Camelus bactrianus*)
- Wild Yak (*Bos grunniens*)

Rashid, W., Shi, J., Rahim, I. u., Qasim, M., Baloch, M. N., Bohnett, E., Yang, F., Khan, I., & Ahmad, B. (2021). Modelling Potential Distribution of Snow Leopards in Pamir, Northern Pakistan: Implications for Human–Snow Leopard Conflicts. *Sustainability*, 13(23), 13229. <https://doi.org/10.3390/su132313229>.

8.6 Have the threats to the survival of the following species been investigated and identified in your country since 2021?

- Argali Sheep (*Ovis ammon*)
- Asiatic Cheetah (*Acinonyx jubatus*)
- Asiatic Wild Ass / Khulan (*Equus hemionus*)
- Bukhara Deer (*Cervus elaphus yarkandensis*)
- Gobi Bear (*Ursus arctos isabellinus*)
- Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)
- Kiang (*Equus kiang*)
- Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
- Persian Leopard (*Panthera pardus saxicolor*)
- Przewalski's Horse (*Equus ferus przewalskii*)
- Saiga Antelope (*Saiga* spp.)
- Snow Leopard (*Uncia uncia*)
- Urial (*Ovis vignei*)
- Wild or Bactrian Camel (*Camelus bactrianus*)
- Wild Yak (*Bos grunniens*)

Please provide links to reports and publications

Ahmad, S., Nabi, G., Hacker, C. E., Strelnikov, I. I., & Luan, X. (2022). Increasing threats to snow leopard survival in Pakistan. *Frontiers in Ecology and Evolution*, 10, 818798.

Din JU, Bari F, Ali H, Rehman E, Adli DSH, Abdullah NA, Norma-Rashid Y, Kabir M, Hameed S, Nawaz DA, Nawaz MA (2022) Drivers of snow leopard poaching and trade in Pakistan and implications for management. *Nature Conservation* 46: 49-62. <https://doi.org/10.3897/natureconservation.46.76036>. <https://www.wfpak.org/?384715/Infrastructure-development-projects-pose-serious-threat-to-Snow-leopards-and-prey-species-in-GB-WWF-Pakistans-study>.

8.7 a) Are the following species populations being monitored regularly in your country? (Please select)

- Argali Sheep (*Ovis ammon*)
- Asiatic Cheetah (*Acinonyx jubatus*)
- Asiatic Wild Ass / Khulan (*Equus hemionus*)

- Bukhara Deer (*Cervus elaphus yarkandensis*)
- Gobi Bear (*Ursus arctos isabellinus*)
- Goitered or Black-Tailed Gazelle (*Gazella subgutturosa*)
- Kiang (*Equus kiang*)
- Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)
- Persian Leopard (*Panthera pardus saxicolor*)
- Przewalski's Horse (*Equus ferus przewalskii*)
- Saiga Antelope (*Saiga* spp.)
- Snow Leopard (*Uncia uncia*)
- Urial (*Ovis vignei*)
- Wild or Bactrian Camel (*Camelus bactrianus*)
- Wild Yak (*Bos grunniens*)

8.7 b) Have standardized methodologies been applied for monitoring any of these species?

- Yes (please list species)
- No

8.7 c) In case of transboundary populations, is monitoring being coordinated with other Range State's agencies?

- Yes (please list species and countries)
- No

Ans. Information on snow leopard is shared with other range states under GSLEP. Population of World Snow Leopard (PAWS) is the mechanism to collect information on snow leopard population.

<https://globalsnowleopard.org/gsllep-projects/paws/>

9. Argali Sheep (*Ovis ammon*)

9.1 Has your Government integrated the CMS Action Plan for the Conservation of the Argali 2025-2031 into the national biodiversity legislation and policies?

- Yes
 In progress (please explain)
 No

Ans. Pakistan has the smallest population of Marco Polo Sheep which is reported to migrate in summers from China to Khunjerab National Park, Gilgit-Baltistan. The species is already 'protected' under the relevant wildlife laws and conservation of protected species is reflected in NBSAP. The conservation activities enlisted the CMS Action Plan for the species are already covered in conservation action for the species in general. The conservation activities for the species include; legal protection to the species, establishment of protected areas, enforcement of wildlife laws through watch and ward to control illegal hunting and trade, research and surveys, awareness raising activities, livestock vaccination schemes and community participation in conservation through community-based trophy hunting programme.

9.2 Has the feasibility of reintroducing Argali in your country been assessed? (Particularly in Dauria SPA)

- Yes
 No

10. Asiatic Cheetah (*Acinonyx jubatus*)

10.1 Complete the fencing of the hot zone of highway 44 along Touran National Park to eliminate vehicle-Cheetah collisions in a way that maintains connectivity and allows Cheetah to safely cross the road e.g. through underpasses or other suitable measures.

Has this been implemented?

- Yes (please explain)
 No

10.2 What measures have been implemented to remove livestock or at least reduce the impact from herding in the Miandasht and Touran reserves? (Please list)

<p>10.3 Have actions been taken to increase, or at least maintain, the Asiatic Cheetah prey base?</p> <p><input type="checkbox"/> Yes (please explain)</p> <p><input type="checkbox"/> No</p>
<p>10.4 Has a landscape-approach been taken to enhance the effectiveness of protected areas, including through identification and conservation of corridors, such as the corridor between Touran and Miandasht?</p> <p><input type="checkbox"/> Yes (please explain)</p> <p><input type="checkbox"/> No</p>
<p>10.5 Has potential range been modelled in border areas with Afghanistan, Iraq, Pakistan, and Turkmenistan?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>
<p>10.6 Has an international conference on the Asiatic Cheetah been held in Teheran, with all relevant stakeholders to develop a regional programme for fundraising and Cheetah conservation?</p> <p><input type="checkbox"/> Yes (please provide details of the conference and outcomes)</p> <p><input type="checkbox"/> No</p>
<p>10.7 Has a population management plan been developed, that includes captive and semi-captive breeding and a study on population genetics?</p> <p><input type="checkbox"/> Yes (please provide links to any relevant documents)</p> <p><input type="checkbox"/> In progress (please explain)</p> <p><input type="checkbox"/> No</p>

10.8 Are capacity-building exchange programs being promoted to support game wardens/reserve managers in further developing their skills?

Yes

No

11. Asiatic Wild Ass / Khulan (*Equus hemionus*)

11.1 Has the Range-Wide Action Plan for the Conservation of the Asiatic Wild Ass been integrated into your country's national policies and legislation on biodiversity?

Yes

No

11.2 What measures have been enacted to increase the population size and range of Asiatic Wild Ass in Kazakhstan and Turkmenistan (Badhyz, Kaplankyr, Meanachacha)? (Please list and describe)

11.3 Has the possibility for reintroducing Wild Ass and existence of suitable habitat been assessed? E.g. in Uzbekistan, Turkmenistan, and Kazakhstan.

Yes (please explain)

No

12. Bukhara Deer (*Cervus elaphus yarkandensis*¹)

12.1 Has the Programme of Work for the Bukhara Deer 2025-2031 been integrated into your country's national policies and legislation on biodiversity?

Yes

No

13. Gobi Bear (*Ursus arctos isabellinus*)

13.1 Has the existing National Action Plan on the Gobi Bear been revised, with a monitoring approach included?

Yes (please provide links to any reports or publications)

No

13.2 Has there been cooperation between Chinese and Mongolian scientists to implement transboundary collaboration on monitoring and investigation? Outcomes should mitigate impacts from the international border fence and maintain landscape permeability.

Yes (please explain outcomes)

No

13.3 Has the conservation of the Gobi Bear been enhanced at the international level through inviting relevant existing organisations and expanding current ongoing projects?

Yes (please explain)

No

¹ *Cervus hanglu bactrianus* according to the IUCN Red List 2016.

14. Goitered or Black-Tailed Gazelle (<i>Gazella subgutturosa</i>)
<p>14.1 Has a national action plan been developed in your country for the conservation of Goitered Gazelles?</p> <p><input type="checkbox"/> Yes (please provide links to any relevant documents)</p> <p><input checked="" type="checkbox"/> No</p>
<p>14.2 Have the impacts of trade and poaching of Goitered Gazelles been reviewed and assessed?</p> <p><input type="checkbox"/> Yes (please explain and provide links to any reports or publications)</p> <p><input checked="" type="checkbox"/> No</p>
<p>14.3 Has the conservation of Goitered Gazelle key habitat been assessed, and recommendations developed for improvement of conservation measures taking into consideration movement patterns?</p> <p><input type="checkbox"/> Yes (please include links to any reports and publications)</p> <p><input checked="" type="checkbox"/> No</p>
<p>14.4 Have field surveys been conducted of potential Goitered Gazelle habitat, and investigations into competitive interactions between gazelles and livestock?</p> <p><input type="checkbox"/> Yes (please include links to any reports and publications)</p> <p><input type="checkbox"/> In progress (please explain)</p> <p><input checked="" type="checkbox"/> No</p>
<p>14.5 Have the following topics been studied? (Please select)</p> <p><input type="checkbox"/> The needs of communities in Goitered Gazelle habitats</p> <p><input type="checkbox"/> The possibility of using alternative energy sources to prevent the impact of local people on desert vegetation</p> <p><input type="checkbox"/> The possibility of sustainable livestock production</p>

No

Please include links to any reports and publications

14.6 Is conservation of transboundary populations of Goitered Gazelle being coordinated among Range States? Including a platform for communicating and analysing data?

 Yes (please describe) No

14.7 Has a day in the year been designated as Goitered Gazelle Day in your country?

 Yes No

15. Kiang (*Equus kiang*)

15.1 Have range-wide and periodic population monitoring protocols been devised in your country?

 Yes (please describe and provide links to any relevant documents) No

If yes, do you use agreed methodologies and coordinate monitoring activities with neighbouring countries?

 Yes (please list countries and provide details) No

<p>15.2 Using specifically designed field surveys, have the following been identified? (Please select)</p> <p><input type="checkbox"/> Core populations?</p> <p><input type="checkbox"/> Core habitats?</p> <p><input type="checkbox"/> Seasonal range use patterns?</p> <p><input type="checkbox"/> No</p>
<p>15.3 Have the competitive interactions between Kiang and livestock been investigated?</p> <p><input type="checkbox"/> Yes (please provide links to any reports and publications)</p> <p><input type="checkbox"/> No</p>
<p>15.4 Have any trends between the cashmere economy and Kiangs on rangelands been investigated?</p> <p><input type="checkbox"/> Yes (please provide links to any reports and publications)</p> <p><input type="checkbox"/> No</p>
<p>15.5 It is important to understand the specific nature of conflicts between herders and Kiang. Have hotspots of perceived or real conflicts been identified and consultative action plans been developed to mitigate these conflicts?</p> <p><input type="checkbox"/> Yes (please explain)</p> <p><input type="checkbox"/> No</p>
<p>15.6 Has forage competition with domestic animals and potential pasture tramping by Kiang been investigated?</p> <p><input type="checkbox"/> Yes (please provide details and links to any reports or publications)</p> <p><input type="checkbox"/> No</p>

15.7 Is a community-participatory approach (citizen science) for monitoring Kiang abundance and occurrence being supported as part of large-scale monitoring efforts?

- Yes (please explain)
 No

16. Mongolian or White-Tailed Gazelle (*Procapra gutturosa*)

16.1 It is important to maintain the Mongolian Gazelles nomadic movements and identify options within the existing policy/legal framework for land protection in Mongolia.

Have sites been identified across Mongolian Gazelle range that are suitable for IUCN category V “Protected Landscape” status or OECMs?

- Yes (please list sites)
 No

16.2 Has the potential for preserving the steppe for carbon storage and volunteer carbon markets been assessed?

- Yes (please explain and provide links to any reports or publications)
 No

16.3 Has a situation analysis on the effects of intensifying and expanding mechanized hay cutting across the eastern steppes on Mongolian Gazelle and other biodiversity been developed which includes the following steps?

- Conduct a policy study on the current legal framework for mechanized hay cutting;
- Collect historical records of hay cutting trends;
- Map hay cutting occurrences;
- Develop a stakeholder list, including entities conducting hay cutting;
- Map out the supply chain for hay supplies from Eastern Steppes.

Yes (please include links to any reports or publications)

Partially (please explain)

No

16.4 Has a situational analysis on Mongolian Gazelle and livestock disease policy been prepared and disseminated, which includes the following steps:

- Conduct literature review;
- Establish a working group for sub-regional disease experts;
- Identify current policy on vaccination and response to disease outbreaks;
- Develop recommendations and identify funding for implementation.

Yes

Partially (please explain)

No

16.5 a) Have the impacts of hunting on Mongolian Gazelles been reviewed and assessed?

- Yes (please explain)
- In progress (please explain)
- No

16.5 b) Have options for sustainable use of the species that provides benefit to local communities and incentives for their conservation been assessed?

- Yes (please explain and provide links to any reports or publications)
- No

17. Persian Leopard (*Panthera pardus saxicolor*)

17.1 Does your country publish activities related to the conservation of the Persian Leopard in the region in a specific bulletin?

- Yes (please describe and provide links)
- No

Ans. https://www.catsg.org/files/ugd/7a07e2_d183e8ec4522454aa1c3005c85106c26.pdf

Khan, B., Nawaz, R., & Hussain, I. (2022). First record of Persian leopard (*Panthera pardus saxicolor* Pocock, 1927) from Chitral Gol National Park, Pakistan.

Bleyhl, B. E. N. J. A. M. I. N., Gerngross, P. E. T. E. R., Askerov, E. L. S. H. A. D., Farhadinia, M. S., Ghoddousi, A. R. A. S. H., Heidelberg, A. U. R. E. L., ... & Kuemmerle, T. O. B. I. A. S. (2022). Mapping the distribution and habitat of Persian leopard across its historical range. *Cat News*, 15, 9-18.

18. Przewalski's Horse (*Equus ferus przewalskii*)

18.1 Have the actions needed to secure migration corridors between reintroduction sites, e.g. from the Great Gobi B Special Protected Area (SPA) and other protected areas in Mongolia, been identified?

Yes (please briefly describe actions required)

No

18.2 Have efforts been made to foster negotiations with China for the conservation and protection of the Przewalski's Horse habitat between Great Gobi B SPA in Mongolia and the Kalamaili Nature Reserve in China, and to open the border fences between the two countries for wildlife migrations?

Yes (please outline progress)

No

18.3 Have other possible reintroduction sites for the Przewalski's Horse been explored in the steppes of your country (Mongolia, China, Russia, Kazakhstan and Uzbekistan)?

Yes (please describe)

No

18.4 Has a communication platform been established between Mongolia, China, Russia and other Range States to share expertise about Przewalski's Horse reintroduction?

Yes (please explain)

No

18.5 Have management plans been developed and appropriate national legal environments established in regions of reintroduction, to avoid hybridization with domestic horses?

Yes (please explain and provide links)

In progress

No

18.6 Have effective monitoring systems been set up to control the livestock decease situation (e.g. anthrax) and outbreaks, and control transmission to Przewalski's Horse?

Yes

No

18.7 Are genetic monitoring systems in place in each reintroduction project, with elaborate plans to exchange horses between populations?

Yes (please explain)

No

19. Snow Leopard (*Uncia uncia*²)

19.1 Is the implementation of the Global Snow Leopard & Ecosystem Protection Programme (GSLEP), the National Snow Leopard & Ecosystem Protection Plans (NSLEP), and the landscape management planning guidelines being supported?

Yes

Partially (please explain)

No

19.2 It is important to reduce Human-Snow Leopard conflict and prevent retaliatory killing.

Are holistic approaches to conflict prevention, mitigation and conservation incentives, as well as raising awareness, being supported to ensure this?

Yes (please describe approaches)

No

Following approaches are being used by Snow Leopard Foundation Pakistan in collaboration with Government and Local communities:

Community based organization and social mobilization

- **Predator Proof corral**
- **Livestock Insurance Schemes**
- **Ecosystem Health Program**

² *Panthera uncia* according to the IUCN Red List 2017.

- **Alternative Livelihood Initiatives**
- **Education and Awareness**
- **National Clubs and Nature Study Camps**
- **International Days Celebration**
- **Capacity building**
- **Funds establishment**

19.3 Have measures against illegal wildlife trade in Snow Leopards been improved through the following in compliance and cooperation with CITES?
(Please select)

- Improved legislation
- Intensifying law enforcement
- Better prosecution
- Addressing drivers of poaching
- Improving data collection, analysis, and information sharing
- No

19.4 Has your country been supporting the four-country agreement on transboundary conservation of Snow Leopards between Uzbekistan, Tajikistan, Kyrgyzstan and Kazakhstan as a model for other countries?

- Yes
- No

19.5 Has national and transboundary management of the species been enhanced (including existing GSLEP landscapes) to include the development of functional and effective, science-based, and participatory management plans?

- Yes
- Partially (please explain)
- No

19.6 Has range-wide functional connectivity among Snow Leopard populations been analyzed, described and mapped?

Yes (please explain and provide links to any reports or publications)

Partially (please explain)

No

- **Ans. Hameed S, Din Ju, Ali H, Kabir M, Younas M, ur Rehman E, et al. (2020) Identifying priority landscapes for conservation of snow leopards in Pakistan. PLoS ONE 15(11): e0228832. <https://doi.org/10.1371/journal.pone.0228832>**
- **Cancellare, I.A., Weckworth, B., Caragiulo, A. et al. Snow leopard phylogeography and population structure supports two global populations with single refugial origin. *Biodivers Conserv* 33, 3961–3979 (2024). <https://doi.org/10.1007/s10531-024-02928-4>.**
- **Din, J. U., Hameed, S., Ali, H., Norma-Rashid, Y., Adli, D. S. H., & Nawaz, M. A. (2022). On the snow leopard Trails: Occupancy pattern and implications for management in the Pamir. *Saudi Journal of Biological Sciences*, 29(1), 197-203.**

19.7 Are livestock grazing practices in Snow Leopard habitat being managed to minimize negative impacts on the ecosystem, and foster coexistence between Snow Leopards and humans?

Yes (please explain)

Partially (please explain)

Awareness sessions have been conducted in community to highlight this issue. Predator- proof corrals have been developed in community to protect livestock.

No

19.8 Are there livestock-free zones in important Snow Leopard habitats?

Yes, in protected areas only

Yes, also outside protected areas

No

19.9 Are negative impacts of infrastructure and extractive industries across Snow Leopard landscapes being prevented and mitigated, in compliance with established safeguard policies? Including the targeted allocation of offset payments (compensation).

Yes, negative impacts are being mitigated (please explain)

Yes, offset payments from companies are invested in Snow Leopard conservation

No

20. Urial (*Ovis vignei*)

20.1 Has your country included conservation of Urial in national conservation strategies and action plans?

Yes (please describe and provide links)
 No

20.2 Have comprehensive species conservation action plans at national level been prepared?

Yes (please describe and provide links)
 No

Ans. There are management plan for the conservation of species at community level for community-managed conservation areas.

20.3 Has landscape level conservation of Urial been promoted through the establishment and/or support of a network of well-managed protected and game management areas, including community-managed areas and transboundary areas?

Yes (please describe)
 No

20.4 Have the following options been explored to address Urial habitat loss? (Please select)

Mitigation and compensation of impact of infrastructure and urbanization
 Regulation of livestock grazing
 Incentives for the conservation, rehabilitation, and sustainable use of natural rangeland and woodland vegetation
 Other approaches (please describe)

20.5 Have approaches to reduce conflict caused by crop raiding, through prevention and compensation of damages (crop selection, scaring off from sensitive crops, benefit sharing from sustainable use), been developed, tested and implemented?

Yes (please explain approaches and progress)

No

21. Wild or Bactrian Camel (*Camelus bactrianus*³)

21.1 Has an action plan been developed that includes a wildlife monitoring approach for the international transboundary Wild Camel populations in the Gobi?

Yes (please provide links)

No

21.2. Have field studies been conducted, using camera-traps and patrol-based monitoring, to assess the migration of the transboundary Wild Camel population in Mongolia and China?

Yes (please explain and provide links to any reports or publications)

Partially (please explain)

No

21.3 a) Has your country contributed to organizing cooperation between Chinese and Mongolian scientists, to implement transboundary collaboration on monitoring Wild Camel populations, mitigate impacts from the international border fence and maintain landscape permeability?

Yes (please describe)

No

21.3 b) Has this cooperation been incorporated in a Memorandum of Understanding?

Yes

No

³ *Camelus ferus* according to the IUCN Red List 2008.

21.4 Are wild population dynamics being monitored, and have responses to habitat fragmentation and destruction of migratory routes caused by illegal mining been investigated?

- Yes (please describe and provide links to any reports or publications)
- Partially (please explain)
- No

22. Wild Yak (*Bos grunniens*)

22.1 Have core populations and habitats, and seasonal range use pattern been identified, with specially designed field surveys?
Have the following been identified using specially designed field surveys? (Please select)

- Core populations
- Core habitats
- Seasonal range use patterns
- No

22.2 Have samples been collected to study the genetic variation in Wild Yak?

<input type="checkbox"/> Yes <input type="checkbox"/> No
22.3 Has Wild Yak population and distribution status been updated...? (Please select) <input type="checkbox"/> At national level <input type="checkbox"/> At regional level <input type="checkbox"/> It has not been updated
22.4 Have the risks of hybridization of Wild Yak with domestic yak, and yak-cow hybrids, been investigated? <input type="checkbox"/> Yes (please provide links to any reports or publications) <input type="checkbox"/> No
22.5 Has forage competition between domestic animals and Wild Yak been investigated? <input type="checkbox"/> Yes (please provide links to any reports or publications) <input type="checkbox"/> No

<p>23. Gobi-Steppe Ecosystem Countries: China, Mongolia, Russia Species: Asiatic Wild Ass, Gobi Bear, Goitered Gazelle, Mongolian Gazelle, Przewalski's Horse, Saiga Antelope, Wild Camel</p>
23.1 Has a Gobi steppe ecosystem action plan including species-specific actions been developed that involves all adjacent Range States, to ensure the following? (Please select) <input type="checkbox"/> Long-term permeability of the landscape <input type="checkbox"/> Avoidance or mitigation of barriers <input type="checkbox"/> Availability of areas without human use

<input type="checkbox"/> Action plan has not been developed <input type="checkbox"/> Action plan has been developed but does not include species-specific actions <input type="checkbox"/> Action plan has been developed but does not involve all range states
<p>23.2 Has a platform of all interested and invited scientists been established to scale up species-specific actions, encourage transboundary collaboration on monitoring and research, and to mitigate impacts from international border fences?</p> <input type="checkbox"/> Yes (please describe and provide links to platforms) <input type="checkbox"/> No
<p>23.3 Has an “Environmental Mitigation Fund” financed by contributions from private sector, government and donors, been established for safeguarding the migratory species of the Gobi Eastern Steppe ecosystem, and to implement mitigation measures for existing and newly constructed infrastructure, research and monitoring?</p> <input type="checkbox"/> Yes (please describe measures) <input type="checkbox"/> Partially (please explain) <input type="checkbox"/> No

<p>24. Qinghai-Tibetan Plateau Countries: Bhutan, China, India, Nepal, Pakistan Species⁴: Argali, Kiang, Snow Leopard, Wild Yak</p>
<p>24.1 Have conservation intervention gaps among existing protected areas been identified through research into the distribution and movement of these species at large landscape scale? Including the effectiveness of the existing protected areas (national parks, national nature reserves, world nature heritage site) in protecting CAMI species.</p> <input type="checkbox"/> Yes (please include links to any reports and publications) <input checked="" type="checkbox"/> Partially (please explain) Hameed S, Din Ju, Ali H, Kabir M, Younas M, ur Rehman E, et al. (2020) Identifying priority landscapes for conservation of snow leopards in Pakistan. PLoS ONE 15(11): e0228832. https://doi.org/10.1371/journal.pone.0228832

⁴ Chiru and Tibetan Gazelle occur in this landscape but are not listed under CMS.

<input type="checkbox"/> No
<p>24.2 Have common threats and landscape-level solutions for these key species been identified?</p> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p>24.3 Have locally suitable mechanisms for cooperative work between sectors (such as wildlife, forestry, animal husbandry and tourism) been identified which may need intervention in policy at the national, provincial and local levels.</p> <input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No

<p>25. Coordination, Data Sharing and Review Processes</p>
<p>25.1 Has the Work Programme for the Central Asian Mammals Initiative been officially endorsed by your country and integrated into national biodiversity policies and legislation?</p> <input checked="" type="checkbox"/> Yes (please explain) <input type="checkbox"/> No

<p>26. Outreach and Awareness Raising</p>
<p>26.1 Has your country initiated systematic awareness raising in the private sector to encourage funding for conservation of CAMI species via Corporate Social Responsibility</p> <input type="checkbox"/> Yes (please explain) <input checked="" type="checkbox"/> No

27. Funding
<p>27.1. Have conservation actions for migratory species, as outlined in the POW, been included in the existing / updated / elaborated state programmes on nature protection?</p> <p><input checked="" type="checkbox"/> Yes (please list state programmes) <input type="checkbox"/> No</p> <p>Ans. There is no dedicated funding for POW implementation. However, activities under different projects being implemented by the government and donors are covering the activities of the POW.</p>
<p>27.2 Have national environmental funds existing under state bodies of your Government been channelled to support the implementation of the POW?</p> <p><input type="checkbox"/> Yes (please explain) Partially (please explain) <input checked="" type="checkbox"/> No</p>
<p>27.3 a) Has fundraising been scaled by applying the following approaches to project development? (Please select)</p> <p><input type="checkbox"/> Ecoregional <input checked="" type="checkbox"/> Landscape <input type="checkbox"/> Transboundary</p> <p>b) Has your country explored funding options through the Global Environment Fund (GEF), including GEF Small Grants Programme projects, for joint proposals with other countries? With involvement of GEF implementing agencies (World Bank, Asian Development Bank, UNDP) in the processes of project application.</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> Partially (please explain) <input type="checkbox"/> No</p>
<p>27.4 Have mechanisms been developed for using revenues from sustainable wildlife management for conservation activities (e.g. trophy hunting and others), in cooperation with CITES?</p>

<input checked="" type="checkbox"/> Yes (please describe) <input type="checkbox"/> No Ans. Revenue generated through community-based trophy hunting programme is utilized for community-based conservation activities.
27.5 Has a trust fund been established for CAMI, including with funding from the private sector? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

28. Synergies and Stakeholder Involvement
28.1 Has a private sector engagement process been initiated to more closely involve the private sector and relevant stakeholders in conservation of CAMO species, <i>inter alia</i> by attending relevant conferences and inviting them to CAMI meetings? <input type="checkbox"/> Yes (please describe) <input type="checkbox"/> In progress (please explain) <input checked="" type="checkbox"/> No
28.2 Are biodiversity conservation measures included in contracts with mining companies? For example, Product Sharing Agreements. <input type="checkbox"/> Yes (please provide examples) <input checked="" type="checkbox"/> No
28.3 The Secretariat is requested to explore options together with the CITES Secretariat in establishing CAMI as a Joint CMS-CITES Initiative, similar to the Joint CMS-CITES African Carnivores Initiative (see also 1.2). Is your government in favour of establishing a joint CMS-CITES Initiative for CAMI? <input type="checkbox"/> Yes, representatives of CITES management authorities will raise this matter at the next relevant CITES meeting <input checked="" type="checkbox"/> Yes, in principle <input type="checkbox"/> No