

Will the khulan ever cross the line?

Progress and challenges towards improving permeability along the TMR and reconnecting the Gobi-Steppe Ecosystem for large ungulates in Mongolia.

August 2015





**Obstacles to
overcome**

Efforts to mitigate

Evidence

The problem

What are the issues ?

Khulan (Asiatic Wild Ass)

Бүс нутгийн улаан дансны цуврал

Монгол Улсын хөхтөн амьтны
улаан данс



Эмхэтгэгч:
Elina L. Clark, Жавхансүрэнгийн Манхбат

Редиктор:
С. Дуламцэрэн, J. E. M. Baillie,
H. Batsaikhan, P. Suvijdska, M. Stubbie

Equus hemionus

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	<ENDANGERED>	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX



Tsaagan Zeer (Mongolian gazelle)

Бүс нутгийн улаан дансны цуврал

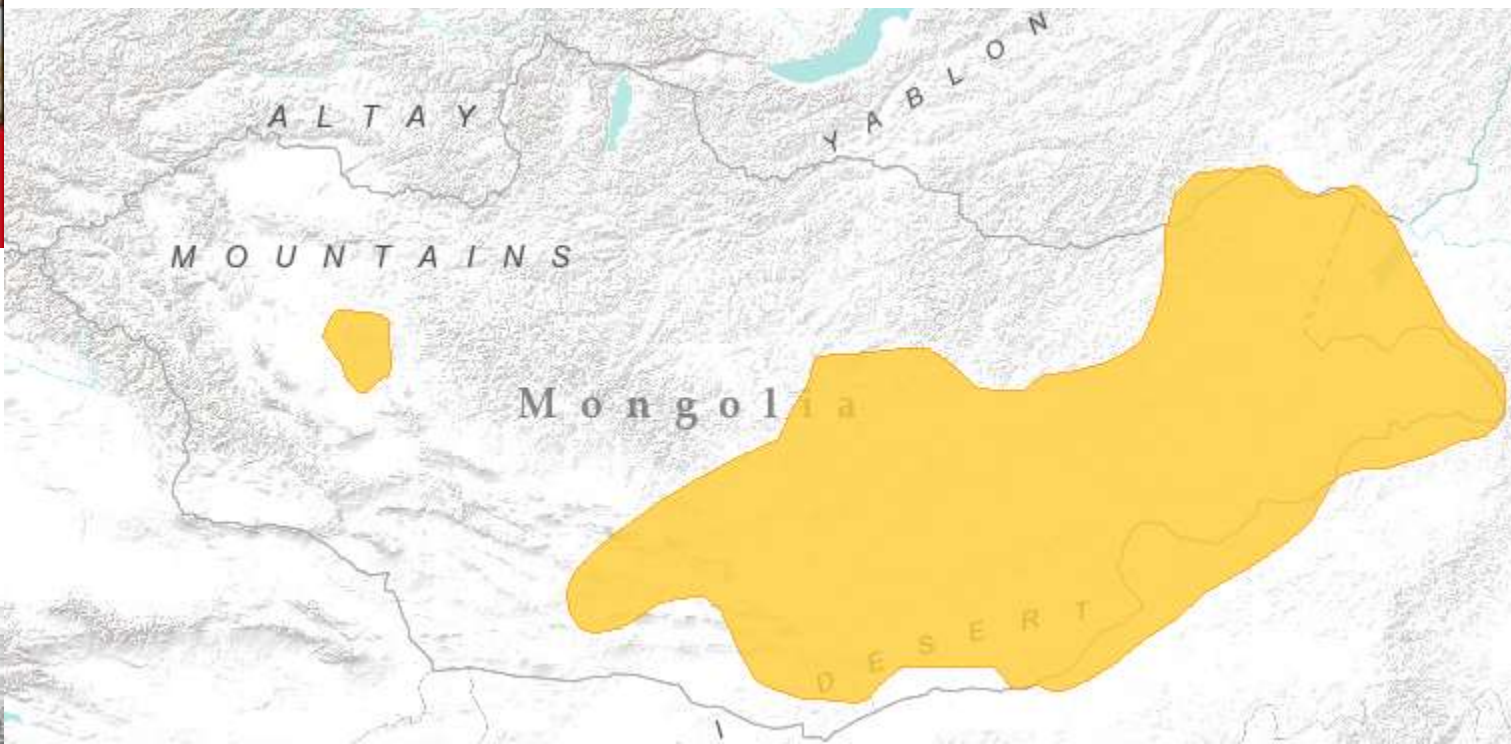
Монгол Улсын хөхтөн амьтны
улаан данс

Эмэлтгэл:
Елена Л. Сав, Жахансүрэнгийн Мөнхбат

Редиктор:
С. Дундговь, J. E. M. Verbe, N. Батсайхан, Р. Сүрэнш, М. Шувда

Procapra gutturosa

NOT EVALUATED	DATA DEFICIENT	LEAST CONCERN	NEAR THREATENED	VULNERABLE	ENDANGERED	CRITICALLY ENDANGERED	EXTINCT IN THE WILD	EXTINCT
NE	DD	LC	NT	VU	EN	CR	EW	EX
		< LEAST CONCERN > LC						



Gobi-Steppe Ecosystem

827,000 km²



Mongolian gazelle annual range



Khulan annual range



US National Grassland Reserves

Olson 1997

Serengeti-Mara Ecosystem

(Sinclair et al. 2007)

Greater Yellowstone Ecosystem

(Noss et al. 2002)

108,000 km²



25,000 km²



15,378 km²



Construction on the Trans-Mongolian Railroad (TMR) began in 1949 and was completed circa 1955.

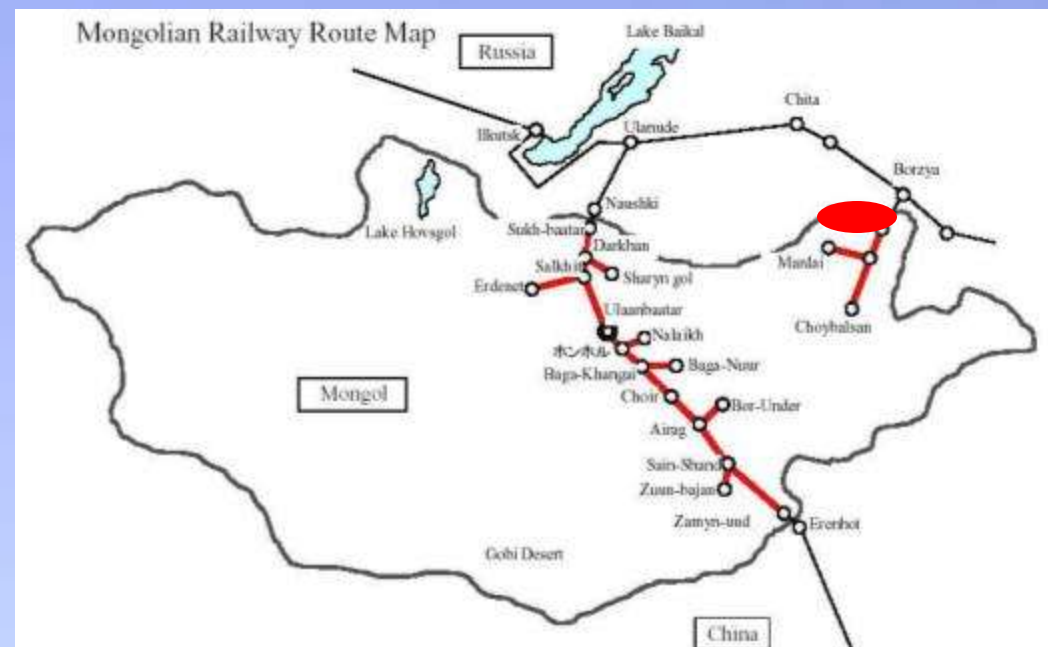


Joint ownership with Russia

1,110 kilometers

11-18 trains/day

Important spur off of the Trans
Siberian Railroad



Mammals of the Soviet Union

VOLUME I

V. G. Heptner
A. A. Nasimovich
A. G. Bannikov



In Trans-Baikaliya the range covers only a small section at Lake Tarei-Nur (Zun-Tarei), north of Solovev, and the steppes along the Argun to the north of Lake Dalai-Nur in Manchuria. This projection of the Mongolian-Manchurian zone represents the northernmost extremity of the range of the species.

Even in the latter half of the eighteenth century these animals did not settle in Trans-Baikaliya but only visited it. Visitations occurred in summer, especially with a scarcity of food in the south (Pallas, 1774 and 1811). Yet even in the middle of the nineteenth century these animals were very common within the Soviet Union (Radde, 1862; Cherkasov, 1867; V. Skalon, 1949). They disappeared in the latter half of the century. This is associated with a significant withdrawal of the northern boundary of distribution into Mongolia and Manchuria.

196

Oryx

1967, Vol. 9, 196-210

Wildlife Protection in Mongolia

By R. A. Hibbert CMG

The continued existence of the wild ass is better documented. Up to the end of the 20's it could be seen in fairly large numbers both north and south of the Altay range, in the north-western region of lakes and desert, and also in the far north-east. Now it is rare and is found only in the trans-Altay deserts as far west as the area of the Przewalski horse and as far east as the frontier districts of the South Gobi province. In the

Procapra gutturosa. By Vladimir E. Sokolov and Anna A. Lushchekina

Published 24 October 1997 by the American Society of Mammalogists

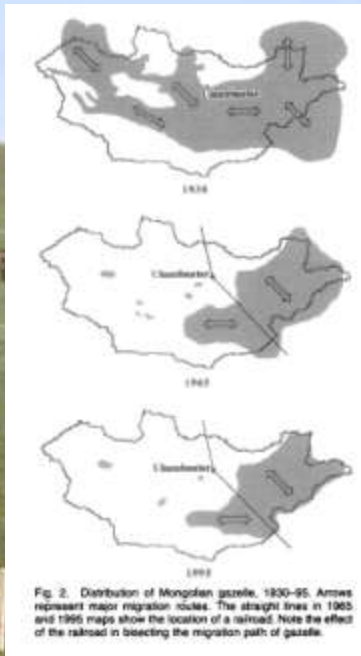
somewhat regular. The construction of the railway from Ulan-Bator to Dzamyn-Ud with its associated wire fence, and the intense development of the eastern regions in Mongolia, have apparently disturbed the migratory routes of Mongolian gazelles. Local migrations associated with changes of pastures are now more characteristic of Mongolian gazelles (Lushchekina et al., 1983).

ORYX VOL 31 NO 2 APRIL 1997

The status and management of the Mongolian gazelle *Procapra gutturosa* population

Badamjavyn Lhagvasuren and E. J. Milner-Gulland

One major factor that may have been involved in the population decline is the construction of the Ulaanbaatar-Beijing railway at the end of the 1950's, which closed the gazelle's migration routes from eastern to western Mongolia. This cutting off of migration routes from east to west may have been a critical factor or coincidental – the data are unclear



THE COMMERCIAL HARVEST OF WILDLIFE IN DORNOD AIMAG, MONGOLIA
JOURNAL OF WILDLIFE MANAGEMENT 62(1):59-71

RICHARD P. HEADING,^{1,2} Mongolia Biodiversity Project and Northern Rockies Conservation Cooperative, Box 49/207, Ulaanbaatar, Mongolia
 HENRY MIX, World Wide Fund for Nature and Nature Conservation International, Reinhardtstrasse 10, Berlin 10117, Germany
 BADAMJAVIN LHAGVASUREN, Society for the Conservation of the Mongolian Gazelle and Institute of General and Experimental Biology, Mongolian Academy of Sciences, Ulaanbaatar-51, Mongolia
 NATSAGDORJIN TSEVEENMYADAG, Society for the Conservation of the Mongolian Gazelle and Eastern Mongolia Protected Areas, Mongolian Ministry for Nature and the Environment, Cholbalsan, Dornod, Mongolia

Preliminary Evidence of a Barrier Effect of a Railroad on the Migration of Mongolian Gazelles

TAKEHIKO Y. ITO,^{*,††} NAOKO MIURA,[†] BADAMJAV LHAGVASUREN,[‡] DULAMT SEREN ENKHBILEG,[‡] SEIKI TAKATSUKI,[§] ATSUSHI TSUNEKAWA,^{*} AND ZHAOWEN JIANG^{**}

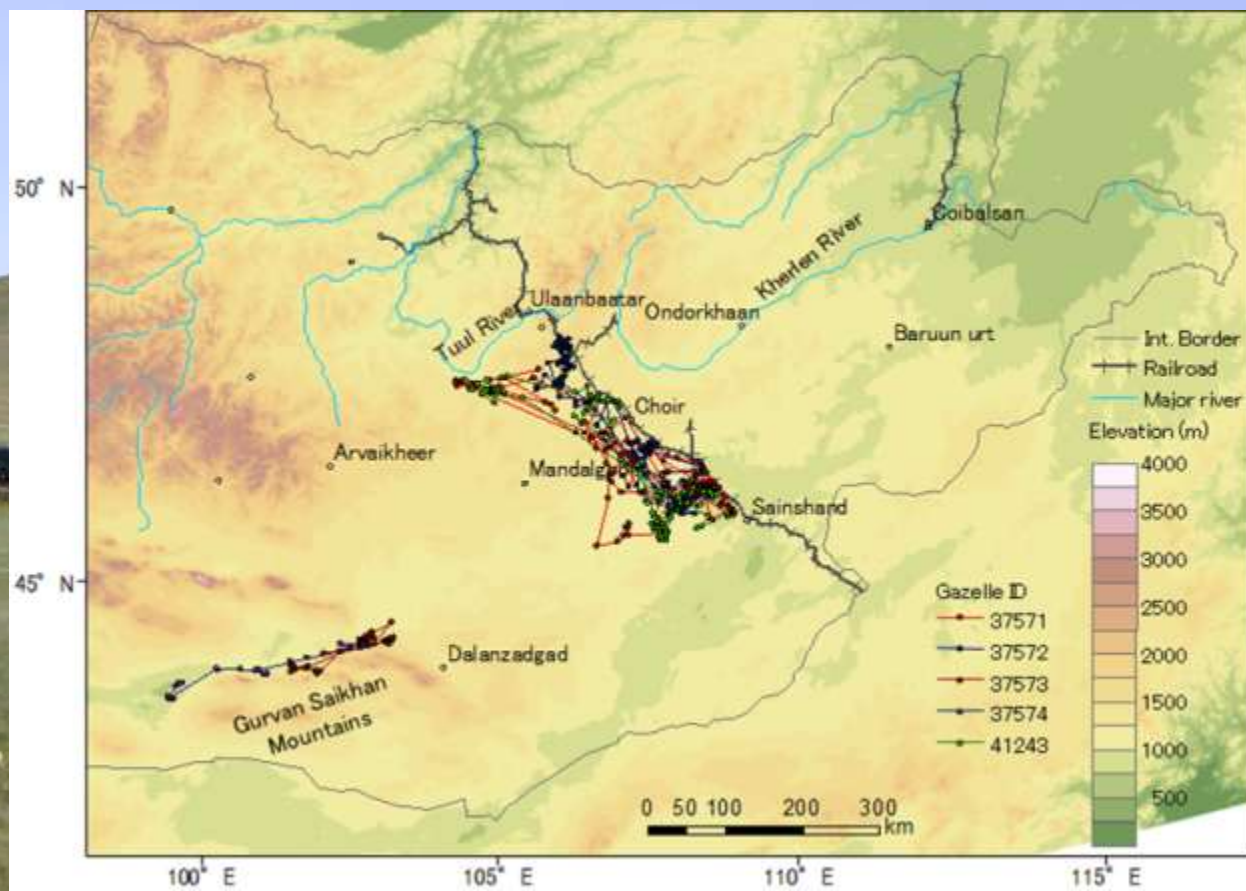


Conservation Biology
Volume 19, Issue 3, pages
945-948, June 2005

Fragmentation of the Habitat of Wild Ungulates by Anthropogenic Barriers in Mongolia



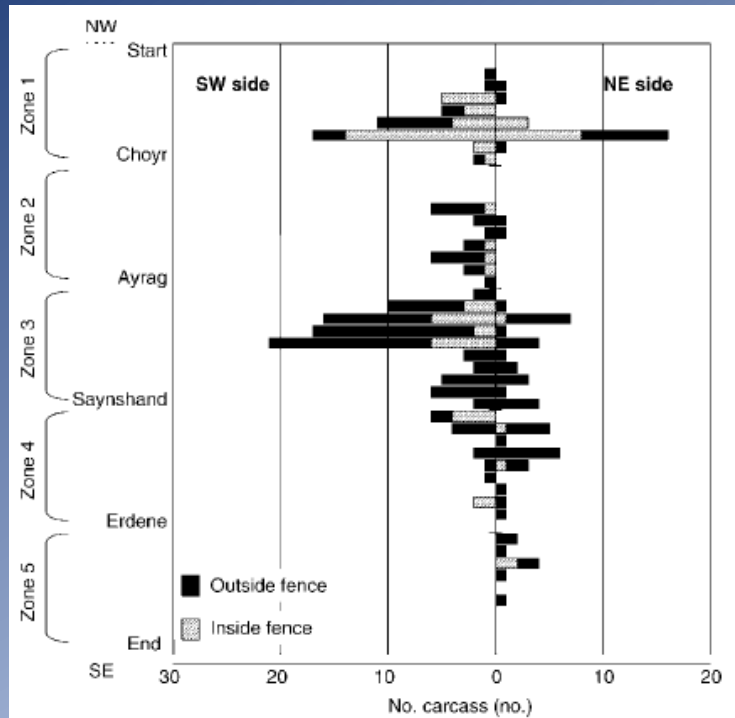
Takehiko Y. Ito^{1*}, Badamjav Lhagvasuren^{2,3}, Atsushi Tsunekawa¹, Masato Shinoda¹, Seiki Takatsuki⁴, Bayarbaatar Buuveibaatar^{2,5}, Buyanaa Chimeddorj^{2,3}



One-Sided Barrier Impact of an International Railroad on Mongolian Gazelles

Takehiko Y. Ito, Ayumi Okada, Bayarbaatar Buuveibaatar, Badamjav Lhagvasuren, Seiki Takatsuki, and Atsushi Tsunekawa

Journal of Wildlife Management May 2008 : Vol. 72, Issue 4, pg(s) 940-943 doi: 10.2193/2007-188



Genetic Structure of Mongolian Gazelle (*Procapra gutturosa*): The Effect of Railroad and Demographic Change

Ayumi Okada¹, Takehiko Y. Ito², Bayarbaatar Buuveibaatar^{3,4}, Badamjav Lhagvasuren^{3,5} and Atsushi Tsunekawa²

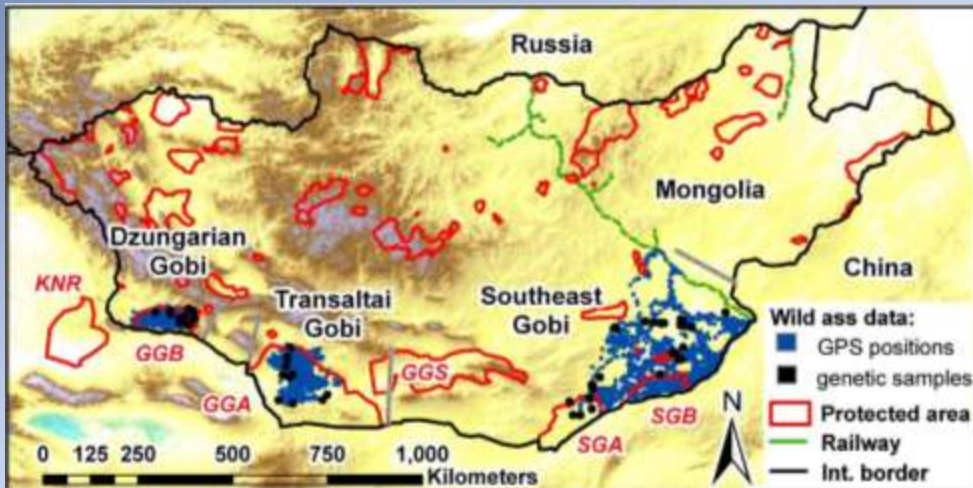
DISCUSSION PAPER



MONGOLIA

Room to Roam?
The Threat to Khulan (Wild Ass)
from Human Intrusion

September 2006



Contents lists available at ScienceDirect

Biological Conservation

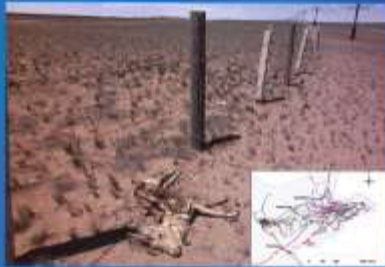
journal homepage: www.elsevier.com/locate/biocon

Connectivity of the Asiatic wild ass population in the Mongolian Gobi

Petra Kaczensky^{a,*}, Ralph Kuehn^b, Badamjav Lhagvasuren^{c,d}, Stephanie Pietsch^b, Weikang Yang^e, Chris Walzer^a



DISCUSSION PAPER



MONGOLIA

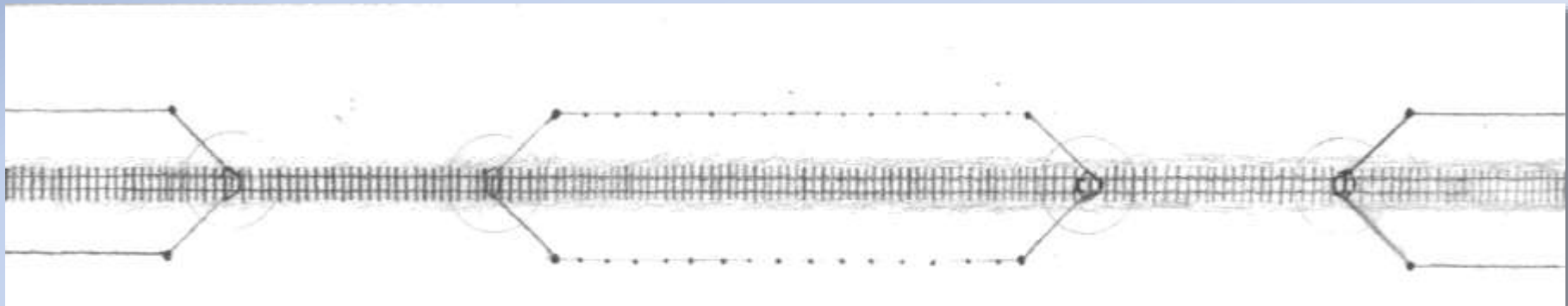
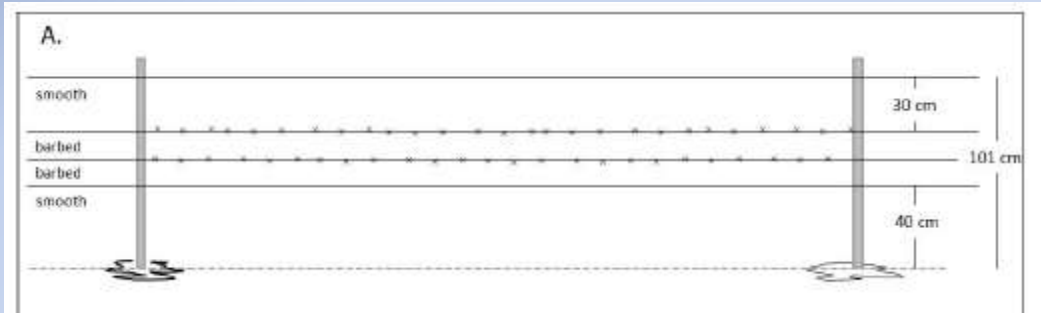
Wildlife Crossing Options
Along Existing and Planned
Mongolian Railway Corridors



Ministry of the Environment and Green Development of Mongolia



Ministry of Infrastructure and Transport of Mongolia







Conserving the World's Finest Grassland Amidst Ambitious National Development

NYAMSUREN BATSAIKHAN,⁴ BAYARBAATAR BUUVEIBAATAR,[†] BAZAAR CHIMED,[‡] OIDOV ENKHTUYA,[§] DAVAA GALBRAKH,[§] OYUNSAIKHAN GANBAATAR,^{*¶} BADAMJAV LKHAGVASUREN,^{**} DEJID NANDINTSETSEG,^{††} JOEL BERGER,^{‡‡§§} JUSTIN M. CALABRESE,^{¶¶} ANN E. EDWARDS,[‡] WILLIAM F. FAGAN,^{***} TODD K. FULLER,^{†††} MICHAEL HEINER,^{‡‡‡} TAKEHIKO Y. ITO,^{§§§} PETRA KACZENSKY,^{††} PETER LEIMGRUBER,^{¶¶} ANNA LUSHCHEKINA,^{¶¶¶} E.J. MILNER-GULLAND,^{****} THOMAS MUELLER,^{¶¶****†††} MARTYN G. MURRAY,^{¶¶††††§§§§} KIRK A. OLSON,^{§§§§} RICHARD READING,^{¶¶¶¶} GEORGE B. SCHALLER,^{§§****} ANNAGRET STUBBE,^{†††††} MICHAEL STUBBE,[†] CHRIS WALZER,^{††} HENRIK VON WEHRDEN,^{‡‡‡‡} AND TONY WHITTEN^{§§§§}

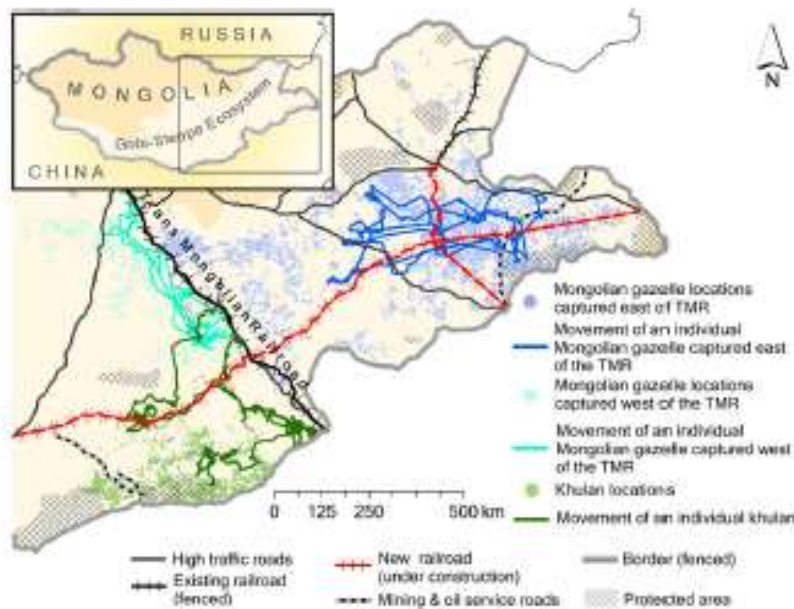


Figure 2. Locations of 61 Mongolian gazelles and 7 khulan (Kaczensky et al. 2011; Ito et al. 2013; Fleming et al. 2014) and movement pathways of 2 Mongolian gazelle and one khulan in the Gobi-Steppe Ecosystem.

WILDLIFE

Mongolian officials look to western Montana wildlife crossings as model

Recommend 130

Like 7


Share 16

Print Email









State policy on railways

The state policy on railways was adopted by the Great Hural of Mongolia in 2010.

The key elements are to:

- (i) Improve the legal environment and structure of the sector through the introduction of competition;
- (ii) Construct new lines which would either be majority state owned or under some form of concession (with ownership transferring back to the state after a certain period), their general alignment to be established by the state, and
- (iii) **Upgrade the capacity and technology of the existing UBTZ main line.**

ADB, 2014





Constitutional Arguments for Fence Removal and Redesign

Article 5 [Economy]

5) The livestock of the country is national wealth and subject to state protection.



Constitutional Arguments for Fence Removal and Redesign

Article 5 [Economy]

5) The livestock of the country is national wealth and subject to state protection.

Article 6 [Public wealth, Restrictions for foreigners]

1) The land, its subsoil, forests, water, fauna and flora and other natural resources in Mongolia shall belong exclusively to the people and be under State protection.

4) The State shall have the right to hold land owners responsible in connection with the manner the land is used, to exchange or take it over with compensation on the grounds of special public need, or confiscate the land if it is used in a manner adverse to the health of the population, the interests of environmental protection or national security.



Constitutional Arguments for Fence Removal and Redesign

Article 5 [Economy]

5) The livestock of the country is national wealth and subject to state protection.

Article 6 [Public wealth, Restrictions for foreigners]

1) The land, its subsoil, forests, water, fauna and flora and other natural resources in Mongolia shall belong exclusively to the people and be under State protection.

4) The State shall have the right to hold land owners responsible in connection with the manner the land is used, to exchange or take it over with compensation on the grounds of special public need, or confiscate the land if it is used in a manner adverse to the health of the population, the interests of environmental protection or national security.

Article 10 [Foreign policy, treaties]

2) Mongolia shall fulfill in good faith its obligations under international treaties to which it is a party.

3) The international treaty to which Mongolia is a party become effective as domestic legislation upon the entry into force of the laws on their ratification or their accession.

4) Mongolia may not abide by any international treaty or other instruments incompatible with its Constitution.



Constitutional Arguments for Fence Removal and Redesign

Article 5 [Economy]

5) The livestock of the country is national wealth and subject to state protection.

Article 6 [Public wealth, Restrictions for foreigners]

1) The land, its subsoil, forests, water, fauna and flora and other natural resources in Mongolia shall belong exclusively to the people and be under State protection.

4) The State shall have the right to hold land owners responsible in connection with the manner the land is used, to exchange or take it over with compensation on the grounds of special public need, or confiscate the land if it is used in a manner adverse to the health of the population, the interests of environmental protection or national security.

Article 10 [Foreign policy, treaties]

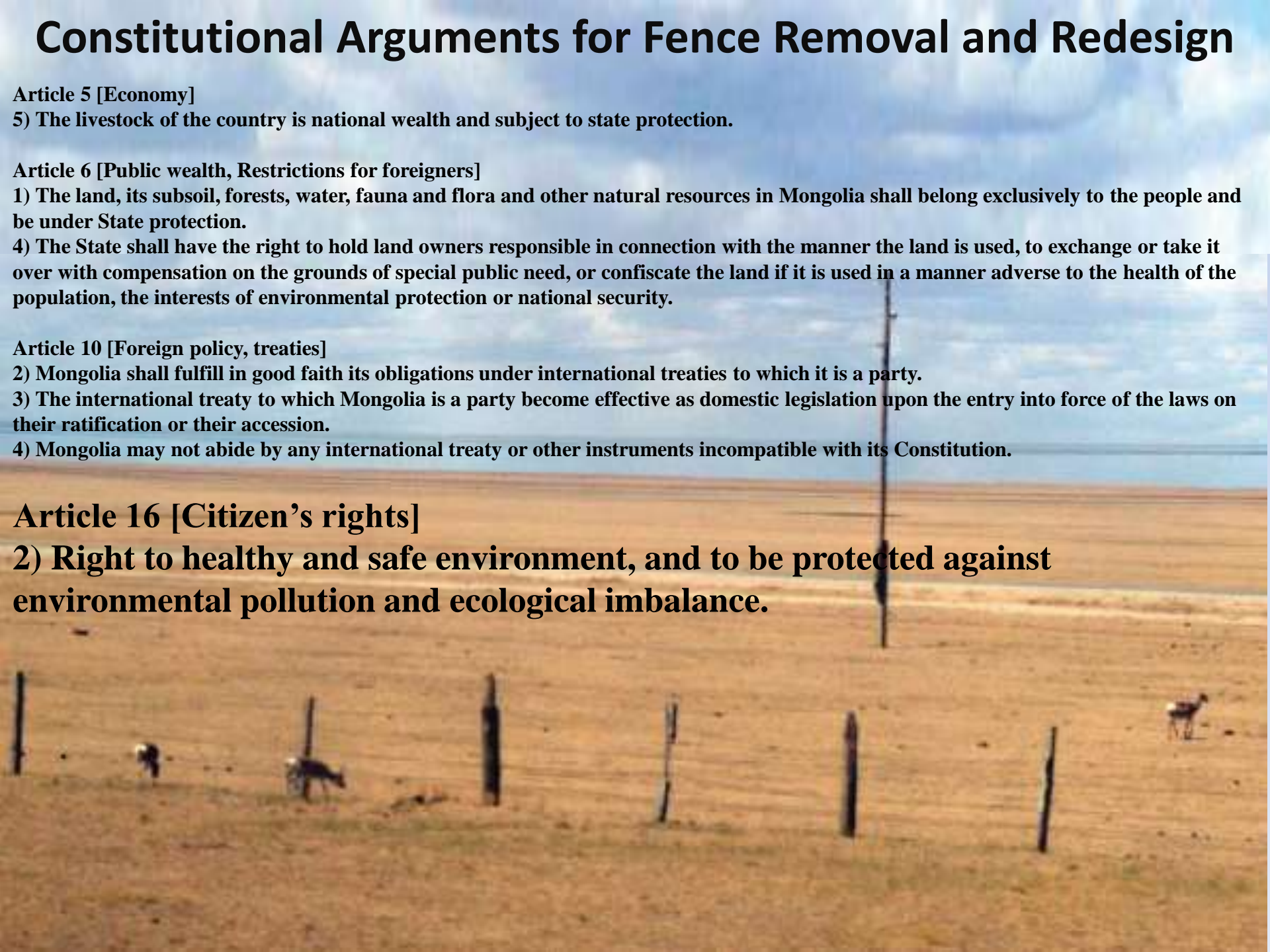
2) Mongolia shall fulfill in good faith its obligations under international treaties to which it is a party.

3) The international treaty to which Mongolia is a party become effective as domestic legislation upon the entry into force of the laws on their ratification or their accession.

4) Mongolia may not abide by any international treaty or other instruments incompatible with its Constitution.

Article 16 [Citizen's rights]

2) Right to healthy and safe environment, and to be protected against environmental pollution and ecological imbalance.



Constitutional Arguments for Fence Removal and Redesign

Article 5 [Economy]

5) The livestock of the country is national wealth and subject to state protection.

Article 6 [Public wealth, Restrictions for foreigners]

1) The land, its subsoil, forests, water, fauna and flora and other natural resources in Mongolia shall belong exclusively to the people and be under State protection.

4) The State shall have the right to hold land owners responsible in connection with the manner the land is used, to exchange or take it over with compensation on the grounds of special public need, or confiscate the land if it is used in a manner adverse to the health of the population, the interests of environmental protection or national security.

Article 10 [Foreign policy, treaties]

2) Mongolia shall fulfill in good faith its obligations under international treaties to which it is a party.

3) The international treaty to which Mongolia is a party become effective as domestic legislation upon the entry into force of the laws on their ratification or their accession.

4) Mongolia may not abide by any international treaty or other instruments incompatible with its Constitution.

Article 16 [Citizen's rights]

2) Right to healthy and safe environment, and to be protected against environmental pollution and ecological imbalance.

Article 17 [Citizens duties]

Citizens of Mongolia, while upholding justice and humanism, shall fulfill in good faith the following basic duties:

1) To respect and abide by the constitution and other laws

2) It is a sacred duty for every citizen to work, protect his/her health, bring up and educate his/her children and to protect nature and the environment.

Concluding thoughts

A photograph of a green field with a fence and several deer running across it. The fence is made of wooden posts and wire. The deer are running from left to right. The background is a clear blue sky.

What community awareness/outreach programs exist to build understanding and tolerance for fence redesign?

Do we know what the average annual fence maintenance costs are?

Are train delay events recorded (When, where, how long, how much)?

What are the current livestock collision statistics?

Are livestock/wildlife sightings recorded by train engineers?

Can fence maintenance be contracted to outside entities?

Can tariffs on trains be used to support payout and maintenance costs?

Are current monitoring efforts adequate?

END



Legal Framework of the Mongolian Railway Sector

The changing situation in the railway transportation sector necessitates

- (i) a change of the 1949 agreement between governments of the former Soviet Union and Mongolian People's Republic that currently regulates the activities of UBTZ, in accordance with the principles of market economy, the Constitution of Mongolia, and other related laws and regulations;
- (ii) implementation of the Railway Transportation Law, approved by the State Great Khural in 2007; and
- (iii) determination of future plans and policies.

The 1949 agreement contradicts the following provisions and principles of the Mongolian Constitution approved on 13 January 1992:

Article 1 paragraph 6.5 of the Constitution: *"Government can lend land to foreign citizens, legal bodies and non-citizens for a certain period of time for a certain fee and with other conditions set forth in the law."* This means UBTZ no longer has a monopoly in railways.

Article 1 paragraph 10.4: *"Mongolia will not abide by international agreements and other official documents that contradict this Constitution."*

Moreover, the 1949 agreement contradicts Article 6 paragraph 3 of the Addendum to the Constitution approved on 16 January 1992, which states, *"if international agreements of the former Mongolian People's Republic contradict the Constitution of Mongolia, the agreements need to be amended in accordance with internationally accepted methods, conditions and guidelines of that agreement before the end of 1993."*

Since 1991, these two new railway laws have been passed:

- (i) The Railway Transportation Safety Law, approved by Parliament in 1996, legalized the roles and obligations of public administration organizations in the railway transportation sector. This law was approved in order to regulate traffic safety.
- (ii) The Railway Transportation Law, approved in 2007, encourages competition and accepts all forms of ownership, thereby enabling new approaches to the development of the sector. For example,
 - Article 4 paragraph 4.1: *"This law regulates all railway transportation activities whatever the type and form of ownership."*
 - Article 5 paragraph 5.1.5: *"Create conditions for market competition."*

Tariff working group

A working group with advisory status should be created by the chair of the RMTPICD comprising 6-8 representatives from the line ministry, carriers, infrastructure managers, and private sector as per the provisions of the Railway Transportation Law of Mongolia. The chair of RMTPICD would also chair the working group's meetings.

The main objectives of the working group are to provide advice to RMTPICD management on decisions that will affect infrastructure managers and carriers and to represent the interests of consumers.

The Law on Concessions and Public-Private Partnerships

The Law on Concessions (2010) has created an opportunity to develop this form of public-private partnership (PPP). PPPs concern infrastructure or services that are funded and operated through a partnership between government and the private sector. Concessioning is when the government retains ownership of assets and transfers the right to use those assets to the private sector for a defined period. The concessionaire carries most commercial risks, although demand risks are sometimes shared with government.

The Law on Concessions was approved by the Grand Khural on 28 January 2010. The purpose of this law is to "regulate relations concerning the organization of tenders for granting to investors the rights of possession, operation, creation and renovation of state and locally own properties under concession agreements, the modification and termination of these agreements and the settlement of disputes." According to Anderson & Anderson LLP, this law is "very close to international standards," its principal weakness being its failure to provide for international arbitration for the settlement of disputes.¹

Article 21 of the Concessions Law concerns the right of the concessionaire to receive payment for allowing third parties to use the concession assets (21.1.3) and the obligation of the concessionaire to provide nondiscriminatory access, i.e., equal access to infrastructure for the same class of customers (21.1.11).

Between them, the Railway Transportation Law and the Law on Concessions have sufficient provisions to establish a legal environment for construction of future railway infrastructure with private sector funding. They are crucial in creating an opportunity for the future development of the railway network to enable mining products to reach the market by rail.