INVESTOR BRIEF · GRASSLAND DMRV · OCTOBER 2026

The Digital *Steppe*

Verified Tier 3 carbon assets from Mongolia's rangelands — measured, modelled and shared with the herders who restore them.

$3M	100,000 ha	24 months	+$2M
proof of concept	pilot scale	to verified credits	herder incentive fund

01 The problem

113 million hectares of Mongolian rangeland face green desertification. Restoration through rotational grazing works — but without credible, low-cost measurement it cannot be paid for, and herders carry the cost.

Carbon markets will fund restoration only when removals are **measured, not modelled from defaults**: Tier 3 data, independently verified.

02 The solution

- **Measure** — Maxar satellite imagery, multispectral drones, NaturaSpec Ultra soil spectrometry and LI-COR flux chambers, calibrated against physical samples by the NUM soil lab and the MAS Institute of Botany.
- **Process** — an edge-to-cloud pipeline on Google Vertex AI (Random Forest and Vision Transformer models) builds a real-time national soil-carbon database. No generic LLMs; Mongolia keeps data sovereignty.
- **Monetize** — credits packaged under an International Carbon Registry (ICR) Tier 3 methodology and reported by API to national and international registries.

03 Two zones, two value streams

Sequestration zone — Khentii, Tuv, Dundgovi and Dornod provinces. Rotational grazing restores soil carbon and generates verified credits for the voluntary market.

Conservation zone — Khustai National Park. Avoided-degradation monitoring feeds ecosystem data into Mongolia's NDC 3.0 and the Joint Crediting Mechanism with Japan.

04 Rights & integrity

Carbon credits and ITMOs remain the property of **landowners, herders and the State**. Technology and methodology IP sit with the project developer (Aerobotek / DX Mongolia); revenue flows back to the camps that practise rotational grazing.

ICR · Tier 3 — built for certification

ISO 14065 audit · third-party VVB · public comment

05 Why now

- 2026 UN Year of Rangelands and Pastoralists; UNCCD COP17 held in Ulaanbaatar (Aug 2026)
- Article 6 deals live: Japan (JCM), Switzerland, Singapore
- One methodology and platform for 113M ha of rangeland

The ask: fund the *$3M* proof of concept

Grant & blended finance

Fund the PoC build-out: sensors, drones, field campaigns, methodology and audit.

Development partners, climate funds, foundations, JCM programmes

Carbon pre-purchase

Commit to future verified credits from the pilot for early, predictable revenue.

Corporate buyers, carbon funds, Article 6 / JCM participants

Impact investment

Co-invest in the dMRV platform that can scale across Mongolia's rangelands and beyond.

Impact investors, climate-tech funds, strategic partners

06 Use of funds — $5M total

dMRV tech & AI Vertex AI, custom drones, NaturaSpec, LI-COR, API	**$900k**
Field data & operations 100,000 ha, satellite imagery, NUM / MAS labs	**$750k**
Methodology & audit VVB, ISO 14065, ICR fees	**$600k**
Project management & legal	**$450k**
Showcase, herder training, grazing pilots	**$300k**
Proof of concept	**$3.0M**
Herder incentive fund direct incentives & sustainable land management	$2.0M

07 24 months to verified credits

MONTHS 1–3

Technology & preparation

Field baseline mapping, drone sensing, Vertex AI pipeline; ICR concept note and ISO 14065 audit started.

SHOWCASE

Live debut

Public live demo of the dMRV system for partners, government and buyers.

MONTHS 4–12

Validation & live MRV

Third-party VVB audit, 30-day public comment, ICR Board Tier 3 approval, automated reporting.

MONTHS 13–24

Commercialization

Verified credit sales on ICR, revenue to herders, NDC 3.0 data handover to the government.

08 Alliance

DX Mongolia / Aerobotek
Project developer — dMRV architecture, AI, custom drones, ICR certification. Led by B. Tuguldur.

NUM Soil Laboratory
Soil baselines, sample validation, NaturaSpec calibration. Ts. Soyol-Erdene PhD.

Institute of Botany, MAS
Species classification, degradation baselines, restoration tracking. I. Tuvshintogtokh PhD.

Government & herder cooperatives
Mandate, land-use authorization and rotational grazing on the ground.

Unit economics: what 100,000 ha could earn

Three planning scenarios from published Mongolian rangeland research and current carbon prices. They are not a project estimate; the real figures come from the Tier 3 soil baseline, verification and buyer contracts.

	CONSERVATIVE	CENTRAL	UPSIDE
Removal rate (tCO_2e/ha/yr)	0.33	**0.55**	1.0
Buffer, uncertainty & leakage	30%	**25%**	15%
Credit price	$8/t	**$20/t**	$35/t
Verified credits / year	23,100 t	**41,250 t**	85,000 t
Gross value / year	$0.18M	**$0.83M**	$2.98M
To herders / year (60%)	**$0.11M**	**$0.50M**	**$1.79M**

09 Why the case rests on scale

At pilot size, credit income alone does not repay a $3M build. That is why the proof of concept is funded by grants and credit pre-purchases. Its output is a verified Tier 3 methodology and MRV platform that can be replicated. At **1 million hectares** the central case is about **$8.3M a year** in credit value. Mongolia has 113 million hectares of rangeland.

10 Basis for the assumptions

- **Removal rate:** 0.33 for rotational management in Mongolian rangelands (Land, 2026); 0.18–0.55 attainable on rangeland (Conant); 0.8–1.35 for reduced grazing in forest-steppe (Chang et al. 2015). The last two are cited in UNDP/FAO SCALA (2024).
- **Price:** about $6.7/t realised by Mongolia's PCCA Plan Vivo herder project (2021–22); about $21/t for nature-based removals (MSCI ARR index, 2025); $28–36/t for authorised Article 6 credits.
- **Herder share:** the PCCA project paid 70% to herders and 30% to its NGO manager. Kenya sets a 40% legal floor for land projects.
- **Deductions:** Verra's AFOLU buffer is at least 10%; soil-carbon uncertainty and displaced grazing add more.

11 Routes to buyers, open now

Singapore

Article 6 Implementation Agreement signed October 2025. Project applications open **30 October 2026**; Singapore carbon-tax payers may offset up to 5% of taxable emissions.

Switzerland

Bilateral agreement signed 21 November 2025. The KliK Foundation buys Mongolian ITMOs generated to 2030 at fixed prices.

Japan

JCM partner since 2013. Mongolia authorised its first ITMOs for transfer to Japan in July 2026.

Mongolia & ADB

National carbon registry procedure since June 2024; ADB–Government grassland carbon pilot launched December 2025.

Next step

Request the full investor deck, a briefing call, or a site visit to the pilot area.

info@dxmongolia.org

dxmongolia.org/steppe

DX Mongolia — Digital Transformation Supporting Association of Mongolia (NGO), Ulaanbaatar

Cover image: 3D model built from Copernicus DEM GLO-30 (© DLR e.V. 2010–2014 and © Airbus 2014–2018, provided under COPERNICUS by the European Union and ESA) and modified Copernicus Sentinel-2 data (2024). Budget and timeline figures are from the DX Mongolia Grassland dMRV proposal. Economics are planning scenarios from the cited public sources, not a project estimate; actual volumes and prices depend on the Tier 3 baseline, verification and contracts.