



The Digital *Steppe*

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

\$3M

proof of concept

100,000 ha

pilot scale

24 months

to verified credits

+\$2M

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

- UNCCD COP17 in Ulaanbaatar, Land Degradation Neutrality targets
- Paris Article 6.2 and the JCM with Japan
- 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			\$900k
Vertex AI, custom drones, NaturaSpec, LI-COR, API				
	Field data & operations			\$750k
100,000 ha, satellite imagery, NUM / MAS labs				
	Methodology & audit			\$600k
VVB, ISO 14065, ICR fees				
	Project management & legal			\$450k
	COP17 showcase, herder training, grazing pilots			\$300k
Proof of concept				\$3.0M
	Herder incentive fund			\$2.0M
direct incentives & sustainable land management				

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.

COP17

Live debut

Live showcase at UNCCD COP17 in Ulaanbaatar.

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.

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