



Technical Assistance Report

PUBLIC

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Transaction Technical Assistance (TRTA)
November 2022

Mongolia: Establishing a Digital Museum for Heritage, Livelihoods, and Tourism in Western Mongolia

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 2 November 2022)

Currency unit	–	Togrog (MNT)
MNT1.00	=	\$0.00029
\$1.00	=	MNT3,390

ABBREVIATIONS

ADB	–	Asian Development Bank
DTPC	–	Department of Tourism Policy Coordination
MET	–	Ministry of Environment and Tourism
O&M	–	operation and maintenance
TA	–	technical assistance
TSC	–	Tsenkher Cave
STDP2	–	Sustainable Tourism Development Project (Phase 2)

NOTE

In this report, "\$" refers to United States dollars.

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TRANSACTION TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 51422-004	
Project Name	Establishing a Digital Museum for Heritage, Livelihoods, and Tourism in Western Mongolia	Department/Division	EARD/EAER
Nature of Activity Modality	Capacity Development Regular	Executing Agency	Ministry of Environment and Tourism
Country	Mongolia		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
		Total	0.000
3. Operational Priorities		Climate Change Information	
✓ OP2: Accelerating progress in gender equality		GHG Reductions (tons per annum)	0
✓ OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		Climate Change impact on the Project	Low
✓ OP4: Making cities more livable		ADB Financing	
		Adaptation (\$ million)	0.000
		Mitigation (\$ million)	0.000
		Cofinancing	
		Adaptation (\$ million)	0.000
		Mitigation (\$ million)	0.000
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 1.b		Some gender elements (SGE)	✓
SDG 5.5, 5.b			
SDG 8.9		Poverty Targeting	
SDG 10.2		General Intervention on Poverty	✓
4. Risk Categorization	Low		
5. Safeguard Categorization	Safeguard Policy Statement does not apply		
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		0.000	
None		0.000	
Cofinancing		0.650	
High Level Technology Fund (Full ADB Administration)		0.650	
Counterpart		0.000	
None		0.000	
Total		0.650	
Currency of Financing: US Dollar			

I. THE ONGOING PROJECT

1. The transaction technical assistance (TA) will support the implementation of the Sustainable Tourism Development Project (Phase 2) (STDP2) in Mongolia. Developing Mongolia's tourism sector is a high priority under national recovery efforts to revitalize the economy following the coronavirus disease (COVID-19) pandemic. The STDP2 will support the development of tourism in three *aimags* (provinces) of western Mongolia—an area of national priority for economic development—focused on inclusive benefits for communities, nature-based solutions to protect wilderness and heritage values, and post-COVID-19 recovery and resilience. The STDP2 is aligned with the following impact: sustainable tourism development in Mongolia improved and diversified. The expected outcome of the STDP2 is sustainability and inclusiveness of tourism in western Mongolia increased. The STDP2 has four outputs: (i) inclusive planning and capacity for community-based tourism enhanced, (ii) enabling infrastructure constructed, (iii) sanitation and waste management improved, and (iv) management of cultural heritage sites and protected areas strengthened. The executing agency is the Ministry of Environment and Tourism (MET), acting through the Department of Tourism Policy Coordination (DTPC). The STDP2 is supported by a regular loan of \$30.0 million from the Asian Development Bank's (ADB) ordinary capital resources, and a grant of \$2.0 million from the Japan Fund for Prosperous and Resilient Asia and the Pacific.¹

II. THE TECHNICAL ASSISTANCE

A. Justification

2. The TA will support a key component under output 4 of the STDP2: establishing Mongolia's first digital museum for the conservation of rock art heritage, livelihoods, and tourism. The digital museum will include high-quality two- and three-dimensional virtual displays of the unique rock art of western Mongolia, including from a cave system—Tsenkher Cave (TSC)—in Khovd *aimag*; establish a digital inventory of rock art and other heritage sites; and develop an online platform to promote digital tourism based on heritage values. The digital museum will be housed within a visitor center in Khovd *aimag* to be constructed under the STDP2. The center, digital museum, and access to the TSC will be managed by the Khovd *aimag* government in collaboration with MET, through an integrated approach for operation and maintenance (O&M), entry fees, and guided visits to and protection of the TSC.²

3. The basic design and operationality of the digital museum will be achieved with part of the ADB loan financing for the STDP2, through one consulting services package (\$850,000) and one goods package (\$344,379). The loan financing will support the design, installation, testing and establishment of a digital rock art database, management information system, website for virtual tours and bookings, and procurement of basic start-up hardware and software (including servers and cables).³

¹ ADB. 2021. [Mongolia: Sustainable Tourism Development Project \(Phase 2\): Report and Recommendation of the President](#). Manila. Project components include the establishment of two visitor centers, two tourist streets and building the capacity of residents and the private sector for community-based tourism. The STDP2 was approved by ADB on 26 October 2021. The planned project duration is six years. Project effectiveness was scheduled for 2021 but was delayed due to domestic procedures. Domestic approval, project effectiveness and the first contract awards and disbursement have been rescheduled to Q4 2022–Q1 2023.

² Western Mongolia supports the richest and most well-preserved rock art (ancient images on rock) in northern Asia and the highest number of ethnic groups in Mongolia. The TSC contains Mongolia's oldest known cave paintings.

³ Establishment of the digital museum is included in the STDP2 design and monitoring framework under indicator 4b: *By 2027, digital museum is established, operational, and promotes rock art, education, and tourism* (footnote 1). The

4. The TA financing will address two additional areas of critical design priority for the digital museum: (i) developing real-time virtual links between the center, digital museum, and TSC with local tourism services, regional learning centers, youth groups, and online tourism portals—to directly support the promotion of local goods, services, and jobs—and establishing the business and contractual framework for O&M of the digital museum; and (ii) capacity building for O&M of these functions. To achieve this, the TA will fund the provision of specialized services and goods for “industry 4.0 technology” i.e., the use of advanced programming and hardware to link and automate the operational lifecycle of the digital museum, including ticket sales and online bookings, maintaining the rock art database, automated performance monitoring, and issuance of progress reports. These functions will strengthen the operational performance, efficiency and user-friendliness of the digital museum and minimize O&M costs. The tasks supported by the TA are not included under the loan as they require specialized services for innovation, testing, and higher upfront costs and international expertise at the design stage.⁴

B. Outputs and Activities

5. **Output 1: Detailed design and O&M arrangements for digital museum supported.** This output will: (i) identify the potential to automate each stage of the digital museum lifecycle developed under the loan; (ii) design and establish an aggregator platform for virtual links between the digital museum with local tourism providers in western Mongolia (focusing especially on youth groups and micro, small, and medium-sized enterprises) and existing national tourism websites, to maximize the promotion of local goods and services and global public access to the digital museum.⁵ This will potentially include establishing virtual links with a regional tourism web portal for central Asia that is under preparation with ADB support;⁶ (iii) design a participatory program to link the digital museum with information technology graduates from local academic institutions; (iv) apply industry 4.0 programming to automate the O&M functions of the digital museum; (v) include functions to monitor public visibility and usage of the digital museum; (vi) design and finalize the policy and legal framework for the digital museum, including billing and booking systems and contractual arrangements with other online portals and service providers; and (vii) review and test all functions for the digital museum supported by the TA and loan and ensure they are ready for handover and operation.

6. **Output 2: Capacity for O&M of digital museum established.** Operation of the digital museum will require additional hardware and software necessary to achieve the functions under output 1 and adequate capacity of staff tasked with O&M. Output 2 will: (i) identify and procure the specialized hardware and software required to achieve the functions under output 1, and which will complement the basic start-up goods procured under the loan; (ii) identify the staff positions responsible for O&M of the technology, contractual and policy functions established under the TA, and prepare the terms of reference of these positions; (iii) assess the potential for the private sector to be involved in O&M of the digital museum; (iv) contribute detailed input to an O&M manual for the digital museum (to be prepared with the loan-financed consulting services)—including roles and responsibilities of agencies and staff positions, procedures for O&M, data entry, and costs and funding sources for the TA-financed components; (v) design and implement

loan financing for the digital museum is under consulting services (CS) package CS4 and goods (G) package G4. Terms of reference for CS4 and details of both packages are in the STDP2 [Project Administration Manual](#).

⁴ The TA first appeared in the business opportunities section of ADB’s website on 26 August 2022.

⁵ An aggregator platform is a web-based platform that consolidates different services and enterprises to strengthen digital marketing and e-commerce for a targeted sector. This will strengthen the ability of local tourism enterprises in western Mongolia to advertise and manage their services under an organized online framework.

⁶ ADB. 2019. [Regional: Sustainable Tourism Development in the Central Asia Regional Economic Cooperation Region](#). Manila. A web portal (VisitiSilkroad.org and visitsilkroad.com) is under preparation.

a participatory and gender-inclusive training program for relevant local agencies to ensure efficient handover of the digital museum, O&M, and for post-handover support; and (vi) prepare a brief knowledge product about the TA results and lessons.

7. The combined result of the TA- and loan-financed support will be a fully operational digital museum that encompasses best-practice international programming, software, and hardware. The TA- and loan-financed consulting services will be recruited in parallel and will work in coordination throughout conceptualization, design, installation, testing, capacity building, and handover to the government. Performance targets will be applied to ensure that the digital museum is operational and that the relevant agencies responsible for O&M of the digital museum have sufficient capacity to undertake their assigned roles. The TA is aligned with the design and monitoring framework of the STDP2, which includes a performance indicator for establishment of the digital museum (footnote 3).

8. **Promoting innovation, knowledge, and regional collaboration.** The digital museum will be the first of its kind for Mongolia. The TA funding will apply high-level technology to achieve the design of a powerful and innovative digital tool that: (i) represents a significant new tourism resource for Mongolia and which responds to increasing global demand for virtual tourism, (ii) is less vulnerable to economic shocks (e.g., from future pandemics and other factors causing declines in visitor numbers), (iii) supports livelihoods through the promotion of local goods and services, and (iv) enhances the protection of heritage sites. The TA complements the efforts of other development partners and donors to support rural livelihoods and environmental protection in western Mongolia, but which do not include the development of digital tourism resources. The digital museum will be designed in collaboration with national heritage experts, to ensure that cultural and heritage values are presented respectfully and to maximize education potential. The TA modality is appropriate for delivering the additional technology services to establish the digital museum; and reflects the added value of ADB support by facilitating a tailored approach which integrates technology, livelihoods, tourism, and capacity building. The TA builds on a growing platform of ADB support for the use of information technology and digital resources for Mongolia, including improved customs automation at border crossings and national databases for social services, state registries and the management of hazardous chemicals.⁷

9. The TA also contributes to the strategic pillars of the ADB-supported Central Asia Regional Economic Cooperation Tourism Strategy 2030, and its associated regional tourism investment framework, 2020–2025.⁸ The strategic pillars of the strategy emphasize the need for crosscutting support for digital technology, and ADB support is underway to develop a regional tourism web portal (footnote 6). The TA- and loan-financed preparation of the digital museum will be undertaken in coordination with this parallel work to ensure leverage and scaling up. Progress and lessons from the TA will be disseminated in TA inception, midterm, and final workshops and reports during implementation; presentations to regional stakeholders at the annual meetings of the Central Asia Regional Economic Cooperation tourism working group; and as a knowledge product. The TA will also exchange lessons and information with similar initiatives e.g., preparation for an ADB-supported digital museum which is in underway in Uzbekistan.⁹

⁷ ADB. [Mongolia: Regional Improvement of Border Services Project](#); ADB. [Mongolia: Improved Registry System to Strengthen the Delivery of Social Services](#); ADB. [Mongolia: Developing an Information System for Development Policy and Planning](#); and ADB. [Mongolia: Improving the Management of Hazardous Chemicals](#).

⁸ ADB. 2020. *CAREC Tourism Strategy 2030*. Manila. CAREC is a partnership of 11 countries working to promote regional development. The strategy aims to promote sustainable, safe, and inclusive tourism development.

⁹ ADB. [Uzbekistan: Integrated Urban Development Project](#).

C. Cost and Financing

10. The TA financing amount is \$650,000, which will be financed on a grant basis by the High-Level Technology Fund¹⁰ and administered by ADB. The key expenditure items are listed in Appendix 1. The following are ineligible expenditures: (i) purchase of vehicles, (ii) salaries for civil servants, (iii) foreign travel, (iv) scholarships or long internships, (v) detailed engineering designs, (vi) civil works and other related expenses, and (vii) activities under ADB's List of Ineligible Items (or Negative List) and Prohibited Investment Activities List.¹¹

11. The government will provide counterpart support in the form of a steering committee to coordinate TA implementation, counterpart staff (remuneration and per diems) and their transportation, available relevant government data and studies for the TA consultants' use, and other in-kind contributions.

D. Implementation Arrangements

12. ADB will administer the TA. The Environment, Natural Resources and Agriculture Division of the East Asia Department will select, supervise, and evaluate consultants; organize workshops; facilitate ADB staff to act as resource persons for workshops; and manage the TA finances. The MET, acting through the DTPC, will provide oversight and guidance for the TA implementation. The Director General of the DTPC will serve as the project director. The DTPC will be the main contact point for ADB and the TA consultants. For the associated loan, the MET, through the DTPC, will establish (i) a multisector steering committee chaired by the MET, which will include *aimag*-level focal points; and (ii) a project implementation unit, which will lead the daily coordination of project activities including facilitation of meetings, site visits, stakeholder consultations, and government review of the draft project designs. The roles of these entities will be expanded to include support and coordination for the TA, particularly to ensure coordination with the loan-financed consulting services for the digital museum.

13. Implementation arrangements are summarized in Table 1.

Table 1: Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	November 2022–December 2025		
Executing agency	Ministry of Environment and Tourism		
Implementing agency	Department of Tourism Policy Coordination		
Consultants	To be selected and engaged by ADB		
	Firm: Quality- and cost-based (90:10)	Consulting firm (simplified technical proposal with output-based contract)	\$640,000
Procurement	To be procured by the consulting firm		
	Request for quotation for goods (software and hardware)	One or multiple contracts	\$191,123
Disbursement	Disbursement of TA resources will follow ADB's <i>Technical Assistance Disbursement Handbook</i> (2020, as amended from time to time).		
Asset turnover or disposal arrangement upon TA completion	Hardware and software procured will be installed by the consultant firm and handed over to the executing agency at TA completion.		

ADB = Asian Development Bank, TA = technical assistance.
Source: ADB.

¹⁰ Financing partner: the Government of Japan. The funding was approved on 21 September 2021.

¹¹ ADB. 2011. *Cost Sharing and Expenditure Eligibility: Policy Implementation Review*. Manila.

14. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.¹² The TA requires a minimum of 11.5 person-months of international consulting inputs and 18.0 person-months of national consulting inputs. A firm will be engaged using the quality- and cost-based selection method, with a quality-cost ratio of 90:10 due to the technical complexity of the assignment, by inviting simplified technical proposals. The contract will be output-based, for efficient contract management and to provide flexibility for the mobilization of additional experts if needed to achieve the TA deliverables. The firm will submit progress reports, which will be reviewed by ADB and the government. All reports will be available in English and Mongolian languages. Resource persons may be invited to review the consultants' outputs and share knowledge during workshops and conferences. The firm will procure the goods.

15. **ADB's procurement.** Procurement will follow the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.

16. **Cofinancier requirements.** The TA will comply with the guidelines of the High-Level Technology Fund. This will include the provision of quarterly updates on implementation progress; notification of TA-funded advertisement and procurement of goods; and provision of the TA reports, knowledge product, and any other outputs arising from the TA.

17. **Sustainability.** The TA and loan-financed consulting services will (i) establish a fully functional digital museum and operational capacity within the Khovd *aimag* government and other key agencies, and (ii) provide post-delivery technical support and follow-up training for the remainder of the TA. The opportunity to involve the private sector for O&M of the digital museum will be assessed under output 2 (para. 6). The MET has also confirmed that the government will cover the costs for O&M of the digital museum after TA completion, including maintaining the servers, internet connections, and salaries.

III. THE PRESIDENT'S DECISION

18. The President, acting under the authority delegated by the Board, has approved the Asian Development Bank administering technical assistance not exceeding the equivalent of \$650,000 to the Government of Mongolia to be financed on a grant basis by the High-Level Technology Fund for the Establishing a Digital Museum for Heritage, Livelihoods and Tourism in Western Mongolia Project, and hereby reports this action to the Board.

¹² Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 2).

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount
High-Level Technology Fund^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	234.9
ii. National consultants	132.6
b. Out-of-pocket expenditures	
i. International and local travel	17.7
ii. Goods (purchase) ^b	191.1
iii. Training, seminars, and conferences ^c	32.5
iv. Reports and communications ^d	5.3
v. Miscellaneous administration and support costs ^e	5.0
2. Contingencies	30.9
Total	650.0

Note: The technical assistance (TA) is estimated to cost \$700,000, of which contributions from the High-Level Technology Fund are presented in the table. The government will provide counterpart support in the form of a steering committee to coordinate TA implementation, counterpart staff, available relevant government data and studies for the TA consultants' use, and other in-kind contributions. The value of the government contribution is estimated to account for 7.1% of the total TA cost.

^a Financing partner: the Government of Japan. Administered by the Asian Development Bank.

^b Equipment will be handed over to the Ministry of Environment and Tourism upon completion of TA activities, and is anticipated to include software (management information system, financial-and-technical systems management, and processing software for large amounts of high-resolution images) budgeted at about \$104,099 and hardware (including hard drives, virtual reality gadgets, internet of things sensors and 10 drones) budgeted at about \$87,024.

^c Consultants will administer training, seminars, and conferences in Ulaanbaatar (the national capital) and/or Khovd *aimag*, Mongolia, including stakeholder consultation and training workshops and inception, interim, and final workshops. These costs may include translation and interpretation services and representation costs, such as food and beverages.

^d Includes printing of the Mongolian-language versions of the TA final report (about 30 copies) and knowledge product (anticipated to be an article of policy brief) (about 50 copies). The printing of the Mongolian-language versions of these deliverables will facilitate knowledge dissemination to domestic agencies. The English-language versions of the TA reports and knowledge materials will be disseminated in electronic format.

^e Miscellaneous administration and support costs include general operating costs, translation of TA reports, office telephone, internet, electricity, and water.

Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=51422-004-TARreport>

1. Terms of Reference for Consultants
2. Approved Report and Recommendation of the President