



Completion Report

PUBLIC

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Mongolia: Strengthening Capacity on Disaster Risk Assessment, Reduction, and Transfer Instruments in Mongolia

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TECHNICAL ASSISTANCE COMPLETION REPORT

TA Number, Country, and Name: TA 9880-MON: Strengthening Capacity on Disaster Risk Assessment, Reduction, and Transfer Instruments in Mongolia		Amount Approved: \$2,000,000	
		Revised Amount: \$2,300,000	
Executing Agency: National Emergency Management Agency	Source of Funding: Japan Fund for Prosperous and Resilient Asia and the Pacific for \$2,000,000 High-Level Technology Fund for \$300,000	Amount Undisbursed: \$10,005.17	Amount Used: \$2,289,994.83
TA Approval Date: 2 December 2019	TA Signing Date: 17 April 2020	TA Completion Date	
		Original Date: 30 April 2022	Latest Revised Date: 30 September 2024
		Financial Closing Date: 6 December 2024	Number of Extensions: 6
TA Type: Knowledge and support TA	Nature of Activity: Capacity development	TA Arrangement: Regular	

Description

The technical assistance (TA) aimed to help the National Emergency Management Agency (NEMA) of Mongolia to develop the legal, policy, and institutional frameworks needed to strengthen disaster risk assessments and promote disaster risk reduction (DRR) and disaster risk financing and insurance (DRFI) in Mongolia. The TA intended to improve the capacity and ability of NEMA, ministries, local government officials, and communities to understand and better plan for disaster risks and respond to disasters. The knowledge and outputs generated through the TA were expected to provide evidence-based policy recommendations and draft strategic priorities for disaster risk financing as a key financial risk management tool.

Mongolia is extremely vulnerable to natural and geophysical hazards because of its geographical location, poorly developed infrastructure, persistent poverty, limited institutional capacity, and continental climate that directly influences the nature, scale, and frequency of hazards experienced. The country experiences over 3,000 small to medium-scale disasters each year, posing serious setbacks to the country's social and economic sustainable development.¹ The toll of disasters has been significant: during 2004–2013, disasters and hazardous phenomena caused about \$321 million of damages and losses.² Over the same period, the government spent a total of \$16 million—from central and local government

¹ Natural hazards common in Mongolia include droughts, *dzud* (extreme winter weather conditions), dust and snowstorms, whirlwinds, desertification, thunderstorms, heavy rains, floods, earthquake, and human and animal infectious diseases. Artificial and technological hazards include forest and steppe fires, aircraft crashes, ice break of rivers and lakes, mine explosions and underground collapse, chemical hazards and toxic substances, building fires, and major traffic accidents.

² NEMA. 2017. Strengthening the Capacity of Disaster Risk Transfer and Development of Disaster Risk Insurance System in Mongolia.

resources and respective ministerial budgets and donations—for disaster response and recovery activities. To support Mongolia’s sustainable socioeconomic development, there was a significant need for Mongolia to strengthen its disaster risk management (DRM) system. This required a comprehensive approach to DRM, based on a more holistic approach, which includes DRFI, emphasizing DRR, and coupling structural and nonstructural actions, as well as strengthening disaster preparedness and emergency response.

Laws and policies predominantly focused on disaster preparedness and emergency response, but did not adequately cover disaster risk reduction, financing, or insurance. It was important to strengthen DRR strategies that include identifying risks and hazards, increasing awareness about the impact of those risks, planning for them, making resources (including financial) available to implement plans, and integrating all these elements into the development agenda and plans.

Expected Impact, Outcome, and Outputs

The TA was aligned with the following impact: Mongolia’s resilience to and national capacity to cope with disasters enhanced (Mongolia Sustainable Development Vision 2030).³ The expected outcome was: DRM mechanisms and governance at the national and local levels strengthened. The expected outputs were: (i) disaster risk assessments enhanced; (ii) disaster risk reduction planning enhanced; (iii) financial resilience policies and best practices recommended; and (iv) institutional, technical and management capacity strengthened.

Implementation Arrangements

The Asian Development Bank (ADB) administered and coordinated implementation of the TA through its East Asia Department and Agriculture, Food, Nature, and Rural Development Sector Office and worked closely with NEMA as the executing agency, and the Department of Disaster Risk Management as the implementing agency.

A consulting firm (ICEM Asia) was engaged to support TA implementation from 1 September 2020 to 30 September 2024. The consultant’s reports (inception, interim, and final reports) were submitted to ADB and NEMA and were discussed during TA review missions. Comments and suggestions received from ADB and NEMA were incorporated into the revised and final reports.

The first extension of the TA completion date by 6 months from 30 April 2022 to 31 October 2022 was approved on 27 January 2022 to address delays in TA implementation caused by coronavirus disease (COVID-19) pandemic restrictions. The second extension from 31 October 2022 to 30 April 2023 was approved on 19 July 2022 to address delay in output 3 progress and the development of a national disaster risk financing strategy. The third extension from 30 April 2023 to 31 October 2023 was approved on 30 March 2023 for the completion of the disaster risk financing strategy and necessary critical in-country consultations.

Increase in TA amount by \$300,000, financed on a grant basis by the High-Level Technology (HLT) Fund⁴ and corresponding changes in TA scope and implementation arrangements with fourth extension of the TA completion date from 31 October 2023 to 31 December 2023 were approved on 23 June 2023. The fifth extension from 31 December 2023 to 31 March 2024 was approved on 24 November 2023 for the completion of additional tasks and activities of the HLT component, particularly on data processing and modeling, due to the delay in delivery of the HLT pilot equipment. Finally, the sixth extension from 31 March 2024 to 30 September 2024 was approved on 26 February 2024 to complete the remaining knowledge/TA results dissemination activities.

³ State Great Khural of Mongolia. 2016. Mongolia Sustainable Development Vision 2030.

⁴ Financing partner: the Government of Japan. Administered by Asian Development Bank.

Conduct of Activities

TA review missions were conducted as follows: (i) inception mission on 9–10 November 2020; (ii) first interim review mission on 10–12 November 2021; (iii) second interim review mission on 13–19 April 2022; and (iv) final review mission on 6 March 2024. Details of activities per output are described below.

Output 1: Disaster risk assessments enhanced. In August 2021, the following activities were completed: (i) review of existing processes for multi-hazard risk assessments, including data requirements, legislation and policy frameworks, challenges, and constraints; (ii) institutional map which articulated (a) the roles of various ministries, departments, and agencies in pre- and post-disaster risk assessment, information management, planning and implementation; and (b) their relationship with sector and geographic (national to local level) agencies, and with recommendations for institutional strengthening and capacity building and awareness raising; (iii) a proposal on improved and new tools, data, analytical and modeling approaches, and methodology for multi-hazard disaster risk assessment – training program on guidelines for implementation was completed in November 2022. Detailed multi-hazard risk assessments at national and selected local level project sites were conducted in February 2024. On the pilot study for drone-based Light Detection and Ranging (LiDAR) technology, the following tasks were completed: (i) procurement of equipment and system awarded in October 2023; (ii) data collection and development of high-resolution digital elevation models completed in November 2023; and (iii) data analysis done in February 2024.

Output 2: Disaster risk reduction planning enhanced. Assessment report with recommendations on existing three step process for DRR planning (prevention and risk reduction, response and recovery, and reconstruction) and post-disaster impact assessment was completed in March 2022 and updated in July 2022. Mapping and assessment of high-level technology options for disaster risk assessment, DRR planning, and DRF were conducted with more than 20 technologies identified and assessed for impact, innovativeness, scalability, value for money, local partnerships, and risk mitigation. Guidelines to mainstream DRR, including the use of multi-hazard disaster risk assessment outputs (from output 1) and incorporating post-disaster impact assessment results, were completed in July 2023. Consultation with stakeholders and training program to raise awareness about disaster risks; assess risk profiles and coping strategies and DRR planning processes were conducted in November 2022 and reports completed in May 2023.

Output 3: Financial resilience policies and best practices recommended. Assessment on the current and past practice and experience with disaster risk financing and recommendation of opportunities for enhancement was completed in July 2021. Case studies were conducted in October 2021 on best practices based on national and international experiences, addressing and safeguarding against disaster risks through insurance programs, insurance products, marketing mechanisms, use of high-level technology, and the use of subsidies or complementary programs by governments. The disaster insurance sector was reviewed in July 2023. The proposed DRR financial risk management strategy and action plan were submitted in August 2023, in coordination with the Ministry of Finance. Recommendations to promote disaster risk insurance were provided in August 2023. Policy briefs, rationale, and supporting documents, including social and economic impact assessments, and a draft disaster risk insurance law were prepared in January 2024.

Output 4: Institutional, technical and management capacity strengthened. Under this output, capacity building and training activities were conducted. Training programs and materials were developed from the results of DRM assessments for outputs 1 to 3 and succeeding training sessions were conducted to raise awareness and understanding about the improved methodologies and approaches proposed by the TA. DRF training was also conducted in May and September 2021 with participants from the private and public sectors which aimed to enhance understanding on how the public and private sector can address risk, including opportunities for developing public–private partnerships to integrate an approach to disaster risk reduction, financing, and insurance and to promote understanding and uptake of the proposed revisions to regulatory and legal frameworks required to support improved DRR and DRFI implementation.

Japanese visibility. Guidelines for donor visibility were complied with, and project-funded goods, materials, workshops, and reports featured the logos of the JFPR and the Government of Japan. During project missions, workshops, and presentations, ADB and government agencies acknowledged the JFPR support. Representatives from the Embassy of Japan, the JFPR, and the Japan International Cooperation Agency (JICA) were invited to participate as observers in project events such as trainings and in the project completion workshop. Details can be found in the TA consultants' final report.

Technical Assistance Assessment Ratings

Criterion	Assessment	Rating
Relevance	The TA was highly relevant. The TA outcome, <i>DRM mechanisms and governance at the national and local levels strengthened</i>, was aligned well with the Mongolia Sustainable Development Vision 2030, which aims to establish national capacity to cope with climate change and strengthen the system to reduce disaster risks, and the project was consistent with the Midterm Strategy to Implement the Sendai Framework for Disaster Risk Reduction (2017–2030). The project was also strategically aligned with the ADB's Strategy 2030 operational priority for tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability, and operational plans: the Climate Change Operational Framework, 2017–2030. The TA design was appropriate for achieving the intended outcomes, and the indicators and targets at various levels were logical, clear, and measurable. The TA results were disseminated through reports, TA workshops, and media releases by ADB and NEMA. Outputs and activities from the TA were coordinated through output 4 to ensure multi-sector awareness raising, stakeholder engagement, and mainstreaming of the intended outputs.	Relevant
Effectiveness	The expected outputs were delivered with high quality. The TA produced numerous outputs that will contribute to and complement the various activities for the government in the future, including the new loan project under preparation focusing on establishing an integrated multi-hazard early warning system. In addition, the capacities of NEMA as well as the provincial	Effective

Criterion	Assessment	Rating
	emergency agencies were enhanced especially in the areas of disaster risk assessment, planning and mainstreaming methodologies, and the applications of technologies such as GIS analysis and drone-based LiDAR technology for conducting flood and other analyses.	
Efficiency	The multiple extensions of the project for more than 2 years were justified as the consultants were unable to travel due to COVID-19 pandemic travel restrictions as well as the delays in procurement of equipment from overseas, which delayed the work substantially. Once the borders were open, the work was conducted very well. The project generated important technical benefits, as this project led to improvements in disaster risk reduction and management. All project activities were completed using the allocated budget, utilizing 99.6% of the total TA budget (JFPR 99.5%, and HLT Fund 100.0%).	Less than efficient
Overall Assessment	The project will be complementary to the new loan project that is being processed in Mongolia. The project was highly relevant to the national policy on disaster risk management. All outputs were delivered within the budget, and the project was conducted efficiently despite the delays due to the travel restrictions during COVID-19 pandemic. Based on the above ratings, the project was highly successful.	Successful
Sustainability	The project was intended to establish a self-sustaining capacity within NEMA to replicate the activities conducted throughout the project. The project demonstrated how to improve the operations of NEMA, and it is likely for NEMA to maintain the activities by themselves. The equipment and skills that were procured and acquired under the project continue to be utilized and can last for several years.	Likely sustainable

Lessons Learned and Recommendations

Design and/or planning	Continuous discussions with and participation of the executing agency during the design stage of the TA is crucial to instill strong ownership of the TA.
Implementation and/or delivery	Close communication with both the executing agency and the consultant team is crucial for the TA's success. Ultimately, the executing agency will implement similar activities as in the project; therefore, their consistent and active participation from the beginning is very important. Frequent personnel changes could constrain smooth implementation.
Management of staff and consultants	After the project is completed, the staff of the executing agency will implement similar activities; therefore, strong ownership by the executing agency is crucial to maintaining their momentum. Similarly, consultants must feel that they are contributing to the overall national goals, and their services are valued by the clients.
Knowledge building	Project experiences and lessons were disseminated through the website of the executing agency, the project's social media site, local newspapers, photographs, and video. More than 500 hazard maps and LiDAR drone demonstrations were showcased during the multiple events for this project.

Stakeholder participation	Constructive discussions among executing and implementing agencies, experts, and other government agencies in the form of workshops could help maximize the TA value addition by addressing the country's needs and challenges. The personnel from the executing agency (NEMA) were actively involved in all the sessions, including the workshops in provinces.
Partnership and cofinancing	Trust funds and cofinancing such as JFPR and HLT Fund could play a crucial role in supporting knowledge and high-level technology transfer. It would have been more meaningful if more knowledge and technology transfer were done by the companies from donor countries that face similar types of hazards.
Replication and/or scaling up	All the hazard maps created through this project will be shared with the other national and <i>aimag</i> (provincial) agencies for different purposes. NEMA could update these maps in the future as well. Also, the technologies and skills introduced in this project such as GIS analytical skills, drone technologies, and new types of analysis using technologies such as drones could be replicated within NEMA as well as in other cities and provinces.
Post-TA financial resource	This TA project complements with the new ADB loan project being prepared that aims to establish multi-hazard early warning systems in Mongolia.

Follow-Up Actions

No follow-up action is needed. A new loan project focusing on establishing multi-hazard early warning system is in Mongolia's pipeline for 2025.
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DESIGN AND MONITORING FRAMEWORK

Impact the TA is Aligned with Mongolia's resilience to and national capacity to cope with disasters enhanced (Mongolia Sustainable Development Vision 2030) ^a		
Results Chain	Performance Indicators with Targets and Baselines	Achievements
Outcome DRM mechanisms and governance at the national and local levels strengthened.	By 2023: a. National disaster risk financing and insurance strategy submitted by NEMA to the Government of Mongolia (2019 baseline: not formulated) (RFI A) b. Proposed legal and regulatory framework using TA recommendations submitted by NEMA to the Government of Mongolia for passage into law (2019 baseline: not formulated) (RFI A)	a. Partially achieved. Strategic Priorities on DRF in Mongolia prepared in August 2023, accepted by NEMA, but not endorsed by the Government. The DRF action plan was cancelled, in agreement with ADB, due to delays in Output 3 activities and limited engagement of the Ministry of Finance. b. Achieved. DRI law, and accompanying documents, were drafted over 2022–2023 and endorsed by NEMA in January 2024.
Outputs 1. Disaster risk assessments enhanced	By 2023: 1a. Disaster risk assessment process report assessing (i) current practices; (ii) institutional map with roles and responsibilities; (iii) legislation and policy frameworks; and (iv) recommendations for improvement produced (2019 baseline: not developed) 1b. Multi-hazard disaster risk assessment guidelines produced (2019 baseline: not developed)	1a. Achieved. DRA baseline assessment completed in January 2021 as part of the inception report. Agreement was reached in February 2021 on the five pilot provinces for the provincial disaster risk assessments. DRA training needs assessment report completed in August 2021. This report includes an overview of institutional roles and responsibilities and existing legislative and policy frameworks for DRA. 1b. Achieved. Series of DRA reports prepared by March 2023 and updated in February 2024 for the most updated climate and meteorological hazard maps (as developed by IRIMHE): 1 national disaster risk assessment report; 5 provincial disaster risk assessment reports for 5 pilot <i>aimags</i> ; 2 national disaster risk assessment methodology reports; accompanying databases and atlases, including 560

	1c. National and local level multi-hazard disaster risk assessment prepared (2019 baseline: not developed) 1d. A drone-based LiDAR technology to develop high-resolution digital elevation models for flood modeling and mapping in urban centers piloted (2023 baseline: not piloted)	national maps and 2,950 provincial maps. 1c. Achieved. Five facility-level DRAs done by February 2023, by a subcontracted national DRA-licensed firm DAT Consulting LLC, including one training conducted in November 2022. NEMA's risk and mapping platform was upgraded by February 2023, by a subcontracted national firm Khan Khulgun LLC, including one training conducted in January 2023. System transferred to new NEMA server in March 2024. An extensive DRA training and knowledge dissemination program was delivered in February 2024, with the first event organized in May 2021 and the last in March 2024. The training report was finalized in May 2023. 1d. Achieved. Pilot on the application of drone-based LiDAR technology for developing high-resolution digital elevation models for flood modeling to improve urban flood resilience completed in March 2024.
2. DRR planning Enhanced	2a. DRR diagnostic report, including high-level technology assessment, produced (2019 baseline: not developed) 2b. Guidelines to mainstream DRR with line ministries prepared (2019 baseline: not developed)	2a. Achieved. DRR planning and mainstreaming baseline assessment completed in January 2021 as part of the inception report. 2b. Achieved. DRR planning and mainstreaming training needs assessment report completed in July 2022. The report includes a review of Mongolia's policy and institutional framework and guidelines for DRR planning and mainstreaming, international good practices and lessons learned, a capacity needs assessment, and an analysis of existing disaster protection plans and Governor Action Plans. The report concludes with a recommended training program on DRR planning and mainstreaming. High-level technology options for DRR report prepared in July 2022, mapping and assessing 20 high-level technology options for DRA, DRR planning, and DRF.

	2c. Guidelines to mainstream DRR with local level agencies prepared (2019 baseline: not developed)	2c. Achieved. Training program on DRR planning and mainstreaming for ministries and provinces organized in November–December 2022. The training report and training manual were finalized in May 2023. DRR mainstreaming toolkit completed in July 2023. Toolkit covers tools to mainstream DRR into sectors and GAPs.
3. Financial resilience policies and best practices recommended	3a. Best practice report on the use of disaster risk financing strategies and instruments (non-insurance based) prepared (2019 baseline: not developed) 3b. Key concept with policy brief for the insurance law drafted (2019baseline: not formulated) 3c. Legal and regulatory framework on disaster risk insurance drafted (2019 baseline: not formulated)	3a. Achieved. DRF baseline assessment completed in January 2021 as part of the inception report. International best practices and case studies on DRF instruments documented in October 2021. DRF Diagnostics report completed in July 2023. The diagnostics assessed the current landscape on six practice areas relevant for the development of disaster insurance and capital markets solutions: government policy, social protection policy, unlicensed competition, economic conditions, credibility of the insurance, reinsurance, and capital markets providers, and product appeal. The DRF diagnostics has been informed by a flood and earthquake risk modeling and quantification report, completed in May 2023. 3b. Achieved. Strategic Priorities on DRF in Mongolia prepared in August 2023. The <i>DRF action plan</i> was cancelled, in agreement with ADB, due to delays in Output 3 activities and limited engagement with the Ministry of Finance. The strategic priorities were presented, discussed and reviewed at a DRF Conference in November 2023. The strategic priorities were subsequently updated and finalized in February 2024. 3c. Achieved. In July 2021, a national legal firm Anand Advocates LLC was subcontracted to support the government in drafting a DRI law. In March 2022, the Ministry of Finance established an inter-ministerial working group to facilitate the development of

		DRI law. From March 2022 to December 2023, four drafts of DRI law were developed. The draft DRI law, and accompanying documents, were endorsed by NEMA in January 2024.
4. Institutional, technical and management capacity strengthened.	4a. DRM policy and institutional setting review with recommendations for improvement prepared (2019 baseline: not formulated) 4b. Private sector engagement assessment with recommendations prepared (2019 baseline: not developed) 4c. At least 200 people trained and reported improved skills in DRR, of which at least 50% are women (2019 baseline: 0) 4d. Toolkit for mainstreaming DRM into development policies prepared (2019 baseline: not developed)	4a. Achieved. DRM baseline assessments conducted for outputs 1 to 3, training needs assessment for Output 1 and 2 and training programs and materials developed for Output 1 and 2 (<i>as described above</i>). 4b. Achieved. International disaster risk pool practices shared during DRF training events for the private sector in May 2021 and for the public sector in September 2021. The private insurance sector was involved in DRF and DRI law consultations. 4c. Achieved. 34 training, awareness raising, and knowledge dissemination events were organized, linked to outputs 1 to 3, with 1,417 participants (927 men and 490 women). Training topics include, among others: evidence-based DRA, national DRA, facility-level DRA, DRR planning, DRA and DRR options analysis, DRR mainstreaming into socio-economic development, DRF instruments, DRF diagnostics, flood modeling, and use of drone-based LiDAR. Four events were dedicated to strengthening the capacity and role of national and local DRR councils. 4d. Achieved. DRR mainstreaming toolkit completed in July 2023.

Key Activities with Milestones

1. Disaster risk assessments enhanced

- 1.1. Review existing processes for multi-hazard risk assessments, including data requirements, legislation and policy frameworks, challenges, and constraints, and provide recommendations to fill gaps and enhance arrangements (*completed in August 2021*).
- 1.2. Prepare institutional map to articulate (i) the roles of various ministries, departments, and agencies in pre- and post-disaster risk assessment, information management, planning and implementation and (ii) their relationship with sector and geographic (national to local level) agencies, with recommendations for institutional strengthening and capacity building and awareness raising (*completed in August 2021*).

- 1.3. Based on analyses, propose improved and new tools, data, analytical and modeling approaches, and methodology for multi-hazard disaster risk assessment, with guidelines for implementation with training materials (*design of methodology and training program completed in August 2021 and training program completed in November 2022*).
- 1.4. Conduct detailed multi-hazard risk assessments at national and selected local level project sites (*completed in February 2024*).
- 1.5. Conduct of pilot study for drone-based LiDAR technology to develop high-resolution digital elevation models for flood modeling and mapping in urban centers:
 - (i) Procurement of equipment and system (*completed in October 2023*).
 - (ii) Data collection and development of high-resolution digital elevation models (*completed in November 2023*).
 - (iii) Data analysis (*completed in February 2024*).
- 2. Disaster risk reduction planning enhanced**
 - 2.1. Assess existing three step process for DRR planning (prevention and risk reduction, response and recovery, and reconstruction) and post-disaster impact assessment, including the institutional and organization setup of the national and local levels, roles and responsibilities pre- and post-disaster, use of high-level technology, financial plans and commitments; identify constraints and challenges; and provide recommendations to fill existing gaps and improvement for enhancing processes (*completed in March 2022 and updated in July 2022*).
 - 2.2. Prepare guidelines to mainstream DRR, including the use of multi-hazard disaster risk assessment outputs (from output 1) and incorporating post-disaster impact assessment results, with line ministries and local level to support informed risk reduction and management strategies, including prioritization of investments (*completed in July 2023*).
 - 2.3. Undertake consultation with stakeholders to raise awareness about disaster risks; assess risk profiles and coping strategies and DRR planning processes; and propose appropriate risk reduction strategies (*training program completed in November 2022; reports completed in May 2023*).
- 3. Financial resilience policies and best practices recommended**
 - 3.1. Analyze current and past practice and experience with disaster risk financing and propose opportunities for enhancement, including government policy and regulations, supervision, and the availability and quality of disaster risk financing products (*completed in July 2021*).
 - 3.2. Provide case studies on best practice based on national and international experiences, addressing and safeguarding against disaster risks through insurance programs, insurance products, marketing mechanisms, use of high-level technology, and the use of subsidies or complementary programs by governments (*completed in October 2021*).
 - 3.3. Review the disaster insurance sector, assessing current government and private sector disaster risk insurance markets, risk (reinsurance and retention of insurance) strategies, insurance products available, use of subsidies (if any), regulatory and policy aspects, and institutional and organizational arrangements and capacity (*completed in July 2023*).
 - 3.4. In coordination with Ministry of Finance, propose a DRR financial risk management strategy and action plan (*completed in August 2023 for DRF strategy. Action plan cancelled, in agreement with ADB*).
 - 3.5. Provide recommendations to promote disaster risk insurance via (i) improved institutional and organizational arrangements and capacity, (ii) policy recommendations and required revisions to existing legislation, and (iii) financial plan associated with disaster insurance (*completed in August 2023*).
 - 3.6. Prepare policy briefs, rationale, and supporting documents, including social and economic impact assessments, and draft the disaster risk insurance law (*completed in January 2024*).
- 4. Institutional, technical and management capacity strengthened**

- 4.1. Undertake capacity needs assessment, prepare training program and materials, and conduct capacity building and training workshops for key DRM stakeholders (*capacity needs assessments completed in August 2021 and July 2022, workshops conducted over March 2021–March 2024*).
- 4.2. Coordinate with other key DRM stakeholders, including strengthening the role of the national and local council for DRR, which can facilitate multi-sector consultation (*completed in March 2024*).
- 4.3. Assess opportunities to engage the private sector, focusing on proposing opportunities for public–private partnerships for DRM and disaster relief activities, which may include public–private dialogues, business recommendations on regulations and law, and local initiatives to support private sector engagement in DRM (*completed in May 2021*).
- 4.4. Hold workshops and awareness raising forums with stakeholders, including parliamentarians, to raise awareness about DRM and DRR approaches as required (*workshops and events conducted over March 2021–March 2024*).
- 4.5. Prepare a tool kit that can help mainstream DRR into development policies, including linking to and monitoring the Sustainable Development Goals (*completed in July 2023*).

TA Management Activities

Mobilize consultants by month 3 (*completed*).

Develop study framework, prepare the inception report, and conduct the inception workshop (*completed in January 2021*).

Prepare the interim report and conduct the interim workshop (*completed in January 2022*); prepare the draft final report and conduct the final workshop (*completed in April 2024*).

Finalize the TA outputs (*completed in September 2024*).

Actual Inputs

Japan Fund for Prosperous and Resilient Asia and the Pacific: \$1,989,994.83

High-Level Technology Fund: \$300,000.00

Note: The government provided counterpart support in the form of remuneration and travel expenses of counterpart staff; domestic transportation; available relevant government data and studies for the TA consultants' use; office accommodation, including use of meeting rooms, office facilities and supplies, and geographic information system maps; administrative assistance; and other in-kind contributions.

ADB = Asian Development Bank, DRA = disaster risk assessment, DRF= disaster risk financing, DRM = disaster risk management, DRR = disaster risk reduction, LiDAR = Light Detection and Ranging, NEMA = National Emergency Management Agency, RFI = result framework indicator, TA = technical assistance.

^a State Great Khural of Mongolia. 2016. Mongolia Sustainable Development Vision 2030. Ulaanbaatar.

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

Contribution to ADB Results Framework: RFI A: National and subnational disaster risk reduction and/or management plans supported in implementation.

Source: Asian Development Bank.

TECHNICAL ASSISTANCE COST**Table A2.1: Technical Assistance Cost by Activity**
(\$'000)

Item	Amount		Actual
	Original	Revised^a	
1. Consultants	1,320.8	1,444.8	1,753.1
2. Goods	90.0	185.0	225.6
3. Training, seminars, and/or conferences	184.2	208.2	193.7
4. Surveys	145.0	188.5	117.6
5. Miscellaneous TA administration	100.0	103.5	0.0
6. Contingency	160.0	170.0	0.0
Total	2,000.0	2,300.0	2,290.0

TA = technical assistance.

^a Increase in TA amount by \$300,000 from High-Level Technology Fund approved on 23 June 2023.

Source: Asian Development Bank estimates.

Table A2.2: Technical Assistance Cost by Fund
(\$'000)

	JFPR	HLT Fund	Total Cost
1. Original	2,000.00	0.00	2,000.00
2. Revised	2,000.00	300.00	2,300.00
3. Actual	1,989.99	300.00	2,289.99
4. Unused	10.01	0.00	10.01

HLT Fund = High-Level Technology Fund, JFPR = Japan Fund for Prosperous and Resilient Asia and the Pacific.

Source: Asian Development Bank estimates.