

**TCR Validation Report**  
April 2024

# Mongolia: Improving the Management of Hazardous Chemicals

Reference Number: TCRV-2023-063  
Project Number: 52019-001  
TA Number: 9808

Independent  
**Evaluation** 

*Raising development impact through evaluation*

## ABBREVIATIONS

ADB	–	Asian Development Bank
DMF	–	design and monitoring framework
EA	–	executing agency
IED	–	Independent Evaluation Department
JFICT	–	Japan Fund for Information and Communication Technology
MET	–	Ministry of Environment and Tourism
MIS	–	management information system
O&M	–	operations and maintenance
TA	–	technical assistance
TCR	–	technical assistance completion report

## NOTE

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

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## TECHNICAL ASSISTANCE COMPLETION REPORT VALIDATION REPORT<sup>1</sup>

### 1. PROJECT DATA TA No. 9808

<b>TA Name</b>	Improving the Management of Hazardous Chemicals	<b>Approval Date</b>	26 Sep 2019	<b>Approved (\$)</b>	750,000.00
		<b>Signing Date</b>	21 Oct 2019	<b>Revised (\$)</b>	Not applicable
<b>Country</b>	Mongolia	<b>Planned Completion Date</b>	30 Nov 2021	<b>Disbursed (\$)</b>	581,651.14
		<b>Actual Completion Date</b>	2 Feb 2023	<b>Undisbursed (\$)</b>	168,348.86
<b>Department</b>	East Asia Department	<b>TA Type</b>	TRTA ( ) KSTA (✓) PATA ( ) CDTA ( ) RDTA ( ) PPTA ( ) RETA ( )	<b>Source of Funding</b>	Japan Fund for Information and Communication Technology
<b>Sector and Subsector</b>	Agriculture, natural resources and rural development  Land-based natural resources management			<b>Executing Agency</b>	Ministry of Environment and Tourism

CDTA = capacity development technical assistance, KSTA = knowledge and support technical assistance, PATA = policy and advisory technical assistance, PPTA = project preparatory technical assistance, RDTA = research and development technical assistance, RETA = regional technical assistance, TA = technical assistance, TRTA = transaction technical assistance.

### 2. DESIGN AND MONITORING FRAMEWORK AND RESULTS

<b>Objective</b>	The knowledge and support technical assistance (KSTA) was aimed at supporting Mongolia's Ministry of Environment and Tourism (MET) to improve the country's management of hazardous chemicals. This was to be undertaken through the establishment of a comprehensive and dynamic web-based management information system (MIS) and building the capacity of national agencies in using the system. <sup>2</sup>
<b>TA Rationale</b>	Mongolia has been using chemicals to manufacture pharmaceutical, agricultural, and industrial products. Since 2014, about 430,000 tons covering around 2,600 types of chemicals were estimated to have been imported, largely for commercial use. <sup>3</sup> At the time of technical assistance (TA) preparation in 2019, there were about 260 agencies in Mongolia registered to import chemicals. Many of these chemical imports were hazardous. <sup>4</sup> However, Mongolia had limited knowledge about the types and volumes of hazardous chemicals in use. The byproducts created from

<sup>1</sup> Team members: P. Muscat (validator), K. Saito (initial reviewer), and K. Ward (evaluator).

<sup>2</sup> Under Occupational Safety and Health Administration (OSHA), very broadly defined as chemicals exhibiting a physical or health hazard. Institute of Hazardous Materials Management. 2019. [Hazardous Chemicals](#).

<sup>3</sup> Importers of chemicals comprise companies for chemicals trade (37% of imported volume), blasting material producers (32%), mining and petroleum (12%), construction (3%), agriculture (3%), wool and cashmere product manufacturers (2%), and other agencies (11%). Unpublished data, MET.

<sup>4</sup> Mercury, cyanide, petroleum, and crude oil (used in the mining industry), bleaching and brighteners (for tanneries), battery acids (for vehicles), and coolants (for refrigeration).

	<p>these processes were discharged into the air and bodies of water and posed health and environmental risks. Addressing this issue was considered a national and global priority.<sup>5</sup></p> <p>Monitoring and reporting of chemical imports, storage, and use were key steps toward better management of hazardous chemicals. However, these were hindered by the absence of a centralized MIS dedicated to track down these hazardous chemicals. A few national agencies recorded data regarding the importation and utilization of hazardous chemicals. However, data collection was not consistently undertaken and needed to be harmonized. Also, the government agencies responsible for monitoring dangerous chemicals had limited capacity to identify, inspect, and manage chemicals. Moreover, these agencies were in need of simple and portable equipment to help field personnel conduct on-the-spot diagnoses for chemical products at border crossings, workplaces, and disposal sites, for accessing reference information and standardizing data within a centralized database.<sup>6</sup></p> <p>The government addressed these issues by establishing a regulatory framework of laws, policies, and programs to manage hazardous chemicals under the National Council on Toxic and Hazardous Substances Affairs. It adopted the Globally Harmonized System of Classification and Labelling of Chemicals in 2009 and enacted a hazardous waste classification system in 2015.<sup>7</sup> Mongolia was also a signatory to international treaties and conventions for hazardous chemicals and was a focal country for international efforts to address the unregulated use of chemicals (such as mercury).<sup>8</sup> Reviews of national priorities for managing chemicals in Mongolia had consistently emphasized the need for an MIS on hazardous chemicals.<sup>9</sup></p>
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Results Levels	Indicators	IED Comment on Evaluability of Indicators
<b>Outcome</b> Monitoring of hazardous chemicals in Mongolia improved	<b>By 2022:</b> Web-based MIS, mobile application, and operations and maintenance (O&M) manual used by at least four agencies and operated and maintained by	Evaluable and SMART (a clear distinction was made between outcome and output targets, i.e.,

<sup>5</sup> United Nations Environment Programme. 2019. [Global Chemicals Outlook II: from Legacies to Innovative Solutions](#) Geneva.

<sup>6</sup> These agencies included the Mongolian Customs General Administration (inspection of goods at border crossings), the General Agency for Supervision and Inspection (company compliance with regulations for the safe transport, use, and disposal of chemicals), the National Agency for Meteorology and Environmental Monitoring (testing and analysis of chemical products), and the National Emergency Management Agency (safety codes and procedures for chemical spills)

<sup>7</sup> This was based on United Nations. 2011. *Globally Harmonized System of Classification and Labelling of Chemicals*. New York; and Government of Mongolia. 2015. *Hazardous Waste Classifications System*. Resolution No. 263. Ulaanbaatar.

<sup>8</sup> Mongolia was a signatory to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, and the Stockholm Convention on Persistent Organic Pollutants. The United Nations and other partners assisted the government in preparing and implementing national implementation plans and building capacity for chemicals management, e.g., the Global Environment Facility. 2019. [Global Opportunities for Long-term Development of Artisanal and Small-scale Gold Mining \(ASGM\) Sector Plus-GEF GOLD +](#)

<sup>9</sup> These priorities include: MET. 2006. *National Implementation Plan for the Stockholm Convention*. Ulaanbaatar; MET. 2009; *National Chemicals Management Profile* 2008. Ulaanbaatar; and Partnership for Action on Green Economy. 2017. *Industrial Waste Inventory in Mongolia*. Geneva.

Results Levels	Indicators	IED Comment on Evaluability of Indicators
	dedicated personnel within these agencies (2018 baseline: No monitoring of hazardous chemicals)	MIS being 'established' and being 'used'). <sup>10</sup>
<b>Output 1</b> Web-based MIS for hazardous chemicals established	<b>By 2021:</b> 1a. Web-based MIS, including mobile application, operational (2018 baseline: not applicable; MIS or mobile application not yet developed)	Evaluable.
<b>Output 2</b> Capacity for the monitoring of hazardous chemicals improved	<b>By 2021:</b> 2a. Tasks for O&M and/or data entry and use of the MIS integrated in the official terms of reference for at least 10 staff positions in four agencies <sup>11</sup> (2018 baseline: Tasks not integrated)	Evaluable although slightly ambiguous if it was '10 staff in total,' or '10 staff in each of four agencies.' This may be reworded into 'At least 10 staff across four agencies.'  The wording of 'and/or' contributed to the sense of ambiguity.
	2b. O&M manual and interagency procedures for use of the MIS completed and circulated to at least four agencies (2018 baseline: O&M manual not developed)	Evaluable.
	2c. At least 100 staff (about 50% women) from relevant government agencies trained and new skills reported in the use of the MIS and/or improved field detection and management techniques for hazardous chemicals (2018 baseline: Not applicable; no training conducted yet)	Evaluable although slightly imprecise. It is not clear whether or not anything lower than but near 50% can be deemed 'about 50%.'
	2d. Needs assessment for field sampling and analytical equipment submitted to MET (2018 baseline: Not applicable; needs assessment not conducted yet)	Evaluable.

<sup>10</sup> Specific, measurable, achievable, relevant, and timebound.

<sup>11</sup> In addition to MET, other agencies anticipated to be involved in the TA implementation included the Mongolian Customs General Administration, the General Agency for Supervision and Inspection, the National Agency for Meteorology and Environmental Monitoring, and/or the National Emergency Management Agency.

### 3. PERFORMANCE ASSESSMENT

#### Relevance

Item	Highly Relevant	Relevant	Less than Relevant	Irrelevant
TCR Rating		✓		
TCRV Rating		✓		
IED Rationale	<p>The TA was aligned with Mongolia's National Program for Reducing Air and Environmental Pollution, 2017–2025 (prioritizing environmental pollution control), and ADB's Strategy 2030 operational priorities on environmental sustainability, livable cities, and strengthening governance and institutional capacity.<sup>12</sup> It was also in line with ADB's country partnership strategy (CPS) for Mongolia, 2017–2020, and was included in the country operations business plan (COBP), 2019–2021.<sup>13</sup> The TA was also aligned with Sustainable Development Goals 3 (good health and well-being), 6 (clean water and sanitation), 11 (sustainable cities and communities), and 12 (responsible consumption and production); the United Nations Environment Programme 2019 (footnote 5); and the UN Global Environment Facility.<sup>14</sup></p> <p>The TA's design and monitoring framework (DMF) was sound, with a sufficiently differentiated results chain and a well-defined causality. This validation notes that there were only two outputs, which contributed to both the design's simplicity and clarity. Also, the number of activities was modest, but all were necessary and (collectively) sufficient to deliver the outputs within the planned timeframe. The indicators were generally SMART although the language could have been more specific. Data sources and reporting mechanisms were clear. Knowledge products (e.g., the MIS, O&amp;M manual) delivered were sufficient in underpinning the training activities.</p> <p>The TA implementation was extended by eight months (in March 2020) to allow for the effects of coronavirus disease (COVID-19) pandemic. The TA costs were substantially less than planned, with an unused amount of \$168,350 (about 22.45% of the original budget). This was mainly attributed to the lower-than-expected costs for workshops, seminars, and training (due to the limitations on in-person interactions during the COVID-19 pandemic and the lower-than-expected consultants' costs. The TCR did not expound on why the actual consultants' cost was lower than envisaged. Aggregate international and national consultant utilization was actually about 10% higher than planned.</p> <p>The TA design fell short (i) embedding system maintenance in government systems, (ii) attaining a sufficient number of staff task descriptions, and (iii) meeting one gender training target. There was a lack of precision in describing the scale of the agency's use of the MIS with respect to its targets.</p> <p>The design's relevance may have also been slightly compromised by the fact that the anticipated involvement of several agencies, e.g., General Agency for Inspection and Supervision, National Agency for Meteorology and Environmental Monitoring, and the National Emergency Management Agency did not materialize, and the tracking of chemicals via third parties proved beyond the scope of the TA. This resulted from COVID-19 delays and the method of tracking by business processes was beyond the functional competence of the MIS. The extensive collaborations in</p>			

<sup>12</sup> Government of Mongolia. 2017. *National Program for Reducing Air and Environmental Pollution, 2017–2025*. Ulaanbaatar; and ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

<sup>13</sup> ADB. 2017. *Country Partnership Strategy: Mongolia, 2017–2020—Sustaining Inclusive Growth in a Period of Economic Difficulty*. Manila; and ADB. 2019. *Country Operations Business Plan: Mongolia, 2020–2021*. Manila.

<sup>14</sup> United Nations. [Sustainable Development Goals](#).

	<p>MIS system design and development stages, as well as the incorporation of additional functionality requested by MET, would suggest that user interface and accessibility would be friendly.</p> <p>The development constraints that the TA addressed, as well as the appropriateness of ADB support for the intervention, were thoroughly explained. As the bank complemented the role of other development partners, e.g., UN, GEF, value addition by ADB was clear. The suitability of a tailored approach integrating technology, chemicals knowledge, and capacity building was cogent, and the justification for a TA modality was relevant. The intended TA stakeholders (MET as host of the MIS, other agencies as sources of data and users) were carefully identified and selected. This validation assesses the TA relevant.</p>
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### Effectiveness

Item	Highly Effective	Effective	Less than Effective	Ineffective
TCR Rating		✓		
TCRV Rating		✓		
<b>Evidence of Outputs Achieved</b>	<p>The TA fully achieved three of the five output targets and partly achieved output 2a and substantially achieved output 2c.</p> <p><b>1a. Web-based MIS, including mobile application, operational</b> The systems were delivered in June 2022. The web-based system included additional transactional functionalities over and above those originally intended for the MIS, such as license issuance and safety data sheets.<sup>15</sup></p> <p><b>2a. Tasks for operation and maintenance and/or data entry and use of the MIS integrated in the official terms of reference for at least 10 staff positions in four agencies</b> The task was mainstreamed into the job responsibilities of ‘about four’ MET staff members. This task could not be fully carried out due to the prioritization of COVID-19 pandemic-related measures by the respective departments.</p> <p><b>2b. O&amp;M manual and interagency procedures for use of the MIS completed and circulated to at least four agencies</b> An O&amp;M manual and interagency procedures for the use of the MIS were completed and circulated to the agencies in June 2022. The TA conducted training sessions and discussed the manual, which included an interagency coordination outline. The training included the staff from MET, Customs, e-Mongolia, and the private sector.</p> <p><b>2c. At least 100 staff (about 50% women) from relevant government agencies trained and new skills reported in the use of the MIS and/or improved field detection and management techniques for hazardous chemicals</b> All training courses were conducted virtually in 2022, and over 100 stakeholders were trained. It can be inferred from the photos of the training event that approximately 40% of the participants were women. Hence, the project fell short of achieving the target of ‘about 50%.’</p> <p><b>2d. Needs assessment for field sampling and analytical equipment submitted to MET</b> The needs assessment was completed in 2021. Identified IT equipment was procured by mid-2021.</p>			

<sup>15</sup> The license issuance function facilitates the import, export, and sale of hazardous chemicals in the country and can streamline chemical management in the country in the long term. Categorization of about 9,000 of 12,000 hazardous chemicals was also completed.

<b>Evidence of Outcomes Achieved</b>	The TA substantially achieved the outcome target. The web-based MIS, the mobile application, and the O&M manual were used by and provided access to users from MET, the Mongolian Customs General Administration, e-Mongolia, and private chemical dealers. However, at completion, the maintenance of the system was undertaken by service providers employed by MET and not by dedicated agency personnel. The use of the MIS by MET, Mongolian Customs General Administration, and e-Mongolia and 'private chemical dealers' was not what was originally envisaged, i.e., 'at least 4 agencies' of those listed to be involved as defined in footnote 'b' of the DMF. <sup>16</sup>
<b>IED Rationale</b>	Three of five output targets were fully achieved, one partly and one substantially, and the outcome was substantially achieved. Achievements were delayed due to the COVID-19 pandemic. However, they were within the agreed extended implementation period. This validation assesses the TA effective.

### Efficiency

Item	Highly Efficient	Efficient	Less than Efficient	Inefficient
<b>TCR Rating</b>		✓		
<b>TCRV Rating</b>		✓		
<b>IED Rationale</b>	<p>The TA was approved on 26 September 2019 and signed on 21 October 2019. The original completion date was 30 November 2021. There was one extension of eight months due to COVID-19 pandemic, giving a final completion date of 30 July 2022. The financial closing date was 2 February 2023. TA activities (including training, meetings with consultants and government staff, and ADB missions, among other things) were conducted in large part seamlessly in virtual mode—a switch from the planned 'hands-on' conduct of the TA.</p> <p>The TA financing amount was \$750,000 from the Japan Fund for Information and Communication Technology (JFICT). Of this amount, \$581,651.14 was disbursed, resulting in a utilization rate of 77.55%. There were considerable savings from the conduct of many activities virtually.</p> <p>The TA supported the delivery of a major information-based knowledge product implemented by multiple government agencies to address a clear development constraint concerning the management of hazardous chemicals. The TA directly targeted a major public good of national importance, i.e., health and environmental conditions, potentially compromised by unsafe state and private management practices. This validation assesses the TA efficient.</p>			

Criterion	Weight	Rating Value	Weighted Rating
Relevance	0.35	2	0.70
Effectiveness	0.35	2	0.70
Efficiency	0.30	2	0.60
<b>Overall Assessment</b> (weighted average of above criteria) <sup>17</sup>			<b>2.00</b>

<sup>16</sup> In addition to MET, other agencies anticipated to be involved in the TA implementation included the Mongolian Customs General Administration, General Agency for Supervision and Inspection, National Agency for Meteorology and Environmental Monitoring, and/or the National Emergency Management Agency.

<sup>17</sup> Each sub-rating is assigned a numerical value: e.g., highly relevant = 3, relevant = 2, less than relevant = 1, and irrelevant = 0. The compound criterion for performance rating is: highly successful (overall weighted average greater than 2.30), successful (overall weighted average greater than or equal to 1.65 and less than or equal to 2.30), less than successful (overall weighted average greater than or equal to 0.75 and less than 1.65), unsuccessful (overall weighted average is less than 0.75).



## Overall Rating

Item	Highly Successful	Successful	Less than Successful	Unsuccessful
TCR Rating		✓		
TCRV Rating		✓		
IED Rationale	<p>The TA was relevant at approval and remained relevant until its completion. It was clearly aligned with national priorities, ADB operational priorities, and global priorities, and its underlying rationale was well-articulated. There were no major design flaws. The DMF was essentially sound despite minor deficiencies in the indicators' specifications. Both outputs were essential, and each contributed to the substantial achievement of the outcome. Of the five output targets, three were fully achieved, one partially achieved, and another substantially achieved. TA outcome and outputs were largely, if not completely, achieved. Only one extension of 8 months was made to the completion date due to the COVID-19 pandemic. According to an ADB BTOR in June 2022, the experience of this TA has been viewed positively and will likely contribute to enthusiasm for similar computer-based KSTA in other sectors.<sup>18</sup> Overall, this validation assesses the TA successful.</p>			

## 4. SUSTAINABILITY

Item	Highly Likely	Likely	Less Likely	Unlikely	NA
TCR Rating		✓			
TCRV Rating		✓			
IED Rationale	<p>The TA established a functioning web-based MIS for hazardous chemicals management. Capacity development activities were carried out and enhanced the functionality of the MET and other key stakeholders to manage information about hazardous chemicals. The ease of MIS use, the production and availability of training manuals, and the participants' engagement in the training courses are likely to help sustain the project's operation. The fact that the MIS relied on a private sector service provider for maintenance does not necessarily compromise sustainability. However, the longer-term sustainability of the system and its use could be achieved if there were teams from the recipient agencies that would operate and maintain the system, as the TA design intended and if adequate resources are made available for O&amp;M. Other aspects of the MIS operations—such as system obsolescence, availability of hardware spare parts, software updates, and institutional practices regarding staff continuity in skills and training—remain unclear. This validation assesses the TA likely sustainable.</p>				

## Lessons Learned

(1–3 implementation, 4–7 development results, 8 others)

Criteria	TCR Self-Assessment	IED Comment
1. Design and/or planning	<p>The TA provided lessons by reiterating the need for factoring future requirements during the design and planning stages of MIS development. The implementation demonstrated the importance of conducting comprehensive stakeholder consultations, considering the country's specific context and needs, e.g., inclusion of transactional activities, ensuring flexibility in TA implementation to accommodate unforeseen circumstances</p>	<p>This reads more like a description of the TA experience rather than a lesson on design or planning.</p> <p>The TA was generally well-designed. One lesson to learn from the design experience could be that specifying indicators more precisely and a more in-depth assessment of the capacities and interests of concerned agencies</p>

<sup>18</sup> ADB (East Asia Department). 2022. Handover Mission TA 9808 MON: Improving the Management of Hazardous Chemicals. Back-to-office report. 10 June (internal).

Criteria	TCR Self-Assessment	IED Comment
	such as the COVID-19 pandemic, and recognizing the need for capacity-building and sustainability measures beyond TA completion through provision of extended warranty services.	are paramount importance in TA design, especially for projects of a highly technical nature.  The recognition of the importance of appropriate arrangements for sustainability is useful.
2. Implementation and/or delivery	The TA was implemented on time, and changes in scope were evaluated promptly and the resources were adjusted accordingly. Regular bi-weekly status meetings with the consulting teams and monthly meetings with the clients and ADB were held, which greatly contributed to the successful delivery of a high-quality product within the set timeframe. The TA team's effective communication and coordination with the EA and stakeholders played a crucial role in ensuring the TA's timely completion.	Rephrasing as a lesson:  Regular status meetings can help contribute to the delivery of a high-quality product within the set timeframe.  It is essential to keep records (of attendance in this case) in order to ascertain the numbers of trainees or of female training participants, rather than relying on qualitative assessment or review of digital photos.
3. Management (staffing, including consultants)		No lesson provided in the TCR.  A lesson on management may center on the importance of transferring service skills from service providers to agency staff responsible for implementing systems in the long-term.
4. Knowledge building	<input type="checkbox"/> Awareness <input type="checkbox"/> Technical product <input checked="" type="checkbox"/> Adoption or uptake <input type="checkbox"/> Building institutional or system capacity <input type="checkbox"/> National or sector practice (guidelines) <input type="checkbox"/> Policy, legal standards <input type="checkbox"/> Academic literature  The TA demonstrated the value of building strong partnerships with stakeholders and involving them in the TA design and implementation process. This allowed seamless assimilation of user knowledge and skills. It also tangibly demonstrated the use of technology to improve hazardous chemicals management practices and enhance the efficiency of government agencies. Also, the TA underscored the importance of adapting to unexpected situations, such as the COVID-19	This is not a lesson about knowledge building. The following paraphrase is suggested:  Producing (consultant-led) technical products is the easier part of establishing a fully functioning increase in institutional or system capacity (i.e., the full operation of the MIS as intended). The former will not guarantee the latter unless the delivered knowledge product has been developed with full

Criteria	TCR Self-Assessment	IED Comment
	pandemic, and adjusting TA plans and timelines accordingly.	stakeholder engagement and embedded in government systems with sufficient efforts at training and skills acquisition.
5. Stakeholder participation	MET, the EA, fully cooperated in the TA implementation. However, pandemic-related restrictions and protocols hindered the smooth implementation of the TA. This was an extraordinary and one-off situation that was beyond the control of the agency and the TA team. Despite the challenges, the TA was successfully completed within the set timeframe and budget, with the agency's active participation and support.	This is a comment on the TA implementation, not a lesson.  While the pandemic may have affected inter-agency working, a lesson from the TA could be that a clearer understanding of anticipated stakeholder roles may be warranted at design.
6. Partnership (and cofinancing)	<input type="checkbox"/> Internal to ADB <input checked="" type="checkbox"/> External to ADB (may also include ADB)  The TA was cofinanced by the Government of Japan – JFICT. The financial support from JFICT has helped to design and implement the MIS for the management of hazardous chemicals in Mongolia. The JFICT support has indeed seeded the systemic management and rolling out foundational structures for improving hazardous chemicals value chain management in Mongolia. This support from JFICT was acknowledged in the consultant report published on the ADB website. Further, the JFICT support was appreciated during the TA closure meeting with MET.	This is a comment on the TA, not a lesson.
7. Replication and scaling-up	<input checked="" type="checkbox"/> Replication <input type="checkbox"/> Scaling-up  The concept of systemic management of hazardous chemicals, harmonization of naming conventions, and compliance to statutory conventions are applicable to other developing member countries of ADB as well, who are a signatory to such conventions.	The potential for replication of KSTA in establishing MIS is applicable across many sectors and countries. However, the actual uptake of the MIS in this case remains unclear.
8. Post-TA financial resources	<input type="checkbox"/> ADB <input type="checkbox"/> Government <input type="checkbox"/> Private Sector <input type="checkbox"/> Other	No lesson provided
9. Others		No lesson provided

### TCR Quality Assessment (Reviewer's Assessment)

TCR Quality	TCRV				IED Comment
	HS	S	LS	US	
<b>Coherence of TCR (25%)</b>		✓			The TCR was largely coherent, logical, and well-organized, but some parts were not clear, e.g., regarding which agencies are using the MIS.
<b>Quality of Data (25%)</b>		✓			The TCR generally provided adequate data. However, the achievement of output indicators lacked some specificity (2a, 2c), and there was a lack of clarity, e.g., with the description of the achievement of output 2d. Some sustainability aspects were left unclear.
<b>Quality of Lessons Learned (50%)</b>		✓			Some lessons were identified although they needed clearer distillation and presentation while others were essentially comments and re-statements. Several key points deriving from design and overall implementation experience were missed.
<b>Overall TCR Quality (weighted as per performance)<sup>19</sup></b>		✓			The TCR was coherent although it had some weaknesses in data quality. Lesson-learning could have been stronger.
<b>Further IED Action (e.g., in-depth evaluation)</b>	Y	<u>N</u>	Reason: not applicable		
<b>Other Remarks</b>	None				

<sup>19</sup> Each sub-rating is assigned a numerical value: e.g., highly satisfactory = 3, satisfactory = 2, less than satisfactory = 1, and unsatisfactory = 0. The compound criterion for the TCR quality rating is: highly satisfactory (overall weighted average greater than 2.30), satisfactory (overall weighted average greater than or equal to 1.65 and less than or equal to 2.30), less than satisfactory (overall weighted average greater than or equal to 0.75 and less than 1.65), and unsatisfactory (overall weighted average is less than 0.75).

### Attachment 1: Description of the Technical Assistance

The technical assistance is described in the technical assistance completion report.<sup>1</sup>

### Attachment 2: Design and Monitoring Framework

The design and monitoring framework is in the technical assistance report.<sup>2</sup>

#### Planned and Actual Achievements of the Technical Assistance

Performance Indicators	Planned	Actual	Reasons for Variance
<b>Outcome</b> Monitoring of hazardous chemicals in Mongolia improved	<b>By 2022:</b> Web-based MIS, mobile application, and O&M manual used by at least four agencies and operated and maintained by dedicated personnel within these agencies (2018 baseline: no monitoring of hazardous chemicals)	<b>Partly Achieved.</b> A web-based MIS, a mobile application, and a O&M manual were delivered as part of the online system, providing access to users from MET, Customs, e-Mongolia, and private chemical dealers. The maintenance of the system was undertaken by service providers employed by MET. The EA will explore provisioning regular staff to maintain the MIS in the future.	MIS was being maintained by service providers, and less than four (government) agencies seemed to be using it.
<b>Output 1</b> Web-based MIS for hazardous chemicals established	<b>By 2021:</b> 1a. Web-based MIS, including mobile application, operational (2018 baseline: not applicable; MIS or mobile application not yet developed)	<b>Achieved.</b> The systems were delivered in June 2022. The web-based system was designed to include additional functionalities such as license issuance and safety sheets in addition to MIS.	Delivered slightly beyond the target date
<b>Output 2</b> Capacity for the monitoring of hazardous chemicals improved	2a. Tasks for O&M and/or data entry and use of the MIS integrated in the official terms of reference for at least 10 staff positions in four agencies (2018 baseline: tasks not integrated)	<b>Partly achieved.</b> The task was mainstreamed into the job responsibilities of about four MET staff members.	This task could not be fully carried out due to the prioritization of pandemic-related measures by the respective departments.
	2b. O&M manual and interagency procedures for use of the MIS	<b>Achieved.</b> Done in June 2022. The TA conducted training sessions and discussed the manual, which included an	Delivered slightly beyond the target date.

<sup>1</sup> Asian Development Bank (ADB). 2023. [Technical Assistance Completion Report: Improving the Management of Hazardous Chemicals in Mongolia](#). Manila.

<sup>2</sup> ADB. 2019. [Technical Assistance to Mongolia for Improving the Management of Hazardous Chemicals](#). Manila.

Performance Indicators	Planned	Actual	Reasons for Variance
	completed and circulated to at least four agencies (2018 baseline: O&M manual not developed)	interagency coordination outline. The training included staff from MET, Customs, e-Mongolia, and the private sector.	
	2c. At least 100 staff (about 50% women) from relevant government agencies trained and new skills reported in the use of the MIS and/or improved field detection and management techniques for hazardous chemicals (2018 baseline: not applicable; no training conducted yet)	<b>Partly Achieved.</b> All training courses were conducted virtually, and over 100 stakeholders were trained. It can be inferred from the digital photos of the training event that approximately only 40% of the participants were women.	The gender target was not met.
	2d. Needs assessment for field sampling and analytical equipment submitted to MET (2018 baseline: not applicable; needs assessment not conducted yet)	<b>Achieved.</b> A needs assessment was done, and the equipment required for the project was implemented. The IT equipment was procured by mid-2021.	No variance.

EA = executing agency; MET = Ministry of Environment and Tourism; MIS = management information system; O&M = operations and maintenance

Sources: ADB. 2019. [Technical Assistance to Mongolia for Improving the Management of Hazardous Chemicals](#). Manila; and ADB. 2023. [Technical Assistance Completion Report: Improving the Management of Hazardous Chemicals in Mongolia](#). Manila.