

**TCR Validation Report**  
October 2023

# Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1)

Reference Number: TCRV-2023-016  
Project Number: 49305-001  
TA Number: 9057



*Raising development impact through evaluation*

## ABBREVIATIONS

ADB	–	Asian Development Bank
ANR	–	agriculture, natural resources, and rural development
CSA	–	climate-smart agriculture
DMC	–	developing member country
DMF	–	design and monitoring framework
FAO	–	Food and Agriculture Organization
IED	–	Independent Evaluation Department
IRRI	–	International Rice Research Institute
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. 9057

<b>TA Name</b>	Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1)	<b>Approval Date</b>	11 Dec 2015	<b>Approved (\$)</b>	1,000,000.00
		<b>Signing Date</b>	11 Dec 2015	<b>Revised (\$)</b>	2,500,000.00
<b>Country</b>	Regional	<b>Planned Completion Date</b>	31 Dec 2018	<b>Disbursed (\$)</b>	1,889,207.94
		<b>Actual Completion Date</b>	3 Aug 2022	<b>Undisbursed (\$)</b>	610,792.06
<b>Department</b>	Sustainable Development and Climate Change Department	<b>TA Type</b>	TRTA ( ) KSTA (✓) PATA ( ) CDTA ( ) RDTA ( ) PPTA ( ) RETA ( )	<b>Source of Funding</b>	Technical Assistance Special Fund
<b>Sector and Subsector</b>	Agriculture, natural resources, and rural development			<b>Executing Agency</b>	Asian Development Bank

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 technical assistance (TA) aimed to assist developing member countries (DMCs) to introduce essential innovations, promising technologies, and new business and partnership approaches in the agriculture, natural resources, and rural development (ANR) sector. These strategies were intended to accelerate the implementation of the Asian Development Bank (ADB)'s Operational Plan for ANR: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020.
<b>TA Rationale</b>	With food and nutrition insecurity persisting in Asia and the Pacific region, many DMCs were facing challenges in achieving the Sustainable Development Goal 2 target, i.e., creating a world free of hunger by 2030. <sup>2</sup> Innovations, partnerships, and new business approaches for knowledge solutions were needed for the DMCs' ANR development and management. The TA was reported as particularly needed for three areas: climate-smart agriculture (CSA), inclusive and sustainable agribusiness value chain development, and more effective utilization of knowledge partnerships in generating knowledge-based interventions.  ADB has committed to investing in CSA to support the DMCs' climate change adaptation and mitigation efforts. Regarding value chain development, business

<sup>1</sup> Team members: M. Andersson (validator), K. Saito (initial reviewer), and G. Rauniyar (quality reviewer).

<sup>2</sup> The sentence is based on the first sentence in Description in the TCR. About 195 million of the hungry population resides in India, 134 million in the People's Republic of China, 19 million in Indonesia, and 14 million in the Philippines. Food and Agricultural Organization of the United Nations (FAO), International Fund for Agricultural Development, and World Food Programme. 2015. *The State of Food Insecurity in the World 2015—Meeting the 2015 International Hunger Targets: Taking Stock of Uneven Progress*. Rome: FAO.

	models for collaborating with private sector activities, structuring catalytic public investments, and scaling up promising private sector initiatives needed to be strategically incorporated in ADB's operations and the DMCs' sector development plans. Lastly, knowledge partnerships were expected to generate knowledge-based interventions that will help address the DMCs' diversified needs and emerging challenges, and increase ADB's engagement in the food and nutrition security area.
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Results Levels	Indicators <sup>3</sup>	IED Comment on Evaluability of Indicators
<b>Outcome</b> Knowledge solutions on climate-smart agriculture and inclusive and sustainable agribusiness value chain for DMCs increased	a. Participating DMCs adopt at least two novel knowledge solutions to address food and nutrition security challenges by 2020. (2015 baseline = 0)	Evaluable. However, it is not clear whether each DMC needs to adopt at least two knowledge solutions to reach the target or two knowledge solutions for all DMCs. If the latter, it is possible that the target can be achieved with the adoption of 1–2 DMCs. The number of participating DMCs should have been stated <i>a priori</i> .
<b>Output 1</b> Climate-smart agriculture interventions tested and introduced	1a. At least two pilot tests and one demonstration activity for adopting climate-smart agriculture practices carried out by 2020 (2015 baseline = 0)	Evaluable. However, the indicator lacked clarity on the number of DMCs.
	1b. Report on assessing preliminary outcomes of all tested innovations and two knowledge products developed by 2020 (2015 baseline = 0)	Evaluable. However, at least a broader area of innovation and knowledge products were required for clarity during implementation.
<b>Output 2</b> Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced	2a. At least two pilot tests and one demonstration activity for gender-inclusive, pro-poor, and sustainable agricultural value chain development carried out by 2020 (2015 baseline = 0)	Evaluable. However, it is not clear if these were planned in each participating DMC. The reader may consider the output as an activity.
	2b. Report on assessing preliminary outcomes of all tested innovations (including from a gender perspective) and two knowledge products developed by 2020 (2015 baseline = 0)	Evaluable.
<b>Output 3</b> Partnerships with centers of excellence developed for	3a. At least two knowledge events carried out under new partnerships or business collaboration	Evaluable. However, the indicator could have been improved with the results of the knowledge events being

<sup>3</sup> Reflects the revised design and monitoring framework (DMF) taken from 19 November 2018 memorandum requesting for increase in TA amount, minor change in scope and implementation arrangements and extension of TA completion date.

Results Levels	Indicators <sup>3</sup>	IED Comment on Evaluability of Indicators
innovations and knowledge dissemination	arrangements with centers of excellence (COEs) or private sector entities for collaborative works in ANR identified and developed by 2020. (2015 baseline = 0)	captured in the indicator, rather than just the number of knowledge events. Once again, the number of events is an activity not an output per se.
	3b. Gender perspective integrated in at least one knowledge event and one new partnership developed by 2020 around climate-smart agriculture and agribusiness value chain development.	Evaluable. However, the indicator could have been more specific about what it meant by gender perspective being integrated in the knowledge events. Also, it was not clear if the partnership would involve private sector entities or not.

### 3. PERFORMANCE ASSESSMENT

#### Relevance

Item	Highly Relevant	Relevant	Less than Relevant	Irrelevant
TCR Rating	✓			
TCRV Rating		✓		
IED Rationale	<p>The TA was aligned with ADB's Operational Plan for ANR: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020, which emphasized: (i) productivity enhancement; (ii) market connectivity and value chain linkage; (iii) food safety, quality, and nutrition; and (iv) climate resilience and sustainable management of natural resources. The TA was also aligned with climate-resilient agriculture and food security strategies of the participating DMCs, and remained relevant beyond the TA completion during supply chain disruptions and economic downturns caused by coronavirus disease (COVID-19) pandemic.<sup>4</sup></p> <p>The rationale of the TA was well articulated in the TA report. The choice of TA type, the design, and results chains were appropriate. The TA's rationale was generally well articulated. The development constraints or issues to be addressed by the TA were clearly stated and adequately substantiated, and the chosen TA type was the most appropriate for addressing them. The intended TA outcome was largely aligned with the stated development priorities and related ADB strategies. The design and monitoring framework's (DMF's) results chain were generally sound (coherent, connected, and complete). There were no major deficiencies in the TA design or readiness for implementation. Minor change in the TA scope and implementation arrangements was made in a timely manner during the TA implementation.</p> <p>The TA provided timely support, and the original resource allocation was commensurate with the expected output and outcome. The TA was expected to help introduce relevant global practices and testing of innovations and technologies in participating DMCs with broad-based participation. It also intended to contribute to strategic investment formulation and design of pipeline projects.</p>			

<sup>4</sup> ADB. 2015. *Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015– 2020*. Manila; ADB. 2008. *Strategy 2020: Working for an Asia and Pacific Free of Poverty*. Manila; and ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient and Sustainable Asia and the Pacific*. Manila.

	<p>The TA underwent one minor change, with added budget funds of \$1.5 million for many relevant additional TA activities, responding to further needs.<sup>5</sup> The TA's DMF was revised to expand the output targets and update the target year. However, the additional activities and outputs introduced could have been anticipated during the TA planning stage. On the indicator, the outcome indicator could have been made clearer as to its intent, i.e., whether the target is to be achieved for each DMC or for all the participating DMCs. There were also areas of improvement in some of the output indicators in terms of better capturing results (see Section 2 above).</p> <p>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><b>Output 1. CSA interventions tested and introduced</b></p> <p>1a. The TA supported four pilot testing and demonstrations of CSA practices: (i) alternate wetting and drying and climate-resilient rice varieties in Bangladesh, (ii) impact evaluation of satellite-based weekly irrigation water advice in Bangladesh, (iii) national release of drought-resistant and zinc-fortified wheat varieties in Nepal, and (iv) study and trial to leverage private green finance to upscale sustainable rangeland management in Mongolia. Support of initial response to locust attack in Pakistan was also provided.</p> <p>1b. The TA prepared four technical reports on postharvest practices to reduce food waste, sustainable livestock, and CSA practices. In addition, the TA published one impact evaluation of the climate-smart digital irrigation advisory trial in Bangladesh, one brief on water-saving rice technologies in Asia, and two e-learning programs on climate-smart forestry, and climate-smart fisheries and aquaculture were prepared with Consultative Group on International Agricultural Research (CGIAR) Research Program for Climate Change and Food Security (CCAFS), World Food Logistics Organization, and Food and Agriculture Organization of the United Nations (FAO).</p> <p><b>Output 2. Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced</b></p> <p>2a. The TA supported the development and testing of three inclusive agribusiness value chain development designs: direct trading of farmer producer groups with private agribusiness companies in the People's Republic of China (PRC), and e-commerce and logistics service linking farmers directly with urban consumers in India. The latter showed better results for upscaling as well as opportunities to engage women in agribusiness.</p> <p>2b. The TA conducted three scoping studies for promising industries and technologies such as: (i) a vegetable market and value chain study in Mongolia which helped design the ensuing loan project, (ii) a scientific study on emerging biotechnology applications and promising agricultural input companies in India and Viet Nam, and (iii) a study on digital agriculture services in Pakistan. The TA published the value chain analysis on Mongolia vegetable market and developed visual extension materials for India.</p> <p><b>Output 3. Partnerships with centers of excellence for innovations and knowledge dissemination developed.</b></p>			

<sup>5</sup> ADB (Sustainable Development and Climate Change Department). 2018. TA 9057: Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1)—Request for Increase in TA Amount, Minor Change in TA Scope and Implementation Arrangements and Extension of TA Completion Date. Memorandum. 29 November (internal).

	<p>3a. The TA partnered with COEs and private companies and supported the organization of knowledge events, such as: (i) two climate-smart agriculture training programs at Japanese Representative Office (JRO) and Thailand Resident Mission (TRM) with CCAFS, FAO, and Wageningen University and Research (WUR); (ii) CSA workshop at the ADB Bangladesh Resident Mission (BRM) with International Rice Research Institute (IRRI); and (iii) a virtual workshop on sustainable livestock and plant-based meat with CCAFS, Chinese Academy of Agricultural Science (CAAS), WUR, and Nanyang Technical University at the PRC.</p> <p>3b. The TA held one major training (training of trainers) and one major workshop plus several field workshops. Workshops included women on their roles in modern postharvest practices, minimizing food waste, and agriculture technology. One knowledge partnership agreement was signed with IRRI and a new partnership with CCAFS and/or CGIAR helped many climate-smart agriculture-related work. Work with Grow Asia facilitated many private–public consultations on food system transformation while continued partnership with FAO also provided technical inputs for CSA work.</p>
<b>Evidence of Outcomes Achieved</b>	The TA supported the testing and demonstration of four CSA practices in three DMCs and two pro-poor and gender-inclusive agribusiness value chains in two DMCs. Pipeline development work by ADB's sector divisions benefited from knowledge solutions from the TA, which resulted in two loan projects cited in the TA completion report (TCR) in India and Mongolia.
<b>IED Rationale</b>	<p>The outputs were achieved. Pilot testing and demonstration activities were supported, and technical reports and scoping studies were delivered. Various knowledge events and trainings were also held. However, the TCR is unclear on any measurement (reporting) of enhanced awareness or knowledge outputs from the knowledge events, e.g., through survey or workshop evaluation forms, i.e., evidence of effective knowledge dissemination and learning.</p> <p>The TCR assessed the outcome indicator to be achieved. However, the TCR should have (i) provided further evidence of adoption of novel knowledge solutions (beyond through a few project designs); and (ii) explained in detail what novel knowledge solutions were adopted by actors in the country, or for example, in the two ensuing loan projects in India and Mongolia cited in the TCR.</p> <p>The TCR did not provide evidence to support how DMCs benefited from the events and knowledge products. This validation assesses the TA less than effective.</p>

**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, signed, and became effective on 11 December 2015. One revision was processed in November 2018: (i) adding a variety of activities (minor scope change); (ii) increasing the budget by \$1.5 million to \$2.5 million (for additional 39 person-months of international experts and 37 person-months of national experts); and (iii) extending the completion date by 2 years (to 10 December 2020). However, the actual completion (financial closure) was not achieved until 3 August 2022, more than 1.5 years after the extended completion date. No reason is provided in the TCR for this significant delay. Virtual missions and workshops under the COVID-19 lockdown reduced costs and facilitated stakeholder participation in rural communities. The TCR could have elaborated on the challenges and adaptation of activities during the pandemic.</p>			

	<p>The TA funds utilization remained at 75.7%. The TCR could have explained: (i) why only \$58,400 (21%) of the revised allocation of \$280,000 for Pilot Testing were used, and (ii) what the \$53,390 for Miscellaneous TA Administration (more than ten times the original budget) was used for. Delays were experienced in the filing of claims by consultants. There is no information in the TA report or the TCR about any expected or actual counterpart contributions (funding or in-kind), except for counterpart government staff, or if such contributions were not expected.</p> <p>The TA reports and studies delivered by the TA generated knowledge. No information is provided in the TCR about the degree of client appreciation of the value of the TA. Regarding value-for-money, the actual TA expenditures of about \$1.9 million are considered reasonable considering the increased TA scope and the contribution to the development concern.</p> <p>In summary, although the TA generated knowledge, the implementation was extended by 2 years, was financially closed more than 1.5 years after TA completion, the budget was increased 1.5 times (150%) which was later underutilized with a utilization rate of only 75.7%. This validation assesses the TA less than efficient.</p>
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Criterion	Weight	Rating Value	Weighted Rating
Relevance	0.35	2	0.70
Effectiveness	0.35	1	0.35
Efficiency	0.30	1	0.30
<b>Overall Assessment</b> (weighted average of above criteria) <sup>6</sup>			<b>1.35</b>

### Overall Rating

Item	Highly Successful	Successful	Less than Successful	Unsuccessful
<b>TCR Rating</b>	✓			
<b>TCRV Rating</b>			✓	
<b>IED Rationale</b>	<p>The TA was responsive to emerging food and nutrition security challenges and priorities of DMCs and aimed to introduce innovative features in ADB's investments in the sector. The rationale for the TA was well articulated. The TA was consistent with ADB's Operational Plan for ANR 2015–2020 and relevant DMC priorities and strategies. The design was appropriate, though there were minor areas that could have been improved on the DMF indicators. The outputs were achieved. In terms of the outcome, the TA helped in the testing and demonstration of climate smart agricultural practices and pro-poor and gender inclusive agribusiness value chains, but there is insufficient evidence provided of the knowledge solutions being adopted. The efficiency suffered from a low funds utilization rate, significant extension in the TA implementation period, and significant budget variances for which no explanations were provided in the TCR. The value for money was adequate though.</p> <p>Therefore, this validation assesses the overall performance of the TA to be less than successful.</p>			

<sup>6</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).



#### 4. SUSTAINABILITY

Item	Highly Likely	Likely	Less Likely	Unlikely	NA
TCR Rating	✓				
TCRV Rating		✓			
IED Rationale	<p>Several factors point in the TCR to a most likely sustainability of the TA results. Significant relevant knowledge events were conducted, and awareness was raised through broad-based stakeholder participation, resulting in strengthened institutional capacity, although the level of awareness raising remained undocumented. The strategic alignment of the TA activities with project processing and pipeline development work of ADB's sector divisions also strengthened sustainability (two loan projects, in India and Mongolia, are cited in the TCR. Analyses and consultations informed future DMC investments and country and sector project teams. Some TA activities contributed to the identification, design, and replication of sector investment projects through a knowledge-based approach, learning from trial and error. Proven approaches and technological solutions were introduced to ADB's project pipeline development. Consultations with and participation of state government staff, farmer groups, and private company representatives in workshops, helped identify critical issues to address and create insights for future investments (initially the mentioned projects in India and Mongolia). However, evidence of the adoption of novel knowledge solutions is insufficient to rate the durability of the overall benefits supported by the TA as highly likely. This validation, assesses the TA rather 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>While many DMCs share the challenges of supporting pro-poor agribusiness value chain development by integrating millions of smallholder farmers into food value chains, each value chain requires context-specific solutions and different approaches. The TA demonstrated a systemic approach to generate relevant insights required to develop innovative, inclusive, and integrated business development models with value chain assessments and facilitation of consultations among key private agribusiness, food logistics, and processing companies and farmer groups. The TA funded scoping studies and training on important climate-smart practices for relevant institutions and project beneficiaries in specific countries, landscapes, and industries. These underlying analyses and consultations were effective in informing future investments of DMCs and sector project teams.</p>	<p>This is a description of what was done, rather than formulated as a lesson. The lesson is paraphrased as:</p> <p>Scoping studies and training on important climate-smart practices can be effective in informing future investments of DMCs and sector project teams.</p>
2. Implementation and/or delivery	<p>The engagement of the Rural Development and Food Security (Agriculture) Thematic Group (RDFS TG) Working Groups, consisting of country and sector project</p>	<p>The intent of the statements is good. The lesson could be succinctly stated as:</p>

Criteria	TCR Self-Assessment	IED Comment
	<p>teams, in TA planning and implementation was instrumental in delivering relevant outputs for the priority food and nutrition security agenda of participating DMCs and corresponding ADB investments. The process also generated ownership of TA activities among the relevant project teams, their counterpart governments, farmer groups, and private sector stakeholders.</p>	<p>The engagement of country and sector project teams, in TA planning and implementation, is essential for delivering relevant outputs and generating broad-based ownership of the TA activities.</p>
<p>3. Management (staffing, including consultants)</p>	<p>Strategical alignment of TA activities with project processing and pipeline development work of ADB's sector divisions was critical in mobilizing substantial support of ADB resident missions, government counterparts, and experts. The TA generated systemic upscaling opportunities for proven approaches and technology applications.</p>	<p>The statement reflects a finding. Lesson can be paraphrased as:</p> <p>Strategic alignment of TA activities with pipeline development work at ADB is critical in mobilizing support of ADB resident missions, government counterparts, and experts.</p>
<p>4. Knowledge building</p>	<p>(✓) Awareness  ( ) Technical product  (✓) Adoption or uptake  (✓) Building institutional or system capacity  ( ) National or sector practice (guidelines)  ( ) Policy, legal standards  ( ) Academic literature</p> <p>Knowledge dissemination workshops were effective in sharing generated insights and discussing relevant future investments among various ministry and state government staff, farmer groups, and private company representatives. Encouraging women farmer representatives to participate in such events helped ADB better identify essential technologies, understand how women can benefit from them, and improve approaches to TA implementation.</p>	<p>The supporting statements are mixed and include findings and lessons. The lesson can be paraphrased as:</p> <p>Encouraging women farmer representatives to participate in knowledge dissemination workshops improves TA implementation.</p>
<p>5. Stakeholder participation</p>	<p>Wide stakeholder participation in TA reviews, knowledge dissemination workshops, and training programs effectively facilitated decision making on upscaling of introduced innovations under sector investment projects. Frequent consultations with private input companies, cold storage, food logistics, retailers and processors, exporters, financial institutions, and farmer groups were effective in finding critical issues to support inclusive and resilient agribusiness value chain development and</p>	<p>This validation offers this lesson:</p> <p>Frequent consultations with all relevant stakeholders are important for upscaling innovations and effectively supporting inclusive and resilient agribusiness value chain development.</p>

Criteria	TCR Self-Assessment	IED Comment
	promising business solutions and technologies to address them.	
6. Partnership (and cofinancing)	<p>( ) Internal to ADB  (✓) External to ADB (may also include ADB)</p> <p>The TA engaged various experts from partner research institutions to carry out analytical activities. While some specialized centers of excellence have brought valuable knowledge contribution, some emerging issues and new industry practices such as safety, and regulations on plant-based protein, biotechnology applications in the agricultural input industry, and emerging green financing opportunities for smallholder farmers, required expertise from a much wider network of researchers and industry practitioners.</p>	<p>The supporting statements do not guide a lesson. A potential lesson is:</p> <p>Emerging issues and new industry practices such as safety, and regulations on plant-based protein, biotechnology applications in the agricultural input industry, and emerging green financing opportunities for smallholder farmers, requires expertise from a wide network of researchers and industry practitioners.</p>
7. Replication and scaling-up	<p>(✓) Replication  ( ) Scaling-up</p> <p>Some of the TA activities have contributed to designing sector projects and their replication under pipeline projects. Other studies and new business development approaches supported by the TA failed to find appropriate investees or provide useful inputs for investment design work. In both cases, the TA allowed project teams and their counterparts to learn from trial and errors and contributed to better investment decision making based on critical technical and market insights. Such a knowledge-based approach in project identification and development is considered vital to effectively respond to diverse and dynamic food and nutrition security challenges and maximize the development impacts of the sector investments.</p>	<p>The lesson has no bearing on what has been discussed in the TCR. However, a potential lesson is:</p> <p>A knowledge-based approach based on trial and error can contribute to better investment decision making.</p>
8. Post-TA financial resources	<p>(✓) ADB  (✓) Government  ( ) Private Sector  ( ) Other</p> <p>As a follow-on action, the same support system continues under the TA on Green and Resilient Rural Recovery through Agri-Food System Transformation in the Asia and Pacific Region.</p>	<p>This is not a lesson, but a statement on the next TA provided by ADB.</p>
9. Others		

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

TCR Quality	TCRV				IED Comment
	HS	S	LS	US	
<b>Coherence of TCR (25%)</b>		✓			The TCR is coherent, i.e., logical, well-organized, and easy to understand.
<b>Quality of Data (25%)</b>			✓		The outcome achievement is not well-substantiated. For example, the details of the knowledge solutions, or which of these were novel, were not clear in the TCR; and further evidence of 'adoption' of such knowledge solutions should have been provided. Output reports and some details on knowledge events (e.g., number of participants, evaluations, etc.) could have been provided for the TCR. No explanation is provided for the significantly delayed financial closure of the TA.
<b>Quality of Lessons Learned (50%)</b>			✓		Most of the lessons are descriptions of what was done rather than formulated as lessons. Some lessons are mixed with findings.
<b>Overall TCR Quality (weighted as per performance)<sup>7</sup></b>			✓		The TCR is coherent, but there were weaknesses in the quality of data. Lessons learned are phrased as statement of facts rather than lesson statements. There are statements in the DMF (achievements) that could have been strong basis for meaningful discussion on the TA's effectiveness.
<b>Further IED Action (e.g., in-depth evaluation)</b>		N	Reason:		
<b>Other Remarks</b>					

<sup>7</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> Knowledge solutions on climate-smart agriculture and inclusive and sustainable agribusiness value chain for DMCs increased.	a. Participating DMCs adopt at least two novel knowledge solutions to address food and nutrition security challenges by 2020. (2015 baseline = 0)	a. <b>Achieved.</b> Supported four testing and demonstrations of climate-smart agriculture practices in three DMCs and two for pro-poor and gender-inclusive agribusiness value chains in two DMCs. The results of these tests have been discussed and disseminated at in-country workshops and seminars, some of which helped design ensuing loan projects and pipeline projects in India and Mongolia.	Not achieved. There is insufficient evidence provided of novel knowledge solutions being adopted (only through a few project designs).
<b>Output 1</b> Climate-smart agriculture interventions tested and introduced.	1a. At least two pilot tests and one demonstration activity for adopting climate-smart agriculture practices carried out by 2020. (2015 baseline = 0)	1a. <b>Overachieved.</b> Supported four testing and demonstrations of climate-smart agriculture practices including AWD and climate-resilient rice varieties in Bangladesh; an impact evaluation of satellite-based weekly irrigation water advice in Bangladesh; the national release of drought-resistant and zinc-fortified wheat varieties in Nepal; and a study and a trial to leverage private green finance to upscale sustainable rangeland management in Mongolia. Technical support for the initial response to the locust attack in Pakistan was also provided.	Achieved.

<sup>1</sup> ADB. 2022. [Technical Assistance Completion Report: Building Sustainable Food and Nutrition Security in Asia and the Pacific \(Phase 1\)](#). Manila.

<sup>2</sup> ADB. 2015. [Technical Assistance for Building Sustainable Food and Nutrition Security in Asia and the Pacific \(Phase 1\)](#). Manila.

Performance Indicators	Planned	Actual	Reasons for Variance
	1b. Report on assessing preliminary outcomes of all tested innovations and two knowledge products developed by 2020. (2015 baseline = 0)	1b. <b>Overachieved.</b> Four technical reports on postharvest practices to reduce food waste, sustainable livestock, and climate-smart agriculture practices; one impact evaluation of the climate-smart digital irrigation advisory trial in Bangladesh published; one brief on water-saving rice technologies in Asia, and two e-learning programs on climate-smart forestry, and climate-smart fisheries and aquaculture have been prepared with CCAFS, World Food Logistics Organization, and FAO.	Achieved.
<b>Output 2</b> Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced.	2a. At least two pilot tests and one demonstration activity for gender inclusive, pro-poor and sustainable agricultural value chain development carried out by 2020. (2015 baseline = 0)	2a. <b>Achieved.</b> Supported the development and testing of three inclusive agribusiness value chain development designs in the PRC and India, two of which have contributed to value chains business collaboration model for upscaling under the ensuing loan project in India.	Achieved.
	2b. Report on assessing preliminary outcomes of all tested innovations (including from a gender perspective) and two knowledge products developed by 2020. (2015 baseline = 0)	2b. <b>Achieved.</b> Three scoping studies to understand emerging industries and technologies were supported, one of which has been published as a technical paper. The value chain trials identified opportunities to better engage women in agribusiness value chains, which have been adopted in the ensuing project in India. The Mongolia vegetable market and value chain analysis was published, and post-harvest visual extension materials were developed in India.	Achieved.
<b>Output 3</b> Partnerships with centers of excellence developed for innovations and	3a. At least two knowledge events carried out under new partnerships or business collaboration	3a. <b>Overachieved.</b> Various knowledge events carried out jointly with centers of excellence and partner companies, including two CSA	Achieved.

Performance Indicators	Planned	Actual	Reasons for Variance
knowledge dissemination.	arrangements with COEs or private sector entities for collaborative works in ANR identified and developed by 2018. (2015 baseline = 0)	training programs at JRO and TRM (with CCAFS, FAO, and WUR), CSA workshop in BRM (with IRRI), a virtual workshop on sustainable livestock and plant-based meat (with CCAFS, CAAS, WUR, and Nanyang Technical University).	
	3b. Gender perspective integrated in at least one knowledge event and one new partnership developed by 2020 around climate-smart agriculture and agribusiness value chain development.	3b. <b>Overachieved.</b> One major training (training of trainers) and one major workshop plus several field workshops were completed. Workshops and training programs were organized on the use of modern postharvest practices to extend crop shelf life and minimize food waste while considering gender roles as women as the dominant workers in the process. An AgriTech workshop included women farmer group representatives to reflect gender perspectives in the technology selection. One KPA signed with IRRI and new partnership with CCAFS and/or CGIAR helped many CSA-related work. Work with Grow Asia facilitated many public-private consultations on food system transformation while continued partnership with FAO also provided technical inputs for CSA work.	Achieved.

ANR = agriculture, natural resources, and rural development; AWD = alternate wetting and drying; BRM = Bangladesh Resident Mission; CAAS = Chinese Academy of Agricultural Science; CCAFS = CGIAR Research Program on Climate Change, Agriculture, and Food Security; CGIAR = Consortium of International Agricultural Research Centers; COE = Center of Excellence; CSA = climate-smart agriculture; DMC = developing member country; FAO = Food and Agriculture Organization; IRRI = International Rice Research Institute; JRO = Japanese Representative Office; KPA = knowledge partnership agreement; PRC = People's Republic of China; TRM = Thailand Resident Mission; WUR = Wageningen University and Research.

Sources: ADB. 2015. [Technical Assistance for Building Sustainable Food and Nutrition Security in Asia and the Pacific \(Phase 1\)](#). Manila; and ADB. 2022. [Technical Assistance Completion Report: Building Sustainable Food and Nutrition Security in Asia and the Pacific \(Phase 1\)](#). Manila.