



# Completion Report

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**PUBLIC**

Project Number: 50058-001  
Technical Assistance Number: 9218  
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## Investment Assessment and Application of High-Level Technology for Food Security in Asia and the Pacific

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## TECHNICAL ASSISTANCE COMPLETION REPORT

<b>TA Number, Country, and Name:</b> TA 9218-REG: Investment Assessment and Application of High-Level Technology for Food Security in Asia and the Pacific		<b>Amount Approved:</b> \$1,500,00.00 <b>Revised Amount:</b> \$2,000,000.00	
<b>Executing Agency:</b>  Asian Development Bank	<b>Source of Funding:</b>  TASF V: \$1,500,000 TASF-Other Sources: \$500,000	<b>Amount Undisbursed:</b> \$52,340	<b>Amount Used:</b> \$1,947,660
<b>TA Approval Date:</b>  28 October 2016	<b>TA Signing Date:</b>  28 October 2016	<b>TA Completion Date</b> <b>Original Date:</b> 31 October 2019 <b>Latest Revised Date:</b> 30 September 2021  <b>Financial Closing Date:</b> 7 June 2022 <b>Number of Extensions:</b> 2	
<b>TA Type:</b> Research and Development Technical Assistance	<b>Nature of Activity:</b> Not applicable	<b>TA Arrangement:</b> Not applicable	

### Description

The global pledge made in September 2015 to end hunger and malnutrition by 2030 underscored the importance to increase investments in agriculture, natural resources, and rural development (ANR). The midterm review of the Asian Development Bank's (ADB) Strategy 2020<sup>1</sup> and the [Operational Plan for Agriculture and Natural Resources, 2015–2020](#) also emphasized the need for more investments to promote a resilient and resource-saving agriculture. Participants of the biennial [ADB Rural Development and Food Security Forum 2016](#) identified high-level technologies (HLT) and climate-smart innovations as the main tools for increasing investments in agriculture. ADB President instructed in April 2016 to implement a systematic approach for mainstreaming the use of HLT in ADB's operation.

With this context, the Technical Assistance (TA) aimed to quantify the investments required in agriculture sector to help end hunger and malnutrition by 2030 in Asia and the Pacific; identify the priority areas for investments within agriculture; and promote HLT use in production, distribution, and as value addition. At the macro level, the TA analyzed the investment requirements and policy imperatives to create an enabling environment for investments. At the upstream, the TA piloted climate-smart technologies in three countries and assessed their benefits and the institutional actions required to scale them up to promote resource-saving climate-smart agriculture. At the downstream, the TA analyzed the horticulture value chains and establishment of modern wholesale markets to reduce postharvest losses, promote food safety, and retain nutritious value of fruits and vegetables. The TA also conducted training of government officials from selected DMCs on modern horticulture value chains.

### Expected Impact, Outcome, and Outputs

The TA's expected impact was increased investments in farming and agri-logistics increased, and the expected outcome was governments' and ADB's knowledge to identify appropriate agriculture and natural resource projects increased. The outputs were—Output 1: Overall agricultural investment requirement and prioritized areas for investment identified in DMCs; Output 2: Climate-resilient agricultural technology promoted and disseminated in selected DMCs; Output 3: Knowledge on customized wholesale markets improved.

Although the TA's expected impact, outcome and outputs were retained, some changes in the scope were made during implementation. A minor change in scope was processed on 11 September 2017 to increase the coverage of climate-smart agricultural technology experiments in Bangladesh to Nepal. Another notable change in scope was made on 29 August 2019 to analyze the perceptions of youth on agriculture and provide project preparation support to India upon the government's request. The final change in scope was processed on 28 October 2020 to include an analysis of the contaminants and main contamination points of vegetables along the agricultural supply chain in Viet Nam.

<sup>1</sup> ADB. 2014. [Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific](#). Manila; and ADB. 2008. [Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank](#), 2008–2020. Manila.

## Implementation Arrangements

The TA was implemented by ADB through the Rural Development and Food Security (Agriculture) Thematic Group (SDTC-AR) of the Sustainable Development and Climate Change Department, in coordination with relevant operations departments, ADB sector and thematic groups, and key external partners. A knowledge partnership agreement (KPA) with the International Rice Research Institute (IRRI) was processed in June 2016 to conduct the field experiments of climate-smart technologies in rice-based agricultural systems. Through the KPA, ADB worked with public research organizations like the Bangladesh Rice Research Institute (in Bangladesh), Cambodian Agricultural Research and Development Institute (in Cambodia), Institute of Policy and Strategy for Agriculture and Rural Development (in Viet Nam), National Development Planning Agency (in Indonesia), and Nepal Agricultural Research Council (in Nepal). TA completion was extended twice from 31 October 2019 to 30 June 2020, then until 21 September 2021 following the revision of the design and monitoring framework to include additional studies on horticulture value chains in India, and food safety in Bangladesh and Viet Nam, and experimentation of climate-smart agricultural technologies in Nepal.

The TA used 30.56 person-months (PM) of international consultants, slightly exceeding the planned 28.75 PM, and 48.15 PM of national consultants against the planned 48.40 PM. The TA used key expertise in agricultural investment, agricultural modeling, agricultural policy, agricultural logistics, financing, knowledge and training, and food safety. Aside from IRRI, the TA also engaged the International Food Policy Research Institute and World Vegetable Center.

## Conduct of Activities

Under **Output 1**, the TA completed several assessments with results published in 2019: (i) [total investment requirements to end hunger and malnutrition in Asia and the Pacific by 2030](#); (ii) [policy support to mobilize investments in agriculture in Indonesia](#) to end hunger and malnutrition by 2030; and (iii) [People's Republic of China's \(PRC\) efforts to promote the use of information and communication technology in agriculture](#). In **Output 2**, the TA conducted field experiments of alternate wetting and drying (AWD) in Bangladesh, and 'direct-seeding rice' (DSR) technology in Cambodia and Nepal. The [findings](#) of these field experiments were published in October 2019. For **Output 3**, the TA conducted in-depth studies of horticulture value chains in [Bangladesh](#), [Nepal](#), [Pakistan](#), and [Viet Nam](#) with findings published as country briefs in October 2019, and trained 18 government officials from Indonesia, Kazakhstan, Nepal, Pakistan, Philippines, Uzbekistan, and Viet Nam participated in the training on modern wholesale market.

The TA also analyzed the perceptions and perspectives of youth about agricultural value chains in the Philippines, which was in the [Rural Development and Food Security Forum 2019](#). It also analyzed the food safety related issues pertinent to fruits and vegetables in Viet Nam and the results are being prepared for publication. The (i) analysis on horticulture value chains in three provinces of India (in coordination with South Asia Department); (ii) evaluation of *Obod Qishloq Program (Prosperous Village Program)* of the government (in coordination with the Uzbekistan Resident Mission); and (iii) a scoping study of off-grid solar PV (photovoltaic)-powered cold storage facility for small farmers in Pakistan was also conducted through the TA.

## Technical Assistance Assessment Ratings

Criterion	Assessment	Rating
Relevance	<p><b>Strategic focus.</b> The use of the systematic approach to mainstream HLT applications in ADB operations also became a strategic focus following the ADB President's guiding instructions in April 2016. The TA's design and implementation are well-aligned with these strategic focuses. Consultations with a wide range of stakeholders and policymakers from the participating countries also enhanced the TA's relevance to the DMCs' needs.</p> <p><b>Design and approach.</b> The TA followed a holistic approach covering the broad spectrum of the agricultural value chains. At the regional macro level, the TA analyzed the investment requirements and priority areas. At the production level, the TA piloted climate-smart technologies in the field, and at the field-to-market connectivity level, the TA analyzed the establishment of modern wholesale markets to reduce postharvest losses, and food safety issues pertinent to fruits and vegetables to retain their nutritious values. No problems were encountered in implementing the activities and changes in the TA scope and completion date were processed to accommodate additional activities requested by government of the participating DMCs.</p> <p>The TA was highly relevant to ADB's strategic focus on food security and climate change in the regions when it was approved in 2016. The knowledge solutions, skills development, and capacity building complementing the research and assessments became even more relevant now as global hunger, malnutrition and climate change impacts became global concerns.</p>	Highly relevant

Criterion	Assessment	Rating
Effectiveness	<p>All intended outputs were achieved with quality. The intended outcome – increased knowledge of governments and ADB about identifying appropriate ANR projects – was achieved.</p> <p><b>Outputs.</b> In addition to accomplishing the target outputs, the activities resulted in the (i) processing of one investment project (aligned with the Country Operations Business Plan), (ii) support to two projects; and (iii) strengthening of ADB's focus on wholesale market and agri-logistics. The international <a href="#">Knowledge-Intensive Agriculture Workshop</a> in June 2017 helped mark ADB as the thought leader on the topic, and independent scholars used the workshop to further pursue the concept as the 'new disruptor in world food.' The knowledge piece on lessons learned from the European agricultural markets for Asia was republished in leading newspapers in several countries (i.e., <a href="#">Daily Mirror</a>, <a href="#">Business Mirror</a>, and <a href="#">The Financial Express</a>). The <a href="#">country report on Indonesia</a> resulted in media uptake drawing the attention of policymakers leading to discussions with ADB on how to work more closely in promoting food security in the country.</p> <p><b>Knowledge.</b> The knowledge generated from the field experiments of climate-smart agricultural technologies were used in the <a href="#">Asian Development Outlook 2021: Transforming Agriculture in Asia (p. 93)</a>. The training on modern wholesale market was cited as one of the best practices in <a href="#">The Asian Development Bank's Knowledge Management in Action</a> report of ADB in 2021 (p. 26-29).</p>	Effective
Efficiency	<p><b>Activity completion.</b> All initially planned activities were completed within the target date of October 2019. TA completion was extended until 21 September 2021 to conduct new activities as requested by the governments, ADB's Resident Missions and Operation Departments. All activities were completed within this new completion date. Some amendments were made to recruit the appropriate consultants to ensure quality output delivery without any financial and fiduciary issues. All activities and resources (human and financial) were well managed.</p> <p><b>Cost efficiency.</b> The TA saved \$52,340 (3%) while delivering more than the budgeted activities at \$1,947,660 (97%) disbursements with all outputs of high quality. For example, although 12 government official trainees from 4 DMCs were targeted for the wholesale market training, 18 trainees from 7 DMCs were trained, which amplified training impact. The TA conducted analysis of horticulture value chains in 5 countries, 1 country more than the target. The TA also completed additional activities: (i) evaluation of the Uzbekistan Prosperous Village Program with the Uzbekistan Resident Mission; and (ii) analysis of off-grid solar energy solutions for small farmers in Pakistan.</p> <p><b>Socioeconomic value.</b> The TA contributed to: (i) quantifying the investment requirements and current gaps to achieve food security wherein the TA made an evidence-based urgent call to mobilize more investments in agriculture, and identify priority areas to invest, thereby providing potential quick wins for the governments; (ii) demonstrating the scientific evidence of significant benefits of AWD and DSR technologies which proved effective climate adaptation strategies; and (iii) estimating the postharvest losses due to poor agri-logistics and market infrastructure, and imparting knowledge and skills in building modern market infrastructure while bringing this issue to the attention of policymakers.</p>	Efficient
<b>Overall Assessment</b>	<p>Given the persistent focus on food insecurity and global commitment to eliminate it through use of high-level technology, the activities and findings of the TA remain highly relevant for current and future operations in agriculture and natural resource sector. As a knowledge and support technical assistance (formerly a research and development TA), the TA resulted in 16 knowledge products and 11 national and international workshops and policy forums with amplified dissemination and outreach. The TA contributed to one pipeline project development (included in Country Operations Business Plan [COBP]), and project pipeline) and conceptualization of two more projects. It has mainstreamed reduced postharvest losses by building modern market infrastructure and networks in ADB Operations along with escalated focus on climate-smart agriculture among the participating DMCs. The TA likewise contributed</p>	Successful

Criterion	Assessment	Rating
	to the capacity building of government officials of seven DMCs. All activities were completed on time following the One ADB approach and hence promoting prompt application of the knowledge generated and completion date was extended to undertake additional activities.	
<b>Sustainability</b>	The findings on horticulture value chain assessments will continue contributing to pipeline project development focusing on improved agricultural market infrastructure and agri-logistics. The findings of the field experiments on climate-smart agriculture technologies are relevant to climate financing. Building on the findings and lessons from this TA, SDTC-AR processed <a href="#">9689-REG: Agricultural Value Chain Development in Selected Asian Countries</a> in 2018 funded by the Ministry of Agriculture, Food and Rural Affairs, Government of the Republic of Korea, to undertake complementary activities in other relevant DMCs.	Likely sustainable

### Lessons Learned and Recommendations

Design and/or planning	The design and planning of this TA followed a complete results chain connecting all segments of agricultural value chains – from field to fork. This worked very well and merits to be followed in future.
Implementation and/or delivery	TA implementation was efficient with timely delivery of outputs. However, there was an incident where a national consultant was cited in a local newspaper as an ADB advisor. Necessary actions were taken in close coordination with the relevant Resident Mission to avoid any potential damage to ADB's reputational risk and relationship with the respective country. Onboarding briefing of first-time consultants were done and proved important to level-off expectations and clarify ADB policies and requirements when it came to implementation of TA activities and delivery of outputs.
Management of staff and consultants	It is better to establish communication channels with each member of the consulting firm/team, aside from the team leader, to ensure proper guidance on the implementation of activities.
Knowledge building	When engaging with governments, it is critical to prepare process documentation (i.e., documenting consultations and all stages of the activity until it is completed), share findings of research/assessments, and obtain relevant clearances especially when findings are published. This would avoid incidents where government agencies might object to the research findings and at the same time ensure that ADB could defend the data.
Stakeholder participation	The TA worked on eight DMCs. The conduct of the activities was efficient with impacts more significant in countries where ADB has strong partnerships with national agencies. National consultants played pivotal roles in building the partnerships, thus the ability to network must be included as a preferred skill when recruiting national consultants.
Partnership	While our partners provided excellent field and logistic support in the field experimentation of climate-resilient technologies, ADB worked closely with relevant experts to consider the social science perspective. Depending on the nature of the activity, a multi-institutional partnership covering both the physical and social sciences need to be explored following a more holistic approach on how to use/re-use the findings.
Replication and/or scaling up	To replicate and scale up the piloted climate-smart agricultural technologies, some institutional reform and modern irrigation technologies would be required.
Post-TA financial resource	The TA identified two upstream and downstream areas for investment; (i) climate-smart agriculture technology in the field; and (ii) modern wholesale markets for smooth transition of food from field to the consumers. The amount of post-TA financial resources would depend on the extent of upscaling the piloted technologies and number of wholesale markets to be built. Typically, \$150 million would be required to build one modern wholesale market. Public-private partnership has the potential to mobilize resources for development of wholesale markets.

### Follow-up Actions

None	
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## DESIGN AND MONITORING FRAMEWORK

<b>Impact</b> Investment in farming and agri-logistics increased		
Results Chain	Performance Indicators with Targets and Baselines	Achievements
<b>Outcome</b> Governments' and ADB's knowledge to identify appropriate ANR projects increased	At least one investment project in ANR based on the finding of this TA included in the COBP, 2019-2021 of participating DMCs by 2020 (2016 baseline = 0)	<b>Achieved.</b> Although delayed with the extended completion date of the TA, the <i>PAK: Punjab Agriculture Markets Development Project</i> was included in the COBP of 2020-22. The TA also contributed to the conceptualization of the <i>IND: Haryana International Horticulture Market and Horticulture Value Chain Project</i> (supported the scoping study), and trained government officials in support of the <a href="#">UzB: Horticulture Value Chain Infrastructure Project</a> .
<b>Outputs</b>		
1. Overall agricultural investment requirement and prioritized areas for investment identified in DMCs	1a. A report estimating the total investment in ANR sectors to ensure food security in Asia and the Pacific prepared by 2019 (2016 baseline = 0)	1a. <b>Achieved.</b> A report titled <i>Ending Hunger in Asia and the Pacific by 2030: An Assessment of Investment Requirements in Agriculture</i> was published in 2019 and posted in <a href="#">adb.org</a> . The report estimated that annual investments in the ANR sector required to achieve <i>Sustainable Development Goal 2: Zero hunger</i> in Asia and the Pacific is \$78.6 billion, requiring an annual increase by \$36.9 billion. One blog and one Development Asia article were also published using the findings of this report: <a href="#">Hungry for Solutions</a> and <a href="#">Making the Right Investments to Achieve Food Security in Asia and the Pacific</a> .
	1b. Country reports on three selected DMCs identifying the priority actions and areas for investment prepared by 2019 (2016 baseline = 0)	1b. <b>Partially achieved.</b> Two country reports on ( <a href="#">Indonesia</a> and <a href="#">PRC</a> ) assessing the priority actions to promote investments agriculture were published in 2019. Two corresponding Development Asia articles on <a href="#">PRC</a> and <a href="#">Indonesia</a> were also published based on the same findings. The publication of Viet Nam country report is ongoing at the time of the Technical Assistance Completion Report preparation.
2. Climate-resilient Agricultural technology promoted and disseminated in selected DMCs	2a. A report on existing HLT and actions required to scale-up their uses delivered to ADB by 2019 (2016 baseline = 0)	2a. <b>Achieved.</b> A report on the existing HLT in agriculture and institutional and policy actions required for upscaling was prepared. The report findings informed the final report on the field experimentation of climate-smart technologies published in 2019 (see 2c). The report was used to write a blog on the use of HLT in agriculture: <a href="#">We Need to Get 'Climate-Smart' to Enhance Food Security in Asia</a> .
	2b. At least three pilots of climate-resilient frontier HLT conducted by the end of 2019 (2016 baseline = 0)	2b. <b>Achieved.</b> Climate-resilient technologies were piloted in Bangladesh, Cambodia, and Nepal. The AWD technology was compared with the continuous standing water irrigation system, with cultivation of vegetables between two harvests in the Korerhat and Nurpur areas of Bangladesh. In Cambodia, stress-tolerant rice varieties were used with mechanized DSR in the Central Dry Zones of Kampong Thom and Takeo, followed by the production of vegetables, pulses, and cassava before planting rice again. The same mechanized dry and wet DSR method was applied in

	<p>2c. Report on assessing the preliminary outcomes of these pilots is prepared by 2019 (2016 baseline = 0)</p> <p>2d. One workshop to disseminate the findings to promote South-South cooperation among DMCs conducted by 2019 (2016 baseline = 0) and 75% of participants indicate enhanced understanding of pilot findings.</p>	<p>Nepal, which alternated rice cropping with cultivation of lentil sown using a drill machine.</p> <p>2c. <b>Achieved.</b> A final report titled <a href="#">Climate-Smart Practices for Intensive Rice-based Systems in Bangladesh, Cambodia and Nepal</a> was published in 2019 and posted in adb.org. A Development Asia <a href="#">article</a> was also published using the findings of the field experiment of climate-resilient technologies.</p> <p>2d. <b>Exceeded.</b> In addition to three consultative workshops in in Bangladesh, Cambodia and Nepal, the <a href="#">Knowledge-Intensive Agriculture (KIA) Workshop</a> was organized in 2017 to share the preliminary results of the first round of field experiments. The final findings of the field experiments were shared during the <a href="#">Rural Development and Food Security (RDFS) Forum 2019</a>. About 91% of the participants of the KIA workshop and about 90% of the participants of the RDFS Forum 2019 found the discussions useful.</p>
3. Knowledge on Customized wholesale markets improved	<p>3a. One analytical report on the economic prospect of wholesale markets in selected DMCS are prepared by 2019 (2016 baseline = 0)</p> <p>3b. At least three government officials from each selected DMCs are trained on wholesale markets by 2019 (2016 baseline = 0)</p> <p>3c. Custom-tailored models of wholesale markets submitted to selected DMCs by 2019 (2016 baseline = 0)</p> <p>3d. Two analytical reports on the role of youth in agricultural value chains and food safety issues in selected DMCs completed by 2021 (2020 baseline = 1)</p>	<p>3a. <b>Exceeded.</b> The economic prospects of wholesale markets and required actions to build them were analyzed in <a href="#">Bangladesh</a>, <a href="#">Nepal</a>, <a href="#">Pakistan</a>, and <a href="#">Viet Nam</a>, and published as country briefs in 2019. One <a href="#">blog</a> was published based on the findings of the analytical report.</p> <p>3b. <b>Partially Achieved.</b> A total of 18 government officials (original plan of 9) from different DMCs (Indonesia -3, Kazakhstan -2, Pakistan -2, Philippines -1, Nepal -3, Uzbekistan – 4, and Viet Nam -3) were trained on wholesale markets in 2017 and 2019. A <a href="#">blog</a> based on the lessons learnt from this training program was published.</p> <p>3c. <b>Achieved.</b> Custom-tailored models for wholesale markets were presented to the governments of Bangladesh (10 October 2018), Nepal (12 October 2018), Pakistan (5 December 2018), and Viet Nam (3 December 2018).</p> <p>3d. <b>Partially achieved.</b> One group discussion was organized with young entrepreneurs during <a href="#">RDFS Forum 2019</a>, and the summary was included in the <a href="#">Forum Report</a>. However, the survey of the young entrepreneurs could not be conducted due to COVID-19 restrictions.</p>

**Actual Key Activities with Milestones****Key Activities with Milestones****1. Overall agricultural investment requirement and prioritized areas for investment identified in DMCs**

- 1.1 Analyzed the current patterns and trend of investment since 2000 in agriculture in Asia and the Pacific (Q1 2017-Q2 2017).
- 1.2 Conducted in-depth studies in selected DMCs to identify the priority actions required and areas to mobilize investment in ANR sector (Q1-Q3 2017).
- 1.3 Prepared a technical model to assess the total investment requirements to promote food security in Asia and the Pacific by 2030 and identified the sources of data to conduct this exercise (Q2 2017- Q4 2017).
- 1.4 Prepared the preliminary results of this technical exercise (Q3 2017-Q2 2018).
- 1.5 Disseminated the preliminary reports summarizing the findings of this exercise (Q4 2018).
- 1.6 Incorporated the comments received on the preliminary findings and finalize the report (Q1 2019).
- 1.7 Disseminated the reports at knowledge dissemination events at headquarters and in some DMCs (Q1 2019-Q4 2019).

**2. Climate-resilient agricultural technology promoted and disseminated in selected DMCs**

- 2.1 Reviewed the available successful ANR high-level technologies currently prevailing in Asia and the Pacific (Q1 2017-Q3 2017).
- 2.2 Analyzed the existing policy support and institutional settings, logistics, financing, and dissemination for high-level technology, and recommended the required actions to scale-up these technologies (Q1 2017-Q3 2017).
- 2.3 Identified frontier biophysical and/or agronomic, information and communication technology, and ecosystem-based climate resilient technologies to meet the needs of DMCs and can be pilot tested with TA support (Q2 2017-Q3 2017).
- 2.4 Prepared the implementation arrangements for the selected pilot activities in consultation with internal and external stakeholders (Q2 2017-Q4 2017).
- 2.5 Implemented the selected pilot activities (Q1 2018-Q2 2019).
- 2.6 Prepared a report summarizing the key findings of the pilot activities (Q1 2017-Q2 2019).
- 2.7 Disseminated the findings through workshop and electronic publications (Q4 2019).

**3. Knowledge on customized wholesale market improved**

- 3.1 Reviewed the existing agricultural supply chain and infrastructure in Asia and the Pacific (Q1 2017-Q3 2017).
  - 3.2 Analyzed future demand for safe and fresh food in selected DMCs (Q1 2017-Q2 2018).
  - 3.3 Prepared a training program on the development and management of wholesale markets (Q3 2017).
  - 3.4 Trained government officials and policymakers on wholesale market development and management (Q4 2017-Q2 2019).
  - 3.5 Prepared a report summarizing the results and key features of the training program (Q4 2019).
  - 3.6 Developed custom-tailored wholesale market models for selected DMCs (Q4 2017-Q4 2018).
  - 3.7 Presented the wholesale market models to stakeholders (Q4 2018).
  - 3.8 Analyzed the role of youth in agricultural value chains in selected DMCs (Q4 2019)
- Prepared the report on food safety in selected DMCs (Q2 2021)
- Prepared the report on horticultural market and supply chain infrastructure in India (Haryana, Rajasthan, and Odisha) (Q2 2021)

**Actual Inputs**

Asian Development Bank: \$1,947,660

ADB = Asian Development Bank, ANR = agriculture, natural resources and rural development, AWD = alternate wetting and drying, COBP = Country Operations Business Plan, COVID-19 = coronavirus disease, DMC = developing member country, DSR = direct-seeded rice/direct-seeding of rice, HLT = high-level technology, IND = India, IRRI = International Rice Research Institute, KPA = Knowledge Partnership Agreement, PAK = Pakistan, PM = person-months, PRC = People's Republic of China, PV = photovoltaic, RDFS = rural development and food security, SDTC-AR = Rural Development and Food Security (Agriculture) Thematic Group, UZB = Uzbekistan

Source: Asian Development Bank.

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

<b>Item</b>	<b>Amount</b>		<b>Actual</b>
	<b>Original</b>	<b>Revised</b>	
1. Consultants	1,001.12	1,680.12	1,679.17
2. Goods			
3. Training, seminars, and/or conferences	221.00	230.40	217.67
4. Surveys	60.00	65.00	35.01
5. Miscellaneous TA administration	82.00	18.00	15.81
6. Pilot testing	80.00		
7. Contingency	55.88	6.48	
<b>Total</b>	<b>1,500.00</b>	<b>2,000.00</b>	<b>1,947.66</b>

TA = technical assistance

Source: Asian Development Bank estimates.

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

	<b>TASF</b>	<b>Total Cost</b>
1. Original	1,500.00	1,500.00
2. Revised	2,000.00	2,000.00
3. Actual	1,947.66	1,947.66
4. Unused	52.34	52.34

TASF = Technical Assistance Special Fund

Source: Asian Development Bank estimates.