



Technical Assistance Report

Project Number: 49305-001
Research and Development Technical Assistance (RDTA)
December 2015

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

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Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
ANR	–	agriculture and natural resources
COE	–	center of excellence
DMC	–	developing member country
FAO	–	Food and Agriculture Organization of the United Nations
RDFS TG	–	Rural Development and Food Security (Agriculture) Thematic Group
TA	–	technical assistance

NOTE

- (i) In this report, “\$” refers to US dollars.

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RESEARCH AND DEVELOPMENT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 49305-001	
Project Name	Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1)	Department /Division	SDCC/SDCC-AR
Country	REG	Executing Agency	Asian Development Bank
2. Sector	Subsector(s)	ADB Financing (\$ million)	
Agriculture, natural resources and rural development	Agricultural production	0.30	
	Agro-industry, marketing, and trade	0.30	
	Land-based natural resources management	0.20	
	Water-based natural resources management	0.20	
	Total	1.00	
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Adaptation (\$ million)	0.30
		Climate Change impact on the Project	Low
Environmentally sustainable growth (ESG)	Disaster risk management Global and regional transboundary environmental concerns Natural resources conservation		
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Governance and capacity development (GCD)	Client relations, network, and partnership development to partnership driver of change	Effective gender mainstreaming (EGM) ✓	
Knowledge solutions (KNS)	Pilot-testing innovation and learning		
Partnerships (PAR)	Implementation United Nations organization		
5. Poverty Targeting		Location Impact	
Project directly targets poverty	Yes	Regional High	
Geographic targeting (TI-G)	Yes		
6. TA Category:	B		
7. Safeguard Categorization	Not Applicable		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		1.00	
Research and development technical assistance: Technical Assistance Special Fund		1.00	
Cofinancing		0.00	
None		0.00	
Counterpart		0.00	
None		0.00	
Total		1.00	
9. Effective Development Cooperation			
Use of country procurement systems		Yes	
Use of country public financial management systems		No	

I. INTRODUCTION

1. Food and nutrition security is a key element of the inclusive and sustainable growth agenda. The Midterm Review of Strategy 2020 of the Asian Development Bank (ADB) reaffirmed ADB's commitment to invest \$2 billion annually in food security and agriculture in developing member countries (DMCs) of Asia and the Pacific.¹ ADB's Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020 provides guidance for ADB operations in the agriculture and natural resources (ANR) sector.² This technical assistance (TA) will help accelerate ADB's efforts to implement the plan through pilot innovations, new partnerships building, and knowledge solutions development.³ The design and monitoring framework is in Appendix 1.

II. ISSUES

2. Although Asia and the Pacific has achieved the Millennium Development Goal of halving the hunger rate, supported by impressive economic growth, approximately 490 million or two-thirds of the global hunger population remain in the region and high levels of malnutrition persist.⁴ In addition, as DMCs continue to evolve from low- to middle-income countries, they face a wide range of challenges to produce and supply more nutritious and safe food to a growing middle class and urban population in the face of shrinking natural resources, a degrading environment, global climate change and disaster risks, a changing labor profile and demographics, and price and market volatilities. To assist DMCs strategically in addressing such highly diversified and dynamic challenges and working toward Sustainable Development Goal 2, innovations, partnerships, and new business approaches for knowledge solutions need to be brought into DMCs' ANR development and management.⁵

3. Introducing innovative and best practices to address food and nutrition security issues is of common interest to many DMCs, who share the sector development targets to support climate resilience building in the ANR sector; and agribusiness development and market orientation of the rural economy, which are reflected in country partnership strategies. The proposed TA will assist DMCs to introduce essential innovations, promising technologies, and new business and partnership approaches in the ANR sector, particularly in three challenging areas, where ADB support to DMCs will be critical.

4. First, ADB support to DMCs should be expanded in climate-smart agriculture as (i) farming in DMCs is likely to face the highest reductions in agricultural potential as a result of climate change,⁶ and (ii) the poor population in the region is particularly vulnerable to food

¹ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

² ADB 2015. *The Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020*. Manila. Adopted in June 2015, the operational plan emphasizes four priority areas for operations: (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.

³ The TA first appeared in the business opportunities section of ADB's website on 12 November 2015.

⁴ 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.

⁵ Sustainable Development Goal 2 is to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

⁶ For instance, the expected negative effects in 2050 are especially profound in South Asia, where production reductions of 11%–18% for rice and 40%–45% for wheat are expected. ADB and International Food Policy Research Institute. 2009. *Building Climate Resilience in the Agriculture Sector of Asia and the Pacific*. Manila.

production and price shocks resulting from climate change and extreme weather events.⁷ Climate change is likely to impact significantly on cropping, agroforestry, grazing, and aquaculture. Climate change adaptation and mitigation, and disaster risk management, are critical to the food and nutrition security agenda in the region. ADB's engagement in DMCs for resilience building remains limited in light of the expected scale of adverse climate impacts.⁸

5. The second area of focus is promoting inclusive and sustainable agribusiness value chain development. Asia's food systems are undergoing a significant transformation from innovations at the farm level to the supermarket revolution, applications of information and communication technology innovations (e-commerce, mobile phone-based transactions, and internet banking), and agricultural insurance tools. The grocery market in Asia has grown to more than \$1.9 trillion in 2015, and is expected to grow further at a fast rate of 8% per annum during 2015–2020.⁹ In response to such market growth prospect, private sector enterprises have begun constructing new supply value chains to source agricultural produce by investing in the technical and institutional capacity improvement of agricultural value chains, many of which have resulted in the increased productivity and incomes of many farming households.¹⁰ Such private sector initiatives also encourage the adoption of sustainable agricultural practices among smallholder farmers, while increasing their supply capacity of high quality agricultural products. Public investments have opportunities to scale up their development impacts to the national and regional levels by collaborating with private investments and helping them expand their market-based solutions. Such collaborations will promote vertical integration of the food value chain and generate further opportunities, such as making sustainable agricultural practices the industry standards, expanding green commodity markets, and effectively introducing food quality and safety controls. Business models for collaborating with private sector activities, structuring catalytic public investments with a clear exit strategy, and scaling up promising private sector initiatives need to be strategically incorporated in ADB's operations and DMCs' sector developments plans. ADB's sovereign and nonsovereign investments in ANR have been increasing in recent years in this area.

6. The third area is to utilize knowledge partnerships more effectively in generating knowledge-based interventions and addressing the highly diversified needs of DMCs. The development of new partnership models for working effectively with centers of excellence (COEs), private sector institutions, and platforms for innovation generation and implementation is critical to respond to the emerging challenges of DMCs and scale up the impacts of ADB's food and nutrition security engagement. Effective knowledge partnership development with key COEs, multilateral development banks, and the private sector is important for swiftly mobilizing

⁷ Climate-smart agriculture is defined as "agriculture that sustainably increases productivity and resilience; reduces greenhouse gases, and enhances achievement of national food security and development goals." FAO. 2010. *Climate Smart Agriculture: Policies, Practices and Financing for Food Security, Adaptation and Mitigation*. Rome. (page ii). Examples include alternate wetting and drying of rice crops that enable crop yield increase while reducing the use of water, seeds, and fertilizer; agroforestry to restore biodiverse forests, which increase income-generating wood and tree products; and soil erosion protection measures that result in increase in yields and income.

⁸ ADB is committed to increase its investment in climate-smart agriculture as part of its \$6 billion annual commitment to support DMCs for climate change adaptation and mitigation by 2020.

⁹ IGD Retail Analysis projections. <http://www.igd.com/>

¹⁰ For instance, Olam, Nestle, and Unilever have pledged the sourcing of sustainably cultivated raw materials and have been supporting highly productive agricultural value chains development engaging 4.0 million (Olam), 5.0 million (Nestle), and 0.5 million (Unilever) smallholder farmers, together with civil society organizations, farmers' organizations, and government agencies in DMCs. Beyond multinational companies, local food companies such as PRAN in Bangladesh, Engro in Pakistan, Akay in India and Cambodia, and Mountain Hazelnuts in Bhutan, are also developing contract farming models to support sustainable agriculture of smallholder farmers.

technical experts from different organizations to work together on specific assignments and delivering knowledge solutions collectively for DMCs.

III. THE RESEARCH AND DEVELOPMENT TECHNICAL ASSISTANCE

A. Impact and Outcome

7. The impact will be safe, nutritious, and affordable food for all in DMCs.¹¹ The outcome of the TA by 2018 will be increased knowledge solutions on climate-smart agriculture, and inclusive and sustainable agribusiness value chain development in DMCs.

B. Methodology and Key Activities

8. The TA will support pilot innovations and analytical works that will assist DMCs in addressing emerging food and nutrition security challenges under ADB's pipeline projects in the ANR sector and formulating new partnerships. The TA will finance activities related to pilot innovations, sector analysis, and the evaluations and dissemination of knowledge and best practices in climate-smart agriculture and inclusive and sustainable agribusiness value chain development—two of the four priority areas identified by the operational plan.

9. **Output 1: Climate-smart agriculture interventions tested and introduced.** A comprehensive review of innovative technologies and farming practices for climate-smart agriculture, and international best practices in scaling up their adoption, will be carried out. The review will identify several innovations to be tested under ADB's sector operations. Two or three activities will be selected based on technical feasibility, environmental sustainability, scale of development impacts, required public investments, and the priorities of operational departments and DMCs concerned. Once pilot innovations are selected, technical feasibility studies and implementation arrangements will be prepared for their implementation, together with the relevant project teams. Each activity will be monitored and evaluated, and a report to summarize the outcomes and experiences of TA activities will be prepared for discussion at knowledge dissemination events.

10. **Output 2: Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced.** A wide range of relevant technologies and innovative institutional settings, logistics, financing, and business models for agribusiness value chains that can generate transformational impacts in ensuring environmental sustainability and the beneficial engagement of a large number of smallholder farmers will be analyzed and pilot innovations that can be tested under ADB's pipeline projects will be identified. A few promising business collaboration models for inclusive and sustainable agribusiness value chain development will be selected for pilot testing based on the scale of development impacts, required public investments, and demand of operational departments and DMCs concerned. These will be implemented together with relevant projects. The outcomes of pilot testing will be evaluated and summarized in a report for knowledge dissemination.¹²

¹¹ ADB has operations in the ANR sector in more than 20 DMCs. Priority will be given to DMCs in which climate change agribusiness development issues are critical. The participation of DMCs is subject to their endorsement on a no-objection basis.

¹² The proposed TA, particularly Output 2, is an emerging regional cooperation and integration area that would facilitate agriculture trade, benefiting farmers—particularly smallholder farmers, and is in line with ADB's Regional Cooperation and Integration Strategy. ADB. 2006. *Regional Cooperation and Integration Strategy*. Manila.

11. **Output 3: Partnerships with centers of excellence developed for innovations and knowledge dissemination.** Partnerships with both public and private institutions with critical expertise in food and nutrition security in DMCs will be developed. While ADB has signed a regional food security partnership agreement with United Nations agencies, new partnerships and collaborations will be sought with selected institutions that have relevant expertise to address DMCs' outstanding and emerging food and nutrition security issues. With current development partners, new types of partnerships will be explored, such as a business collaboration with the consultative group for the Consortium of International Agricultural Research Centers beyond ongoing research assistance, and collaboration with private sector institutions to leverage private investment and develop knowledge products.¹³ The results of such activities will be presented and discussed at various knowledge events for wider dissemination.

C. Cost and Financing

12. The TA is estimated to cost \$1,000,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-V). Appendix 2 lists the cost items for the proposed TA.

D. Implementation Arrangements

13. The TA will be implemented over 3 years from January 2016 to December 2018.¹⁴ ADB, through its Agriculture, Rural Development, and Food Security Unit of the Sustainable Development and Climate Change Department, will be the executing agency. The unit, which also serves as the secretariat of the Rural Development and Food Security (Agriculture) Thematic Group (RDFS TG), will be responsible for the overall supervision of TA implementation. The TA will require in total 29 person-months of international experts and 39 person-months of national experts. The outline terms of reference for consultants are in Appendix 3. Engagement of consulting services will follow ADB's Guidelines on the Use of Consultants (2013, as amended from time to time).

14. The secretariat will monitor the TA activities and report to the RDFS TG committee for discussions and decision making as appropriate. It will coordinate with the working groups formed under the RDFS TG (Climate-Smart Agriculture Working Group and Agribusiness Value Chain Working Group) for implementing outputs 1 and 2. Within the scope of outputs 1 and 2, the two working groups supported by the secretariat will develop partnerships with COEs and the private sector institutions. The two working groups will actively engage in the implementation of TA activities in coordination with relevant project teams.

15. ADB will engage the Investment Center of the Food and Agriculture Organization of the United Nations (FAO) through single source selection to assist the two working groups in providing technical support to DMCs and ADB; and in carrying out relevant analytical works, pilot testing, and monitoring under outputs 1 and 2.¹⁵ The FAO has the necessary expertise at global, regional, and national levels to provide technical and operational services to deliver the two TA outputs. Single source selection is justified because the FAO has (i) multiple expertise in agriculture, rural development, and food security that are relevant to ADB's sector operations,

¹³ Asia and the Pacific Regional Food Security Partnership Framework signed by ADB, the FAO, and the International Fund for Agricultural Development in 2010.

¹⁴ Depending on the need for expansion of partnerships and pilot activities, the duration may be extended and the amount of the TA budget may be increased.

¹⁵ Arrangements with the FAO will comply with the 1981 ADB-FAO Memorandum of Understanding.

particularly the leadership role at the Global Alliance for Climate Smart Agriculture and various works for agricultural value chain development in DMCs; (ii) significant teams of technical and operational personnel in the field, whose activities complement the TA activities; and (iii) extensive experience in collaborative work in the sector among DMC governments, ADB, and other development partners. The FAO will propose a team comprising 16 person-months of international and 26 person-months of national consulting services to deliver the TA outputs.

16. For output 3, ADB will recruit individual experts (6 person-months international and 8 person-months national) to assist the RDFS TG working groups in carrying out (i) preparation of knowledge products that summarize the best practices and lessons from the TA activities; (ii) events preparation to disseminate knowledge to DMCs and within ADB; and (iii) follow-up activities, including project proposal preparation to seek additional funds. In addition, ADB will recruit firms to provide 7 person-months of international and 5 person-months of national market research and agribusiness value chain development specialists based on the consultants' qualifications selection method to carry out technical analysis required for business collaboration model development with COEs and private sector institutions. The use of the method is justified as the assignments require the services of institutions with highly specialized expertise as well as investment experience in relevant DMCs, for which very few institutions are qualified.

17. The RDFS TG working groups will identify and select TA activities based on DMCs' priority and ownership, the needs of regional departments, and opportunities with ADB's future food and nutrition security engagement. The RDFS TG committee will endorse the TA activities selected. Once the scope of TA activities is confirmed, consultations will be carried out with relevant DMCs and endorsement by the DMCs on a no-objection basis will be sought prior to implementing any country-specific activities.

18. TA activities will be recorded and evaluated, and any good practices and lessons will be compiled into working papers and/or policy briefs for wider dissemination. Some outputs will be presented and disseminated at the Food Security Knowledge Forum in June 2016 and other knowledge dissemination events, including events at DMC resident missions. Working papers in multilingual forms will be produced for wider dissemination of the TA outputs.

19. All disbursements under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). ADB will undertake procurement of equipment in accordance with its Procurement Guidelines (2015, as amended from time to time) in coordination with its Office of Information Systems and Technology and Office of Administrative Services, where applicable. After TA completion, any procured equipment will be disposed of in compliance with the project administration instructions on administering grant-financed TA.

IV. THE PRESIDENT'S DECISION

20. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$1,000,000 on a grant basis for Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1), and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Impact the Technical Assistance is Aligned with^a			
Safe, nutritious, and affordable food for all in DMCs			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p>Outcome Knowledge solutions on climate-smart agriculture and inclusive and sustainable agribusiness value chain for DMCs increased</p>	<p>a. Participating DMCs adopt at least 2 novel knowledge solutions to address food and nutrition security challenges by 2018 (2015 baseline = 0)</p>	<p>a. Annual reports of the Rural Development and Food Security (Agriculture) Thematic Group; and progress reports and PDSs of relevant projects</p>	<p>Risks Unstable macroeconomic performances of DMCs Shocks to the food system and commodity markets (e.g., economic, extreme weather events, and infectious disease) to discourage investments in ANR sector Unsustained commitment of development partners and stakeholders for innovations</p>
<p>Outputs 1. Climate-smart agriculture interventions tested and introduced</p>	<p>1a. At least 2 pilot tests for adopting climate-smart agriculture practices carried out by 2018 (2015 baseline = 0)</p> <p>1b. Report on assessing preliminary outcomes of all tested innovations and 1 knowledge product developed by 2018 (2015 baseline = 0)</p>	<p>1a. Annual reports of the Rural Development and Food Security (Agriculture) Thematic Group; and progress reports and PDSs of relevant projects</p> <p>1b. Sustainable development working paper series uploaded to ADB website</p>	<p>Risks No effective regulations in place to ensure sustainable use of water and land Limited access to financing for smallholder farmers and agribusiness small and medium-sized enterprises</p>
<p>2. Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced</p>	<p>2a. At least 2 pilot tests for gender inclusive, pro-poor and sustainable agricultural value chain development carried out by 2018 (2015 baseline = 0)</p> <p>2b. Report on assessing preliminary outcomes of all tested innovations (including from a gender perspective) and 1 knowledge product developed by 2018 (2015 baseline = 0)</p>	<p>2a. Annual reports of the Rural Development and Food Security (Agriculture) Thematic Group; and progress reports and project data sheet of relevant projects</p> <p>2b. Sustainable development working paper series uploaded to ADB website</p>	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
3. Partnerships with centers of excellence developed for innovations and knowledge dissemination	<p>3a. At least 2 knowledge events carried out under new partnerships or business collaboration arrangements with COEs or private sector entities for collaborative works in ANR identified and developed by 2018 (2015 baseline = 0)</p> <p>3b. Gender perspective integrated in the knowledge events and new partnerships developed around climate-smart agriculture and agribusiness value chain development</p>	3a. Annual reports of the Rural Development and Food Security (Agriculture) Thematic Group	

Key Activities with Milestones

1. Climate-smart agriculture interventions tested and introduced

- 1.1 Analyze international best practices among both public and private investments in promoting climate-smart agriculture that ensures environmental sustainability in developing countries (Q1–Q3 2016)
- 1.2 In consultation with Climate-Smart Agriculture Working Group of the Rural Development and Food Security (Agriculture) Thematic Group, identify opportunities to test for potential incorporation in ADB operations; select a few for pilot testing that best suit DMCs' needs and ADB's operational demand^b (Q1 2016–Q1 2017)
- 1.3 Prepare technical feasibility studies for selected pilot activities and implementation arrangements, together with relevant project team leaders (Q1 2016–Q1 2017)
- 1.4 Implement and monitor the selected pilot tests as integral parts of ADB's ongoing or pipeline projects (Q2 2016–Q4 2018)
- 1.5 Produce a report summarizing key findings of the pilot activities (Q3 2017–Q3 2018)
- 1.6 Disseminate the multilingual reports at knowledge dissemination events, including events at DMC resident missions (Q4 2018)

2. Approaches to develop inclusive and sustainable agribusiness value chain tested and introduced

- 2.1 Analyze a wide range of relevant technologies and innovative institutional settings, logistics, financing, and business models in ANR sector that can generate transformational impacts in ensuring environmental sustainability as well as the beneficial engagement of a large number of smallholder farmers, particularly women farmers, in commercial food value chain development (Q1–Q3 2016)
- 2.2 Identify promising innovations that meet DMCs' needs and which can be tested under ADB's operations; select the most suitable ones for TA support based on discussions at the Agribusiness Value Chain Working Group of the Rural Development and Food Security (Agriculture) Thematic Group and agreed selection criteria^p (Q1 2016–Q1 2017)
- 2.3 Prepare technical feasibility studies and implementation arrangements for the selected pilot activities in consultation with various internal and external development partners for selected proposals (Q1 2016–Q1 2017)
- 2.4 Implement the selected proposals as integral parts of ADB's ongoing or pipeline projects (Q2 2016–Q4 2018)
- 2.5 Produce a report summarizing key findings of the pilot activities (Q3 2017–Q3 2018)
- 2.6 Disseminate the multilingual reports at knowledge dissemination events, including events at DMC resident missions (Q4 2018)

3. Partnerships with centers of excellence developed for innovations and knowledge dissemination

- 3.1 Identify partnership development and collaboration opportunities with COEs and private sector institutions, particularly in climate-smart agriculture, and gender inclusive and pro-poor agribusiness value chain development, considering institutions' expertise and their potential value addition to ADB's ANR operations (Q1 2016–Q4 2017)

<p>Key Activities with Milestones</p> <p>3.2 Develop and negotiate the concept and scope of collaborative activities with partner organizations, and plan and carry out technical and preparatory works for the identified activities (Q1 2016–Q4 2017)</p> <p>3.3 Implement the identified collaborative activities together with the partner institutions, DMC government offices, and ADB project team (Q3 2016–Q4 2017)</p> <p>3.4 Evaluate the effectiveness of engaging experts of the partner organization in ADB's operation and discuss the partnership and collaboration outcome, and prepare knowledge products (Q4 2017, Q4 2018)</p> <p>3.5 Plan and implement the Food Security Knowledge Forum in 2016 and other event for knowledge dissemination, together with partner institutions</p>
<p>Inputs</p> <p>ADB: \$1,000,000 (grant)</p>
<p>Assumptions for Partner Financing</p> <p>Not applicable.</p>

ADB = Asian Development Bank, ANR = agriculture and natural resources, COE = center of excellence, DMC = developing member country, PDS = project data sheet, Q = quarter, TA = technical assistance.

^a ADB. 2015. *Operational Plan for Agriculture and Natural Resources: Promoting Sustainable Food Security in Asia and the Pacific in 2015–2020*. Manila.

^b Selection criteria will include the scale of potential development impacts, the types and scale of required public investment, and the financial viability of the business approach.

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN

(\$'000)

Item	Amount
Asian Development Bank^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	611.0
ii. National consultants	143.0
b. International and local travel	29.0
c. Reports and communications	2.0
2. Equipment ^b	10.0
3. Training, seminars, and conferences ^c	
a. Facilitators	25.0
b. Training program	25.0
4. Surveys and industry analysis ^c	50.0
5. Miscellaneous administration and support costs ^d	5.0
6. Pilot testing ^e	50.0
7. Contingencies	50.0
Total	1,000.0

^a Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-V). No suitable financing from other sources has been found to date. Once additional financing sources are identified, the technical assistance (TA) amount will be increased to finance more TA activities.

^b All equipment, such as mobile phones and tablets, are planned to be rented. If any equipment is to be purchased, the equipment procurement will follow ADB's Procurement Guidelines (2015, as amended from time to time), and all equipment will be turned over to subproject implementing agencies concerned after completion or disposed of in accordance with ADB policy.

^c Any advances provided should be liquidated within a 30-day period, so that the TA can be closed in an orderly and timely manner.

^d Miscellaneous administration and supports costs will be for the implementation of TA activities to be selected during the TA implementation and translations of reports for in-country knowledge dissemination.

^e Excludes consultants. Includes costs of equipment rental, training, extension and communication materials, agricultural inputs, and consultation meetings. The TA will not exceed the 30% limit of pilot testing.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The Asian Development Bank (ADB) will recruit international experts for 29 person-months and national experts for 39 person-months to carry out technical assistance (TA) activities in accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). Output-based (lump sum) contracts will be considered for all consulting services.

A. Consultant Requirements from the Food and Agriculture Organization of the United Nations (Outputs 1 and 2)

2. The Food and Agriculture Organization of the United Nations (FAO) will be selected by ADB through single source selection. The FAO, through its Investment Center, will implement the TA activities and assist in sector analysis, pilot innovations, and other technical works associated with pipeline development in developing member countries (DMCs) in agriculture and food security. FAO experts will work with ADB staff on various knowledge products and pipeline development. FAO support will be utilized to target two to three countries initially for sector analysis, pre-investment work, and innovation pilot works for investment formulation, in line with the priorities of regional departments and DMCs. The FAO will provide a total of 16 person-months of international and 26 person-months of national consulting services.

3. **Climate-smart agriculture specialists** (international, 6 person-months; national, 10 person-months). The experts will have graduate degrees in agriculture, climate change, resource economics, or other relevant fields, with extensive experience in designing and implementing climate change adaptation and mitigation as well as disaster risk management measures for agriculture and natural resources projects in DMCs. The specialists' outputs will include (i) a report on international best practices on climate-smart agriculture that should be introduced to DMCs; (ii) analysis of subsector for pre-investment works; (iii) a list of innovations that can be introduced to ADB operations, and methodology and activities for testing them under ADB's pipeline projects; (iii) technical proposals of selected pilot activities; and (iv) TA activity progress reports. The specialists' tasks will include the following:

- (i) Survey past and ongoing ADB interventions and international best practices among both public and private investments in promoting climate-smart agriculture and ensuring environmental sustainability in developing countries.
- (ii) Carry out relevant subsector analysis and other analytical works related to food and nutrition security issues.
- (iii) In consultation with the Climate-Smart Agriculture Working Group of the Rural Development and Food Security Thematic Group, identify and conceptualize new projects on climate-smart agriculture, as well as the opportunities to test some of the promising disaster risk management, climate adaptation, and mitigation measures for potential incorporation in ADB's operations; and select a few that best suit DMC's needs and ADB's operational demand.¹
- (iv) Utilizing the ongoing and pipeline projects, identify opportunities for innovation and knowledge sharing, and generate knowledge products on lessons and good practices in climate-smart agriculture.
- (v) Develop and implement training programs for capacity building of sector divisions as required.

¹ Selection criteria will include the scale of potential development impacts, environmental sustainability, the types and scale of the required public investment, and the financial viability of the business approach.

- (vi) Prepare technical feasibility studies for selected pilot testing activities, together with relevant project team leaders.
- (vii) Implement and monitor the selected pilot tests, together with relevant project teams, as integral parts of ADB's ongoing or pipeline projects.
- (viii) Report the progress of TA activities to ADB and relevant project offices of DMCs.

4. **Agribusiness value chain development specialists** (international, 7 person-months; national, 10 person-months). Successful candidates will have graduate degrees in agribusiness, finance, economics, business administration, or a related field, with a good record of working in the agriculture and food industries and relevant experience in agribusiness development in DMCs. The outputs of the specialists include (i) a report on agricultural value chain development that will engage smallholder farmers and promote environmental sustainability standard in relevant DMCs, (ii) a list of potential pilot innovations that can be tested and scaled up when successful by ADB's pipeline projects, (iii) technical proposals for pilot tests and business partnership development with key value chain players, and (iv) TA activity progress reports. Specialists' tasks will include the following:

- (i) Assess a wide range of relevant technologies and innovative institutional settings, logistics, financing, and business model development in agriculture that can generate transformational impacts in ensuring environmental sustainability as well as the beneficial engagement of a large number of smallholder farmers, particularly women farmers, in commercial food value chain development.
- (ii) Unbundle the values that accrue along the value chain to identify areas of intervention and analyze interventions that promote private sector and smallholder partnership.
- (iii) Survey past and ongoing relevant ADB interventions, and identify promising innovations to generate synergies between public and private investments that can be tested by ADB's operations; develop proposals and specify the technical feasibility and implementation arrangements, in consultation with various internal and external development partners.
- (iv) Evaluate and select the proposals suitable for TA support under the guidance of the Agribusiness Value Chain Working Group of the Rural Development and Food Security Thematic Group, based on agreed selection criteria (footnote 1, Appendix 3).
- (v) Implement the selected proposals, together with relevant project teams, as integral parts of ADB's ongoing or pipeline projects.
- (vi) Report the progress of TA activities to ADB and relevant project offices of DMCs.

5. **Participatory stakeholder consultation specialists** (international, 3 person-months; national, 6 person-months). The specialists will have graduate degrees in the social sciences or a related field, and experience in planning and conducting participatory multistakeholder consultations for agricultural projects, particularly agribusiness investments. The outputs of the specialists will include (i) successful group discussions with wide outreach for each pilot testing activity; and (ii) a report on the findings of such discussions and recommendations for the relevant TA activities—reflecting the social, economic, and environmental concerns of the consulted groups. More specifically, the specialists will do the following:

- (i) Review the profile of prospective stakeholders of the pilot activities, develop a profile directory, and contribute to the design of the selection criteria for pilot testing activities.
- (ii) Analyze gender issues regarding the pilot activities, carry out consultation with women beneficiaries, and propose any gender mainstreaming measures that needs to be incorporated in the TA activities.

- (iii) Together with the agribusiness value chain development specialists, develop the design of the stakeholder dialogues and the modality for consultations; implement the group consultations.
- (iv) Prepare a report on the findings of the consultations; provide recommendations for pilot project activities, reflecting the priority concerns of the groups.

B. Consultant Requirements for Output 3

6. ADB will hire individual experts for knowledge product preparation and dissemination, and firms for technical assessments that require special expertise for partnership and business collaboration development.

7. **Knowledge development and dissemination specialists** (international, 6 person-months; national, 8 person-months). The specialists will have a graduate degree in economics, agriculture, development studies, or a related field; and strong experience in development assistance projects in DMCs. Working knowledge of ADB's project implementation, knowledge products, and events preparation would be an advantage. The output of the specialists will include a summary of findings and lessons from the TA activities. More specifically, the specialists will do the following:

- (i) Review TA activities and their reports, and prepare a summary to highlight key findings and lessons from the activities.
- (ii) Assist the working groups and relevant project teams in carrying out some TA activities, preparing reports and evaluation works.
- (iii) Assist in drafting and editing TA reports and developing them into knowledge works.
- (iv) Assist in preparing for the knowledge events and new partnerships that integrates gender perspective
- (v) Assist the secretariat and working groups in preparing and implementing knowledge dissemination events.

8. **Market research and agribusiness value chain development specialists** (international, 7 person-months; national, 5 person-months). Technical feasibility studies will be carried out as preparatory works to (i) develop business models for collaboration between ADB's investment projects and private sector institutions and/or centers of excellence for the development of commercially viable, inclusive, and environmentally sustainable agricultural value chains; and (ii) improve the productivity and incomes of a large number of smallholder farmers. The specialists will have graduate degrees in agribusiness, finance, economics, business administration, or a related field, with 5 years or more of continuous working experience in the food and agriculture industries and agricultural market analysis in developing countries, with specific focus on smallholder agriculture. Experience in analyzing the impacts of yield gains for smallholder farmers from engaging in such agricultural value chain development investments would be an advantage. Specific tasks of the specialists will include the following:

- (i) Analyze the feasibility of the demand-based business development potential and opportunities for scaling up agricultural commodity value chains, based on the current and projected needs of both vegetable and field crops, by region and market segment;
- (ii) Analyze the value chain key players including producers, storage, logistics services, primary processors, wholesale, and retail industries;
- (iii) Assess the state of production conditions including agronomy, access to inputs, information, utilities, financing means, and extension services of smallholder farmers;

- (iv) Identify key players in agricultural value chains; their business interests; and their capacity for importation, local seed production, marketing, and distribution;
- (v) Analyze the potential business interests in scaling up value chain development, based on collaborations among private companies and potential public investments;
- (vi) Estimate the scale of the potential development impacts of such value chain development on smallholder farmers;
- (vii) Recommend partnership models among private entities and public institutions; and approaches to develop agricultural value chains of scale, specifying the role of public institutions and finance; and
- (viii) Identify potential exit strategies for such public investment.