



Technical Assistance Report

Project Number: 55113-001
Knowledge and Support Technical Assistance (KSTA)
December 2021

Green and Resilient Rural Recovery through Agri-Food System Transformation in the Asia and Pacific Region

This document is being disclosed to the public in accordance with ADB's Access to Information Policy.

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
ANRRD	–	agriculture, natural resources, and rural development
CCF	–	Climate Change Fund
COVID-19	–	coronavirus disease
CSA	–	climate-smart agriculture
DMC	–	developing member country
PRC Fund	–	People’s Republic of China Poverty Reduction and Regional Cooperation Fund
RDFS TG	–	Rural Development and Food Security Thematic Group
SDG	–	Sustainable Development Goal
TA	–	technical assistance
TASF	–	Technical Assistance Special Fund

NOTE

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

Vice-President	Bambang Susantono, Knowledge Management and Sustainable Development
Director General	Bruno Carrasco, Sustainable Development and Climate Change Department (SDCC)
Chief Thematic Officer	Xiaohong Yang, Thematic Advisory Service Cluster (SDTC), SDCC
Chief	Qingfeng Zhang, Rural Development and Food Security (Agriculture) Thematic Group (SDTC-AR) concurrently Officer-in-Charge, Environment Thematic Group (SDTC-ENV), SDCC
Team leaders	Narayan Iyer, Senior Natural Resources and Agriculture Specialist, SDTC-AR, SDCC Michiko Katagami, Principal Natural Resources and Agriculture Economist, SDTC-AR, SDCC Suzanne Robertson, Principal Environment Specialist, SDTC-ENV, SDCC
Team members	Srinivasan Ancha, Principal Climate Change Specialist, Environment, Natural Resources & Agriculture Division (SEER), Southeast Asia Department (SERD) (Lead, Rural Development and Food Security Thematic Group [RDFS TG] Climate-Smart Agriculture Working Group) Leah Arboleda, Natural Resources and Agriculture Officer, SDTC-AR, SDCC Maria Angela Banaria, Senior Operations Assistant, SDTC-AR, SDCC Shingo Kimura, Senior Natural Resources and Agriculture Specialist, Environment, Natural Resources & Agriculture Division, East Asia Department Erin Lumanta-Sea, Associate Operations Analyst, SDTC-AR, SDCC Navin Kumar Twarakavi, Senior Digital Agriculture Specialist, SDTC-AR, SDCC Takeshi Ueda, Principal Natural Resources and Agriculture Economist, SEER, SERD (Lead, RDFS TG Agribusiness Value Chains Working Group)

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

CONTENTS

	Page
KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE	
I. INTRODUCTION	1
II. ISSUES	2
III. THE TECHNICAL ASSISTANCE	3
A. Impact and Outcomes	3
B. Outputs, Methods, and Activities	3
C. Cost and Financing	5
D. Implementation Arrangements	5
IV. THE PRESIDENT'S DECISION	7
APPENDIXES	
1. Design and Monitoring Framework	8
2. Cost Estimates and Financing Plan	12
3. List of Linked Documents	14

KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 55113-001	
Project Name	Green and Resilient Rural Recovery through Agri-Food System Transformation in the Asia and Pacific Region	Department/Division	SDCC/SDTC-AR
Nature of Activity Modality	Research and Development Regular	Executing Agency	Asian Development Bank
Country	REG (BAN, CAM, IND, KGZ, LAO, MLD, MON, NAU, NEP, PAK, PRC, SRI, VAN, VIE)		
2. Sector		ADB Financing (\$ million)	
✓ Agriculture, natural resources and rural development	Agricultural policy, institutional and capacity development		0.24
	Agricultural production		0.34
	Agro-industry, marketing, and trade		0.44
	Fishery		0.13
	Forestry		0.13
	Irrigation		0.12
	Land-based natural resources management		0.13
	Livestock		0.13
	Rural market infrastructure		0.12
Energy	Renewable energy generation - biomass and waste		0.13
Finance	Inclusive finance		0.15
Industry and trade	Small and medium enterprise development		0.11
Information and communication technology	ICT industries and ICT-enabled services		0.61
	Total		2.78
3. Operational Priorities		Climate Change Information	
✓ Addressing remaining poverty and reducing inequalities		GHG Reductions (tons per annum)	0.000
✓ Accelerating progress in gender equality		Climate Change impact on the Project	Medium
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		ADB Financing	
✓ Promoting rural development and food security		Adaptation (\$ million)	0.65
✓ Fostering regional cooperation and integration		Mitigation (\$ million)	0.15
		Cofinancing	
		Adaptation (\$ million)	0.55
		Mitigation (\$ million)	0.00
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 1.5		Effective gender mainstreaming (EGM)	✓
SDG 2.3, 2.4, 2.a, 2.c			
SDG 5.a, 5.b		Poverty Targeting	
SDG 6.4		Geographic Targeting	✓
SDG 7.a			
SDG 12.2, 12.3			
SDG 13.a			
4. Risk Categorization		Complex	
5. Safeguard Categorization		Safeguard Policy Statement does not apply	
6. Financing			

KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

Modality and Sources	Amount (\$ million)
ADB	2.75
Knowledge and Support technical assistance: Climate Change Fund	0.75
Knowledge and Support technical assistance: Regional Cooperation and Integration Fund	0.50
Knowledge and Support technical assistance: Technical Assistance Special Fund	1.50
Cofinancing	1.35
People's Republic of China Poverty Reduction and Regional Cooperation Fund (Full ADB Administration)	0.80
Strategic Climate Fund (Full ADB Administration)	0.55
Counterpart	0.00
None	0.00
Total	4.10

Currency of ADB Financing: US Dollar

I. INTRODUCTION

1. The knowledge and support technical assistance (TA) for Green and Resilient Rural Recovery through Agri-Food System Transformation in the Asia and Pacific Region will (i) assess the impact of the coronavirus disease (COVID-19) on the region's food and nutrition security and rural livelihood; and (ii) help developing member countries (DMCs) of the Asian Development Bank (ADB) reshape their visions and investments for a greener and resilient recovery of agri-food value chains and rural economies from disruptions caused by COVID-19, which have exacerbated rural poverty and food and nutrition insecurity, particularly among women and vulnerable groups.¹ To identify innovative technological and investment pathways through research and development activities to transform the agri-food systems for stronger long-term food and rural livelihood security, the TA will support comprehensive assessments of agri-food value chains and rural livelihood vulnerability and opportunity, and help DMCs formulate evidence-based short-, medium-, and long-term policy and investment responses to strengthen food and nutrition security and to accelerate rural development for the COVID-19 recovery era and beyond.

2. The TA² was endorsed during the corporate priority framework meeting on 25 November 2020 and is included in the 2021 ADB Management-approved results-based work plan of the Sustainable Development and Climate Change Department. The TA will contribute to Sustainable Development Goals (SDGs) 1 (no poverty), 2 (zero hunger), 5 (gender equality), 6 (clean water and sanitation), 7 (affordable and clean energy), 12 (responsible consumption and production), and 13 (climate action), and accelerate the implementation of ADB's operational priorities 1, 2, 3, 5, and 7. Guided by its Strategy 2030,³ ADB has been helping its DMCs achieve SDGs by identifying and investing in multisectoral solutions and tackling various emerging development challenges. Under Strategy 2030, ADB commits to further include climate change and gender in its investment designs and has reaffirmed its annual food security engagement of \$2 billion. Operational priority 5⁴ has delineated ADB's strategic directions in promoting rural development and food security investments.⁵

3. The TA will distill lessons (i) from experiences of ADB and its development partners, especially in rural vitalization, impact on women and their leadership role in responding to the pandemic and transforming agri-food systems, agribusiness value chain modernization, food security strengthening, climate investment, and design of eco-compensation mechanisms; and (ii) from implemented projects that have demonstrated deleterious effects of intensive farming and urbanization on land, health, and biodiversity.⁶ The TA will build upon the findings and outcomes and serve as a continuation of a regional TA that helped DMCs develop knowledge solutions for climate-smart agriculture (CSA) and inclusive and sustainable agribusiness value chains.⁷

¹ World Food Programme. 2020. [Populations at Risk: Implications of COVID-19 for Hunger, Migration and Displacement](#).

² After the heads of department corporate priority meeting, the TA name was changed to better align with ADB's vision of a green, inclusive recovery from the COVID-19 pandemic.

³ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

⁴ ADB. 2019. *Strategy 2030 Operational Plan for Priority 5: Promoting Rural Development and Food Security, 2019–2024*. Manila.

⁵ The TA first appeared in the business opportunities section of ADB's website on 18 October 2021.

⁶ Relevant projects include (i) ADB. [People's Republic of China: Preparing Yangtze River Economic Belt Projects](#). Manila (TA 9311); and (ii) ADB. [People's Republic of China: Preparing the Yellow River Ecological Corridor and Climate Resilient Agriculture Development](#). Manila (TA 6654).

⁷ ADB. 2015. *Technical Assistance for Building Sustainable Food and Nutrition Security in Asia and the Pacific (Phase 1)*. Manila (TA 9057).

II. ISSUES

4. Although the Asia and Pacific region has made significant progress in tackling food and nutrition insecurity over the past decades, it was already offtrack in achieving SDG 2 (zero hunger and ending all forms of malnutrition).⁸ The COVID-19 pandemic further increased the number of people facing acute food insecurity to 272 million in 2020–2021, and 57 million more in Asia were affected by hunger in 2020.⁹ Women, who are in charge of feeding their families, are among the most food insecure and need to find ways to cope with the pandemic's impacts. Localized climate change impacts—such as increased frequency and severity of extreme weather events, temperature rise, and unpredictable precipitation—have multiplied difficulties for farmers, particularly those who rely on rain-fed agriculture, in improving productivity and stabilizing local markets with sufficient and diverse nutritious food supply.

5. The COVID-19 pandemic has disrupted agri-food supply chains, leading to massive job and income losses, and resulted in intensified food, nutrition, and livelihood insecurity, especially in countries with extensive lockdowns.¹⁰ With the pandemic still evolving, quantifying its medium- to long-term impact on rural and urban low-income families, particularly women, is not yet possible. ADB has estimated that COVID-19 could induce a heavy loss in 2021, from \$3.1 trillion to \$5.4 trillion, equivalent to about 3.6%–6.3% of global gross domestic product.¹¹ About 28% of the losses are incurred in developing Asia, with South Asia hit hardest.

6. The COVID-19 crisis has aggravated preexisting rural development and food security challenges and demonstrated emerging opportunities. Urban–rural disparities have worsened as rural communities continue to have limited access to health care, medicines, energy, mobility infrastructure, and information and communication technologies. The rapid expansion of agri-food systems has been identified as the primary cause of global and regional biodiversity loss and of reinforced stress on the depletion of the natural capital base (e.g., land, soil, water, forests, and marine resources).¹² Steady growth of food and nutritional demand, compounded by climate change and the intensifying competition over shrinking natural resources around the food–water–energy nexus, are likely to put further pressure on food and nutritional security, economic prosperity, environmental sustainability, and social stability. At the same time, more communications and transactions have been carried out remotely, demonstrating the potential benefits of advanced information and communication technologies and their applications in agriculture and value chain financing. ADB has an important role in helping DMCs understand the nature of renewed development challenges under the COVID-19 pandemic. ADB will help DMCs formulate policy and investment solutions to rebuild rural economies and to solidify food supply chains into a robust low-carbon system that can efficiently engage millions of smallholder farmers; conserve natural resources; and augment resilience against disaster risks, climate change, and future pandemics. ADB's subregional platforms, such as the Greater Mekong Subregion Program

⁸ Food and Agriculture Organization of the United Nations. 2021. *The State of Food Insecurity in the World*. Italy.

⁹ World Bank. 2021. *Food Security and COVID-19*. The estimate of the World Food Programme for the countries where it operates.

¹⁰ (i) High Level Panel of Experts. 2020. *Impacts of COVID-19 on Food Security and Nutrition: Developing Effective Policy Responses to Address the Hunger and Malnutrition Pandemic*. Rome. <https://www.fao.org/3/cb1000en/cb1000en.pdf>; (ii) D. Egger et. al. 2021. Falling Living Standards during COVID-19 Crisis: Quantitative Evidence from Nine Developing Countries. *Science Advances*. 7 <https://www.science.org/doi/10.1126/sciadv.abe0997>; and (iii) J. Clapp and W. Moseley. 2020. *This Food Crisis is Different: COVID-19 and the Fragility of the Neo-Liberal Food Security Order*. *Journal of Peasant Studies*. 47 (7). pp. 1393–417

¹¹ ADBI. 2021. *Macroeconomic Impact of COVID-19 in Developing Asia*. Manila.

¹² “Natural capital” is the stock of natural assets in an ecosystem that interact to yield a flow of goods and services.

Initiative, Central Asia Regional Economic Cooperation Program, and South Asia Subregional Economic Cooperation Program, are critical to ADB assisting DMCs.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcomes

7. The TA is aligned with the following impact: food and nutritional security and rural prosperity in the Asia and Pacific region improved (footnote 5). The TA will have the following outcomes: natural resources and capital investments¹³ in agriculture, natural resources, and rural development (ANRRD) projects increased in the post-COVID-19 era.¹⁴ The TA will help DMCs¹⁵ better understand and analyze evolving impacts of the COVID-19 pandemic and emerging challenges, encourage and introduce essential innovations, accelerate adoption of promising technologies, and expedite new business and financing partnership approaches in ANRRD sector, particularly in four challenging areas, where ADB's support to DMCs will be most critical. By 2024, at least four natural resource or capital investments with credible risk and/or return profiles will be included in the project pipeline, which will enable nature-based smart solutions to be integrated into agriculture and natural resource pipelines.

B. Outputs, Methods, and Activities

8. **Output 1: Impact of the COVID-19 pandemic on food and nutritional security and rural development assessed.** The TA will examine COVID-19 impacts on agri-food value chains and rural livelihoods through risk and vulnerability assessments. They will prioritize high-value value chains from the perspective of food, nutrition, and rural livelihood and/or income security and focus on socio-ecologically vulnerable smallholders, women farmers, landless farm laborers, and the urban poor in selected DMCs and subregions (including cross-border aspects of value chains). The assessments will be evidence-based and informed by dialogues with key stakeholders, including civil society organizations representing specific value chains. The assessments will identify and analyze (i) short-, medium-, and long-term COVID-19 relief and recovery enhancing information, knowledge, and technology; and (ii) investment gaps and needs. The findings, to include age- and gender-disaggregated data whenever available, will enable ADB's operations to respond to DMCs' COVID-19 relief and recovery needs.

9. **Output 2: Smart, resilient, gender-responsive, inclusive, and sustainable agri-food systems and rural development interventions and investments identified and promoted.** To tackle disparate food security and rural development challenges, ADB will dialogue with DMC policy makers, decision-makers, civil society organizations, and development partners to identify and prioritize country-specific socio-technological intervention and investment bundles that help achieve regional objectives. A resilience stress test will be conducted to check how prioritized local, national, and regional high-value agri-food and rural development investments will respond to natural hazards, climate risks, and other economic and environmental shocks. The TA will support the development of the Natural Capital Lab concept within the One ADB framework to pioneer in (i) undertaking natural capital risk and opportunity assessments of prioritized high-value agri-food and rural development value chains, focusing on high-risk agroecological zones and

¹³ Natural capital investments refer to agri-food projects that result in protection, enhancement and growth of natural assets and provide sustainable rural livelihoods .

¹⁴ The design and monitoring framework is in Appendix 1.

¹⁵ Preliminary DMCs identified include Bangladesh, Cambodia, India, Kyrgyz Republic, the Lao People's Democratic Republic, Maldives, Mongolia, Nauru, Nepal, Pakistan, the People's Republic of China, Sri Lanka, Vanuatu and Viet Nam. Work will commence upon receipt of "no-objection" from DMCs.

landscapes, to generate a project pipeline with market-credible risk–return profiles along with ADB’s operations departments; and (ii) supporting the establishment of the Innovative Natural Capital Financing Facility concept, to complement ADB’s ANRRD investment program and scale up green/nature-positive recovery and development solutions.

10. Output 3: Climate-smart agriculture interventions tested and demonstrated. ADB will help participating DMCs increase adaptation and CSA investments as a strategic corporate target. CSA investments build resilience in food systems by supporting climate change adaptation and disaster risk management and maximizing mitigation investments to help achieve nationally determined contributions and contribute to the goal of the Paris Agreement, while increasing food supply capacity. The supported activities for sovereign and non-sovereign projects include (i) demonstration of innovative technologies and business approaches for adaptation, such as digital agriculture services, biotechnology inputs, and regenerative and protective farming techniques; (ii) identification of localized climate investment opportunities in specific landscapes and food supply chains and community adaptation strategies, and preparation of adaptation project proposals, CSA country profiles and investment plans, and innovative financing tools; (iii) testing of digital agriculture services for climate resilience and upscaling of proven climate-smart advisory and warning systems (weather prediction, crop diversification and precision agriculture advice, crop insurance, pest and disease monitoring); (iv) development of incentive mechanisms to encourage farmers to invest in adaptation practices at scale and leveraging of private green financing to upscale CSA dissemination and boost rural livelihoods; (v) a feasibility study and demonstration of urban and protected farming as adaptation measures for Pacific island countries; (vi) agriculture policy analyses and reform dialogue for resilient and low-carbon food systems; and (vii) preparation of training materials and sharing of knowledge on CSA best practices.

11. Output 4: Approaches to develop inclusive and sustainable agribusiness value chains tested and introduced. To support DMCs, agribusiness, communities, and other stakeholders in achieving their commitment to equitable and low-carbon transformation and to collectively prevent pandemics through regional animal disease control, scientific understanding of new industries and emerging issues will be beneficial. The supported activities for sovereign and nonsovereign projects include (i) demonstration of promising digital agriculture services (demand and market intelligence, weather and precision agriculture advice, e-platform trading of outputs and quality inputs, logistics and machinery services, credit scoring, food traceability, and transparency) for farmers, farmers’ groups, and small and medium-sized enterprises to efficiently access markets and improve farming income and profitability; (ii) building of farmers’ and women’s groups’ capacity to use digital payments; (iii) engagement of more women farmers’ groups in commercial value chains and their training as high-earning postharvest specialists, professional crop suppliers, trading service providers, and technical research assistants; (iv) scoping studies on emerging sustainable aquaculture, fishery, and feed industries; (v) feasibility studies to identify alternative measures to improve animal health and animal disease control that drastically reduce antibiotic use and avoid antimicrobial resistance in selected livestock value chains (One Health approach for food safety); support regenerative agriculture; and increase agroecological sustainability, including by reducing agrochemicals in farming and aquaculture and introducing a circular system; (vi) urban agriculture to revive local food production and pandemic-resilient food system building; and (vii) feasibility studies to identify technical, institutional, and infrastructure investment opportunities to minimize food waste and increase transaction and resource-use efficiency in agribusiness value chains.

12. Applications of digital technologies will focus on improving connectivity, enlarging opportunities in marketing and financing, reducing transaction costs, controlling risks, strengthening remote training and capacity building, delivering basic social services (e.g., health

care and vocational education), abating wastes and pollution, and monitoring and conserving natural capital in rural areas. Special efforts will be made to engage women and young entrepreneurs and avoid enlarging the existing digital divide. The TA will promote multiple dissemination and deployment options, including the science and technology backyard approach.¹⁶ The concept of a digital platform for agribusiness services will be established to deliver agri-food value chain advisory and support services across DMCs, including small island developing states and/or countries in fragile and conflict-affected situations.

C. Cost and Financing

13. The TA is estimated to cost \$4,100,000, of which (i) \$1,500,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF) (\$1,000,000 under TASF 7 and \$500,000 under TASF-other sources); (ii) \$750,000 will be financed on a grant basis by the Climate Change Fund (CCF);¹⁷ (iii) \$500,000 will be financed on a grant basis by the Regional Cooperation and Integration Fund;¹⁸ (iv) \$550,000 will be financed on a grant basis by the Strategic Climate Fund¹⁹ and administered by ADB; and (v) \$800,000 will be financed on a grant basis by the People's Republic of China Poverty Reduction and Regional Cooperation Fund (PRC Fund)²⁰ and administered by ADB. The key expenditure items are listed in Appendix 2.

14. Eligible/ineligible expenditure items for each trust fund are as follows:

- (i) **Regional Cooperation and Integration Fund.** Eligible expenditure includes operational expenses of a TA project in the form of consulting services, minimal equipment, and other goods that are indispensable for TA implementation, and other related activities, including demonstration of a project approach. Civil works, capital equipment, and salary for permanent staff of the executing agencies are ineligible.
- (ii) **PRC Fund.** The fund will support operational expenses related to TA, grant, and other eligible initiatives agreed upon by the Ministry of Finance, People's Republic of China and ADB, including consulting services, training, conferences, workshops, small-scale civil works, and/or other associated demonstration equipment and materials. The PRC Fund does not support participants' expenses during seminars/workshops/conferences/site visits.
- (iii) **CCF.** The fund can finance consulting services, equipment, capacity building, technical and policy analysis, and partnership development works for preparing climate investment projects, particularly adaptation investment.
- (iv) **Strategic Climate Fund.** The fund can finance consulting services, travel expenses, training, consultation meetings, workshops, and conference in Maldives.

D. Implementation Arrangements

15. ADB will administer the TA. The Rural Development and Food Security (Agriculture) Thematic Group (RDFS TG) under ADB's Sustainable Development and Climate Change

¹⁶ A rural community-based hub linking useful knowledge directly with down-to-earth practices to promote technology assimilation, innovation, and exchange.

¹⁷ Established by ADB.

¹⁸ Established by ADB. Financing partner: the Government of Japan.

¹⁹ Under SCF Technical Assistance Facility.

²⁰ The fund was originally named People's Republic of China Regional Cooperation and Poverty Reduction Fund in the 2005 Board paper.

Department will be the executing agency responsible for the overall supervision of TA implementation. The TA will have a regional focus.

16. The scope of TA activities will be confirmed in consultations with the DMCs. RDFS TG will monitor the TA activities and report to the RDFS TG committee for discussions and decision-making.²¹ RDFS TG working groups (for CSA, agribusiness value chain, natural capital lab, and digital agriculture) will support the TA; proactively engage multiple sector and thematic groups in coordination with project teams; and develop partnerships with centers of excellence and private sector institutions to deliver the best solutions that the market can offer. TA implementation will be coordinated with the ongoing or planned agricultural cooperation activities under ADB's subregional platforms. The TA duration will be 36 months.

17. Policy and technical briefs, risk and vulnerability assessment reports, and other knowledge products will be shared in a timely manner through ADB-managed websites, webinars, country workshops, and international conferences, in accordance with ADB's publication procedures. The knowledge to be generated from the TA will help build a more resilient, green, inclusive, and equitable food system; support the structural transformation of emerging economies; and promote regional cooperation in Asia and the Pacific. Implementation arrangements are summarized in the table.

Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period ^a	December 2021–November 2024		
Executing agency	ADB		
Implementing agencies	Rural Development and Food Security (Agriculture) Thematic Group, Sustainable Development and Climate Change Department, ADB		
Consultants	To be selected and engaged by ADB		
	Firm: Consultants' qualification selection method	COVID-19–related agri-food and rural development value chain risk and vulnerability assessments (international, 13 person-months; national, 21 person-months)	\$436,500
	Firm: Consultants' qualification selection method	Undertaking assessment of nature-based investment opportunities, development of natural capital lab concept, establishment of natural capital financing facility and agribusiness service platform concept (international, 25.5 person-months; national, 66 person-months)	\$1,295,500
	Individual: Individual selection	International expertise (55 person-months)	\$912,600
	Individual: Individual selection	National expertise (133 person-months)	\$514,600
Disbursement	Disbursement of technical assistance resources will follow ADB's <i>Technical Assistance Disbursement Handbook</i> (2020, as amended from time to time). The funds from ADB TASF, CCF, SCF, RCI Fund, and PRC Fund will be utilized to finance all activities and disbursed based on project deliverables.		

ADB = Asian Development Bank, CCF = Climate Change Fund, COVID-19 = coronavirus disease, PRC Fund = People's Republic of China Poverty Reduction and Regional Cooperation Fund, RCI Fund = Regional Cooperation and Integration Fund, SCF = Strategic Climate Fund, TASF = Technical Assistance Special Fund.

^a The implementation period starts from the expected month of commitment or signing.

Source: Asian Development Bank.

²¹ Working groups comprise representatives from ADB's operations departments and thematic and sector groups.

18. **ADB's procurement.** Procurement will follow the ADB Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers (2017, as amended from time to time).

19. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy and its associated project administration instructions and/or staff instructions.²² Consultants will execute their responsibilities as per their terms of reference and within ADB's applicable guidelines.

20. **Social media and websites.** A web page for the natural capital lab will be developed and hosted on the ADB website. Beyond the TA implementation period, content management will be managed by a dedicated team under the innovative natural capital financing facility.

21. **Cofinancier requirements.** Monitoring and reporting requirements are (i) RCI Fund: annual project implementation reports; (ii) CCF and Strategic Climate Fund: annual progress reports; and (iii) PRC Fund: annual project progress and plan reports.

IV. THE PRESIDENT'S DECISION

22. The President, acting under the authority delegated by the Board, has approved (i) the Asian Development Bank (ADB) administering a portion of technical assistance not exceeding the equivalent of \$1,350,000 to be financed on a grant basis by the People's Republic of China Poverty Reduction and Regional Cooperation Fund and the Strategic Climate Fund; and (ii) ADB providing the balance not exceeding the equivalent of \$2,750,000 on a grant basis for Green and Resilient Rural Recovery through Agri-Food System Transformation in the Asia and Pacific Region, and hereby reports this action to the Board.

²² Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).

DESIGN AND MONITORING FRAMEWORK

Impact the TA is Aligned with			
Food and nutritional security and rural prosperity in the Asia and Pacific region improved (Strategy 2030 Operational Plan for Priority 5: Promoting Rural Development and Food Security, 2019–2024) ^a			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
Outcome Natural resources and capital investments in agriculture, natural resources, and rural development projects increased in the post-COVID-19 era	By 2024 a. At least four natural resource/capital investments with credible risk/return profiles included in the pipeline (2020 baseline: 0)	a. ADB country partnership strategies and/or indicative country pipeline and monitoring; work program and budget framework database	A. Presence of strong natural capital components in ANRRD projects that are economically feasible in the Asia and Pacific region
Outputs 1. Impact of the COVID-19 pandemic on food and nutritional security and rural development assessed 2. Smart, resilient, gender-responsive, inclusive, and sustainable agri-food systems and rural development interventions and investments identified and promoted	1a. At least five COVID-19–era local, national, and regional agri-food and rural development value chain risk and vulnerability assessments, including sex-disaggregated data where available, undertaken by 2022 (2020 baseline: 0) 2a. At least four agri-food and rural development value chain, natural capital risk, vulnerability, and opportunity assessments undertaken, incorporating sex-disaggregated data where available, and gender mainstreamed by 2024 (2020 baseline: 0) 2b. At least five ongoing and/or in the pipeline ANRRD projects with natural capital components supported by 2024 (2020 baseline: 0) 2c. Natural Capital Lab concept established by 2022 (2020 baseline: Not applicable) (OP 7.3.4) 2d. Innovative Natural Capital Financing Facility concept established by 2022 (2020 baseline: Not applicable) 2e. Agribusiness Service Platform concept developed by 2022 (2020 baseline: Not applicable) (OP 7.2.4) 2f. At least 200 government officials, business leaders, and community representatives (at least 30% women) received	1a. Quarterly assessment reports/consultant progress reports 2a. Quarterly assessment reports/consultants' progress reports 2b. ADB ANRRD (including the Private Sector Operations Department) project pipeline and portfolio 2c. ADB's announcement on website; consultant/TA progress reports 2d. ADB's announcement on website; consultant/TA progress reports 2e. Annual reports of the RDFS TG; TA consultant progress reports; Sustainable Development and Climate Change Department/consultant tracking/monitoring reports 2f. Registration at training programs/webinars; training evaluation report	R. Lack of reliable data, and constraints on obtaining quality on-ground data/information because of COVID-19 R. Uncertainty because the COVID-19 outbreak restricts the ability of DMCs to support TA activities. A. All policy and regulatory constraints on digitalization of ANRRD project design and delivery process can be overcome.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>3. Climate-smart agriculture interventions tested and demonstrated</p> <p>4. Approaches to develop inclusive and sustainable agribusiness value chains tested and introduced</p>	<p>training on natural capital investment by 2024 (2020 baseline: 0) (OP 2.3.1)</p> <p>3a. At least 2 new tests/ demonstration activities/for adopting climate-smart agriculture practices, including 1 focused on gender empowerment, carried out by 2024 (2020 baseline: 0) (OP 3.1.5)</p> <p>3b. Report on assessing preliminary outcomes of all tested innovations and 2 knowledge products published by 2024 (2020 baseline: 0)</p> <p>3c. In Maldives, at least 4 national consultation workshops, 3 interagency coordination meetings, and 1 regional knowledge-sharing event held by 2022, with at least 40% women participating, to identify issues and opportunities related to climate resilience in agriculture and food security in the context of COVID-19 recovery (2020 baseline: 0) (OP 3.2.2)</p> <p>3d. By 2022, priority policy reforms and investments in Maldives to promote climate-resilient agriculture and food security, and innovative financing instruments for resilient agriculture and food security identified (2020 baseline: 0)</p> <p>3e. By 2023, at least 3 actions to strengthen resilience of agriculture and food systems identified and reported for Maldives (2021 baseline: 0) (OP 2.5.1)</p> <p>4a. At least 1 new test/ demonstration activity/for gender-inclusive, pro-poor, and sustainable agricultural value chain development carried out by 2024 (2020 baseline: 0) (OPs 1.3.3; 5.2.3)</p> <p>4b. At least 1 new test/ demonstration activity/for building use cases of rural digitization, with focus on gender empowerment, carried out by</p>	<p>3a. Consultant reports; progress reports; project data sheets</p> <p>3b. Reports, policy briefs, and working papers uploaded to ADB website</p> <p>3c. Workshop reports</p> <p>3d. Consultant reports</p> <p>3e. Reports, policy briefs and working papers uploaded to ADB website</p> <p>4a. Consultant reports; progress reports; project data sheets</p> <p>4b. Consultant reports; progress reports; project data sheets</p>	

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	2024 (2020 baseline: 0) (OP 5.2.4) 4c. Report on assessing preliminary outcomes of all tested innovations and 2 knowledge products published by 2024 (2020 baseline: 0)	4c. Reports, policy briefs and working papers uploaded to ADB website	

Key Activities with Milestones
<p>1. Impact of COVID-19 pandemic on food and nutritional security and rural development assessed</p> <p>1.1 Review COVID-19 impacts on ANRRD in participating DMCs and/or prioritized agroecological landscapes (Q4 2021–Q4 2022).</p> <p>1.2 Identify high-value (from food, nutrition, livelihood, and income security angles) local, national, and regional agri-food value chains in high, medium, low, and without COVID-19 impacts in DMCs and/or agroecological zones/landscapes (Q4 2021–Q4 2022).</p> <p>1.3 Utilize digital technologies and platforms and undertake risk and vulnerability assessments of COVID-19 impacts on agri-food value chains and/or agroecological landscapes (Q4 2021–Q4 2022).</p> <p>1.4 Identify COVID-19 impacts on intensifying and/or mitigating policy, technological, and market factors, focusing on socio-ecologically vulnerable smallholders and landless farm laborers (Q4 2021–Q4 2022).</p> <p>1.5 Prepare policy and action briefs for ADB DMCs and clients (Q4 2021–Q4 2022).</p> <p>2. Smart, resilient, gender-responsive, inclusive, and sustainable agri-food systems and rural development interventions and investments identified and promoted</p> <p>2.1 Develop concepts of the Natural Capital Lab and associated Innovative Natural Capital Financing Facility, and prepare a knowledge support TA proposal to establish the Natural Capital Lab and Innovative Natural Capital Financing Facility (Q4 2021–Q2 2022).</p> <p>2.2 Develop the concept of an agribusiness services platform (Q4 2021–Q2 2022).</p> <p>2.3 Assess the digital infrastructure (hard and soft) capability of ANRRD investment planning agencies and private sector organizations in selected DMCs and/or agroecological landscapes (Q4 2021–Q2 2022).</p> <p>2.4 Assess the agriculture technology utilization capability of selected ANRRD project executing and/or implementing agencies (Q4 2021–Q4 2023).</p> <p>2.5 Design, deliver, and implement country-specific knowledge solutions, learning programs, and outreach activities, including those in partnership with the private sector (Q4 2021–Q2 2024).</p> <p>2.6 Undertake a resilience stress test of selected socio-ecologically high-value local, national, and regional agri-food and rural development value chains (Q1–Q2 2022).</p> <p>2.7 Identify agri-food and rural development value chain policy, technology, and investment bundles (Q1–Q2 2022).</p> <p>2.8 Generate smart ANRRD investment project profiles with market-credible risk–return profiles (Q4 2021–Q4 2023).</p> <p>2.9 Synergize smart ANRRD investments with ADB’s COVID-19 recovery operations (Q2 2022–Q2 2024).</p> <p>2.10 Assess the findings considering the extent of outreach scale of digital services, last-mile connection issues, and any required measures to avoid generating a digital divide (such as combining digital services with face-to-face interactions) (Q4 2021–Q2 2024).</p> <p>2.11 Discuss the findings and outputs by organizing stakeholder workshops and knowledge dissemination events, including at DMC resident missions (Q4 2021–Q2 2024).</p> <p>3. Climate-smart agriculture interventions tested and demonstrated</p> <p>3.1 Survey international best practices among public and private investments on promoting climate-smart agriculture and interdisciplinary green recovery approaches in developing countries (Q4 2021).</p> <p>3.2 In consultation with the climate-smart agriculture working group of RDFS TG and sector and thematic groups, identify a few test and demonstration opportunities that best suit the needs of DMCs and ADB’s operational demand (Q4 2021–Q4 2022).</p> <p>3.3 Carry out scoping/technical feasibility studies for selected demonstration activities and implementation arrangements, together with project team leaders (Q4 2021–Q3 2022).</p> <p>3.4 Analyze green and resilient recovery in Maldives, produce country reports, and organize national consultation workshops (Q4 2021–Q2 2022).</p>

Key Activities with Milestones

- 3.5 Identify innovative financing instruments for pursuing resilient food systems as part of COVID-19 recovery, based on country recommendations, interagency coordination meetings, and a regional knowledge-sharing event (Q1 2022–Q4 2022).
 - 3.6 Implement and monitor the selected test and demonstration activities as integral parts of ADB's ongoing or pipeline projects (Q4 2021–Q2 2024).
 - 3.7 Produce a report summarizing key findings of the activities (Q4 2021–Q2 2024).
 - 3.8 Discuss the findings and outputs by organizing stakeholder workshops and knowledge dissemination events, including at DMC resident missions (Q4 2021–Q2 2024).
- 4. Approaches to develop inclusive and sustainable agribusiness value chains tested and introduced**
- 4.1 Survey a wide range of technologies and innovative institutional settings, logistics, financing, and business models in the food sector, particularly integrated business development approaches to combine essential elements to make viable business cases (e.g., technical advancement + logistics + supply chain finance) that can have transformational impacts and ensure environmental sustainability as well as the beneficial engagement of many smallholder farmers, particularly women, in commercial food value chain development (Q4 2021–Q3 2022).
 - 4.2 Identify promising innovations that meet DMCs' needs and can be tested under ADB's operations, and select the most suitable ones for TA support based on discussions with the agribusiness value chain working group of RDFS TG and other sector and thematic groups (Q4 2021–Q4 2022).
 - 4.3 Carry out scoping/technical feasibility studies and prepare implementation arrangements for the selected demonstration activities in consultation with internal and external development partners for selected proposals (Q4 2021–Q3 2022).
 - 4.4 Implement the selected proposals as integral parts of ADB's ongoing or pipeline projects (Q4 2021–Q2 2024).
 - 4.5 Produce a report summarizing key findings of the demonstration activities (Q4 2021–Q2 2024).
 - 4.6 Discuss the findings with multiple stakeholders by organizing workshops and knowledge dissemination events, including at DMC resident missions (Q4 2021–Q2 2024).

TA Management Activities

TA management will be ongoing through the lifespan of the TA and will include

- (i) hiring of consultants;
- (ii) regular management of contracts for technical studies (to conform to normal monthly management and invoicing and billing cycles); and
- (iii) annual and periodic TA review to monitor utilization of TA funds and progress on TA performance indicators and to assess consultants' performance.

Inputs

ADB: \$1.5 million Technical Assistance Special Fund (TASF) (TASF 7: \$1.0 million and TASF-other sources: \$0.5 million)
 Climate Change Fund: \$0.75 million
 Strategic Climate Fund: \$0.55 million
 People's Republic of China Poverty Reduction and Regional Cooperation Fund: \$0.8 million
 Regional Cooperation and Integration Fund: \$0.5 million

A = assumption; ADB = Asian Development Bank; ANRRD = agriculture, natural resources, and rural development; COVID-19 = coronavirus disease; DMC = developing member country; OP = operational priority; Q = quarter; R = risk; RDFS TG = Rural Development and Food Security (Agriculture) Thematic Group; TA = technical assistance.

^a ADB. 2019. *Strategy 2030 Operational Plan for Priority 5: Promoting Rural Development and Food Security, 2019–2024*. Manila.

Contribution to Strategy 2030 Operational Priorities:

The expected values and methodological details for all OP indicators to which this TA will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 3).

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Amount				
	ADB ^a	Climate Change Fund ^b	Strategic Climate Fund ^c	People's Republic of China Poverty Reduction and Regional Cooperation Fund ^d	Regional Cooperation and Integration Fund ^e
A. Consultants					
1. Remuneration and per diem ^f					
a. International consultants	774.0	420.0	216.2	403.0	252.0
b. National consultants	376.0	164.0	231.0	199.0	124.0
2. Out-of-pocket expenditures					
a. International and local travel	146.8	49.3	35.0	62.0	39.0
B. Surveys and studies ^g	51.0	20.0	10.0	38.0	24.0
C. Training, seminars, and conferences ^h	104.0	80.0	15.0	61.0	38.0
D. Miscellaneous TA administration costs ⁱ	15.0	5.0	5.0	11.0	7.0
E. Contingencies	32.2	11.7	37.8	24.0	15.0
Total	1,500.0	750.0	550.0	800.0	500.0

ADB = Asian Development Bank, CCF = Climate Change Fund, PRC Fund = People's Republic of China Poverty Reduction and Regional Cooperation Fund, RCI Fund = Regional Cooperation and Integration Fund, TA = technical assistance.

Notes: The TA is estimated to cost \$4,100,000, of which contributions from ADB, Climate Change Fund, Strategic Climate Fund, People's Republic of China Poverty Reduction and Regional Cooperation Fund, and Regional Cooperation and Integration Fund are presented in the table. Numbers may not sum precisely because of rounding.

^a Financed by ADB's Technical Assistance Special Fund (TASF) (TASF 7 [\$1.0 million] and TASF-other sources [\$0.5 million]).

^b Established by ADB.

^c Under SCF Technical Assistance Facility. Administered by ADB. Climate-smart agriculture activities for Maldives will be financed on a grant basis by the Strategic Climate Fund.

^d Administered by ADB.

^e Established by ADB. Financing partner: the Government of Japan.

^f Includes experts hired under resource person contracts to provide short-term consulting inputs.

^g Includes costs for field researchers, enumerators, focus group discussions, survey work and materials, costs for field work, including related non-consulting services, and support for preparation of analytical work/studies and demonstration work. Including activities such as (i) training of women in India to operate soil survey and related testing devices; a survey on feasible hydroponics and other forms of urban farming in the Pacific; and subscription of participating communities to digital advisory services for climate resilience such as weather and monsoon prediction, pest and disease detection, and prime harvesting advisory and logistics arrangements in selected developing member countries; (ii) community consultation workshops in Viet Nam, stakeholder consultations on various adaptation and mitigation investments in Sri Lanka, and training of village women trainers in digital services and in handling of drone and helium balloons for soil research in India; and (iii) demonstration of digital agriculture services for participating farmers and communities, including e-platform trading of crops and inputs, traceability and food safety standards, crop market information and advice, and mechanization and precision farming and harvesting advice.

^h Includes national workshops and related events on irrigation water policy in Viet Nam, a country climate investment plan in Sri Lanka, and a training program on upscaling climate smart agriculture for practitioners. Including honoraria, country briefings, cross learning visits, participation of developing member country representatives and cost of travel of ADB staff as resource persons in international or regional workshops, conferences and forums, participation of other resource persons, and other capacity-building support. May also include travel cost of ADB staff to provide administrative or secretariat support services to implement regional training activities (workshops, seminars) for the regional technical assistance as per ADB (Budget, People, and Management Systems Department; and Strategy,

Policy and Partnerships Department). 2013. Use of Bank Resources: Regional Technical Assistance and Technical Assistance vs. Internal Administrative Expenses Budget. Memorandum. 26 June (internal).

- ⁱ Includes costs for editors, typesetters/graphic artists, peer reviewers, proofreaders, videographer, translators, and other knowledge production expenses; including cost of Office 365 license costs for TA individual consultants.
Source: Asian Development Bank estimates.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=55113-001-TARreport>

1. Terms of Reference for Consultants
2. Contribution to Strategy 2030 Operational Priorities

Supplementary Documents

3. Regional Cooperation and Integration Scorecard
4. Innovative Natural Capital Financing Facility