



# Technical Assistance Report

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**PUBLIC**

Project Number: 55257-001  
Knowledge and Support Technical Assistance (KSTA)  
May 2022

## Promoting Digitalization for Green and Inclusive Growth in Asia

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**Asian Development Bank**

## ABBREVIATIONS

ADB	–	Asian Development Bank
ASEAN	–	Association of Southeast Asian Nations
DMC	–	developing member country
ERCD	–	Economic Research and Regional Cooperation Department
ICT	–	information and communication technology
PRC	–	People’s Republic of China
TA	–	technical assistance

## NOTE

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

<b>Vice-President</b>	Woochong Um, Managing Director and Officer-in-Charge, Knowledge Management and Sustainable Development
<b>Director General</b>	Albert Park, Economic Research and Regional Cooperation Department (ERCD)
<b>Deputy Director General</b>	Chia-Hsin Hu, ERCD
<b>Director</b>	Abdul Abiad, Macroeconomics Research Division (ERM), ERCD
<b>Team leaders</b>	Shu Tian, Senior Economist, ERM, ERCD (principal) Donghyun Park, Advisor, Office of the Chief Economist (EROD), ERCD (colead)
<b>Team members</b>	Rhia Theresa C. Bautista-Piamonte, Operations Assistant, ERM, ERCD Cynthia Castillejos-Petalcorin, Senior Economics Officer, ERM, ERCD Gemma Estrada, Senior Economics Officer, EROD, ERCD Yothin Jinjarak, Senior Economist, ERM, ERCD Marcel Schroder, Economist, ERM, ERCD Mai Lin C. Villaruel, Economics Officer, ERM, ERCD

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## KNOWLEDGE AND SUPPORT TECHNICAL ASSISTANCE AT A GLANCE

<b>1. Basic Data</b>		<b>Project Number:</b> 55257-001	
<b>Project Name</b>	Promoting Digitalization for Green and Inclusive Growth in Asia	<b>Department/Division</b>	ERCDC/ERMR
<b>Nature of Activity Modality</b>	Research and Development Regular	<b>Executing Agency</b>	Asian Development Bank
<b>Country</b>	REG (INO, KOR, MAL, PHI, PRC, SIN, THA, VIE)		
<b>2. Sector</b>	<b>Subsector(s)</b>	<b>ADB Financing (\$ million)</b>	
		<b>Total</b>	<b>0.000</b>
<b>3. Operational Priorities</b>		<b>Climate Change Information</b>	
✓ OP1: Addressing remaining poverty and reducing inequalities		GHG Reductions (tons per annum)	0
✓ OP2: Accelerating progress in gender equality		Climate Change impact on the Project	Low
✓ OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability		<b>ADB Financing</b>	
✓ OP4: Making cities more livable		Adaptation (\$ million)	0.000
✓ OP5: Promoting rural development and food security		Mitigation (\$ million)	0.000
		<b>Cofinancing</b>	
		Adaptation (\$ million)	0.000
		Mitigation (\$ million)	0.000
<b>Sustainable Development Goals</b>		<b>Gender Equity and Mainstreaming</b>	
SDG 1.2, 1.5		Some gender elements (SGE)	✓
SDG 5.5			
SDG 8.2, 8.4		<b>Poverty Targeting</b>	
SDG 9.b		General Intervention on Poverty	✓
SDG 10.4			
SDG 12.a			
<b>4. Risk Categorization</b> Low			
<b>5. Safeguard Categorization</b> Safeguard Policy Statement does not apply			
<b>6. Financing</b>			
<b>Modality and Sources</b>		<b>Amount (\$ million)</b>	
<b>ADB</b>		<b>0.000</b>	
None		0.000	
<b>Cofinancing</b>		<b>0.500</b>	
Republic of Korea e-Asia and Knowledge Partnership Fund (Full ADB Administration)		0.500	
<b>Counterpart</b>		<b>0.000</b>	
None		0.000	
<b>Total</b>		<b>0.500</b>	
<b>Currency of Financing:</b> US Dollar			

## I. INTRODUCTION

1. The knowledge and support technical assistance (TA) will support knowledge development and provide policy advice on fostering green and inclusive growth via digitalization in developing Asia. This TA focuses on enabling information and communication technology (ICT) to facilitate Asia's transition toward green and inclusive growth. The Economic Research and Regional Cooperation Department (ERCD) will carry out the TA in collaboration with global and regional experts for quality research and resources and will disseminate outputs to policy makers and stakeholders.

2. The TA is well aligned with Strategy 2030 of the Asian Development Bank (ADB).<sup>1</sup> By promoting digitalization for green and inclusive growth, the TA will contribute to ADB's operational priority 3 on tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; and operational priority 1 on addressing remaining poverty and reducing inequalities. The TA will examine how digitalization can contribute to inclusive and sustainable economic growth, innovation, and employment. Since digital solutions such as smart cities, e-commerce, and fintech also support disadvantaged groups, this TA partly contributes to other operational priorities, especially operational priority 2 on accelerating progress in gender equality, operational priority 4 on making cities more livable, and operational priority 5 on promoting rural development and food security. All TA activities are aligned with Sustainable Development Goals 1, 5, 8, 9, 10, 12, and 13 and with ADB's overall efforts to promote prosperous, inclusive, resilient, and sustainable growth.<sup>2</sup>

## II. ISSUES

3. Developing Asia needs to move toward a green, inclusive, and resilient growth trajectory because the region needs to keep tackling challenges to reduce poverty and inequality as well as enhance resilience to shocks caused by climate change and pandemics. Green and inclusive growth provides (i) economic benefits through increased production factors, such as physical, labor, and natural capital; improved efficiency; and innovation; (ii) social benefits, such as greater resilience, job creation, and poverty reduction; and (iii) environmental benefits.<sup>3</sup>

4. ICT infrastructure and digitalization present opportunities to foster the shift toward sustainable growth. Digitalization supports growth via more capital input, enhances efficiency, and fosters innovation as well as creates environmental and social benefits. Digital technologies—such as online solutions, big data, and cloud technology—boost inclusiveness and resilience by enabling continuity of economic activities. Cloud migration of core banking systems enabled climate resiliency at Cantilan Bank in the Philippines.<sup>4</sup> E-commerce boosted social inclusion by widening market access for rural producers in the People's Republic of China (PRC).<sup>5</sup> Digital solutions and technology such as smart city and buildings boost energy efficiency and productivity and fintech services enhance financial access to underserved groups, such as micro, small, and medium-sized enterprises. Digitalization also helps with emission tracking to boost investor confidence during the low-carbon transition.

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<sup>1</sup> ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

<sup>2</sup> The TA first appeared in the business opportunities section of ADB's website on 25 March 2022.

<sup>3</sup> World Bank. 2012. [Inclusive Green Growth: The Pathway to Sustainable Development](#). Washington, DC.

<sup>4</sup> H. Fernandez. 2022. [Women Embrace Digital Banking in Typhoon-Hit Philippine Province as COVID Drives Entrepreneurship](#). *Eco-Business*. 8 March.

<sup>5</sup> United Nations Department of Economic and Social Affairs. 2021. [Leveraging Digital Technologies for Social Inclusion](#). *Policy Brief*. No. 92. New York.

5. ADB's developing member countries (DMCs) lack conducive policy frameworks to facilitate digitalization and innovation toward green and inclusive growth. Developing Asia faces strategic, institutional, behavioral, and financial barriers during its shift toward sustainable growth. Technological advances and innovation play a vital role to overcome these barriers and contribute to sustainable growth. However, only a few developing Asian economies, such as the PRC, the Republic of Korea, and Singapore, have made significant progress on digital transformation. Most developing Asia economies do not have sufficient policy instruments and capacity to foster advances in and adoption of ICT and innovation to guide ICT-enabled sustainable growth and encourage other types of technologies during the low-carbon transition.

6. Developing Asia will benefit from knowledge and policies that connect innovative digital solutions to green and inclusive growth. Enhanced knowledge about the drivers, impediments, and good practices in using ICT to foster green industries and technologies will contribute to policy capacity to support digital ecosystems and accelerate digitalization. The findings of the TA could also serve as a basis for pipelines that highlight climate change considerations in various sectors in the context of digitalization.

### III. THE TECHNICAL ASSISTANCE

#### A. Impacts and Outcome

7. The TA is aligned with the following impacts: (i) poverty and inequalities among developing Asia's population reduced, and (ii) support for climate and disaster resilience and environmental sustainability in developing Asia scaled up. The TA will have the following outcome: DMCs' knowledge and capacity to develop policies that accelerate digital transformation toward green and inclusive growth improved.<sup>6</sup>

#### B. Outputs, Methods, and Activities

8. **Output 1: Knowledge about opportunities and challenges of green and inclusive growth generated.** This component will estimate the economic, social, and environmental consequences of a low-carbon transition. Through desk-based research, the TA team will review developing Asia's carbon footprint. It will analyze opportunities and challenges that will emerge during the transition to sustainable growth across sectors such as renewable energy and energy efficiency, green transport, green agriculture, green buildings, green trade, and the circular economy via increased capital inputs, enhanced productivity and innovation, new markets and jobs, greater resilience, and investor confidence. Research and policy recommendations will focus on selected Association of Southeast Asian Nations (ASEAN) economies, such as Indonesia, the Philippines, Thailand, and Viet Nam, based on information availability. A regional study may be conducted to provide recommendations for policy development in other parts of developing Asia.

9. **Output 2: Knowledge about smooth digital transformation for sustainable growth promoted.** Because of the different digitalization stages of the DMCs covered in this TA, the TA team will conduct desk-based research to review the experiences of Asian economies—such as the PRC, the Republic of Korea, and Singapore—and the challenges in the selected ASEAN

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<sup>6</sup> The design and monitoring framework is in Appendix 1.

economies.<sup>7</sup> The TA team will also analyze how digitalization helps address the challenges and opportunities during the transition to sustainable growth in selected ASEAN economies by exploring opportunities for vulnerable groups such as micro, small, and medium-sized enterprises and women, and investors in the forms of information tracking, measurement tools, and other platforms for green initiatives. The team will conduct good practice case studies and analysis of how digital solutions can foster green and inclusive development to support policy recommendations for smooth digital transformation. A regional study may be conducted to provide recommendations for policy development in other parts of developing Asia.

10. **Output 3: Knowledge and capacity to form a conducive policy environment for sustainable growth through digitalization strengthened.** This component focuses on knowledge dissemination and capacity building by transforming knowledge into policy recommendations. The desk-based knowledge products such as reports, blogs, infographics, and working papers generated under this component will foster policy development and guide investment toward sustainable growth through smooth digital transformation in the selected ASEAN markets. To actively target relevant stakeholders and generate greater impact, the knowledge products will be disseminated at virtual or in-country knowledge and capacity building events and in regional knowledge sharing events.

11. To maximize impact and jointly support DMCs' policy development, the TA will explore collaboration with research institutes, other ADB departments, and international organizations involved in similar work in delivering the outputs.<sup>8</sup> This practice will also ensure that the cases and best practices will be relevant to ADB's DMCs.

### C. Cost and Financing

12. The TA financing amount is \$500,000, which will be financed on a grant basis by the Republic of Korea e-Asia and Knowledge Partnership Fund and administered by ADB. The key expenditure items are listed in Appendix 2.

13. The following are ineligible items under the Republic of Korea e-Asia and Knowledge Partnership Fund: (i) civil works, (ii) procurement of large-scale equipment, (iii) permanent staffing cost, (iv) hiring of staff consultants, and (v) foreign travel cost of staff, unless otherwise agreed between the Government of the Republic of Korea and ADB.

### D. Implementation Arrangements

14. ADB will administer the TA. ERCD will execute and implement the TA and will also be responsible for selecting, supervising, and managing consultants; procurement; and accomplishing, monitoring, and evaluating the outputs. ERCD will provide staff as resource persons in workshops and conferences. To conduct research, ERCD will explore collaboration with other research and international institutions. To maximize ADB's experience and knowledge, ERCD will coordinate with other departments and resident missions to identify DMC participants and recommend research partners. Implementation arrangements are summarized in the table.

<sup>7</sup> One way to overcome barriers to inclusive growth through digitization is supporting smaller civil society organizations that represent citizens and communities and have limited access to digital services or capacity to use them. The policy options will discuss how they can be supported during the digital transition.

<sup>8</sup> For example, ADB. 2020. [Technical Assistance for Policy Advice for COVID-19 Economic Recovery in Southeast Asia](#). Manila; ADB. [Regional: Green and Innovative Finance Initiative for Scaling Up Southeast Asian Infrastructure](#); and the Digital Technology for Development Framework developed by the Sustainable Development and Climate Change Department.

### Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	May 2022–December 2024		
Executing agency	Economic Research and Regional Cooperation Department, ADB		
Implementing agency	Macroeconomics Research Division, Economic Research and Regional Cooperation Department, ADB		
Consultants	To be selected and engaged by ADB		
	Individual selection	International (30 person-months)	\$310,000
	Individual selection	National (1 person-month)	\$5,000
Procurement <sup>a, b</sup>	To be procured by the executing agency		
	RFQ, direct contracting, shopping as applicable	3–4 contracts	\$40,000
Disbursement	Disbursement of TA resources will follow ADB's <i>Technical Assistance Disbursement Handbook</i> (2020, as amended from time to time).		

ADB = Asian Development Bank, RFQ = request for quotation, TA = technical assistance.

<sup>a</sup> Goods to be procured include only the purchase of databases and licenses.

<sup>b</sup> Procurement Plan (accessible from the list of linked documents in Appendix 3).

Source: ADB.

15. **Consulting services.** ADB will engage the consultants following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.<sup>9</sup> Individual consultants will be recruited through individual selection where short-listed candidates may be hired to provide international and/or national consulting inputs. Output-based and lump sum contracts will be pursued to the extent possible.

16. **ADB's procurement.** Datasets or licenses to use certain databases may be purchased during TA implementation. In organizing training sessions, workshops, and meetings, ADB will use the shopping method to procure non-consulting services. 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). Where applicable, the TA team will coordinate with ADB's Procurement, Portfolio, and Financial Management Department and Office of the General Counsel before purchasing datasets from DMC statistical agencies and third-party database providers. Disbursements under the TA will follow ADB's *Technical Assistance Disbursement Handbook* (2020, as amended from time to time).

17. **Social media and websites.** Project research and outputs will be hosted on and disseminated through the ADB website upon project completion, following the Guidelines on Social Media at ADB and the Branding Tool Kit.

## IV. THE PRESIDENT'S DECISION

18. The President, acting under the authority of delegated by the Board, has approved the Asian Development Bank administering technical assistance not exceeding the equivalent of \$500,000 to be financed on a grant basis by the Republic of Korea e-Asia Knowledge and Partnership Fund for Promoting Digitalization for Green and Inclusive Growth in Asia, and hereby reports this action to the Board.

<sup>9</sup> Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 3).

## DESIGN AND MONITORING FRAMEWORK

<b>Impacts the TA is Aligned with</b> Poverty and inequalities among developing Asia's population reduced (Strategy 2030 Operational Plan for Priority 1: Addressing Remaining Poverty and Reducing Inequalities, 2019–2024) <sup>a</sup>  Support for climate and disaster resilience and environmental sustainability in developing Asia scaled up (Strategy 2030 Operational Plan for Priority 3: Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 2019–2024) <sup>b</sup>			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<b>Outcome</b> DMCs' knowledge and capacity to develop policies that accelerate digital transformation toward green and inclusive growth improved	At least 75% of TA knowledge event participants, at least 25% of whom are women, reported improved knowledge about fostering digitalization and directed more resources toward green and inclusive growth (2021 baseline: 0)	Events feedback; post-event surveys (conferences, workshops, or webinars); and TA consultant reports	A: DMCs' commitment to SDGs and green and inclusive growth will be sustained.
<b>Outputs</b> 1. Knowledge about opportunities and challenges of green and inclusive growth generated  2. Knowledge about smooth digital transformation for sustainable growth promoted  3. Knowledge and capacity to form a conducive policy environment for sustainable growth through digitalization strengthened	1. Five studies and/or research papers on sustainable growth and green industries and policies fostering green and inclusive growth published on and disseminated through the ADB website with at least 100 downloads and 10 citations (2021 baseline: 0) (OP2.1, OP2.5)  2. Five studies and/or research papers on digital transformation and contribution to green and inclusive growth published on and disseminated through the ADB website with at least 100 downloads and 10 citations (2021 baseline: 0)  3a. One executive report on the key findings and policy recommendations published and disseminated; three blogs prepared; Published knowledge products receive at least 1,000 clicks and 10 citations; and at least 150 webinar and/or workshop participants reported	1a. Progress reports and completed reports by consultants  1b. Journal websites, Google Scholar, conferences, publication references, ADB web counters, ADB website, and TA consultant reports  2. Journal websites, Google Scholar, conferences, publication references, ADB web counters, ADB website, and TA consultant reports  3a. ADB website, TA progress reports, and post-events surveys	R: Analysis may be delayed because of the competing research priorities of collaborating research institutions.  R: Analysis may be delayed because of the competing research priorities of collaborating research institutions.  R: Event organization may be delayed because of availability and schedule conflicts of policy makers and panelists.

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>increased awareness or usefulness about related topics (2021 baseline: 0)</p> <p>3b. At least three dissemination workshops and policy dialogues organized and attended by at least 200 researchers and policy makers, at least 50 of whom are women (2021 baseline: 0)</p>	<p>3b. Conference and/or workshop materials and post-event surveys</p>	
<p><b>Key Activities with Milestones</b></p> <p><b>1. Knowledge about opportunities and challenges of green and inclusive growth generated</b></p> <p>1.1 Consultants contracted (Q2–Q3 2022).</p> <p>1.2 Five research studies simultaneously drafted (Q4 2022–Q2 2023).</p> <p>1.3 Databases procured or subscribed (Q4 2022–Q2 2023).</p> <p>1.4 Research revised and finalized (Q3–Q4 2023).</p> <p><b>2. Knowledge about smooth digital transformation for sustainable growth promoted</b></p> <p>2.1 Consultants contracted (Q2–Q3 2022).</p> <p>2.2 Five research studies drafted simultaneously (Q4 2022–Q2 2023).</p> <p>2.3 Research revised and finalized (Q4 2023).</p> <p><b>3. Knowledge and capacity to form a conducive policy environment for sustainable growth through digitalization strengthened</b></p> <p>3.1 Inception workshop organized (Q4 2023).</p> <p>3.2 Research studies published digitally (Q4 2023–Q4 2024).</p> <p>3.3 Executive report drafted and finalized (Q4 2023–Q1 2024).</p> <p>3.4 Executive report and blogs published and launched (Q2 2024).</p> <p>3.5 Dissemination events organized (Q3 2023–Q4 2024).</p>			
<p><b>Inputs</b></p> <p>Republic of Korea e-Asia and Knowledge Partnership Fund: \$500,000</p>			

A = assumption, ADB = Asian Development Bank, DMC = developing member country, DMF = design and monitoring framework, OP = operational priority, Q = quarter, R = risk, SDG = Sustainable Development Goal, TA = technical assistance.

<sup>a</sup> ADB. 2019. [Strategy 2030 Operational Plan for Priority 1: Addressing Remaining Poverty and Reducing Inequalities, 2019–2024](#). Manila.

<sup>b</sup> ADB. 2019. [Strategy 2030 Operational Plan for Priority 3: Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 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 will be detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 3).

Source: ADB.

**COST ESTIMATES AND FINANCING PLAN**  
(\$'000)

Item	Amount
<b>Republic of Korea e-Asia and Knowledge Partnership Fund<sup>a</sup></b>	
1. Consultants <sup>b</sup>	
a. Remuneration and per diem	
i. International consultants	310.0
ii. National consultants	5.0
b. Out-of-pocket expenditures	
i. International and local travel	10.0
ii. Miscellaneous administration and support costs	4.0
2. Printed external publications <sup>c</sup>	20.0
3. Databases and licenses <sup>d</sup>	40.0
4. Training, seminars, workshops, forums, and conferences <sup>e</sup>	
a. Facilitators and/or resource persons	25.0
b. Venue rental and related facilities	15.0
c. Participants	15.0
d. Representation	1.0
5. Contingencies	55.0
<b>Total</b>	<b>500.0</b>

Note: The technical assistance (TA) is estimated to cost \$500,000, of which contributions from the Republic of Korea e-Asia and Knowledge Partnership Fund are presented in the table.

<sup>a</sup> Administered by the Asian Development Bank (ADB).

<sup>b</sup> Lump sum payments and output-based contracts will be considered under the TA. Fixed or lump sum out-of-pocket expenses will be considered for administrative efficiency and a simplified disbursement process.

<sup>c</sup> The copies, preferably printed in-house, will be offered based on requests from readers, libraries, and stakeholders and will be used in dissemination events.

<sup>d</sup> Direct contracting will be applied for purchasing databases and licenses from a single proprietary source. Based on para. 20 of the Project Administration Instruction on Administering Grant-Financed Technical Assistance (PAI 5.09), goods procured by ADB or consultants remain ADB's property until transferred to the government or disposed by ADB.

<sup>e</sup> 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). Includes venue rental and related facilities; cost of workshops and conferences (at least eight events); resource persons, including travel expenses of ADB staff participating in workshops as resource persons; and dissemination activities. Representation expenses will be kept minimal level and follow ADB's guidelines (PAI 5.09, para. 26).

Source: ADB estimates.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/LinkedDocs/?id=55257-001-TARreport>

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