



Country Operations Business Plan

May 2019

People's Republic of China 2019–2021

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 23 April 2019)

Currency unit	–	yuan (CNY)
CNY1.00	=	\$0.1490
\$1.00	=	CNY6.7120

ABBREVIATIONS

ADB	–	Asian Development Bank
COBP	–	country operations business plan
CPS	–	country partnership strategy
PRC	–	People's Republic of China
TA	–	technical assistance

NOTE

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

Vice-President	Ahmed M. Saeed, Vice-President, Operations 2
Director General	Amy S. P. Leung, East Asia Department (EARD)
Director	Benedict Bingham, Country Director, PRC Resident Mission (PRCM), EARD
Team leader	Marzia Mongiorgi-Lorenzo, Principal Country Specialist, EARD
Team members	Sujata Gupta, Director, Sustainable Infrastructure Division, EARD Nan Hua, Operations Assistant, EARD Sangay Penjor, Director, Urban and Social Sectors Division, EARD Ying Qian, Director, Public Management, Financial Sector, and Regional Cooperation Division, EARD Sha Xu, Project Analyst, EARD Junmei Yang, Senior Programs Officer, EARD Xiaoyan Yang, Senior Programs Officer, EARD Qingfeng Zhang, Director, Environment, Natural Resources, and Agriculture Division, EARD

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I. CONSISTENCY OF BUSINESS PLAN WITH COUNTRY PARTNERSHIP STRATEGY

1. The Asian Development Bank (ADB) country operations business plan (COBP), 2019–2021 for the People’s Republic of China (PRC) is consistent with the strategic priorities of:

- (i) ADB’s country partnership strategy (CPS) for the PRC, 2016–2020 to manage climate change and environment, promote regional cooperation, support inclusive economic growth, foster knowledge cooperation, and support institutional and governance reform;¹
- (ii) the government’s Thirteenth Five-Year Plan, 2016–2020 to support more inclusive and environmentally sustainable growth; and
- (iii) ADB’s Strategy 2030² to select areas where ADB can add most value and promote knowledge cooperation.³

2. During this COBP, ADB will continue to focus on areas where it can add most value, especially addressing institutional challenges and generating regional public goods, such as developing demonstration projects and policy innovations, promoting advanced technology, strengthening institutions through capacity building, expanding private sector operations and public–private partnerships, and sharing best practices. ADB will focus on addressing development challenges in lagging areas with pockets of fragility relevant to other ADB developing member countries. The COBP will continue to put knowledge at the center of ADB’s operations in the PRC and technical assistance (TA) will focus on upstream investment in knowledge relevant to preparing the next CPS, 2021–2025, including preparing inputs to the government’s Fourteenth Five-Year Plan.

II. INDICATIVE RESOURCE PARAMETERS

3. The PRC, a group C developing member country, is eligible for regular ordinary capital resources (OCR) lending. The indicative resources available during 2019–2021 for sovereign lending operations total \$5.25 billion. The COBP, 2019–2021 consists of 28 firm lending projects totaling \$5.63 billion and 8 standby lending projects for 2021 totaling \$1.02 billion.⁴ The sovereign operations will continue addressing climate change and environment protection, promoting regional cooperation, supporting inclusive and sustainable growth, through investments in livable cities and delivery of basic social services in remote areas, and modernizing agriculture and rural areas. Cofinancing and funding from other sources, including other development partners, local commercial banks, private sector financing, and ADB’s regular OCR regional cooperation and integration (RCI) set-aside, will be explored and promoted.

4. The 2019 nonlending program consists of 26 TA projects with a total value of \$14 million financed from ADB’s Technical Assistance Special Fund. Seven projects (total value: \$8 million) are categorized as transaction TA, and 19 projects (total value: \$6 million) as knowledge and support TA. The knowledge and support TA program includes three cluster projects (with six subprojects) and 10 stand-alone projects (two of which cover five subprojects). These will help transition to a more strategically focused program that could initiate a series of TA projects for

¹ ADB. 2016. *Country Partnership Strategy: People’s Republic of China, 2016–2020—Transforming Partnership: People’s Republic of China and Asian Development Bank*. Manila.

² ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

³ ADB prepared the COBP based on agreements ADB and the government reached during the country programming confirmation mission in ADB headquarters, Manila in November 2018.

⁴ The indicative 2021 program and resources are subject to the approval of the new CPS for the PRC, 2021–2025, tentatively scheduled for the third quarter of 2020.

long-term partnerships and facilitate scoping work for future investments. ADB will seek to mobilize additional resources from other funds and other development partners.

5. Financing for nonsovereign operations will be direct and through intermediaries. The operations will continue to focus on environment protection, climate change adaptation, inclusive growth, and RCI, while focusing on new business models and new technological solutions. The operations will target environmental solutions—sustainable energy delivery, waste management and clean water, food safety and agricultural development—and social sector investments to meet basic human needs. Investments in the finance sector will help develop small and medium-sized enterprises, leasing, and supply-chain finance. Nonsovereign operations will continue to support reform-minded state-owned enterprises and expand integrated solutions that draw on expertise in ADB's East Asia Department and Private Sector Operations Department.

III. SUMMARY OF CHANGES TO LENDING AND NONLENDING PROGRAMS

6. The lending and nonlending pipelines in this COBP are commitment-based. Changes to the lending program include the cancellation of two projects at the request of the government: (i) Shandong Qingdao Rural Waste-to-Energy and Clean Energy Supply Project, and (ii) Heilongjiang Jiamusi Irrigation and Drainage System Modernization Project, with its \$150 million reallocated as additional financing for the current Heilongjiang Green Urban and Economic Revitalization Project; and the identification of projects for potential cofinancing with Agence Française de Développement, the International Fund for Agricultural Development, and KfW Development Bank. The proposed 2019 nonlending program fully replaces the 2018 standby TA projects and the tentative 2019 TA pipeline of the COBP, 2018–2020.

7. To be more aligned with ADB's Strategy 2030, projects in this COBP will promote innovation as an integral feature, including new and innovative approaches to: (i) technical design, technology or sustainable solutions; (ii) financing, lending modalities, direct financing or intermediary financing; (iii) collaboration, partnerships, or cofinancing with private sector innovators, ADB's Private Sector Operations Department, and/or knowledge partnerships; and (iv) implementation arrangements with rapid disbursement and/or strengthening institutional capacity. Several COBP projects will promote innovative technical designs for climate change and technology based interventions for livable cities, green transport, and integrated trade hubs. All projects in the COBP will explore improved financing and implementation arrangements.

8. The nonlending program for 2019–2021 (Table A3.2) will enhance the lending program design and support upstream knowledge for knowledge-based engagement in the PRC. ADB is increasingly prioritizing developing knowledge products that can be shared with other developing economies. The knowledge and support TA program will aim to achieve the objectives of the CPS' country knowledge plan and build a pipeline of upstream knowledge that will help prepare the next CPS (2021–2025) and future investments. To this end, the 2019 nonlending programming exercise piloted a "4x4 approach," which requires proposed nonlending projects to meet four criteria—CPS alignment, substantive impact, ADB's comparative advantage, and required technical expertise within One ADB—and fall into four buckets: (i) policy innovation to bring knowledge to operations, (ii) operational knowledge to harvest knowledge from operations for scaling up and transferring knowledge, (iii) capacity building, and (iv) regional knowledge sharing to export knowledge from ADB operations in the PRC.

COUNTRY ASSISTANCE RESULTS AREAS

Key Country Development Outcomes that ADB Contributes to	ADB		
	Key Areas of Assistance	Indicative Resource Available for Commitment in 2019–2021	Changes from Last COBP
1. Agriculture, Natural Resources, and Rural Development			
<p>Agricultural productivity and water use efficiency improved</p> <p>Participation of rural households in agricultural value chains increased</p>	<p>Integrated water resources management</p> <p>Sustainable land management</p> <p>Agricultural and rural infrastructure</p> <p>ICT application in rural areas</p> <p>Rural finance</p> <p>Climate smart agriculture</p> <p>Climate change adaptation</p>	<p>Amount: \$1.18 billion</p> <p>Share of COBP envelope: 21.00%</p>	<p>No change</p>
2. Education			
<p>Human capital developed to promote innovation and improve service delivery</p>	<p>Technical and vocational education and training</p> <p>Higher education</p> <p>Curriculum development</p> <p>Teacher development</p> <p>Application of ICT in learning and teaching</p> <p>School–industry partnerships</p> <p>School rehabilitation and upgrades</p> <p>Research and development</p> <p>System and policy reforms</p>	<p>Amount: \$150 million</p> <p>Share of COBP envelope: 3.00%</p>	<p>New outcomes added: teacher development, application of ICT, and research and development</p>
3. Energy			
<p>Energy efficiency increased and greenhouse gas emissions reduced</p> <p>Energy regulation system and low-carbon development strategies developed and implemented</p> <p>Carbon-trading platforms established</p>	<p>Renewable energy development</p> <p>Emission reduction in industrial sector</p> <p>Advanced technologies for low-emission fossil fuel</p> <p>Low-carbon, energy-efficient urban energy system</p>	<p>Amount: \$900 million</p> <p>Share of COBP envelope: 16.00%</p>	<p>No change</p>
4. Health			
<p>A three-tiered elderly care system (home, community, and institutional care) developed</p> <p>Early childhood education and care</p>	<p>Development and implementation of elderly care policies</p> <p>Planning and management of elderly care services</p> <p>Elderly care infrastructure</p> <p>Development of age-friendly cities</p> <p>Development of health and elderly care services</p>	<p>Amount: \$400 million</p> <p>Share of COBP envelope: 7.00%</p>	<p>Promotion of private sector involvement added</p>

Key Country Development Outcomes that ADB Contributes to	ADB		
	Key Areas of Assistance	Indicative Resource Available for Commitment in 2019–2021	Changes from Last COBP
	Promotion of private sector involvement		
5. Industry and Trade			
<p>Economic growth potential on both sides of the border realized along economic corridors connecting the PRC with neighboring countries of the Greater Mekong Subregion and Central Asia</p> <p>An enabling environment for innovation and new industries to support the green transformation of local economy created</p>	<p>Support for small and medium-sized enterprises in border areas</p> <p>Promotion of cross-border financial transactions and investments</p> <p>Better efficiency for cross-border trade</p> <p>Key infrastructure and services in border economic zones</p> <p>Physical and informational connectivity across borders</p> <p>Facilities and services to support research and development activities for green transformation</p> <p>Capacity building for local authorities to introduce new cleaner and more efficient industries</p>	<p>Amount: \$420 million</p> <p>Share of COBP envelope: 7.00%</p>	<p>New outcomes added: facilities and services to support research and development activities for green transformation</p>
6. Transport			
A more efficient, safe, green, and sustainable transport system developed	<p>Low-carbon transport</p> <p>Sustainable public transport</p> <p>Road safety</p> <p>Multimodal passenger transport hubs</p> <p>Freight logistics facilities</p> <p>Energy-efficient technologies, emission control, and monitoring</p> <p>Climate change adaptation</p>	<p>Amount: \$1.239 billion</p> <p>Share of COBP envelope: 22.00%</p>	No change
7. Water and Other Urban Infrastructure and Services			
More livable, green, inclusive, competitive, healthy, and smart small and medium-sized cities developed	<p>Improvement of urban environment</p> <p>Water supply, wastewater and urban drainage management, and solid waste management</p> <p>Flood protection and ecological river rehabilitation and sponge city infrastructure</p> <p>Low-carbon and climate-resilient cities</p> <p>Sustainable urban redevelopment</p> <p>Improved equitable public service provisions</p>	<p>Amount: \$1.311 billion</p> <p>Share of COBP envelope: 23.00%</p>	<p>New outcomes added: water supply, wastewater and urban drainage management, and solid waste management; and improved equitable public service provisions</p>

ADB = Asian Development Bank, COBP = country operations business plan, ICT = information and communication technology, PRC = People's Republic of China.
Source: Asian Development Bank estimates.

ASSISTANCE PROGRAM FOR PREVIOUS YEAR

Table A2.1: Lending Commitments, 2016–2018

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA/ PRF	Cost (\$ million)			
						Total	ADB Regular OCR	Gov't	Co-finance
2016									
Guizhou Vocational Education Development Program (RBL)	OP1	EDU	GI	EASS	2014	1,610	150	1,460	
Jiangxi Pingxiang Integrated Rural–Urban Infrastructure Development	OP1, OP4 OP5	WUS, TRA	GI	EASS	2013	361	150	211	
Henan Sustainable Livestock Farming and Product Safety Demonstration	OP1, OP5	ANR	No	EAER	2013	149	69	80	
Chemical Industry Energy Efficiency and Emission Reduction (FIL)	OP3	ENE	GI	EASI	2013	245	100	63	82
Hunan Dongjiang Lake Environmental Protection and Integrated Utilization	OP3	ANR, WUS	No	EAER	2014	262	130	132	
Shandong Groundwater Protection	OP3	ANR	No	EAER	2013	344	150	194	
Qingdao Smart Low-Carbon District Energy	OP3	ENE	GI	EASI	2014	264	130	134	
Beijing–Tianjin–Hebei Air Quality Improvement-Hebei Policy Reforms Program (PBL)	OP3, OP4	ENE	No	EAPF	2014	4,799	300	4,132	367
Henan Hebi Qihe River Environmental Improvement and Ecological Conservation	OP3, OP5	ANR, WUS	TI-M	EAER	2014	325	150	175	
Total						8,359	1,329	6,581	449
2017									
Hebei Elderly Care Development	OP1	HLT, EDU	GI	EASS	2015	180	100	80	
Jiangxi Xinyu Kongmu River Watershed Flood Control and Environmental Improvement	OP1, OP3 OP5	ANR, WUS	TI-M	EAER	2015	300	150	150	
Guangxi Modern Technical and Vocational Education and Training Development Program (RBL)	OP1, OP5	EDU	GI	EASS	2016	10,222	250	9,772	200

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA/ PRF	Cost (\$ million)			
						Total	ADB Regular OCR	Gov't	Co-finance
Shaanxi Accelerated Energy Efficiency and Environment Improvement Financing (FIL)	OP3	ENE	GI	EASI	2015	459	150	309	
Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—China National Investment and Guaranty Corporation's Green Financing Platform Project (FIL)	OP3, OP4	ENE, WUS ANR, TRA	No	EASI	2016	2,153	515	1,328	310
Shanxi Urban–Rural Water Source Protection and Environmental Improvement Demonstration	OP3, OP5	ANR, TRA WUS	No	EAER	2014	152	100	52	
Guizhou Rocky Desertification Area Water Management	OP3, OP5	ANR	TI-G	EAER	2016	339	150	189	
Chongqing Integrated Logistics Demonstration	OP3, OP6	TRA	GI	EASI	2014	428	150	278	
Qinghai Haidong Urban–Rural Eco Development	OP4, OP5	ANR, WUS	GI	EASS	2014	234	150	84	
Fujian Farmland Sustainable Utilization and Demonstration	OP5	ANR	No	EAER	2014	191	100	91	
Shanxi Inclusive Agriculture Value Chain Development	OP5	ANR	TI-G	EAER	2016	148	90	58	
Ningxia Liupanshan Poverty Reduction Rural Road Development	OP5, OP1	TRA	TI-G	EASI	2014	266	100	166	
Guangxi Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 1	OP7	IND, WUS	No	EAPF	2016	280	130	150	
Total						15,352	2,135	12,707	510
2018									
Public–Private Partnership Demonstration Program to Transform Delivery of Elderly Care Services in Yichang, Hubei (RBL)	OP1	HLT	GI	EASS	2016	128	50	78	
Hunan Xiangjiang River Watershed Existing Solid Waste Comprehensive Treatment	OP3	WUS	GI	EASS	2015	258	150	108	
Mountain Railway Safety Enhancement	OP3, OP1	TRA	GI	EASI	2008	860	180	680	

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA/ PRF	Cost (\$ million)			
						Total	ADB		Co-finance
							Regular	OCR	
Shandong Spring City Green Modern Trolley Bus Demonstration	OP3, OP4	TRA	GI	EASI	2016	422	150	272	
Heilongjiang Green Urban and Economic Revitalization	OP3, OP4 OP2	ANR, WUS TRA, IND	GI	EASS	2015	1,021	310	491	
Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region Reduction and Pollution Control Facility (FIL)	OP3, OP4	ENE, WUS ANR, TRA	No	EASI	2017	2,033	496	1,537	
Chongqing Longxi River Basin Integrated Flood and Environmental Risk Management	OP3, OP5	ANR, WUS	No	EAER	2017	379	150	229	
Xinjiang Changji Integrated Urban–Rural Infrastructure Demonstration	OP4	ANR, TRA WUS, EDU ENE	GI	EASS	2015	255	150	105	
Guangxi Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 2	OP7	IND, WUS	No	EAPF	2016	440	180	260	
Total						5,796	1,816	3,760	

ADB = Asian Development Bank, ANR = agriculture, natural resources, and rural development, EAER = Environment, Natural Resources and Agriculture Division, EAPF = Public Management, Financial Sector and Regional Cooperation Division, EASI = Sustainable Infrastructure Division, EASS = Urban and Social Sectors Division, EDU = education, ENE = energy, FIL = financial intermediation loan, GI = general intervention, Gov't = government, HLT = health, IND = industry and trade, MFF = multitranches financing facility, OCR = ordinary capital resources, PBL = policy-based lending, PRF = poverty reduction cooperation fund, RBL = results-based lending, TI-G = targeted intervention–geographic dimensions of inclusive growth, TI-M = targeted intervention-millennium development goals, TRA = transport, TRTA = transaction technical assistance, WUS = water and other urban infrastructure and services.

^a Detailed classifications of operational priorities are OP1 (addressing remaining poverty and reducing inequalities); OP2 (accelerating progress in gender equality); OP3 (tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability); OP4 (making cities more livable); OP5 (promoting rural development and food security); OP6 (strengthening governance and institutional capacity); and OP7 (fostering regional cooperation and integration).

Source: Asian Development Bank.

Table A2.2: Nonlending Commitments, 2017–2018

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				
					ADB		Others		Total (\$'000)
					Source	Amount (\$'000)	Source	Amount (\$'000)	
2017									
1. TRTA									
Support for the Guangxi Modern Technical and Vocational Education and Training Development	OP1, OP5	EDU	EASS	TRTA	TASF	600			600
Hunan Xianjiang River Watershed Existing Solid Waste Comprehensive Treatment (supplementary)	OP3	WUS	EASS	TRTA			UEIF	225	225
Shaanxi Accelerated Energy Efficiency and Environment Improvement Financing Program (Supplementary)	OP3	ENE	EASI	TRTA			FSDPSF	100	100
Preparing Air Quality Improvement Program (2017–2019) in the Greater Beijing–Tianjin–Hebei Region	OP3, OP4	ENE	EASI	TRTA	TASF	1,500	CEF	400	1,900
Preparing the Yangtze River Economic Belt Project	OP3, OP5	ANR	EAER	TRTA	TASF	1,500	WFPF CLCF	300 600	2,400
Shanxi Inclusive Agricultural Value Chain Development	OP5	ANR	EAER	TRTA	TASF	300			300
Gansu Internet-Plus-Based Socialized Agricultural Service System Development	OP5, OP2	ANR	EAER	TRTA	TASF	500			500
Heilongjiang Business Development Services Support to Strengthen Financial Intermediation Component Implementation	OP6	FIN	EASS	KSTA	TASF	450	FSDPSF	300	750
Preparing the Regional Cooperation and Integration Projects	OP7	RCI	EAPF	TRTA	TASF	1,000			1,000
Subtotal TRTA						5,850		1,925	7,775
2. KSTA									
Establishment of an Integrated Comprehensive Three-Tier System for Elderly Care	OP1	HLT	EASS	KSTA	TASF	670			670
Policy and Social Work Services for Vulnerable Children	OP1	HLT	EASS	KSTA	TASF	400			400

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Supporting the Application of River Chief System for Ecological Protection in Yangtze River Economic Belt	OP3	ANR	EAER	KSTA	TASF	400			400
Strategic Policy Study on Collaborative Control of Air Pollution and Carbon Emissions in the Transport Sector	OP3	TRA	EASI	KSTA			CLCF	350	350
Study of Clean Energy Supply for the Rural Areas in the Greater Beijing–Tianjin–Hebei Region	OP3	ENE	EASI	KSTA	TASF	400			400
Developing Cost-Effective Policies and Investments to Achieve Climate and Air Quality Goals in the Beijing–Tianjin–Hebei Region (supplementary)	OP3	ENE	EASI	KSTA			CEF	75	75
Mainstreaming Urban Climate Change Adaptation in the People's Republic of China	OP3, OP4	ENE	EASS	KSTA	TASF	500			500
Comprehensive Hub-Oriented Transportation Strategy for Urumqi Metropolitan Area	OP4	TRA	EASI	KSTA	TASF	800			800
Support to Public Finance and Finance Sector Reform in Henan Province	OP6	FIN	EAER	KSTA	TASF	600	FSDPSF	750	1,350
Establishing a Market Conduct Supervision Mechanism for Financial Consumer Protection	OP6	FIN	EAPF	KSTA	TASF	400			400
Reforming the System of Personal Income Tax and Social Security Contributions	OP6	FIN	EAPF	KSTA	TASF	300			300
Strengthening Liability Insurance and Improving Social Governance in Neijiang City	OP6	FIN	PRCM	KSTA	TASF	530			530
Strengthening Capacity in Implementation of Green Financing Platform for the Greater Beijing–Tianjin–Hebei Region	OP6	FIN	EASI	KSTA			CEF	1,000	1,000
Policy and Social Work Services for Vulnerable Children	OP6	PSM	EASS	KSTA	TASF	400			400
Subtotal KSTA						5,400		2,175	7,575
Total						11,250		4,100	15,350

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
2018									
1. TRTA									
Jiangxi Shangrao Early Childhood Education Demonstration	OP1, OP2 OP5	EDU	EASS	TRTA	TASF	400			400
Supporting Project Preparation	OP1, OP3 OP4	HLT, FIN WUS, TRA	PRCM	TRTA	TASF	1,300			1,300
Supporting Project Preparation (supplementary)	OP1, OP3 OP4	HLT, FIN WUS, TRA	PRCM	TRTA	TASF	2,388	EAKPF	500	2,888
Shanxi Technical and Vocational Education and Training Development Demonstration Project	OP1, OP5 OP2	EDU	EASS	TRTA	TASF	400			400
Green Finance Catalyzing Facility	OP3	FIN	EAPF	TRTA	TASF	300	PPGMSSAC	150	450
Green Finance Catalyzing Facility (supplementary)	OP3	FIN	EAPF	TRTA			FSDPSF	225	225
Guangxi Hezhou Mountain Mining Areas Vitalization	OP3, OP4	ANR, WUS	EASS	TRTA	TASF	400			400
Preparing Air Quality Improvement Program (2017–2019) in the Greater Beijing–Tianjin–Hebei Region (supplementary)	OP3, OP4	ENE	EASI	TRTA	TASF	300			300
Preparing the Yangtze River Economic Belt Project (supplementary)	OP3, OP5	ANR	EAER	TRTA	TASF	1,500	CLCF	158	1,658
Shaanxi Transport and Logistics Port	OP4	TRA	EASI	TRTA	TASF	560	UEIF	400	960
Heilongjiang Jiamusi Irrigation and Drainage System Modernization (supplementary)	OP5	WUS	EASS	TRTA	TASF	200			200
Enhancing the Capacity of Executing and Implementing Agencies for Better Project Implementation	OP6	PSM	PRCM	TRTA	TASF	700			700
Preparing Regional Cooperation and Integration Projects (supplementary)	OP7	IND	EAPF	TRTA			RCIF	1,000	1,000
Subtotal TRTA						8,448		2,433	10,881

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
2. KSTA									
Accelerating the Reform of Application-Oriented Undergraduate Programs at Local Universities in Yunnan Province	OP1	EDU	EASS	KSTA	TASF	400			400
Jiaozuo National Pilot Project for the Standardization of Public Employment Services (supplementary)	OP1	ICT, PSM	EASS	KSTA			EAKPF	200	200
Policy and Capacity Building for Elderly Care	OP1	HLT	EASS	KSTA	TASF	400	EAKPF	350	750
Strengthening the Role of E-Commerce in Poverty Reduction in Southwestern Mountainous Areas in Chongqing	OP1	PSM	EAPF	KSTA	TASF	400			400
Research on Qinghai's Integration into Belt and Road Tourism	OP1, OP5	IND	EASS	KSTA	TASF	400			400
Developing a Climate-Friendly Cooling Sector through Market and Financing Innovation	OP3	ENE	EASI	KSTA	TASF	500			500
Improving Ecological Protection and Poverty Alleviation Outcomes of the Rare-Earth Sector in Jiangxi Province	OP3	ANR	EAER	KSTA	TASF	400			400
Improving the Design of the National Carbon Emissions Trading System	OP3	ENE	EASI	KSTA			CLCF	750	750
Piloting Innovative Flash Flood Early Warning Systems in Selected River Basins	OP3	ANR	EAER	KSTA	TASF	400			400
Study on the Road Map for Air Quality Improvement in Pilot Cities in Beijing–Tianjin–Hebei and Its Surrounding Areas	OP3	ENE	EASI	KSTA	TASF	400			400
Capacity Development Support to the National and Local Joint Engineering Research Center on Carbon Capture, Utilization, and Sequestration at Northwest University (subproject 1) ^b	OP3	ENE	EASI	KSTA			CCSF	1,200	1,200
Industry Green Growth Indicators and Innovative Mechanisms for Guangdong Province	OP3	ENE, FIN	EASS	KSTA	TASF	300			300
Policy Research on Sustainable Forestry in the Yangtze River Economic Belt (subproject 4) ^c	OP3, OP5	ANR	EAER	KSTA	TASF	350			350

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Public–Private Financing Mechanism for Chishui Watershed Protection (subproject 1) ^c	OP3, OP5	ANR	EAER	KSTA	TASF	400			400
Policy Study on Integrating Poverty Alleviation and Rural Welfare Improvement with Ecological Conservation (subproject 2) ^c	OP3, OP5	ANR	EAER	KSTA	TASF	350			350
Study on the Comprehensive Eco-Compensation Mechanism (subproject 3) ^c	OP3, OP5	ANR	EAER	KSTA	TASF	400			400
Advanced Renewable Energy Technology Demonstration	OP4	ENE	EASI	KSTA		300	CLCF CEF	200 200	700
Hubei Xiangyang Integrated Sustainable Transportation and Logistics Planning and Strategic Study	OP4	WUS	EASI	KSTA	TASF	400			400
Policy Study on Integrated Transport Development in Xiong'an New Area by International Perspective	OP4	TRA	EASI	KSTA	TASF	400			400
Study on Municipal Solid Waste Regional Integrated Management Model for Beijing–Tianjin–Hebei	OP4	PSM, WUS	EASS	KSTA	TASF	400			400
Judicial Reform: Using Big Data to Improve Delivery of Justice	OP6	KNS	OGC	KSTA	TASF	400			400
Legislation Research on Public–Private Partnership from the Perspective of National Fiscal Management	OP6	PSM	EAPF	KSTA	TASF	400			400
Reform and Diversification of the Local Government Bond Market	OP6	FIN	EAPF	KSTA	TASF	400			400
Midterm Review of the Thirteenth Five-Year Plan and Initial Research Towards the Fourteenth Five-Year Plan	OP6	PSM	PRCM	KSTA	TASF	600			600
Subtotal KSTA						8,400		2,900	11,300
Total						16,848		5,333	22,181

ADB = Asian Development Bank, ANR = agriculture, natural resources, and rural development, CCSF = Carbon Capture and Storage Fund under the Clean Energy Financing Partnership Facility, CEF = Clean Energy Fund, CLCF = Climate Change Fund, EAER = Environment, Natural Resources and Agriculture Division, EAKPF = Republic of Korea e-Asia and Knowledge Partnership Fund, EAPF = Public Management, Financial Sector and Regional Cooperation Division, EASI = Sustainable Infrastructure Division, EASS = Urban and Social Sectors Division, EDU = education, ENE = energy, FIN = finance, FSDPSF = Financial Sector Development Partnership Special Fund, Gov't = government, HLT = health, ICT = information and communication technology, IND = industry, KNS = knowledge solutions, KSTA = knowledge and support technical

assistance, OGC = Office of the General Counsel, PPGMSSAC = Cooperation Fund for Project Preparation in the Greater Mekong Subregion and in Other Specific Asian Countries, PRCM = People's Republic of China Resident Mission, PSM = public sector management, RCI = regional cooperation and integration, RCIF = Regional Cooperation and Integration Fund, TASF = Technical Assistance Special Fund, TRA = transport, TRTA = transaction technical assistance, UEIF = Urban Environmental Infrastructure Fund, WFPF = Water Financing Partnership Facility, WUS = water and other urban infrastructure and services.

^a Detailed classifications of operational priorities are OP1 (addressing remaining poverty and reducing inequalities); OP2 (accelerating progress in gender equality); OP3 (tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability); OP4 (making cities more livable); OP5 (promoting rural development and food security); OP6 (strengthening governance and institutional capacity); and OP7 (fostering regional cooperation and integration).

^b Cluster TA C0035-PRC: Promoting and Scaling Up Carbon Capture and Storage Demonstration.

^c Cluster TA C0032-PRC: Policy Research on Ecological Protection and Rural Vitalization for Supporting Green Development in the Yangtze River Economic Belt.

Source: Asian Development Bank.

INDICATIVE ASSISTANCE PIPELINE

Table A3.1: Lending Products, 2019–2021

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA /PRF	Total	Cost (\$ million)		
							ADB	Gov't ^a	Co-finance
							Regular OCR		
2019 Firm									
Demonstration of Guangxi Elderly Care and Health Care Integration and Public–Private Partnership	OP1	HLT	GI	EASS	2018	TBD	100	TBD	
Hubei Yichang Comprehensive Elderly Care Service Demonstration	OP1, OP2	HLT	GI	EASS	2016	300	150	150	
Multimodal Passenger Hubs Development	OP3	TRA	GI	EASI	2008	TBD	120	TBD	
Shandong Green Development Fund (FIL)	OP3, OP2	WUS	No	EAPF	2017	TBD	100	TBD	KfW: €100 million; AFD: €70 million
Air Quality Improvement in the Greater Beijing–Tianjin–Hebei for Shandong	OP3, OP4 OP2	ENE	No	EASI	2017	TBD	400	TBD	
Heilongjiang Green Urban and Economic Revitalization (additional financing) ^b	OP3, OP4 OP2	WUS, TRA	GI	EASS	2015	TBD	150	TBD	
Sichuan Ziyang Green Transformation and Development	OP3, OP5 OP2	EDU, WUS	No	EAER	2017	413	200	213	
Yangtze River Green Ecological Corridor Comprehensive Agriculture Development	OP3, OP5 OP2	ANR	No	EAER	2017	507	300	207	
Xinjiang Hetian Comprehensive Urban Development and Environmental Improvement	OP4, OP2	ANR, WUS TRA	GI	EASS	2016	240	100	140	
Yunnan Lincang Border Economic Cooperation Zone Infrastructure Comprehensive Development	OP7, OP2	TRA, WUS	GI	EASS	2017	763	250	513	
Total							1,870		
2019 Standby									
Chongqing Innovation and Human Capital Development	OP3, OP1 OP2	EDU, IND	No	EASS	2018	427	200	227	

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA /PRF	Total	Cost (\$ million)		
							ADB	Gov't ^a	Co-finance
							Regular OCR		
Guizhou Gui'an New Urban Area Smart Transport	OP4, OP2	TRA	GI	EASI	2017	687	200	487	
Gansu Internet-Plus-Based Socialized Agriculture Service System Development	OP5, OP2	ANR, ICT	No	EAER	2017	220	150	70	
Xinjiang Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 1	OP7	IND, WUS	No	EAPF	2017	TBD	150	TBD	
Total							700		
2020 Firm									
Hubei Xiangyang Elderly Care Service Development with Public-Private Partnership	OP1	HLT	No	EASS	2018	TBD	150	TBD	
Chongqing Innovation and Human Capital Development	OP3, OP1 OP2	EDU, IND	No	EASS	2018	427	200	227	
Air Quality Improvement in the Greater Beijing-Tianjin-Hebei Region for Hebei (FIL) ^c	OP3/OP4	ANR, ENE TRA, WUS	No	EASI	2017	TBD	500	TBD	
Henan Dengzhou Integrated River Restoration and Ecological Protection	OP3, OP5	ANR	No	EAER	2018	438	200	238	
Jilin Yanji Low-Carbon Climate-Resilient Urban Development ^f	OP4, OP2	WUS, TRA	GI	EASS	2018	200	130	70	
Guizhou Gui'an New Urban Area Smart Transport	OP4, OP2	TRA	GI	EASI	2017	687	200	487	
Gansu Internet-Plus Based Socialized Agriculture Service System Development	OP5, OP2	ANR, ICT	No	EAER	2017	220	150	70	
Xinjiang Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 1	OP7	IND, WUS	No	EAPF	2017	TBD	150	TBD	
Inner Mongolia Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 1	OP7	IND, WUS	No	EAPF	2017	TBD	220	TBD	
Total							1,900		
2020 Standby									
Subregional Rail Link (Yuxi-Mohan)	OP3, OP2	TRA	GI	EASI	2011	TBD	150	TBD	

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA /PRF	Total	Cost (\$ million)		
							ADB	Gov't ^a	Co-finance
							Regular OCR		
Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Green Financing Scale-Up (FIL)	OP3, OP4	ANR, ENE TRA, WUS	No	EASI	2017	TBD	500	TBD	
Hunan Xiangtan Low Carbon City Development	OP3, OP4	TRA, ENE	GI	EASI	2017	1,948	200	1,748	
Yunnan Sayu River Basin Rural Water Pollution Management and Eco-compensation Demonstration	OP3, OP5	ANR	No	EAER	2018	173	100	73	
Anhui Huangshan Xin'an River Ecological Protection and Green Development	OP3, OP5	ANR, WUS	No	EAER	2018	200	100	100	
Total							1,050		
2021 Firm^d									
Subregional Rail Link (Yuxi–Mohan)	OP3, OP2	TRA	GI	EASI	2011	TBD	150	TBD	
Air Quality Improvement in the Greater Beijing–Tianjin–Hebei Region—Green Financing Scale-Up (FIL)	OP3, OP4	ANR, ENE TRA, WUS	No	EASI	2017	TBD	500	TBD	
Hunan Xiangtan Low Carbon City Development	OP3, OP4	TRA, ENE	GI	EASI	2017	1,948	200	1,748	
Yunnan Sayu River Basin Rural Water Pollution Management and Eco-compensation Demonstration	OP3, OP5	ANR	No	EAER	2018	173	100	73	
Anhui Huangshan Xin'an River Ecological Protection and Green Development ^f	OP3, OP5	ANR, WUS	No	EAER	2018	200	100	100	KfW
Silk Road Ecological Rehabilitation and Protection (Shaanxi, Gansu, and Qinghai)	OP3, OP5 OP2	ANR	No	EAER	2018	308	200	148	
Shanxi Changzhi Industrial Transformation and Economic Upgrading	OP4, OP2	WUS, TRA	GI	EASS	2018	500	300	200	
Guangxi Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 3	OP7	IND, WUS	No	EAPF	2016	TBD	140	TBD	
Xinjiang Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 2	OP7	IND, WUS	No	EAPF	2017	TBD	170	TBD	
Total							1,860		

Project/Program Name	Operational Priorities ^a	Sector	Poverty Targeting	Division	Year of TRTA /PRF	Total	Cost (\$ million)		
							ADB	Gov't ^a	Co-finance
							Regular OCR		
2021 Standby									
Jiangxi Shangrao Early Childhood Preschool Education Demonstration	OP1, OP2 OP5	EDU	GI	EASS	2018	257	100	157	
Shanxi Technical and Vocational Education and Training Development Demonstration	OP1, OP5 OP2	EDU	GI	EASS	2018	TBD	100	TBD	
Yangtze River Inland Waterway Demonstration	OP3	TRA, ENV	GI	EASI	TBD	TBD	150	TBD	
Shaanxi Logistics Development	OP3, OP4	TRA	GI	EASI	2018	468	200	268	
Chishui River Transprovincial Environmental and Eco-Compensation ^e	OP3, OP4	ANR	No	EAER	2019	TBD	TBD	TBD	
Guangxi Hezhou Mountain Mining Areas Vitalization	OP3, OP4	ANR, WUS	GI	EASS	2018	200	100	100	
Inner Mongolia Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 2	OP7	IND, WUS	No	EAPF	2017	TBD	200	TBD	
Xinjiang Regional Cooperation and Integration Promotion Investment Program (MFF), Tranche 3	OP7	IND, WUS	No	EAPF	2017	TBD	170	TBD	
Total							1,020		

ADB = Asian Development Bank, AFD = Agence Française de Développement, ANR = agriculture, natural resources, and rural development, EAER = Environment, Natural Resources and Agriculture Division, EAPF = Public Management, Financial Sector and Regional Cooperation Division, EASI = Sustainable Infrastructure Division, EASS = Urban and Social Sectors Division, EDU = education, ENE = energy, ENV = environment and climate change, FIL = financial intermediation loan, GI = general intervention, Gov't = government, HLT = health, ICT = information and communication technology, IND = industry and trade, KfW = Kreditanstalt für Wiederaufbau, MFF = multitranches financing facility, OCR = ordinary capital resources, PRF = poverty reduction cooperation fund, TBD = to be determined, TRA = transport, TRTA = transaction technical assistance, WUS = water and other urban infrastructure and services.

^a Detailed classifications of operational priorities are OP1 (addressing remaining poverty and reducing inequalities); OP2 (accelerating progress in gender equality); OP3 (tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability); OP4 (making cities more livable); OP5 (promoting rural development and food security); OP6 (strengthening governance and institutional capacity); and OP7 (fostering regional cooperation and integration).

^b The \$150 million additional financing is from the Heilongjiang Jiamusi Irrigation and Drainage System Modernization Project, which has been cancelled at the request of the government (not included in the pipeline).

^c The project might be split into smaller projects for Henan (Henan Cleaner Fuel Switch Investment Program for \$300 million) and the Greater Beijing–Tianjin–Hebei region.

^d The proposed projects for 2021 are indicative and subject to the approval of ADB's new country partnership strategy for the People's Republic of China, 2021–2025, planned for the third quarter of 2020.

^e The amount for this project will be determined during further processing.

^f KfW co-financing is subject to further processing.

Source: Asian Development Bank.

Table A3.2: Nonlending Products and Services, 2019–2021

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
2019 Firm									
1. TRTA									
Supplementary to TA 9309-PRC: Preparing Air Quality Improvement Program (2017–2019) in the Greater Beijing–Tianjin–Hebei Region	OP3, OP4	ANR, ENE TRA, WUS	EASI	TRTA	TASF	500			500
Supplementary to TA 9373-REG: Preparing Regional Cooperation and Integration Projects	OP7	IND, WUS	EAPF	TRTA	TASF	500			500
Supplementary to TA 9437-PRC: Supporting Project Preparation	OP1, OP3 OP5	EUD, WUS	PRCM	TRTA	TASF	500	WFPF	500	1,000
PPP/NSO Project Development						400			400
Guangxi Elderly Care and Health Care Integration and PPP Project						100			100
Silk Road Ecological Protection and Rehabilitation Project	OP3, OP5 OP2	ANR	EAER	TRTA	TASF	800			800
Environment and Rural Development Facility	OP3, OP5 OP1	ANR	EAER	TRTA	TASF	2,100			2,100
Urban and Social Development Facility	OP3, OP4 OP1	WUS	EASS	TRTA	TASF	1,800			1,800
Sustainable Infrastructure Facility	OP3, OP5 OP7	ANR, RCI	EASI	TRTA	TASF	1,800			1,800
Subtotal TRTA						8,000		500	8,500
2. KSTA									
Poverty, Inequality, and Gender (OP1 and OP2)									
Development of a Sustainable Elderly Care System in PRC	OP1, OP4, OP5	HLT	EASS	KSTA	TASF	800			800
Component 1: Elderly Care Sector Development with Enhancing Private Sector's Involvement						400		TBD	TBD

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				
					ADB		Others		Total (\$'000)
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Component 2: Strategic Plan for Rural Elderly Care System Development						400		TBD	TBD
Study on Health Sector	OP1, OP2	HLT	EASS	KSTA	TASF	400			400
Strengthening Core Competencies Development for Primary Schools	OP1, OP2	EDU	EASS	KSTA	TASF	400		TBD	TBD
Climate and Environment and Rural Development and Food Security (OP3 and OP5)									
TA on Agriculture Green Production and Waste Management	OP3	ANR	EAER	KSTA	TASF	900			900
Subproject 1: Promote County-Level Green Agricultural Development in Support of the Rural Vitalization Strategy: Research on Green Development Models in China's Major Grain-Producing Areas (OP5)						300		TBD	TBD
Subproject 2: Study on the Technology Integration and Policy Mechanism of Resource Utilization of Agricultural Organic Waste and Rural Clean Energy Development						300		TBD	TBD
Subproject 3: Study on Implementing Rural Vitalization Strategy in Qinghai						300		TBD	TBD
TA Cluster: YREB—Water and Pollution Management	OP3	WUS	EAER	KSTA	TASF	600			600
Current Situation and Strategy of Plastic Waste Pollution Control						300		TBD	TBD
River and Ocean Eco-Environment Management System and Capacity Building						300		TBD	TBD
TA Cluster: Rural Vitalization—Rural Water, Wastewater Treatment, and Environmental Management	OP3	WUS	EAER	KSTA	TASF	600			600

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				
					ADB		Others		Total (\$'000)
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Study on Rural Water Supply, Sewage and Sanitation Upgrading Projects in Shanxi Province						300		TBD	TBD
TA to Support Initiatives under the Memorandum of Understanding for Rural Vitalization								500	500
Financial Incentives to Rural Sewage Treatment and Sanitation Management						300		TBD	TBD
Livable Cities (OP4)									
Flagship Study: New-Era Livable Cities Acceleration Action Plan: Climate-Resilient, Low-Carbon, Socially-Inclusive, Healthy and Age-Friendly, Environmentally Sustainable, Economically Competitive and Smart Development of City-Clusters, Cities, and Urban-Rural Integration Enabling Acceleration of Urban Innovations	OP4	TBD	EASS	KSTA	TASF	500			500
Governance and Institutional Capacity (OP6)									
TA Cluster: Financial Sector Reform	OP6	FIN	EAPF	KSTA	TASF	700			700
Study on the Municipal Climate Finance Road Map	OP6	FIN	EAPF	KSTA				225	225
CPS studies	OP6	MUL	PRCM	KSTA	TASF	400			400
Regional Cooperation and Integration (OP7)									
Central Asian Bio-safety Channel Construction Aid Project	OP7	IND	EAPF	KSTA	TASF	400			400
TA to Support Memorandum of Understanding with CAREC Institute	OP7	Inst. Build, RCI	PRCM	KSTA	TASF	300			300
Top Up of RCSI TA9531-REG: Enhancing Regional Knowledge Sharing Partnerships	OP7	RCI	EAOD	KSTA				PRC Fund*	130
Total						6,000		855	

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
2019 Standby									
Research on PPPs in Education in Economically Underdeveloped Minority Areas: A Case Study of Guangxi	OP1	EDU	EASS	KSTA	TASF	400			400
Study on the Internationalization of Medical and Health Care in Yunnan Province under the New Situation	OP1	HLT	EASS	KSTA	TASF	500		TBD	TBD
Developing Pathways and Policy Framework of Climate Change Adaptation for Rural Communities in China	OP3	ENE	EASI, EAER	KSTA	TASF	400		TBD	400
Research on Market Mechanism and Support Policy for Promoting Energy Storage Technology in Demand Side Management	OP3	ENE	EASI	KSTA	TASF	400		TBD	TBD
Research of Coordinated Development Strategy of New Energy Buses Based on Multiple Development Environments and Vehicle Energy Types	OP3	ENE	EASI	KSTA	TASF	400			400
Research on the Air Pollution Control and Experience Sharing of the People's Republic of China	OP3	ENE	EASI	KSTA	TASF	388			388
Research on the Prevention and Control of Soil Pollution After the Closure, Transformation, Relocation, and Conversion of Yichang's Chemical Enterprises Along the Yangtze River	OP3	ENE, ANR	EASI, EAER	KSTA	TASF	400			400
A Study on the Policy and Technology of Rural Energy Revolution in Shanxi Province under the Rural Revitalization Strategy	OP3	ENE, ANR	EASI, EAER	KSTA	TASF	400			400

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				Total (\$'000)
					ADB		Others		
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Promoting Sanitary Management on Wastewater and Trash in Rural Area through Financial Motivation	OP3	ANR	EAER	KSTA	TASF	400		400	
Research on the Mechanism and Policy Needs of the National Agricultural Science and Technology Innovation System to Support Rural Revitalization	OP5	ANR	EAER	KSTA	TASF	400		400	
Research on Promoting the Construction of the People's Republic of China's Multi-Level Pension System	OP6	FIN	EAPF	KSTA	TASF	400		400	
Impact of Fintech on the Development of SMEs	OP6	FIN	EAPF	KSTA	TASF	400		400	
Research on Promoting the Development of SMEs in the Payment Field by RegTech	OP6	FIN	EAPF	KSTA	TASF	400		400	
Promotion of SME Development through Financial Technologies	OP6	FIN	EAPF	KSTA	TASF	400		400	
Study of Intellectual Property Rights in Industry Transformation	OP6	FIN	EAPF	KSTA	TASF	300		300	
Total						5,988			
2020/2021									
Research on PPPs in Education in Economically Underdeveloped Minority Areas: A Case Study of Guangxi	OP1	EDU	EASS	KSTA	TASF	400		400	
Study on the Internationalization of Medical and Health Care in Yunnan Province under the New Situation	OP1	HLT	EASS	KSTA	TASF	500	TBD	TBD	
Developing Pathways and Policy Framework of Climate Change Adaptation for Rural Communities in the People's Republic of China	OP3	ENE	EASI, EAER	KSTA	TASF	400	TBD	TBD	

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding				
					ADB		Others		Total (\$'000)
					Source	Amount (\$'000)	Source	Amount (\$'000)	
Research on Market Mechanism and Support Policy for Promoting Energy Storage Technology in Demand Side Management	OP3	ENE	EASI	KSTA	TASF	400	TBD	TBD	
Research of Coordinated Development Strategy of New Energy Buses Based on Multiple Development Environments and Vehicle Energy Types	OP3	ENE	EASI	KSTA	TASF	400		400	
Research on the Air Pollution Control and Experience Sharing of the People's Republic of China	OP3	ENE	EASI	KSTA	TASF	388		388	
Research on the Prevention and Control of Soil Pollution After the Closure, Transformation, Relocation, and Conversion of Yichang's Chemical Enterprises Along the Yangtze River	OP3	ENE, ANR	EASI, EAER	KSTA	TASF	400		400	
A Study on the Policy and Technology of Rural Energy Revolution in Shanxi Province under the Rural Revitalization Strategy	OP3	ENE, ANR	EASI, EAER	KSTA	TASF	400		400	
Promoting Sanitary Management on Wastewater and Trash in Rural Area through Financial Motivation	OP3	ANR	EAER	KSTA	TASF	400		400	
Research on the Mechanism and Policy Needs of the National Agricultural Science and Technology Innovation System to Support Rural Revitalization	OP5	ANR	EAER	KSTA	TASF	400		400	
Research on Promoting the Construction of the People's Republic of China's Multi-Level Pension System	OP6	FIN	EAPF	KSTA	TASF	400		400	
Impact of Fintech on the Development of SMEs	OP6	FIN	EAPF	KSTA	TASF	400		400	

Project/Program Name	Operational Priorities ^a	Sector	Division	Assistance Type	Sources of Funding		Total (\$'000)	
					ADB			Others
					Source	Amount (\$'000)		
Research on Promoting the Development of SMEs in the Payment Field by RegTech	OP6	FIN	EAPF	KSTA	TASF	400	400	
Promotion of SME Development through Financial Technologies	OP6	FIN	EAPF	KSTA	TASF	400	400	
Study of Intellectual Property Rights in Industry Transformation	OP6	FIN	EAPF	KSTA	TASF	300	300	
Total						5,988		

ADB = Asian Development Bank, ANR = agriculture, natural resources, and rural development, CAREC = Central Asia Regional Economic Cooperation, CPS = country partnership strategy, EAER = Environment, Natural Resources and Agriculture Division, EAOD = Office of the Director General, EAPF = Public Management, Financial Sector and Regional Cooperation Division, EASI = Sustainable Infrastructure Division, EASS = Urban and Social Sectors Division, EDU = education, ENE = energy, FIN = finance, HLT = health, IND = industry, Inst. Build. = institution building, KSTA = knowledge and support technical assistance, MUL = multisector, PPP = public-private partnership, NSO = nonsovereign operations, PRC = People's Republic of China, PRCM = People's Republic of China Resident Mission, RCI = regional cooperation and integration, RKSI = Regional Knowledge Sharing Initiative, SMEs = small and medium-sized enterprises, TA = technical assistance, TASF = Technical Assistance Special Fund, TBD = to be determined, TRA = transport, TRTA = transaction technical assistance, WFPF = Water Financing Partnership Facility, WUS = water and other urban infrastructure and services, YREB = Yangtze River Economic Belt.

^a Detailed classifications of operational priorities are OP1 (addressing remaining poverty and reducing inequalities); OP2 (accelerating progress in gender equality); OP3 (tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability); OP4 (making cities more livable); OP5 (promoting rural development and food security); OP6 (strengthening governance and institutional capacity); and OP7 (fostering regional cooperation and integration).

Source: Asian Development Bank.

INDICATIVE KNOWLEDGE PRODUCTS AND EVENTS

Table A4.1: Knowledge Products and Events for 2019

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
Observations and Suggestions Policy Notes #1: Reforming the System of Personal Income Tax	Finance, public sector management	Brief	EARD	9405
Observations and Suggestions Policy Notes #2		Brief	EARD	
Quarterly Dialogue PRC No.1: Taxation of Digital Economy in the PRC	Finance, public sector management	Brief	EARD	
Quarterly Dialogue PRC No. 4: Hainan Free Trade Port Construction	Industry and trade	Brief	EARD	
Two Position Papers for the 14th Five-Year Plan Study: (a) Inclusive Development	Multisector	Brief	EARD	9525
Two Position Papers for the 14th Five-Year Plan Study: (b) Modernization	Multisector	Brief	EARD	9525
Quarterly Dialogue PRC No. 2: Urban Mining	Urban development	Brief	EARD	
Quarterly Dialogue PRC No. 3: Development of Xiong'an District	Urban development	Brief	EARD	
Guideline for Groundwater Recharging in the PRC	Water	Instructive material	EARD	
City Clusters in the PRC to Pioneer Mega Urban Governance	Urban, governance, economy, environment	Journal article	EARD	
City Clusters Coordination in the PRC – Institutionalized Governance in Mega Urban Regions	Urban, governance, economy, environment	Report	EARD	
Low-Carbon Climate-Resilient Healthy City Development Demonstration Project in Yanji, Jilin Province	Urban	Technical blog post	EARD	
Integrated Resource Conservation in Tianjin – Smart Water	Agriculture and natural resources	Technical study	EARD	
Eight High-Level Papers for the 14th Five-Year Plan Study	All	Technical study	EARD	9525
Solar District Heating in the PRC	Energy	Technical study	EARD	
Climate Change and Protected Areas	Environment	Technical study	EARD	

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
Mainstreaming Urban–Rural Environmental Master Planning in the PRC	Environment, urban development	Technical study	EARD	
City Cluster Coordination in the PRC	RCI	Technical study	EARD	
Guidelines for Designing ITS Projects – A Case of Gui'an	TBD	Technical study	EARD	
Catalyzing Economic Revitalization in East Heilongjiang	Urban development	Technical study	EARD	
Small Cities, Towns, and Villages Inclusive and Green Development Strategy for Jiangxi Province	Urban development, environment	Technical study	EARD	
Study on Municipal Solid Waste Regional Integrated Management Mode for Beijing–Tianjin–Hebei	Urban development, social development and protection, environment	Technical study	EARD	
Country Water Assessment	Water	Technical study	EARD	
Flood Footprint and Accountability Mechanism – A Way Forward to Mainstream Flood Risk Management in Development	Disaster risk management	Working paper	EARD	
Working Paper on Poverty Reduction in the PRC	Poverty	Working paper	EARD	
Working Paper on Hefei – Xi'an Railway Impact Evaluation	Transport	Working paper	EARD	
Working Paper on Nanpu Bridge Impact Evaluation	Transport	Working paper	EARD	
Eighth ASEAN+3 Village Leaders Exchange Program	Poverty	Event Organization	EARD	9531
Global Partnership on Poverty Reduction	Poverty	Event Organization	EARD	9531
Asia–Pacific Forum on Low-Carbon Technology	Climate change	Forum	EARD	
The Eighth International Conference on Eco-Compensation and Payments for Ecosystem Services	Environment	Forum	EARD	9040
13th ASEAN–PRC Forum on Social Development and Poverty Reduction	Poverty	Forum	EARD	9531
CAREC–BRI Cooperation/CAREC Think Tanks Forum	RCI	Forum	EARD	
Tenth ADB–PRC Knowledge-Sharing Platform	TBD	Forum	EARD	
Northeast Regional Forum	TBD	Forum	EARD	
Workshop on urban topics	Urban development	Forum	EARD	

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
Asia High-Level Policy and Technical Dialogue on Carbon Market Cooperation	Climate change	High-level meeting	EARD	
Asia High-Level Policy and Technical Dialogue on Carbon Market Cooperation	Environment	High-level meeting	EARD	9574
ADB Lecture Series on Environment and Development at Tsinghua University and AFDI	Various	Lecture series	EARD	
International Development Lecture Series, Shanghai	Various	Lecture series	EARD	
ADO Launch 2019	TBD	Publication launch	EARD	
ADOU Launch 2019	TBD	Publication launch	EARD	
Special Economic Zones as Catalysts for Economic Corridors, Value Chains and Production Networks Training	Economics, industry, and trade	Training	EARD	9572
Training Workshop on RCI Operational Direction - theory/sector/case studies	RCI	Workshop	EARD	
TA Final Workshop: TA 9353-PRC	Mainstreaming urban climate change adaptation in the PRC	Workshop	EARD	9353
Study Visit of Azerbaijan Customs to Pilot Joint Customs Control between PRC and Mongolia	Trade, regional cooperation and integration	Workshop	EARD	
Total number of publications = 27				
Total number of events = 19				

ADB = Asian Development Bank, ADO = Asian Development Outlook, AD OU = Asian Development Outlook Update, AFDI= Asia-Pacific Finance and Development Institute; ASEAN = Association of Southeast Asian Nations, ASEAN+3 = Association of Southeast Asian Nations plus three, BRI = Belt and Road Initiative, CAREC = Central Asia Regional Economic Cooperation, EARD = East Asia Department, ITS = intelligent transport system, PRC = People's Republic of China, RCI = regional cooperation and integration, TA = technical assistance, TBD = to be determined.

Note: "Knowledge products" may include the five types reported to the ADB Board of Directors: flagship products, op-eds, policy briefs, technical studies, and working papers. Other knowledge products such as databases, multimedia (e.g., PowerPoint presentations, videos, websites), and other forms of documentation (e.g., guides, case studies, training and capacity development materials) may also be included. "Events" may include flagship events, event organization, and training or capacity development.

Source: Asian Development Bank.

Table A4.2: Additional Knowledge Products and Events Delivered in 2018

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
The impact of IPO Approval on the Price of Existing Stocks: Evidence from the People's Republic of China	Economics	Journal article	ERCD	
Who Exacerbates the Extreme Swings in the Chinese Stock Market?	Economics	Journal article	ERCD	
Will Order Imbalances Predict Stock Returns in Extreme Market Situations? Evidence from the People's republic of China	Economics	Journal article	ERCD	
Charting an Eco-future for Yangtze and the People's Republic of China	Agriculture and natural resources, climate change, environment, urban development	Op-ed	VPO2	
Rural Vitalization through Internet Plus Agriculture	Agriculture and natural resources, ICT	Op-ed	EARD	
No Reason for City Clusters Not to Succeed	Capacity development, governance and public sector management, urban development	Op-ed	DOC	
Knowledge, Innovation Key to Quality	Economics, knowledge management, industry and trade, social development and protection, urban development, public-private partnership	Op-ed	EARD	
Tax Reform in the United States: Implications for the People's Republic of China	Economics	Policy brief	EARD	
Measuring, Monitoring, and Operationalizing Quality of Growth—Implications for the People's Republic of China	Economics, environmental sustainability, inclusive growth, social inclusion, sustainable development	Policy brief	EARD	
Aging and Implications for Elderly Care Services in the People's Republic of China	Economics, labor and employment, social assistance programs, social protection	Policy brief	EARD	

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
Three Features of Aging in the People's Republic of China and Implications for Development Agenda	Social development and protection, social inclusion	Policy brief	EARD	
Internet Plus Agriculture: A New Engine for Rural Economic Growth in the People's Republic of China	Agriculture rural development, agriculture technology	Technical study	EARD	
50 Climate Solutions from Cities in the People's Republic of China	Climate change, energy efficiency and conservation, urban development, urban transport, vehicle emissions, waste management	Technical study	EARD	
Avoiding the Middle-Income Trap in Asia: The Role of Trade, Manufacturing, and Finance	Economics	Technical study	ADB	
Slowdown in the People's Republic of China: Structural Factors and the Implications for Asia	Economics	Technical study	ADB	
A Partnership Transformed: Three Decades of Cooperation between the Asian Development Bank and the People's Republic of China in Support of Reform and Opening Up	Economics, history and membership, industry and trade, RCI	Technical study	EARD	
Inclusive Business Market Scoping Study in the People's Republic of China	Poverty, private sector	Technical study	SDCC	8550
Proceedings of the Second CAREC Think Tanks Development Forum: Exploring Knowledge Solutions for Regional Cooperation and Integration	RCI, knowledge management	Technical study	EARD	
New Towns and New Districts Case Studies from the PRC	Urban development, environment,	Technical study	EARD	
Assessment of GMS Economic Corridors in PRC	Transport	Technical study	SERD	
Managing Water Resources for Sustainable Socioeconomic Development: A Country Water Assessment for the People's Republic of China	Water	Technical study	EARD	
Integrating Flood and Environmental Risk Management: Principles and Practice	Disaster risk management, environment, environmental safeguards, floods	Working paper	EARD	

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
Impact Evaluation of Road Improvements and Rural Poverty—Baseline Survey in the Ningxia Liupanshan Area of the PRC	Rural transport, poverty, Impact evaluation	Working paper	EARD	
7th International Conference on Eco-Compensation and Payment for Ecosystem Services (PRC and ADB co-hosted the conference)	Agriculture and natural resources, environment, rural development, poverty	Conference	EARD	
Conference on Asian Super Grid	Energy	Conference	EARD	9001
2018 Asian Evaluation Week	Capacity development	Forum	IED	
2018 China Poverty Reduction Forum	Poverty, knowledge management	Forum	EARD	
Think Tank Gathering on Development Challenges	Capacity development	Forum	EARD	
ADB joins low-carbon technology forum in the PRC	Climate change, renewable energy	Forum	EARD	
Inaugural China Financial Sector Forum (held in the PRC)	Finance	Forum	EARD	
Boao Forum	Finance, regional cooperation, urban development	Forum	EARD	
10th Pan-Beibu Gulf Economic Cooperation Forum (ADB was a participant)	RCI	Forum	EARD	
CAREC Integrated Trade Agenda 2030 consultations held in PRC	Industry and trade	High level meeting	EARD	
Distinguished Speaker Series: Globalization and Environmentally Sustainable Development in China: An International Business Perspective	Environment	Learning session	ADB I	
Distinguished Speaker Series: Belt and Road Initiative: Cost-Benefit Analysis and Meeting Environmental Obligations	Environment, regional cooperation and integration	Learning session	ADB I	
Distinguished Speaker Series: High-Speed Rail and the New Economic Geography: Evidence from Chinese Cities	Transport, urban development	Learning session	ADB I	
International Development Lecture Series (Spring 2018)	Knowledge management	Lecture series	EARD	
Lecture Series in Tsinghua University on Environment and Development	Urban development, environment	Lecture series	EARD	

Title of Publication or Event	Subject	Type	Department or Sector Group or Thematic Group	Funding Source
PRCM: ADB kicks off third year of lecture series in international development, AFDI, Shanghai	Various	Lecture series	EARD	
4th Project Implementation Management Executive Seminar concludes	Project management	Seminar	EARD	
ADB speaks at seminar on revision of tendering and bidding law of PRC	PSM	Seminar	EARD	
ADB speaks at Future of Finance Summit in PRC	Finance	Summit	EARD	
ADB speaks at Taobao Village Summit in the PRC	Rural development, e-commerce	Summit	EARD	
Special Economic Zones (SEZs) as Catalysts for Economic Corridors, Value Chains and Production Networks 2018	Industry and trade	Training	EARD	
Workshop on rural revitalization held in PRC	Agriculture and natural resources	Workshop	EARD	
Special Economic Zones and Economic Corridor Development	Economics	Workshop	SARD	
Northeast Asia Power System Interconnection Strategy	Energy	Workshop	EARD	
ADB discusses legal reform for Yangtze River environmental protection	Environment, PSM	Workshop	EARD	
ADB research on PRC's Fourteenth Five-Year Plan kicks off	MUL	Workshop	EARD, PRCM	
TA supports PRC to reform personal income tax and social security contributions	PSM	Workshop	EARD	
Workshop on market access, facilitating trade in GMS agrifood held in the PRC	RCI	Workshop	EARD	
CDIA, ADB support developing capacity for Yangtze River Economic Belt green transformation	Industry and trade, capacity development	Workshop	EARD	
Total number of publications = 23				
Total number of events = 29				

ADB = Asian Development Bank, ADBI = Asian Development Bank Institute, AFDI = Asia-Pacific Finance and Development Institute, CAREC = Central Asia Regional Economic Cooperation, CDIA = Cities Development Initiative for Asia, DOC = Department of Communications, EARD = East Asia Department, ERCD = Economic Research and Regional Cooperation Department, GMS=Greater Mekong Subregion, ICT = information and communications technology, IED = Independent Evaluation Department, IPO = Initial Public Offering, MUL = Multisector, PPP = public-private partnership, PRC = People's Republic of China, PRCM = People's Republic of China Resident Mission, PSM = public sector management, RCI = regional cooperation and integration, SARD = South Asia Department, SDCC =

Sustainable Development and Climate Change Department, SERD = Southeast Asia Department, SEZ = special economic zone, SOE = state-owned enterprise, TA = technical assistance, TBD = to be determined, VOC = volatile organic compound, VPO2 = Office of the Vice-President (Operations 2).

Note: "Knowledge products" may include the five types reported to the ADB Board of Directors: flagship products, op-eds, policy briefs, technical studies, and working papers. Other knowledge products such as case studies, tool kits, learning modules, technical blog posts, technical notes, websites, videos, infographics, journal articles, impact evaluations, Q&As and FAQs, and guides may also be included. "Events" may include flagship events, event organization, and training or capacity development.

Source: Asian Development Bank.

Table A4.3: Innovation, Advanced Technology, and Pilot Initiatives to be Implemented in 2019

Item	Nature	Project Number	Sector or Theme	Division
Protection of historical and cultural heritage, introduction of digital asset management system, and leverage of knowledge partnership between local government and research institutes under Henan Dengzhou Integrated River Restoration and Ecological Protection project	PLT		Agriculture, natural resources and rural development	EAER
Using advance technology and innovative approach in traffic management and development of sustainable transport infrastructure	TCH		Transport	EASI
Implementation of an elderly care human resources development program at the tertiary and continuing education levels	PLT	L3536-PRC	Health	EASS
Low-Carbon Climate-Resilient Healthy City Development Demonstration Project in Yanji, Jilin Province	INO		Urban	EASS
Pilot of water reuse innovation and urban acupuncture approach in design under Xinjiang Hetian Comprehensive Urban Development and Environment Improvement project	PLT		Urban	EASS
Pilot projects to support good practice elderly care service development in areas such as management, quality assurance, and new services	PLT	L3536-PRC	Health	EASS
Use of an integrated elderly care service model that links home, community, and residential care and management	PLT	L3536-PRC	Health	EASS
Use of Public–Private Partnership: Public–Private Partnerships Demonstration Program to Transform Delivery of Elderly Care Services in Yichang, Hubei	PLT	L3506-PRC	Health	EASS
Use of Results-Based Lending: Public–Private Partnerships Demonstration Program to Transform Delivery of Elderly Care Services in Yichang, Hubei	PLT	L3506-PRC	Health	EASS
Total number of innovation, advanced technology, and pilot initiatives = 9				

EAER = East Asia Environment, Natural Resources & Agriculture Division, EASI = East Asia Sustainable Infrastructure Division, EASS = East Asia Urban and Social Sectors Division, INO = innovation, PLT = pilot initiative, TCH = advanced technology
Source: Asian Development Bank.