Technical Assistance Report

Project Number: 47258-001
Regional—Policy and Advisory Technical Assistance (R-PATA)
December 2013

A Program of Studies on Low-Carbon Development of the People's Republic of China and India

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
CoP	–	community of practice
GHG	–	greenhouse gas
PRC	–	People's Republic of China
TASF	–	Technical Assistance Special Fund
UNDP	–	United Nations Development Programme

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Regional—policy and advisory technical assistance (R-PATA)
Targeting classification	–	General intervention
Sector (subsector)	–	Multisector
Themes (subthemes)	–	**Environmental sustainability** (global and regional transboundary concerns), economic growth (knowledge, science, and technological capacities), social development (human development), regional cooperation and integration (other regional public goods)
Climate change	–	Climate change mitigation
Location (impact)	–	Rural (medium), urban (high), national (high), regional (medium)

NOTE

In this report, "$" refers to US dollars.

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I. INTRODUCTION

1. The People's Republic of China (PRC) and India are seeking to identify opportunities and related technical, financial, and policy requirements to create low-carbon economic growth pathways. The PRC's Twelfth Five-Year Plan has for the first time set a carbon-intensity reduction target of 17% and intends to achieve it by 2015.[1] India's Twelfth Five Year Plan has also recognized the need for low-carbon development strategies to ensure inclusive growth.[2] While some detailed studies on low carbon development for energy, industrial and other sectors have been undertaken nationally, there are few collaborative studies comparing the experiences gained in the two countries, particularly at a subnational scale. Bilateral official interactions between the PRC and India have revealed an interest by the two countries in collaborating on these topics.

2. In 2012, PRC and India jointly launched an initial research project about low-carbon development strategies, funded by the United Nations Development Programme (UNDP). The objective of the UNDP research project was to inform short- to long-term decision making in the PRC and India on enhancing low-carbon development strategies. The UNDP project sought to bring together policy and practice communities on a single knowledge platform.

3. UNDP provided seed funding to the research project and has called for partnerships to further advance low-carbon development in both countries because it is currently unable to fund or oversee additional research on this topic. In early 2013, the governments of PRC and India endorsed further studies on low-carbon development, seeking assistance from the Asian Development Bank (ADB). They specified seven focus areas for potential studies: power, industry, transport, buildings, agriculture, forestry, and waste.

4. After stakeholder consultations in the PRC and India, three of the seven focus areas—energy, buildings, and transport—will be considered for inclusion in this proposed regional policy and advisory technical assistance (TA), which focuses on the development of a low-carbon development study. ADB's vice-president for knowledge management and sustainable development approved the TA concept paper on 8 November 2013.[3] The design and monitoring framework is in Appendix 1.

II. ISSUES

5. To mitigate the impacts of climate change, greenhouse gas (GHG) emissions must be significantly reduced in the coming decades. It will be necessary for emerging economies to shift toward low-carbon development; this is particularly true of the PRC and India, which together account for about 37% of the world's population, 12% of the world's gross domestic product, and about 32% of the world's GHG emissions. Both the PRC and India are intent on finding opportunities to create green growth, and to deploy technical, financial, and policy tools to achieve sustainable development.

6. The development approaches and experiences of the PRC and India reflect clear differences in their policies, systems, and socioeconomic circumstances. Nevertheless, the challenges facing these two countries in shifting toward low-carbon development are similar and stern. In both countries, technology innovations are unevenly disseminated geographically and

[1] Government of the People's Republic of China. 2012. *The Twelfth Five Year Plan for National Economic and Social Development of the People's Republic of China, 2011-2015.* Beijing.
[2] Government of India, Planning Commission. 2013. *Twelfth Five Year Plan, 2012-2017*. Delhi.
[3] The TA first appeared in the business opportunities section of ADB's website on 13 November 2013.

sectorally. Both countries urgently need a better understanding of how to promote innovation, commercialize new technology, and scale up technology deployment in the context of low-carbon development, enabling them to adjust strategies and build capacities in science, technology and innovation, as well as basic technical skills.

7. Financing remains a key factor in the scaling up of low-carbon technologies. In both countries, public funding is insufficient and this will get worse as government funding for social services increases and consumption levels grow. In-depth studies are required to examine the policy and regulatory environment, key financial institutions relevant to low-carbon development, and models of reforms for both public and private financing systems to better manage public funds and create necessary incentives for driving private sector capital away from high-carbon investment and into low-carbon assets.

8. Given that subnational planning and implementation are vital for low-carbon development, and there are many examples of bottom-up decentralized efforts, case studies demonstrating integrated policies, programs, and innovative solutions would be very useful for generating knowledge and developing good models for technology innovation and dissemination, financing, and market creation. The proposed study will fill this information gap.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

9. The impact will be increased cooperation between the PRC and India, leading to the establishment of low-carbon development paths for selected focus areas in both countries. The outcome will be greater knowledge and better understanding by policymakers of low-carbon development experiences in the PRC and India.

B. Methodology and Key Activities

10. Outputs relate to a series of substantive studies to be completed for the PRC and India, as well as a synthesis. The TA will be implemented in two phases. Phase 1 will consist of (i) conducting analytical overviews and in-depth studies in three areas of critical interest to the PRC and India,[4] which will examine the key factors contributing to or discouraging low-carbon finance, technology, and innovation (two or three subnational case studies will be conducted for each selected sector); and (ii) drawing lessons from the in-depth studies for future policy and program development. Phase 2 will focus on publishing and disseminating the knowledge products and synthesis completed in phase 1.

11. **Output 1: Nexus of low-carbon development and energy examined in the PRC and India.** Output 1 involves the following:

(i) **Low-carbon energy study: PRC.** This study will
   (a) examine the policy framework to promote more carbon capture and storage initiatives, integrated gasification combined-cycle technologies, and waste-to-energy technologies, and to ‘reduce, reuse, and recycle’

[4] Studies for both countries are mostly equivalent in scope, but slight differences result from a few single-country interests that emerged at a consultation workshop held in Beijing in August 2013; they are reflected in the descriptions of expected outputs.

activities, with particular regard to private sector involvement in such initiatives;
(b) discuss the policy, legal, and regulatory framework to support development and commercialization of second-generation biofuels; and
(c) analyze and recommend ways to improve energy pricing, including level of subsidies, target groups, and subsidy administration mechanisms.

(ii) **Low-carbon energy study: India**. The study will
(a) identify barriers to greater application of cleaner fossil fuel (supercritical, ultra supercritical, and integrated gasification combined-cycle) technologies, as well as waste-to-energy technologies in power generation, and recommend ways to overcome these barriers;
(b) define technical, economic, and regulatory challenges in implementing carbon capture and storage in the power sector, with recommendations on how to overcome such challenges;
(c) examine the nexus of low-carbon development and energy, with a particular focus on emerging areas such as the carbon trade market; and
(d) prepare case studies to highlight good practices and lessons.

12. **Output 2: Building, appliance, and equipment standards assessed in the PRC and India for improved energy efficiency**. Output 2 involves the following:

(i) **Low-carbon building study: PRC**. The study will
(a) analyze barriers and challenges in scaling up energy efficiency investments in both new and older buildings;
(b) assess and recommend ways to lower the barriers to energy efficiency investment in buildings;
(c) assess and recommend ways to harmonize energy efficiency standards and building energy codes across PRC provinces to improve enforcement and implementation; and
(d) prepare case studies to highlight good practices and lessons.

(ii) **Low-carbon building study: India**. The study will
(a) analyze and recommend ways to improve enforcement of building energy codes, equipment and appliance standards, and labeling programs;
(b) assess the policy, regulatory, and financial environment to promote and support energy service companies;
(c) analyze energy efficiency investment opportunities in new and older buildings, and make recommendations on how to turn them into tangible investments; and
(d) prepare case studies to highlight good practices and lessons.

13. **Output 3: Low-carbon development strategies for the transport sector analyzed in both the PRC and India.** This involves a low-carbon transport study for both countries (with equivalent scope), which will
(a) prepare representative policy and project case studies to highlight best practices and lessons (e.g., sustainable urban transport such as nonmotorized transport, bus rapid transit, high-speed rail);
(b) identify policies, programs, and projects that may be scaled up and replicated; point to barriers and recommend how to overcome them;

(c) assess policy and financial mechanisms, including public–private partnerships, instruments such as taxes, charges, and subsidies, as well as fuel and vehicle performance standards and other regulatory instruments; and
(d) compile, analyze, and describe approaches to climate-proofing low-carbon transportation infrastructure and to managing social dimensions of transport (e.g., accessibility, gender, poverty alleviation).

14. **Output 4: Findings and recommendations synthesized and summarized for low-carbon development strategies in the energy, transport, and building focus areas in the PRC and India.** This involves a consolidated analytical report on low-carbon development (in all sectors selected for the PRC and India), which will

(a) identify good practices and lessons and recommend how to use them to improve low-carbon technology applications in both countries considering policy, regulatory, and institutional frameworks; technical capacity; resource availability; and financing of innovative arrangements;
(b) assess co-benefits (including environmental and social benefits such as reduced GHG emissions, local air pollution, noise, and associated health impacts);
(c) assess and recommend how to improve and increase information and technology cooperation;
(d) analyze constraints on implementation of policies and strategies for low-carbon energy, transport, and buildings; and recommend ways to overcome these constraints;
(e) document experiences and lessons from establishing markets for tradable renewable-energy certificates; and
(f) prepare case studies to highlight good practices and lessons.

C. Cost and Financing

15. The TA is estimated to cost $1,000,000, which will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-other sources). The cost estimates and financing plan are in Appendix 2.

D. Implementation Arrangements

16. ADB will be the executing agency for the TA. The TA will be implemented by the Regional and Sustainable Development Department, in close coordination with East Asia Department and South Asia Department, and ADB's energy, urban, and transport communities of practice (CoPs). Partnership with centers of excellence on low carbon development will be explored.[5]

17. The TA will require 29 person-months of international and 36 person-months of national consulting services. For the PRC studies, the consulting team will comprise 12–24 individual international and national consultants whose expertise will cover low-carbon policy and regulation, finance, and technology across the three study focus areas. An administrative coordinator for the PRC study will also be engaged. For the India studies, the government has suggested that the work be undertaken by leading research institutes for easier coordination and collaboration. Consulting firms will therefore be engaged, using the consultants'

[5] These centers of excellence may include Tsinghua University 3E Institute and The Energy and Resources Institute.

qualifications selection method because the assignment is relatively short-term and requires in-depth, specialized expertise in low-carbon development policy and practice in selected sectors. Consulting firms will appoint teams of similar size and composition to the PRC team to deliver the India study program. Lastly, ADB will engage international individual consultants to coordinate all study outputs and prepare synthesis reports and publications. More details on the structure of the proposed team and the outline terms of reference for all consultants are in Appendix 3. ADB will engage all consultants in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time).

18. Two to three workshops will be held during TA implementation: (i) a small, tripartite inception workshop may be needed to determine the detailed scope of each sector study, including detailed terms of reference for consultants, agreement on the procedures for reviewing the progress of studies, quality control, and other administrative arrangements; (ii) a midterm workshop; and (iii) a final workshop for review, consultation, and knowledge sharing purposes.

19. A steering committee, comprising ADB staff and two members each from the PRC's National Development and Reform Committee and India's Department of Economic Affairs of the Ministry of Finance will provide guidance and exercise overall oversight. The TA will be monitored also through peer review by the East Asia Department, South Asia Department, and by the Energy CoP, Urban CoP, and Transport CoP. Knowledge generation and management is a focus of the TA. Study results will be published and disseminated through workshops, conferences, and websites of the governments, participating research institutions, and ADB.

20. The estimated period of TA implementation is 24 months, from January 2014 to December 2015. This includes about 18 months of research activities (phase 1) and 6 months of final publications and dissemination (phase 2). All disbursements under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time).

IV. THE PRESIDENT'S DECISION

21. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of $1,000,000 on a grant basis for A Program of Studies on Low-Carbon Development of the People's Republic of China and India, and hereby reports this action to the Board.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Increased cooperation between the PRC and India leading to the establishment of low-carbon development paths for selected sectors in both countries	Evidence of policy making in the selected sectors that is influenced by the experience in low-carbon development in the PRC and India, and evidence of bilateral cooperation in the selected sectors	Sector policy, plans and programs; bilateral agreements or cooperation programs between the PRC and India	**Assumptions** Policymakers and practitioners have incentives and capability to incorporate good practices and lessons into decision making The PRC and India will continue to cooperate in the selected sectors
Outcome Greater knowledge and better understanding by policymakers of low-carbon development experiences in the PRC and India	TA study results well received, cited, and used in at least 2 PRC and 2 India government reports and plans from 2015 and beyond	Feedbacks from workshop participants Feedback from steering committee members In-country policy papers, reports, and documents	**Assumptions** Participants of TA workshops include key decision makers TA reports and publications issued by key government agencies TA steering committee members include key decision makers
Outputs 1. Nexus of low-carbon development and energy examined 2. Building sector, appliance, and equipment standards assessed in the PRC and India for improved energy efficiency 3. Low-carbon development strategies for the transport sector analyzed in both the	Low-carbon energy study on (i) the PRC and (ii) India published and disseminated Low-carbon building study on (i) the PRC and (ii) India published and disseminated Low-carbon transport study on (i) the PRC and (ii) India published and disseminated	Feedbacks from governments and other in-country stakeholders Periodic TA reviews Peer review by ADB energy and transport CoPs	**Assumptions** Relevant governments in both countries continue to provide necessary support to the participating research institutions for carrying out studies Researchers in both countries have access to relevant and quality data and materials Timely coordination between the PRC and India study teams

<table>
<tr><td>PRC and India

4. Findings and recommendations synthesized and summarized for low-carbon development strategies in energy, transport, and building sectors in the PRC and India</td><td>A consolidated analytical report on low-carbon development for selected sectors for both the PRC and India published and disseminated</td><td></td><td>Risks
Some data needed for studies may be considered confidential</td></tr>
<tr><td colspan="3">Activities with Milestones

The following activities and milestones will be undertaken for Outputs 1-4:
1. Conduct inception, medium-term, and final review meetings
2. Submit draft study reports prepared by the PRC and India study teams (August–September 2014)
3. Conduct review, consultation seminars, and/or workshops in the PRC and India (November–December 2014)
4. Submit final reports by the PRC and India study teams (March–April 2015)
5. Submit the draft Consolidated Analytical Report on Low-Carbon Development (June 2015)
6. Submit the final Consolidated Analytical Report on Low-Carbon Development (August 2015)
7. Conduct dissemination workshop(s) in the PRC, India, or Manila (October 2015)
8. Publication of TA outputs (December 2015)</td><td>Inputs
ADB: $1,000,000
Item <b>Amount ($’000)
Consultants 560
Workshops, seminars and conferences 125
Miscellaneous, administration and support costs 20
Contingencies 35</td></tr>
</table>

ADB = Asian Development Bank, CoP = community of practice, PRC = People’s Republic of China, TA = technical assistance.
Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
($'000)

Item	Amount
Asian Development Bank[a]	
1. Consultants	
a. Remuneration and per diem	
i. International consultants (29 person-months)	560.0
ii. National consultants (36 person-months)	160.0
b. International and local travel	70.0
c. Reports and communications	30.0
2. Workshops, seminars, and conferences[b]	125.0
3. Miscellaneous administration and support costs[c]	20.0
4. Contingencies	35.0
Total	**1,000.0**

[a] Financed by the Asian Development Bank's Technical Assistance Special Fund (TASF-other sources).
[b] Includes honorarium and travel costs for resource persons and facilitators, participants' travel costs, and staff travel costs as resource persons and/or speakers, and logistical costs. Also includes representation costs that may be incurred during a workshop, seminar, or conference; about $5,000 is allotted for representation expenses.
[c] Includes publication-related costs, e.g., editing and proofreading, layout, printing.
Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The technical assistance (TA) will require 65 person-months of inputs from international and national consultants. All consultants will be engaged by the Asian Development Bank (ADB) in accordance with its Guidelines on the Use of Consultants (2013, as amended from time to time).

A. Consulting Firm (For India Studies)

2. Consulting firms will be engaged using the consultants' qualifications selection method to provide expertise in the areas of technology, policy and regulation, finance, and project implementation across the energy, buildings, and transport focal areas. Following are the consulting service packages for India:

Consulting Service Packages for India

General Description	Estimated Value	Estimated Number of Contracts	Recruitment Method	Type of Proposal
1. Low-carbon energy and building studies	$200,000	1	CQS	Biodata technical proposal
2. Low-carbon transport study	$120,000	1	CQS	Biodata technical proposal

CQS = consultants' qualifications selection.
Source: Asian Development Bank.

3. Expertise required from the consulting firms is equivalent across both packages and would consist of the following:

(i) **Low-carbon policy and regulatory specialists** (1–2 international consultants totaling 3 person-months; 1–2 national consultants totaling 4 person-months). The specialists will have qualifications in economics, policy, or a related discipline and conduct research to identify policy and regulatory barriers to low-carbon development in India across the energy, building, and transport sectors, and make recommendations to overcome them. Responsibilities include
   (a) identifying policy and regulatory constraints to stronger low-carbon policies and investment in the energy, building, and transport sectors;
   (b) analyzing and recommending improvements to the energy and transport pricing regimes, including subsidy levels, mechanisms, and target groups;
   (c) examining requirements for policy, legal, and regulatory frameworks in support of developing and commercializing second-generation biofuels;
   (d) documenting experiences and lessons from establishing a market for tradable renewable-energy certificates;
   (e) assessing options and recommending how to implement, harmonize, and enforce energy efficiency appliance standards, fuel and vehicle performance standards, labeling programs, building energy codes, and other regulatory instruments; and
   (f) gathering inputs from pertinent stakeholder groups.

(ii) **Low-carbon finance specialists** (1–2 international consultants totaling 3 person-months; 1–2 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in business, finance, or a

related discipline and conduct research to identify barriers to the financing of low-carbon development in India across the energy, building, and transport sectors, and recommend ways to overcome them. Tasks include

(a) identifying financial constraints to stronger low-carbon policies and investment in the energy, building, and transport sectors;
(b) assessing the financial environment to promote and support the energy service industry in the country;
(c) recommending how to lower barriers to energy efficiency investment in new and older buildings, and how to turn opportunities into tangible investments;
(d) analyzing financial mechanisms for the transport sector, including public–private partnerships and instruments such as taxes, charges, and subsidies; and
(e) gathering inputs from pertinent stakeholder groups.

(iii) **Low-carbon technology specialists** (1–2 international consultants totaling 3 person-months; 1–2 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in engineering, science, business process, or related disciplines and conduct research to identify technology barriers to low-carbon development in India across the energy, building, and transport sectors, and recommend ways to overcome them. Responsibilities include

(a) identifying technological issues and constraints on stronger low-carbon policies and investment in the energy, building, and transport sectors;
(b) conducting technology-specific studies into the market status for particular low-carbon market segments, e.g., waste-to-energy technology and innovations in renewable energy;
(c) assessing technology availability, cost-effectiveness, greenhouse gas mitigation value, replication potential, and other co-benefits;
(d) conducting research on issues related to specific examples of low-carbon technologies of particular interest to the PRC and India, including renewable energy, energy efficiency, sustainable urban transport, high-speed rail, bus rapid transit, private cars, nonmotorized transport; and
(e) gathering inputs from pertinent stakeholder groups.

(iv) **Low-carbon project specialists** (1–2 international consultants totaling 3 person-months; 1–2 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in project management, business administration, or related disciplines. They will conduct research to identify and document successful low-carbon project approaches, highlight barriers to their implementation in India across the energy, building, and transport sectors, and recommend ways to overcome them. Responsibilities include

(a) identifying and documenting case studies of successful low-carbon development across residential and nonresidential buildings, and across both new buildings and building retrofits;
(b) identifying and documenting case studies of successful low-carbon energy development, including their cost-effectiveness, greenhouse gas mitigation value, replication potential, and other co-benefits;
(c) identifying successful transport policies, programs, and projects that can be scaled up and replicated;

(d) compiling, analyzing, and documenting approaches to the climate-proofing of low-carbon technologies, and to managing social dimensions (e.g., accessibility, gender, poverty alleviation); and
(e) gathering inputs from pertinent stakeholder groups.

B. Individual Consultants (For the People's Republic of China Studies)

4. Individual consultants will be engaged to do the low-carbon studies for the PRC. Expertise required and the scopes of work include:

(i) **Low-carbon policy and regulatory specialists** (2–4 international consultants totaling 3 person-months; 2–4 national consultants totaling 4 person-months). The specialists will have qualifications in economics, policy, or a related discipline. They will conduct research to identify policy and regulatory barriers to low-carbon development in the PRC across the energy, building, and transport sectors, and recommend ways to overcome them. Responsibilities include
(a) identifying policy and regulatory constraints to stronger low-carbon policies and investment in the energy, building, and transport sectors;
(b) analyzing and recommending ways to improve energy and transport pricing regimes, including level of subsidies, target groups, and subsidy administration mechanisms;
(c) examining requirements for a policy, legal, and regulatory framework in support of developing and commercializing second-generation biofuels;
(d) documenting experiences and lessons from establishing a market in tradable renewable-energy certificates;
(e) assessing options and recommending ways to implement, harmonize, and improve the enforcement of energy efficiency appliance standards, fuel and vehicle performance standards, labeling programs, building energy codes, and other regulatory instruments;
(f) gathering inputs from pertinent stakeholder groups; and
(g) providing logistical and other support to project team meetings and activities.

(ii) **Low-carbon finance specialists** (2–4 international consultants totaling 3 person-months; 2–4 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in business, finance, or a related discipline. They will conduct research to identify barriers to the financing of low-carbon development in the PRC across the energy, building, and transport sectors, and recommend ways to overcome them. Responsibilities include
(a) identifying financial constraints to stronger low-carbon policies and investment in the energy, building, and transport sectors;
(b) assessing the financial environment to promote and support the energy service industry in each country;
(c) assessing options and recommending ways to lower the barriers to energy efficiency investment in both new and older buildings, and how to turn opportunities into tangible investments;
(d) analyzing financial mechanisms for the transport sector, including public–private partnerships and instruments such as taxes, charges, and subsidies;
(e) gathering inputs from pertinent stakeholder groups; and

(f) providing logistical and other support to project team meetings and activities.

(iii) **Low-carbon technology specialists** (2–4 international consultants totaling 3 person-months; 2–4 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in engineering, science, business process, or related disciplines. They will conduct research to identify technology barriers to low-carbon development in the PRC across the energy, building, and transport sectors, and recommend ways to overcome them. Task include

(a) identifying technological issues and constraints to stronger low-carbon policies and investment in the energy, building, and transport sectors;
(b) conducting technology-specific studies into the market status for particular low-carbon market segments, e.g., waste-to-energy technology and innovations in renewable energy;
(c) assessing technology availability, cost-effectiveness, greenhouse gas mitigation value, replication potential, and other co-benefits;
(d) conducting research on issues related to specific examples of low-carbon technologies of particular interest to the PRC and India, including renewable energy, energy efficiency, sustainable urban transport, high-speed rail, bus rapid transit, private vehicles, and nonmotorized transport; and
(e) gathering inputs from pertinent stakeholder groups.

(iv) **Low-carbon project specialists** (2–4 international consultants totaling 3 person-months; 2–4 national consultants totaling 4 person-months). The specialists will have postgraduate qualifications in project management, business administration, or related disciplines. They will conduct research to identify and document successful low-carbon project approaches, highlight barriers to their implementation in the PRC across the energy, building, and transport sectors, and recommend ways to overcome them. Responsibilities include

(a) identifying and documenting case studies of successful low-carbon development across residential and nonresidential buildings, and across both new buildings and building retrofits;
(b) identifying and documenting case studies of successful low-carbon energy development, including their cost-effectiveness, greenhouse gas mitigation value, replication potential, and other co-benefits;
(c) identifying successful transport policies, programs, and projects that can be scaled up and replicated;
(d) compiling, analyzing, and documenting approaches to the climate-proofing of low-carbon technologies, and to managing social dimensions (e.g., accessibility, gender, poverty alleviation); and
(e) gathering inputs from pertinent stakeholder groups.

(v) **Project administrative coordinator** (1 PRC national consultant, 4 person-months total). The coordinator will have qualifications in project management and administration and will provide support to the PRC project team and the steering committee in executing the PRC studies. Tasks will include

(a) coordinating outputs of other team members and pertinent stakeholder groups, including providing administrative support to and organizing workshops and meetings of the steering committee;
(b) managing program contractual arrangements on behalf of ADB; and

(c) working with other consultants on the program to promote knowledge sharing between team members.

C. Individual Consultants (Synthesis and Publication)

5. Individual consultants will be responsible for preparing and finalizing synthesis reports under output 4 for publication.

(i) **Low-carbon development specialist and/or study coordinator** (international, 4 person-months total). The coordinator will have postgraduate qualifications in economics, technology, or related disciplines and has the principal task of coordinating and synthesizing all components of the study program into a consolidated final report. This will include

(a) coordinating the outputs of other team members and pertinent stakeholder groups;
(b) conducting secondary research to find gaps and inconsistencies, and collecting data and information complementary to the overall research program;
(c) contributing to the writing of reports and stakeholder presentations as assigned; and
(d) working with other consultants on the program to promote knowledge sharing between the two countries on project case studies, resource availability, and successful project management tools; and pointing to potential opportunities for greater project collaboration.

(ii) **Editor and publications specialists** (1–2 international consultants totaling 1 person-month). Under the direct supervision of the Technical Assistance Supervising Unit, and in collaboration with the study coordinator, the editor will

(a) edit the synthesis study, including rewriting, reorganizing, or shortening the text to improve its logical structure and sharpen the arguments; simplifying technical language, eliminating unnecessary jargon, and introducing definitions so the text can be understood by nonspecialists; and suggesting material (e.g., boxes) to make the publication reader-friendly;
(b) ensure consistency and accuracy, including checking for factual errors (e.g., ensuring correct names or institutions, checking major statements of fact on leading websites), and highlighting data inconsistencies; and
(c) ensure conformity with ADB editorial style and usage.