

# **Technical Assistance Report**

Project Number: 42057 Policy and Advisory Technical Assistance (PATA) December 2008

# People's Republic of China: China Clean Development Mechanism Fund Capacity Development (Cofinanced by the Climate Change Fund)

Asian Development Bank

## **CURRENCY EQUIVALENTS**

(as of 3 December 2008)

| Currency Unit | _ | yuan (CNY) |
|---------------|---|------------|
| CNY1.00       | = | \$0.1448   |
| \$1.00        | = | CNY6.905   |

### ABBREVIATIONS

| ADB    | _ | Asian Development Bank                                |
|--------|---|---|
| CCDMF  | _ | China Clean Development Mechanism Fund                |
| CDM    | — | clean development mechanism                           |
| CER    | — | certified emissions reduction                         |
| EA     | — | executing agency                                      |
| GDP    | — | gross domestic product                                |
| GHG    | _ | greenhouse gas  |
| MIS    | _ | management information system                         |
| PMO    | _ | project management office                             |
| PRC    | — | People's Republic of China                            |
| ТА     | _ | technical assistance                                  |
| UNFCCC | _ | United Nations Framework Convention on Climate Change |

### **TECHNICAL ASSISTANCE CLASSIFICATION**

| _<br>_<br>_ | Policy and advisory technical assistance (PATA)<br>General intervention<br>Energy<br>Energy sector development<br>Environmental sustainability, governance, capacity development<br>Global and regional transboundary environmental concerns and |
|-------------|--|
| -           | issues, public governance, organizational development  |
|             | _<br>_<br>_  |

## NOTE

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

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|-----------------------------|--|
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### I. INTRODUCTION

1. During the Country Programming Mission in December 2007, the Government of the People's Republic of China (PRC) requested the Asian Development Bank (ADB) to provide a policy and advisory technical assistance (TA) for China Clean Development Mechanism Fund Capacity Development. The TA has been included in the ADB nonlending pipeline for the PRC for 2008.<sup>1</sup> This report is based on the understanding reached with the China Clean Development Mechanism Fund (CCDMF) regarding the impact, outcome, methodology and key activities, cost estimates, financing plan, and implementation arrangements for the TA. The TA design and monitoring framework is in Appendix 1.

#### II. ISSUES

2. The PRC signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1991, and ratified the Kyoto Protocol of the UNFCCC in 2002. As a developing participating country of the UNFCCC, the PRC is eligible to benefit from the clean development mechanism (CDM) established under the Kyoto Protocol. The CDM is designed to promote a win-win solution between developed and developing countries in addressing global climate change; project owners in developing countries may register certified emissions reductions (CERs) that can then be sold to counterparts from developed countries. Such market-based CER transactions enable entities in developed countries to achieve their mandatory targets for reducing greenhouse gas emissions from 1995 level at a lower cost. The PRC has the potential to generate about 50% of the total worldwide annual CERs. The Government considers the CDM as an important mechanism for (i) extending financial support and new technology from developed countries to complement its own efforts to promote sustainable development, and (ii) addressing climate change concerns on both national and international basis.

3. ADB has been providing ongoing support to the PRC for CDM capacity development and has implemented a number of early CDM projects. In 2000, a TA prepared sample CDM documents for six typical projects;<sup>2</sup> in 2002, a TA identified specific opportunities for CDM projects.<sup>3</sup> In 2005, ADB's CDM facility successfully brokered the CERs from an ADB-funded project for utilizing coal mine methane, and the Asia Pacific Carbon Fund, under the Carbon Market Initiative, purchased CERs from another ADB-funded hydropower project.<sup>4</sup> Two other ADB-funded projects successfully signed contracts directly with other buyers of CERs.<sup>5</sup> The above projects promoted sustainable development in the PRC and enhanced global efforts to address climate change issues.

4. In 2005, the PRC introduced a levy on the CER revenues generated by various types of CDM projects and established a specialized facility—the CCDMF—to manage the levies

<sup>&</sup>lt;sup>1</sup> The TA first appeared in the business opportunities section of ADB's website on 17 September 2008.

<sup>&</sup>lt;sup>2</sup> ADB. 2000. Technical Assistance for the Promotion of Renewable Energy, Energy Efficiency, and Greenhouse Gas Abatement Projects. Manila.

<sup>&</sup>lt;sup>3</sup> ADB. 2002. Technical Assistance to the People's Republic of China for Opportunities for the Clean Development Mechanism in the Energy Sector. Manila.

<sup>&</sup>lt;sup>4</sup> ADB. 2004. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of China for the Liaoning Environmental Improvement Project. Manila; and ADB. 2006. Report and Recommendation of the President to the Board of Directors on a Proposed Multitranche Financing Facility to the People's Republic of China for the Gansu Heihe Rural Hydropower Development Investment Program. Manila.

<sup>&</sup>lt;sup>5</sup> ADB. 2004. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of China for the Coal Mine Methane Development Project. Manila; and ADB. 2003. Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the People's Republic of China for the Gansu Clean Energy Development Project. Manila.

collected for supporting domestic climate change-related activities. The CDM levy is an innovation to enhance the rationale and integrity of the CDM as a partnership for promoting sustainable development. ADB provided earlier TA to help the newly established CCDMF prepare initial operational guidelines and procedures;<sup>6</sup> the deliverables included (i) the draft decree and guidelines on the CDM fee collection mechanism; (ii) a draft policy paper for the internal control and governance structure; (iii) a draft operations manual for day-to-day operation of the CCDMF; and (iv) materials for capacity development, information dissemination, and a public awareness program. The activities and workshops envisaged under the TA have been completed, except for a training program that is planned in December 2008.

5. Now that the CCDMF has started collecting levy—expected to reach \$1.5 billion by 2012, the end of Kyoto Protocol period—the CCDMF staff require capacity building for fund management and investment. Training will need to extend to other stakeholders, including officials at provincial level who process proposals for CDM projects and other climate change-related activities.

Climate change is not only an environmental problem but also a critical development 6. issue. Its adverse impacts will disproportionally affect the poor, as they are most reliant on their direct natural environment. In its long-term strategic framework 2008–2020 (Strategy 2020),<sup>7</sup> ADB has identified the environment, including climate change, as one of strategic priorities to pursue its mission to help its developing member countries reduce poverty and improve living conditions and quality of life. ADB recently established the Climate Change Fund and Future Carbon Fund to help developing member countries implement projects that can contribute to climate change mitigation and energy security. ADB's country partnership strategy for the PRC 2008–2010<sup>8</sup> has also emphasized environmental sustainability. Like many other countries, the PRC has recognized that it is facing imminent and severe climate change challenges, and has initiated several measures to tackle these challenges. The 2007 National Climate Change Programme of the PRC specifically requires assistance from international partners to mitigate the effects of climate change. There is strong and clear consistency between the strategic priorities of ADB and the PRC in this sector. The proposed TA will be a concrete step to strengthen this strategic linkage.

### III. THE TECHNICAL ASSISTANCE

### A. Impact and Outcome

7. The impact of the TA will be the reduction of greenhouse gas emissions from the PRC and mitigation of global climate change impacts. The outcome will be a strengthened capacity of the CCDMF for promoting and supporting climate change-related projects.

### B. Methodology and Key Activities

8. To achieve the TA outcome and contribute to the TA impact, the following outputs will be delivered:

<sup>&</sup>lt;sup>6</sup> ADB. 2006. Technical Assistance to the People's Republic of China for the Establishment of the Clean Energy Development Mechanism Fund. Manila.

<sup>&</sup>lt;sup>7</sup> ADB. 2008 Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020. Manila.

<sup>&</sup>lt;sup>8</sup> ADB. 2008. Country Partnership Strategy (2008–2010): People's Republic of China. Manila.

- (ii) Output 2: Internet-based management information system (MIS) designed and operational for office administration, project management, risk control, human resources management, and financial management.
- (iii) Output 3: Draft design of financial instrument covering potential climate changerelated financial products (e.g., debt and derivative) and liquidity management (e.g., risk management and account management).
- (iv) Output 4: Training conducted and public awareness enhanced through workshops, seminars, and conferences for stakeholders, preparation of booklets for information dissemination, and study tour.

9. Considering the requirements of and relationships among different outputs, the key activities in output 1 will include (i) reviewing international practices on fund management and identifying and positioning the CCDMF's business and financial objectives, risk tolerance, and capital leverage capacity; (ii) preparing investment and management guidelines as well as operational approaches for business operations, such as lending, guarantee, and equity investment; (iii) preparing relevant guidelines and working procedures for risk control and performance evaluation; and (iv) preparing legal documentation covering contract management and contract templates.

10. Output 2 will include (i) defining the rationale of the MIS; (ii) preparing related flow charts of the proposed MIS for software programming; and (iii) purchasing the software program from eligible firms as well as evaluating the performance of functional software delivered.

11. Output 3 will include (i) reviewing international practices on climate change-related financial instruments and summarizing best international practices; (ii) reviewing the PRC's capital market regulations, including mechanisms, working procedures, and regulatory standards; (iii) analyzing and summarizing the merits and shortcomings of potential climate change-related financial instruments; (iv) recommending specific options with comprehensive and quantitative justification; and (v) developing an overall strategy of liquidity management for the CCDMF.

12. Output 4 will include (i) conducting a workshop after the draft policy documents of operation governance are endorsed; (ii) conducting two seminars on the design of climate change-related financial instruments; (iii) conducting a training workshop on the proposed MIS after collective tests are completed; and (iv) conducting a conference to introduce the latest research development on climate change and related issues, and to exchange experiences among CDM project developers.

## C. Cost and Financing

13. The total cost of the TA is estimated to be \$1,000,000 equivalent. The Government has requested ADB to finance \$800,000 equivalent, of which \$300,000 will be financed by ADB's TA funding program and \$500,000 by the Climate Change Fund, all on a grant basis. The grant to be provided by the Climate Change Fund will be front-loaded at the relevant TA contract

commitment level. The Government will finance the balance of the cost, equivalent to \$200,000, through the provision of in-kind contribution by the CCDMF in the form of office accommodation, logistic facilities, interpretation services, and remuneration of counterpart staff. The Fact-Finding Mission was assured by the Government that the relevant counterpart contribution by the CCDMF will be available as required according to the implementation schedule of the TA. The detailed cost estimates and financing plan are in Appendix 2.

## D. Implementation Arrangements

14. The CCDMF will be the Executing Agency (EA) for the TA and will help coordinate with the relevant government offices, as necessary. The CCDMF has already nominated project management office staff, who will guide and support consultants on a day-to-day basis.

15. The TA will be implemented over 18 months from March 2009 to August 2010. The estimated allocation of consulting services will be two international consultants, including a fund management specialist and a financial specialist (5 person-months in total); and nine national consultants, including two fund management specialists, two financial specialists, an MIS specialist, two legal counsels, a safeguards specialist, and a training specialist (33 person-months in total). The outline terms of reference for consulting services are in Appendix 3.

The use of consultants is needed under this TA, and different components will be 16. implemented using different consultant selection approaches. For outputs 1, 3, and 4, ADB, in consultation with the EA, will select and engage consultants through a consulting firm in accordance with ADB's Guidelines on the Use of Consultants (2007, as amended from time to time) using the guality- (80%) and cost-based (20%) selection method. Because the TA outputs are going to cover the new areas of CCDMF activities, a suitable review panel of external experts will be engaged to participate in the relevant conferences, workshops, and seminars held under the TA, and to comment on relevant consultants' reports. Training programs. seminars, workshops, and a study tour will be conducted through the consulting services contract. Conferences will be administered through the EA. For output 2, a suitable commercially available software package will be purchased and modified, as necessary, to satisfy the MIS needs of the CCDMF. The software should include modules for office administration, project management, risk control, project performance evaluation, human resource management, financial management, and contract management. In case minor changes are needed to accommodate all the requirements, the software vendor will be required to carry them out as part of the initial support service. The MIS specialist (national consultant for component 2) will help prepare the specifications of the MIS software, and procure and evaluate the performance of the program; in case changes to be made are significant, additional consulting services will be used and the price of the software adjusted accordingly. The procurement of all commercial software and equipment under the TA will be carried out in accordance with ADB's Procurement Guidelines (2007, as amended from time to time). Upon completion of the TA, all software and equipment procured will be turned over to the CCDMF. TA funds will be disbursed in line with ADB's Technical Assistance Disbursement Handbook (2008, as amended from time to time).

17. All TA deliverables and progress reports should address all aspects of the terms of reference for consultants and will be written in English and translated into Chinese. The consultants will maintain close working relations with ADB and the CCDMF. Tripartite meetings among ADB staff, the CCDMF, and the consultants will be held periodically to provide guidance to the consultants and to review their reports.

18. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$800,000 on a grant basis to the Government of the People's Republic of China for the China Clean Development Mechanism Fund Capacity Development, and hereby reports this action to the Board.

## **DESIGN AND MONITORING FRAMEWORK**

| Design<br>Summary   | Performance Targets<br>and/or Indicators  | Data Sources<br>and/or Reporting<br>Mechanisms  | Assumptions<br>and Risks  |
|---|---|---|---|
| Impact  |   |   | Assumption  |
| Reduction of GHG emissions<br>in the PRC and mitigation of<br>global climate change   | Energy intensity per unit<br>of GDP is reduced by<br>20% by 2010 compared<br>with 2005                        | Annual report of<br>National Bureau of<br>Statistics, PRC<br>Annual report of<br>National<br>Development and<br>Reform<br>Commission, PRC | The Government remains<br>committed to working on<br>climate change issues  |
|   |   | 00111111351011, 1 100   |   |
| Outcome   |   |   | Assumption  |
| Strengthened capacity of the<br>CCDMF for promoting and<br>supporting climate change-<br>related activities   | The number of climate<br>change-related projects<br>supported by the<br>CCDMF is doubled from<br>2009 to 2010 | CCDMF reports   | The CCDMF's commitment<br>regarding support for climate<br>change-related projects<br>remains unchanged           |
| Outputs   |   |   | Assumptions   |
| <ol> <li>Draft operation<br/>governance framework for<br/>prudent investment of levy<br/>collected by the CCDMF</li> </ol>  | The draft reports<br>developed under the TA<br>are endorsed by the<br>CCDMF in mid-2009                       | CCDMF reports   | Active participation of stakeholders in capacity building activities  |
| 2. Internet-based MIS<br>designed and operational<br>for office administration,<br>project management, risk<br>control, human resources<br>management, and<br>financial management,<br>etc. | The MIS is established<br>and tested for<br>operational performance<br>in 2009                                | CCDMF reports   | The CCDMF is able to endorse<br>the draft operational manuals<br>and recommendation reports in<br>a timely manner |
| 3. Draft design of financial<br>instrument covering<br>potential climate change-<br>related financial products<br>and liquidity management  | The draft report<br>developed under the TA<br>is endorsed by the<br>CCDMF in November<br>2009                 | CCDMF reports   |   |
| 4. Training conducted and public awareness enhanced   | Training programs are<br>conducted and<br>information<br>dissemination materials<br>are developed in 2009     | Training program<br>reports<br>CCDMF reports  |   |
| Activities with Milestones  | 1   | 1   | Inputs  |
| Output 1. Operation governa<br>1.1 Submit the draft outlines o<br>(by the end of the third mo<br>1.2 Submit the draft frameword<br>of the fourth month after th                             | f framework documents for the the the the the the the the start of the the the k documents for the CCDMF      |   | <ul> <li>ADB: \$800,000</li> <li>Consultants: \$319,000</li> <li>Equipment and software:<br/>\$200,000</li> </ul> |

| Activities with Milestones  | Inputs  |
|---|---|
| <ul><li>1.3 Finalize the framework documents within 1 month after receiving comments of the CCDMF (by the end of fifth month after the start of the TA).</li><li>Output 2. Design for internet-based MIS</li></ul>  | conferences:<br>\$205,000                                 |
| Output 2. Design for internet-based wild  | <ul> <li>Miscellaneous and other:<br/>\$15,000</li> </ul> |
| <ul><li>2.1 Submit the draft outlines and flow charts of the internet-based MIS for the CCDMF to review (by the end of the fifth month after the start of the TA).</li><li>2.2 Submit the draft design for the MIS incorporating the CCDMF's comments on the previously submitted outlines and flow charts (by the end of the</li></ul>                           | Contingencies: \$61,000                                   |
| seventh month after the start of the TA).   | Office accommodation and                                  |
| 2.3 Submit subsystems of the MIS and complete subsystem tests (by the end of the 10th month after the start of the TA).   |   |
| <ul><li>2.4 Install the whole MIS for collective tests (by the end of the 11th month after the start of the TA).</li></ul>  | Stan. 400,000   |
| <ul><li>2.5 Finalize the design for the MIS within 1 month after receiving comments of the CCDMF on the test results (by the end of the 12th month after the star of the TA).</li></ul>   |   |
| Output 3. Climate change-related financial instrument design  |   |
| 3.1 Submit an outline of the draft report on potential climate change-related financial instruments for the CCDMF review (by the end of the third month after the start of the TA).   |   |
| <ul> <li>3.2 Submit the draft report based on the analysis of the PRC's financial environment and global climate change-related financial practices (by the end of the seventh month after the start of the TA).</li> <li>3.3 Finalize the report after incorporating comments of the CCDMF (by the end of the ninth month after the start of the TA).</li> </ul> |   |
| Output 4. Training and public awareness enhancement   |   |
| <ul> <li>4.1 Prepare training materials on the draft policy documents on operation governance and conduct a workshop after the documents are endorsed (by the end of the sixth month after the start of the TA).</li> <li>4.2 Conduct a continue on the draft report of the TA).</li> </ul>   | ,   |
| 4.2 Conduct a seminar on the draft report on potential climate change-related<br>financial instruments after it is submitted (by the end of the eighth month<br>after the start of the TA).   |   |
| 4.3 Conduct the second seminar on the draft report on potential climate change-<br>related financial instruments after it is finalized (by the end of the 10th month<br>after the start of the TA).   |   |
| 4.4 Prepare training materials on the internet-based MIS and conduct a<br>workshop after collective tests are completed (by the end of the 12th month<br>after the start of the TA).  |   |
| 4.5 Conduct a conference to introduce the latest research development or<br>climate change and related issues, and to exchange experiences among<br>CDM project developers (by the end of the 14 <sup>th</sup> month after the start of the<br>TA).   |   |
| ADB = Asian Development Bank, CCDMF = China Clean Development Me  | chanism Eurod CDM - clean                                 |

ADB = Asian Development Bank, CCDMF = China Clean Development Mechanism Fund, CDM = clean development mechanism, GDP = gross domestic product, GHG = greenhouse gas, MIS = management information system, PMO = project management office, PRC = People's Republic of China, TA = technical assistance.

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

| Item   |   | Total<br>Cost |
|--------|---|---------------|
| A. As  | ian Development Bank Financing <sup>a</sup>                           |               |
| 1.     | Consultants   |               |
|        | a. Remuneration and Per Diem for International Consultants            | 100.0         |
|        | b. International and Local Travel                                     | 50.0          |
|        | c. Translation, Reports, and Communications                           | 5.0           |
| 2.     | Training, Seminars, and Conferences                                   |               |
|        | <ul> <li>External Consultation and Study Tour</li> </ul>              | 80.0          |
|        | b. Training Programs, Seminars, and Workshops                         | 50.0          |
| 3.     | Contingencies   | 15.0          |
|        | Subtotal (A)  | 300.0         |
| B. Cli | mate Change Fund <sup>b</sup>   |               |
| 1.     | Consultants   |               |
|        | a. Remuneration and Per Diem for National Consultants                 | 149.0         |
|        | <ul> <li>b. Translation, Reports, and Communications</li> </ul>       | 15.0          |
| 2.     | Equipment and Software Program <sup>c</sup>                           |               |
|        | a. Equipment Procurement  | 35.0          |
|        | <ul> <li>Software Program Procurement and Adaptation</li> </ul>       | 165.0         |
| 3.     | Training, Seminars, and Conferences                                   |               |
|        | <ul> <li>Conferences and Participant Travel Cost</li> </ul>           | 55.0          |
|        | <ul> <li>Provision for Review Panel of Experts<sup>d</sup></li> </ul> | 20.0          |
| 4.     | Miscellaneous Administration and Support Costs                        | 10.0          |
| 5.     | Representative for Contract Negotiations                              | 5.0           |
| 6.     | Contingencies   | 46.0          |
|        | Subtotal (B)  | 500.0         |
| C. Go  | vernment Financing  |               |
| 1.     | Office Accommodation and Transport                                    | 60.0          |
| 2.     | Remuneration and Per Diem of Project Management Office Staff          | 60.0          |
| 3.     | Reports and Communications  | 20.0          |
| 4.     | Interpretation Services, Secretariat, and Office Supplies             | 60.0          |
|        | Subtotal (C)  | 200.0         |
|        | Total   | 1,000.0       |

<sup>a</sup> Financed by Asian Development Bank's technical assistance (TA) funding program.

<sup>b</sup> Climate Change Fund will be front-loaded at the contract commitment level.

<sup>d</sup> Because the TA outputs are going to cover the new areas of the China Clean Development Mechanism Fund activities, a suitable review panel of external experts will be engaged to participate in relevant conferences, workshops, and seminars held under the TA, and to comment on relevant consultants' reports.

Source: Asian Development Bank estimates.

<sup>&</sup>lt;sup>c</sup> Equipment will include a server, five desktops, and three laptops, which will be used for the proposed management information system, and will be purchased using the shopping method. All equipment will be transferred to the Executing Agency after completion of the TA; software program will be purchased based on commercially available software packages; if necessary, software vendor will be requested to adapt related software to meet the China Clean Development Mechanism Fund's special requirements. Software procurement will be carried out in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time).

### OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

#### A. General Terms

1. The technical assistance (TA) activities will consist of four outputs. The outputs and associated deliverables will cover, but are not limited to, the following:

- (i) Output 1: Draft operation governance framework for prudent investment of levy collected by the China Clean Development Mechanism Fund (CCDMF). It will include investment guidelines and approach, risk control, performance evaluation, and legal documentation covering contract management and contract templates.
- (ii) Output 2: Internet-based management information system (MIS) designed and operational for office administration, project management, risk control, human resources management, and financial management.
- (iii) Output 3: Draft design of financial instrument covering potential climate changerelated financial products (e.g., debt and derivative) and liquidity management (e.g., risk management and account management).
- (iv) Output 4: Training conducted and public awareness enhanced through workshops, seminars and conferences for stakeholders, preparation of booklets for information dissemination, and study tour.

2. The TA will be implemented over a period of about 18 months, from March 2009 to August 2010. It will require 38 person-months of consulting services (5 person-months international and 33 person-months national).

### B. International Consultants

3. **Fund Management Specialist and Co-Team Leader** (2 person-months). An international fund management specialist will be required to provide inputs to component 1. Activities include, but are not limited to, the following:

- (i) Act as co-team leader of international consultants to prepare and deliver outputs of components 1 and 3, as directed by the CCDMF.
- (ii) Review international practices on fund management and understand the Executing Agency's business and financial objectives, risk tolerance, and capital leverage capacity.
- (iii) Coordinate with the co-team leader of national consultants in preparation of the draft CCDMF governance framework documents following management guidelines and operational approaches, which will include, but are not limited to,:
   (a) business operations, such as lending, guarantee, and equity investment;
   (b) risk control;
   (c) performance evaluation; and
   (d) legal documentation (covering contract management and contract templates).
- (iv) Prepare relevant sections of the CCDMF operation framework documents, and provide useful inputs for reports related to risk control and performance evaluation. Technical focus will include incorporation of international best practices of fund management into the framework documents.

(v) Help the training specialist identify training requirements and develop training materials.

4. **Financial Specialist** (3 person-months). An international financial specialist will be required and contribute to components 1 and 3. Activities include, but are not limited to, the following:

- (i) Prepare and deliver relevant sections of components 1 and 3, as directed by the CCDMF.
- (ii) Understand the PRC's capital market, including mechanisms, working procedures, and regulatory standards, etc.; and understand the CCDMF's business and financial objectives, risk tolerance, and capital leverage capacity.
- (iii) Review international practices on climate change-related financial instruments and summarize best international practices; and understand operational modalities of potential climate change-related financial instruments, such as lending, guarantee, and equity investment.
- (iv) Summarize merits and shortcomings of potential climate change-related financial instruments; and recommend specific options with comprehensive and quantitative justification.
- (v) Develop an overall strategy of liquidity management for the CCDMF.
- (vi) Help the training specialist identify training requirements and develop training materials.

## C. National Consultants

5. **Fund Management Specialist and Co-Team Leader** (8 person-months). Two national fund management specialists will be required and one of them will act as co-team leader for national consultants. National fund management specialists will contribute to components 1, 2, and 3. Their activities include, but are not limited to, the following:

- Act as co-team leader of national consultants to prepare and deliver outputs of all components, as directed by the CCDMF; prepare the implementation schedule of consulting works for all components.
- Work with international co-team leader to describe the rationale for technical considerations and coordinate preparation of the draft CCDMF governance framework documents, including allocation of responsibilities among team members, review of technical inputs, and compilation of reports from team members. The CCDMF governance framework documents will include, but are not limited to, following management guidelines and operational approaches:

   (a) business operations, such as lending, guarantee and equity investment;
   (b) risk control;
   (c) performance evaluation; and
   (d) legal documentations (covering contract management and contract templates).
- (iii) Participate in stakeholder consultation meetings, workshops, and seminars, to obtain views of relevant stakeholders on fund management issues for technical consideration.
- (iv) Prepare relevant sections of operation framework documents, and provide useful inputs for reports related to risk control and performance evaluation.
- (v) Submit the draft framework documents to the Asian Development Bank (ADB) and the CCDMF for review, and coordinate incorporation of comments received.
- (vi) Help the MIS specialist understand the draft operation governance framework, and help prepare flow charts and rationale for the proposed MIS.

(vii) Help the training specialist identify training requirements and develop training materials.

6. **Financial Specialist** (14 person-months). Two national financial specialists will be required and contribute to components 1 and 3. Their activities include, but are not limited to, the following:

- (i) Help the team leader prepare and deliver outputs of component 1, as directed by the CCDMF.
- (ii) Prepare and deliver outputs of component 3, as directed by the CCDMF.
- (iii) Participate in stakeholder consultation meetings, workshops, and seminars to obtain views of relevant stakeholders on capital market operation for technical consideration.
- (iv) Help the international financial specialist understand the PRC's financial market, including mechanisms, working procedures, regulatory standards, and governing body.
- (v) Prepare relevant sections of reports for financial instruments, and provide useful inputs for reports related to risk control and performance evaluation.
- (vi) Help the training specialist identify training requirements and develop training materials.

7. **MIS Specialist** (2 person-months). A national MIS specialist will be required and contribute to component 2. Activities include, but are not limited to, the following:

- (i) Understand the needs of the CCDMF, and prepare the implementation schedule for the development of the internet-based MIS.
- Based on the draft operation governance framework, define the rationale and prepare related flow charts of the proposed MIS for software programming. The internet-based MIS at least includes following parts: (a) office administration, (b) project management, (c) risk control, (d) project performance evaluation, (e) human resource management, (f) financial management, and (g) contract management.
- (iii) Help the CCDMF purchase the related software and evaluate the performance of functional software delivered.
- (iv) Help the training specialist identify training requirements and develop training materials.

8. **Legal Counsel** (4 person-months). Two national legal counsels will be required and mainly contribute to component 1. Their activities include, but are not limited to, the following:

- (i) Prepare relevant sections of the CCDMF governance framework documents related to legal issues.
- (ii) Draft contract templates for various business activities, such as project lending financial guarantee, and equity investment, as required.
- (iii) Review all TA deliverables before submission to keep TA outputs consistent with national legal system.
- (iv) Help the training specialist identify training requirements and develop training materials.

9. **Safeguard Specialist** (2 person-months). A national safeguard specialist will be required and contribute to component 1. Activities include, but are not limited to, the following:

- (i) Understand the needs of the CCDMF and be familiar with national policy and standards for social and environmental safeguards.
- (ii) Help the team leader keep TA outputs consistent with national policy and standards.
- (iii) Prepare safeguard guidelines and working procedures of the CCDMF operation framework, at least covering lending, financial guarantee, and equity investment activities.
- (iv) Help the training specialist identify training requirements and develop training materials on safeguard topics.

10. **Training Specialist** (3 person-months). A national training specialist will be required and contribute to component 4. Activities include, but are not limited to, the following:

- (i) Work with the team leader to schedule training programs, seminars, workshops, and study tours.
- (ii) Work with other consultants to develop related training materials, workshop and seminar proceedings, and presentation handouts, etc.
- (iii) Work with other consultants to identify international and national participants and prepare invitation letters, as directed by the CCDMF.
- (iv) Summarize seminar and workshop results and submit a summary report to ADB and the CCDMF.

## D. Reporting

11. The consultants will be required to submit reports including, but not limited to, the following:

- (i) Inception report describing the detailed implementation plan (within 1 month after signing the consulting contract).
- (ii) Implementation progress report documenting consulting work progress, preliminary results of analyses, issues that have been met and proposals for their resolution (at the end of every 3 months after the TA starts).
- (iii) Draft final TA report documenting the results of the TA, lessons, and an action plan for further steps (by the end of the 11th month after the TA starts).
- (iv) Final TA report incorporating feedback from ADB and the CCDMF on the draft final TA report (within 1 month after receiving feedback from ADB and the CCDMF on the draft final report).

12. All TA deliverables and progress reports will be written in English and translated into Chinese. Three copies of each TA deliverable (in English) will be submitted to ADB and 10 copies (5 in English and 5 in Chinese) to the CCDMF. Progress reports should be submitted timely by co-team leaders to the CCDMF and ADB. The deliverables and progress reports should address all aspects of the terms of reference for consultants to the level of detail appropriate for the given stage of the TA. The consultants will present key findings in the workshops and seminars. Officials from the Ministry of Finance, National Development and Reform Commission, and other ministries in the board of the CCDMF will be invited to participate in the workshops and seminars.