



# Technical Assistance Report

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Project Number: 41678  
December 2007

## A Regional Review of the Economics of Climate Change in Southeast Asia (Financed by the Government of the United Kingdom)

Asian Development Bank

## ABBREVIATIONS

ADB	–	Asian Development Bank
C	–	Celsius
CSP	–	country strategy and program
DMC	–	developing member country
EREA	–	Economic Analysis and Operations Support Division
ERD	–	Economics and Research Department
GDP	–	gross domestic product
GHG	–	greenhouse gas
IPCC	–	Intergovernmental Panel on Climate Change
OCO	–	Office of Cofinancing Operations
OECD	–	Organization for Economic Cooperation and Development
PRC	–	People's Republic of China
RSDD	–	Regional and Sustainable Development Department
RSES	–	Environment and Social Safeguard Division
SERD	–	Southeast Asia Department
TA	–	technical assistance
UK	–	United Kingdom

## TECHNICAL ASSISTANCE CLASSIFICATION

<b>Targeting Classification</b>	–	General intervention
<b>Sectors</b>	–	Multisector: energy, agriculture and natural resources
<b>Subsector</b>	–	Environment and biodiversity
<b>Themes</b>	–	Sustainable economic growth, environmental sustainability, regional cooperation
<b>Subthemes</b>	–	Promoting macroeconomic stability, global and regional transboundary environmental concerns and issues

## NOTE

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

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## I. INTRODUCTION

1. The Government of the United Kingdom (UK), through its Foreign and Commonwealth Office, approached the Asian Development Bank (ADB) in the first half of 2007 to collaborate on a study of the economics of climate change in Southeast Asia. The proposed regional technical assistance (TA) for the study came out of a series of meetings between ADB and the Government of the UK in several global forums on climate change, and internal consultations among ADB's Economics and Research Department (ERD), Office of Cofinancing Operations (OCO), Regional and Sustainable Development Department (RSDD) and Southeast Asia Regional Department (SERD). The major agreements reached on the objectives, scope, implementation arrangements, and financing plan of the TA<sup>1</sup> are reflected in this paper. The TA design and monitoring framework is in Appendix 1.

## II. ISSUES

2. The Intergovernmental Panel on Climate Change (IPCC) recently released its fourth assessment report, *Climate Change 2007*<sup>2</sup>, which underscores that the evidence of global warming is now considered unequivocal based on observed increases in worldwide average air and ocean temperatures, widespread melting of snow, and rising average sea level. Eleven of the past 12 years rank among the 12 warmest years since global surface temperature was recorded.<sup>3</sup> Climate models predict that the global average temperature could rise between 1.8°C and more than 4.0°C by the end of the 21st century. A growing body of scientific evidence indicates that increases in greenhouse gases (GHG) caused by human activities are predominantly responsible for the rapid climate change. The major source of GHG emissions is the use of fossil fuels for energy. Other important sources include cement manufacturing, land use and land use change, feedstocks in agriculture, and deforestation.

3. Climate change will have serious adverse impacts on the global environment and human society. It is expected to undermine agricultural productivity, decrease water quantity and quality in most arid and semiarid regions, increase the incidence of vector-borne diseases in the tropics and subtropics, and harm ecological systems and their diversity. In addition, the sea level rise associated with anticipated increases in temperature could displace tens of millions of people living in low-lying areas, and threaten the existence of small island states. A recent review of the economics of climate change by the Government of the UK states that, if no action is taken now, the overall cost and risks of climate change could be equivalent to the loss of 5% of global gross domestic product (GDP) each year. If a wider range of risks and impacts is considered, the estimated damage could reach as high as 20% of global GDP.<sup>4</sup>

4. Developing countries are more vulnerable than wealthier countries to climate change. Poor people face the most risk from the increased impacts of volatile weather patterns, such as floods and droughts. In the Asia and Pacific region, where the majority of the world's poor resides, the IPCC has suggested that glacier melting, as a result of global warming, could affect 500 million people in the Hindu Kush-Himalayan region, and an additional 250 million people in the People's Republic of China (PRC). This would have serious consequences for downstream

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<sup>1</sup> The TA first appeared in *ADB Business Opportunities* on 20 November 2007.

<sup>2</sup> IPCC. 2007. *Climate Change 2007*. Cambridge, United Kingdom: Cambridge University Press.

<sup>3</sup> IPCC. 2007. Summary for Policymakers. In *Climate Change 2007: The Physical Science Basis*. A Report of Working Group I to the Fourth Assessment Report of the IPCC, 2007. Cambridge, United Kingdom: Cambridge University Press (p. 5).

<sup>4</sup> Stern, Nicholas. 2007. Summary of Conclusions. In *The Economics of Climate Change: The Stern Review*. Cambridge, United Kingdom: Cambridge University Press (p. vi).

agriculture in most countries of South Asia that rely on glacier melt for irrigation. Freshwater availability in Central, South, East, and Southeast Asia, particularly in large river basins, is projected to decrease. Combined with population growth and increasing urbanization, this could adversely affect more than 1 billion people by the 2050s. Coastal and low-lying areas, especially heavily populated, mega-delta regions in South, East, and Southeast Asia, will be at greatest risk due to increased flooding from the sea and rivers. Bangladesh, India, PRC and Viet Nam are cited as especially susceptible to increasing salinity of ground and surface water.<sup>5</sup>

5. Therefore, climate change is both a development and environmental problem. In recent years, a global consensus has emerged that climate change must be addressed soon. Developed and developing countries increasingly are being urged to reduce GHG emissions. Energy infrastructure investments in low-carbon technologies, shifts to renewable energy sources, and policies to promote energy efficiency improvement programs are considered effective means to reduce GHG emissions. Fuel efficiency and modal shifts in the transport sector, biomass feedstocks for energy use in the agricultural sector, and forest-related mitigation activities such as carbon dioxide removals by sinks also could mitigate GHG emissions.<sup>6</sup> Many of the climate adaptation actions, including more effective disaster management and land use planning, will be extensions of good sustainable development practices.

6. Combating climate change will be a critical development challenge for Asia and the Pacific in the decades to come. Asia's share of global GHG emissions is estimated to have increased from less than 9% in 1973 to 24% in 2003. With the region's rapidly growing economies and large population continuing to consume energy faster than the rest of the world, the region's share of GHG emissions is projected to increase to 29% by 2030.<sup>7</sup> However, many Asian developing countries are just beginning to address climate change, and their capabilities in this area are uneven. The public awareness of the urgency of combating climate change is still low; potential socioeconomic impacts of climate change are not well understood; and more discussions are needed on the economic costs and benefits of unilateral and regional actions on mitigation and adaptation, as well as on supporting government and private sector actions to implement policies to mitigate and adapt to climate change.

7. Supporting environmentally sustainable growth in DMCs is one of ADB's strategic priorities under its second medium-term strategy (2006–2008). ADB is in a good position to undertake this TA, because it is promoting similar climate change initiatives under its clean energy and environment program. The study will be a major knowledge product, which ADB can offer to its DMCs. ADB's *Disaster and Emergency Assistance Policy* (2004) draft action plan recommends the development of synergies between disaster risk reduction and support for adaptation to climate change. The proposed TA will explore possibilities of cultivating synergies with ADB's clean energy and environment program, and ADB's *Disaster and Emergency Assistance Policy*. ADB has good working relationships and strong links with institutions involved in climate change issues, such as the United Nations Framework Convention on Climate Change, United Nations Environment Programme and its subregional partners, and initiatives financed by the Global Environment Facility.

<sup>5</sup> IPCC. 2007. *Climate Change 2007: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Fourth Assessment Report of the IPCC 2007. Cambridge, United Kingdom: Cambridge University Press (Chapter 10, p. 11–17).

<sup>6</sup> IPCC. 2007. Summary for Policymakers. In *Climate Change 2007: Mitigation of Climate Change*. A Report of Working Group III to the Fourth Assessment Report of the IPCC, 2007. Cambridge, United Kingdom: Cambridge University Press (p. 17–20).

<sup>7</sup> ADB. 2006. *Medium-Term Strategy II (2006–2008)*. Manila (p.13).

### III. THE PROPOSED TECHNICAL ASSISTANCE

8. The purpose of the proposed TA is to (i) contribute to regional debate on economic costs and benefits of unilateral and regional actions on mitigation and adaptation; (ii) raise awareness about the urgency of climate change challenges and their potential socioeconomic impact on the participating countries, while informing other stakeholders (e.g., civil society, academia, media, nongovernment organizations, private sector, and aid agencies) of the same; and (iii) indirectly support government and private sector actions in the region to mitigate and adapt to climate change. The TA will cover six developing member countries (DMCs): Indonesia, Malaysia, Philippines, Singapore, Thailand, and Viet Nam, as requested by the Government of the UK.<sup>8</sup>

#### A. Impact and Outcome

9. The TA's impact is to contribute to the reduction of GHG emissions in the long term. The TA's outcomes are to (i) obtain the consensus and cooperation among policy makers in the region on the steps needed to address climate change in Southeast Asia, including the adoption of investment programs, plans, policies, and/or other actions to adapt development to expected future climatic conditions; (ii) improve understanding of the economics of climate change to enable policy makers in the region to adopt necessary actions; and (iii) align ADB operations with the needs of participating countries for addressing climate change problems.

#### B. Methodology and Key Activities

10. The proposed TA has three phases with corresponding activities and outputs, as follows:

- (i) **Phase I: Scoping.** This phase will involve mapping the existing or expected regional or country-level analysis on climate change in terms of local impacts of climate change, and options and costs for reducing GHG emissions locally. It will cover work carried out by governments, international organizations, academics, and nongovernment organizations. The scoping will help identify research, research gaps, and needs for further research. The methodology developed by the Stern Review team will be introduced.
- (ii) **Phase II: Studying country-specific impacts of climate change.** This will involve studies and national consultations leading to individual country assessments of the impacts of climate change for the six participating countries. Country-level studies will be undertaken on local impacts of climate change, adaptation, costs for reducing GHG emissions, and policy options. The findings of this phase will be presented at the International Stern Symposium to be organized by the Government of the UK, tentatively scheduled in the second quarter of 2008.
- (iii) **Phase III: Studying regional interdependencies and responses.** This will involve conducting regional consultations to broaden the national assessments and to determine the level of regional interdependence through analysis of the costs and benefits of climate change mitigation in the short, medium, and long run. It also will entail developing policy recommendations for the participating countries and

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<sup>8</sup> The selection of countries was based on recommendations from the Government of the UK, which has discussed similar initiatives with the PRC and India.

relevant regional bodies. Upon completion of the TA, the findings will be presented and disseminated at the side events of key multilateral gatherings, such as the Conference of Parties 14 in December 2008.

### **C. Cost and Financing**

11. The TA, which is estimated to cost \$904,200, will be financed on a grant basis by the Government of the UK and administered by ADB. The proceeds will cover consulting services, country visits, events and workshops, publication, administration, and other administrative costs. The cost estimates and financing plan are in Appendix 2.

### **D. Implementation Arrangements**

12. ADB will be the Executing Agency for this TA. Within ADB, the TA is expected to be implemented by the Economic Analysis and Operations Support Division (EREA) of ERD, in close coordination with the Environment and Social Safeguard Division (RSER) of RSDD. The management of the TA will follow a three-tiered structure. A study team, comprising of representatives from the participating countries and international consultants, will be formed to carry out the TA activities. The team will be led by the team leader, appointed from among the ADB staff, and will be guided by a steering committee. The committee, which will act as the project executive, will set the methodological and strategic directions of the TA. Chaired by a review leader, the committee will comprise representatives from ADB, the Government of the UK, and other partner institutions such as United Nations Economic and Social Commission for Asia and the Pacific. An advisory panel, comprising senior government officials from all the participating countries and regional bodies, will be formed to advise the work of the steering committee and the study team. The review leader will chair the advisory panel and will act as the conduit between the advisory panel and the other tiers. The review leader will be a prominent expert on climate change issues in the region.

13. The TA will require 20 person-months of individual international and 32 person-months of individual national consulting services. In addition, the TA will engage administrative supporters on an as-needed basis. All the consultants will be engaged in accordance with ADB's *Guidelines on the Use of Consultants* (February 2007, as amended from time to time). The consultants' terms of reference are in Appendix 3. Activities funded by this TA will start in a DMC only after ADB has received a "no-objection" in writing from its government.

14. The TA is expected to be implemented over 12 months from January to December 2008. The outline of the final report is in Appendix 4.

## **IV. THE PRESIDENT'S DECISION**

15. The President, acting under the authority delegated by the Board, has approved ADB administering the technical assistance not exceeding the equivalent of \$904,200 to be financed on a grant basis by the Government of the United Kingdom for a Regional Review of the Economics of Climate Change in Southeast Asia, and hereby reports this action to the Board.

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<b>Impact</b>  Contribute to the reduction of GHG emissions in the long-run		<ul style="list-style-type: none"> <li>National, regional, and global statistics</li> <li>International, regional, and national forums on climate change</li> </ul>	<b>Assumption</b> <ul style="list-style-type: none"> <li>Climate change will continue and impact environment and human society.</li> </ul> <b>Risk</b> <ul style="list-style-type: none"> <li>Adverse effects of climate change will intensify.</li> </ul>
<b>Outcome</b>  1. Consensus achieved among policy makers in the region on the steps needed to address climate change in Southeast Asia, including the adoption of investment programs, plans, policies, and/or other actions to adapt development to expected future climatic conditions, among other things  2. Improved understanding of the economics of climate change to enable policy makers in the region to adopt necessary actions  3. Better alignment of ADB operations with the need of the participating countries for addressing climate change problems	Visible improvement in the development of climate change-related policies and measures in Southeast Asia  Visible improvement in public awareness on the urgency of addressing climate change challenges	<ul style="list-style-type: none"> <li>Number of participants from participating countries in the training workshop</li> <li>Number of government officials who participated in the consultations</li> <li>National government policy documents</li> <li>International and regional agreements reached on climate change</li> <li>International, regional, and national forums on climate change</li> <li>International, regional, and national media</li> </ul>	<b>Assumption</b> <ul style="list-style-type: none"> <li>Climate change will continue and impact environment and human society.</li> </ul> <b>Risks</b> <ul style="list-style-type: none"> <li>Timing in reaching consensus among countries could vary.</li> <li>Government policies and overall cooperation of participating countries could change.</li> <li>The timing of the implementation of the studies' recommendations could vary across countries.</li> </ul>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p><b>Outputs</b></p> <p>Phase I:</p> <p>1. Highlights of regional and national consultations</p> <p>2. Inception report</p> <p>Phase II:</p> <p>1. Database of country-level data for GHG emission sources and other important socioeconomic data and studies on climate change from participating countries</p> <p>2. Initial results of modeling activities and related outputs.</p> <p>3. Interim report</p> <p>Phase III:</p> <p>1. Regional and national consultations</p> <p>2. Final TA review report on the economics of climate change in Southeast Asia</p>	<p>One regional consultation on climate change conducted, one regional training workshop on climate change modeling, and one national consultation on country-specific climate change conducted for each participating country within first quarter 2008</p> <p>Inception report completed and presented in the International Stern Symposium by third quarter of 2008</p> <p>Data complete and of good quality</p> <p>Interim report completed within third quarter of 2008</p> <p>One regional consultation on climate change and one national consultation on country-specific climate change conducted for each participating country within the last quarter of 2008</p> <p>Final TA review report completed and released by December 2008</p>	<p>Feedback from the participating countries</p> <p>Feedback from relevant international and regional organizations</p> <p>International, regional, and national media</p>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>Climate change will continue and impact environment and human society.</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>Data might not be available and of good quality.</li> <li>Regional analysis and policy recommendations might cause conflicts with existing development plans of the participating DMCs.</li> </ul>



Activities with Milestones	Inputs
<p>1. Phase I – Scoping (January–March 2008)</p> <ul style="list-style-type: none"> <li>1.1 Consultation with participating countries</li> <li>1.2 Engagement of consultants</li> <li>1.3 Establishment of the steering committee and advisory panel</li> <li>1.4 Mapping of existing and expected regional and country-level analysis on climate change</li> <li>1.5 Provision of the methodology to be used for calculating climate adaptation costs pursuant to the Stern Review, and development of the state-of-the-art climate impact model for the proposed TA</li> <li>1.6 Conduct of first regional consultation meeting and training workshop</li> <li>1.7 Conduct of national consultation meetings</li> <li>1.8 Preparation of inception report</li> </ul> <p>2. Phase II – Country-specific impacts of climate change (March–July 2008)</p> <ul style="list-style-type: none"> <li>2.1 Country-level research and data gathering</li> <li>2.2 Development and analysis of the climate change scenarios (lower, median, and higher range)</li> <li>2.3 Preparation and analysis of energy demand projections and GHG mitigation potential under different climate change scenarios</li> <li>2.4 Consolidation, preparation, and submission of interim report</li> <li>2.5 Presentation of interim findings to the International Stern Symposium</li> </ul> <p>3. Phase III – Regional interdependencies and responses (August–December 2008)</p> <ul style="list-style-type: none"> <li>3.1 Conduct of the second regional consultation meeting</li> <li>3.2 Conduct of national consultation meetings</li> <li>3.3 Formulation of policy recommendations for regional climate change adaptation and mitigation</li> <li>3.4 Consolidation and analysis of the national assessments into a regional assessment</li> <li>3.5 Preparation and submission of the final report</li> <li>3.6 Dissemination of findings to COP 14 in December 2008</li> <li>3.7 Publication of the final report.</li> </ul>	<p>\$904,000 in grant from the Government of the United Kingdom</p> <p>20 person-months of international consulting services</p> <p>32 person-months of national consulting services</p>

ADB = Asian Development Bank, COP = Conference of the Parties, DMC = developing member countries, GHG = greenhouse gases, TA = technical assistance.

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

<b>Item</b>	<b>Total Cost</b>
<b>Government of United Kingdom Financing<sup>a</sup></b>	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	353.80
ii. National Consultants	120.00
b. International and Local Travel	252.00
c. Reports and Communications <sup>b</sup>	28.00
2. Training, Seminars, and Conferences	75.20
3. Contingencies	75.20
<b>Total</b>	<b>904.20</b>

<sup>a</sup> Administered by the Asian Development Bank (ADB). Total amount also includes ADB's administration fee, audit cost, bank charges, and provision for foreign exchange fluctuations (if any), to the extent that these items are not covered by the interest and investment income earned on this grant, or any additional grant by the Government of the United Kingdom.

<sup>b</sup> Includes publications-related costs.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. International Consultants

1. **Climate Adaptation Specialist and Lead Consultant** (8 person-months). As the lead consultant, the climate adaptation specialist will have extensive knowledge and experience in climate change issues, and a working knowledge of the Stern Review on the economics of climate change. The successful candidate will

- (i) under the direction of the team leader, manage and supervise the technical advisor, climate impact model specialist, Southeast Asia energy model specialist, climate policy analysts, consultative process facilitator, national climate experts, and program coordinator—collectively, the study team—and all activities under the technical assistance (TA);
- (ii) undertake the scoping, mapping, assembly, and review of existing regional and country-level climate change studies, including work carried out by governments, international institutions, academic institutions, and nongovernment organizations;
- (iii) prepare and finalize an inception report;
- (iv) organize and lead the two regional and six in-country national consultations and other consultations, and meetings as part of the TA;
- (v) prepare a final report that includes, among other things, the summary outcome of the consultations, analysis of the model outputs, policy directions and recommendations, and manage the subsequent dissemination of the outputs; and
- (vi) perform other tasks relevant to this TA as may be assigned by the team leader.

2. **Technical Advisor** (2 person-months). The technical advisor will have extensive experience in modeling and working knowledge of the Stern Review. The successful candidate will

- (i) provide the methodology to be used for calculating climate adaptation costs pursuant to the Stern Review;
- (ii) develop and make available the state-of-the-art model that will be used for the analysis of the mitigation options for the participating countries;
- (iii) provide the full documentation of the model, including the assumptions made, the basis for the assumptions, the data requirements, and data formats;
- (iv) conduct at least one training session on the use of the state-of-the-art model and the methodology of calculating climate adaptation cost to the study team during one of the regional consultation meetings;
- (v) provide technical support on the use of the state-of-the-art model and other related technical issues, including the calculation of climate-related costs; and
- (vi) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

3. **Climate Impact Model Specialist** (4 person-months). The climate impact model specialist will have extensive experience in modeling and working knowledge of adaptation and impact analysis of climate change. The successful candidate will

- (i) provide and make available a climate impact model with full documentation, including the assumptions made, the basis for the assumptions, the data requirements, and data formats;
- (ii) develop different climate change scenarios (lower, median, and higher range) on the participating countries;
- (iii) analyze the impact of different climate change scenarios based on a well-established regional climate impact model, investigating specific effects on sectors such as agriculture and forest;
- (iv) identify the level of adaptive capacity within the participating countries based on current ability to manage extreme weather events and existing climate variability at macro and micro levels;
- (v) prepare and submit a formal report on the analysis of the outputs of the regional climate impact model with relevant assumptions and data, and will present the same during the regional consultations as may be necessary; and
- (vi) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

4. **Southeast Asia Energy Model Specialist** (2 person-months). The energy model specialist will have extensive experience in energy modeling and working knowledge of the energy sector and greenhouse gas (GHG) mitigation analysis. The successful candidate will

- (i) provide and make available an energy model with full documentation, including the assumptions made, the basis for the assumptions, the data requirements, and data formats;
- (ii) assemble and review pertinent energy-related information and other basic economic data for the participating countries to be used for the energy model structures;
- (iii) provide and analyze energy demand projections and the GHG mitigation potentials under different climate change scenarios;
- (iv) identify the sectors of GHG mitigation at macro and micro levels for participating countries;
- (v) prepare and submit a formal report on the analysis of an energy model with GHG mitigations and present the same during the regional consultations, as may be necessary; and
- (vi) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

5. **Climate Change Policy Analyst** (1 person-month). The climate change policy analyst will have expertise in the impact of a climate change policy and risk analysis. The successful candidate will

- (i) assemble and review existing regional and in-country climate change policies from the participating countries;
- (ii) provide insights and recommendations for future domestic and regional policy development in mitigation and adaptation;
- (iii) provide policy and measures on the climate vulnerabilities;
- (iv) provide insights and recommendations for outcomes of future international negotiations on international policy tools based on Southeast Asian countries' national and regional socioeconomic interests;
- (v) assess how international financial flows can support efforts to reduce emissions in Southeast Asia, and provide most economic benefit to the region; and will examine how Southeast Asia can use the international market framework to its maximum advantage;
- (vi) examine what financing current and proposed international instruments can provide to reduce deforestation;
- (vii) provide regional and national climate policies that might enhance international technology transfer and climate risk information sharing;
- (viii) recommend measures to strengthen existing policies and prepare corresponding draft policies;
- (ix) present a report of these policy areas during the regional consultations as may be necessary; and
- (x) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

6. **Environment Economist** (2 person-months). The environment economist will have extensive knowledge on climate change issues, as well as on the valuation of costs and benefits of climate change. The economist should generate environmental costs and benefits estimates in collaboration with other experts on the study team, enabling and undertaking cost-benefit analysis of different adaptation mitigation policy options. The successful candidate will

- (i) provide an overall economic assessment to a low-carbon economy in Southeast Asia;
- (ii) conduct initial scoping of the data requirements to undertake cost-benefit analysis of climate change adaptation and mitigation options, and provide a feedback for the climate change modeling experts on the team;
- (iii) using the climate change adaptation mitigation scenarios developed by modeling experts, estimate the cost and benefits of the different climate change scenarios, incorporating but not limited to (a) different macroeconomic projections, (b) increasing the resilience of livelihoods and infrastructure, (c) early warning systems, and (d) governance (climate-resilient development paths);
- (iv) undertake the cost-benefit analysis of different climate change scenarios, and assess how to integrate climate change impacts in development planning processes; and
- (v) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

7. **Consultative Process Facilitator** (1 person-month). The consultative process facilitator will generally coordinate and facilitate the regional consultation meetings under the TA. The successful candidate will

- (i) develop a detailed work plan for the regional consultative process, and prepare suitable lists of participants in collaboration with national focal points and consultants;
- (ii) design and implement internal and external consultation processes, including tasks such as helping prepare workshop-related materials, maintaining a database to record responses received, making arrangements with resident missions, and acknowledging all responses received;
- (iii) schedule, coordinate, and facilitate the two regional consultation meetings, as directed by the team leader and the lead consultant;
- (iv) compile, analyze, and report on each regional consultation meeting and on the cumulative results of the two regional consultation meetings;
- (v) prepare and submit a formal report on the outcome of the regional consultations; and
- (vi) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

## B. National Consultants

8. **National Climate Experts** (4 person-months each, total 24 person-months). At least six national climate experts (one for each participating country) generally will undertake country-level review, assessment, data gathering, and administrative support. The successful candidates will

- (i) assemble and review existing country-level climate change studies, including work carried out by governments, international institutions, academic institutions, and nongovernment organizations;
- (ii) prepare a status report on the country-level climate change, including the historic and current trends, policy interventions made, and pending policy legislation and recommendations;
- (iii) attend the respective national consultation and the two regional consultations, including the training session on the use of the state-of-the-art model and the methodology of calculating climate adaptation cost;
- (iv) provide data necessary for input to the mitigation model and the climate impact model;
- (v) present the report, findings, and outputs during the national consultations;
- (vi) provide other related country-level data and assistance to the team leader and lead consultant, as necessary; and
- (vii) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

9. **Program Coordinator** (8 person-months). The program coordinator, under the direction and supervision of the team leader, will

- (i) coordinate and assist the lead consultant in the activities under the TA;
- (ii) coordinate with the respective country focal representatives to facilitate the six national consultations;

- (iii) participate in the two regional consultations and six national consultations, as directed by the team leader;
- (iv) maintain all technical databases for six participating countries and conduct simple analysis, as directed by the team leader; and
- (v) perform other tasks relevant to this TA as may be assigned by the team leader and the lead consultant.

## OUTLINE OF THE FINAL REPORT

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