



Technical Assistance Report

Project Number: 44323
Regional—Capacity Development Technical Assistance (R—CDTA)
November 2011

Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion, Phase 2 (Cofinanced by the Government of Finland)

ABBREVIATIONS

ADB	–	Asian Development Bank
AWPB	–	annual work plan and budget
BCI	–	Biodiversity Conservation Corridors Initiative
CEP	–	Core Environment Program
COO	–	chief of operations
ECP	–	economic cooperation program
EMM	–	environment ministers' meeting
EOC	–	Environment Operations Center
GIS	–	geographic information system
GMS	–	Greater Mekong Subregion
Lao PDR	–	Lao People's Democratic Republic
NSU	–	national support unit
PFD	–	program framework document
REDD	–	reduced emissions from deforestation and degradation
SEA	–	strategic environmental assessment
TA	–	technical assistance
WGE	–	Working Group on Environment

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Regional—capacity development technical assistance (R—CDTA)
Targeting classification	–	Targeted intervention
Sector (subsectors)	–	Multisector, agriculture and natural resources (land-based natural resources management, forestry, agriculture and rural sector development, water-based natural resources management)
Themes (subthemes)	–	Environmental sustainability, regional cooperation and integration; (natural resources conservation, environmental policy and legislation); capacity development
Climate change	–	Climate-change adaptation, climate-change mitigation
Location (impact)	–	Rural (medium), urban (low), national (medium), regional (high)
Partnership	–	Government of Finland

NOTE

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

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I. INTRODUCTION

1. Since 1995, the Asian Development Bank (ADB) has provided technical and financial support to address emerging environmental concerns and challenges within the Greater Mekong Subregion (GMS). In 2005, previous environmental initiatives were consolidated into the Core Environment Program and Biodiversity Conservation Corridors Initiative (CEP-BCI) and endorsed at the first GMS environment ministers meeting (EMM).¹ CEP-BCI addresses one of the five strategic thrusts and constitutes one of the flagship programs of the GMS economic cooperation program (ECP). The first phase of CEP-BCI, administered under ADB's technical assistance (TA) for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion, is scheduled for completion on 31 December 2011.²

2. During the second EMM concluded in Vientiane, Lao People's Democratic Republic (Lao PDR), in 2008, the GMS governments acknowledged the relevance of CEP-BCI in achieving the overall goals of the ECP and directed the Working Group on Environment (WGE) to begin preparation of a follow-on phase for endorsement at the third EMM.³ Accordingly, commencing in January 2010, ADB helped the WGE and its technical secretariat, the GMS Environment Operations Center (EOC), prepare the second phase of CEP-BCI through a series of country-level and regional consultations. In July 2011, the program framework document (PFD) for CEP-BCI (2012–2016) was endorsed, in principle, at the third EMM. A follow-on regional TA for the second phase of CEP-BCI was included in the GMS Regional Cooperation Operations Business Plan.⁴ The proposed TA covers the first 4 years (2012–2015) of the PFD. The design and monitoring framework is in Appendix 1.

II. ISSUES

3. **Resource-intensive economic growth.** The GMS economies expanded rapidly over the past decade, with a combined average annual gross domestic product growth rate exceeding 9%. A defining feature of economic growth was the dependence on primary sectors (i.e., agriculture, forestry, fisheries, mining), the energy sector (i.e., hydropower, petroleum products, biofuels), and natural resource-based services (i.e., tourism), underwritten by a substantial infusion of foreign investments and fueled by a burgeoning intraregional demand for food, energy, and commodities. Productivity gains in these sectors were based on harnessing the GMS's natural capital, natural resources, and ecosystem services.⁵ However, current trends of resource depletion and environmental degradation are undermining ecosystem service delivery functions. National environmental performance assessments confirm downward trends of GMS-wide environmental indicators.⁶ Between 10% and 40% of arable land is already degraded. Water quality is decreasing as a result of contaminant loading from agriculture, urban settlements, and industry.⁷ Although the actual rate of forest loss is decreasing, forest cover will decline by a further 0.9% between 2010 and 2020.⁸

¹ Joint Ministerial Statement. 25 May 2005. First Meeting of the GMS Environment Ministers. Shanghai, People's Republic of China (PRC).

² ADB. 2005. *Technical Assistance for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion*. Manila (TA 6289-REG).

³ Joint Ministerial Statement. 29 January 2008. Second Meeting of the GMS Environment Ministers. Vientiane, Lao PDR.

⁴ ADB. 2010. *Regional Cooperation Operations Business Plan: Greater Mekong Subregion 2011–2013*. Manila. The TA first appeared in the business opportunities section of ADB's website on 12 October 2011.

⁵ Services provided by ecosystem functions—such as water retention and regulation, soil conservation and regeneration, and flood protection—are the basis for the viability of many economic activities.

⁶ CEP-BCI. National environmental performance assessment reports. <http://www.gms-eoc.org>

⁷ Food and Agriculture Organization of the United Nations (FAO). 2010. *Aquastat: FAO's Information System on Water and Agriculture*. Rome.

⁸ FAO. 2011. *Forests and Forestry in the Greater Mekong Subregion to 2020*. Rome.

4. **Socioeconomic implications of natural resource-led growth.** Economic growth has brought prosperity to the GMS, as evidenced by steady progress on most Millennium Development Goals and positive trends in Human Development Indices across countries.⁹ However, a significant percentage of the GMS's population still lives in poverty (e.g., 30% in Cambodia and 27% in the Lao PDR).¹⁰ Natural resource-intensive, export-led growth may have aggravated poverty by increasing the pressure on limited resource stocks. Consequently, rural communities that have traditionally relied on natural resources for their livelihoods—especially in upland areas where ethnic minorities are concentrated—are at risk of being marginalized. Disparities in economic opportunities also persist between men and women. Women are generally more vulnerable to environmental degradation, as their livelihood activities are more entwined with natural resources.

5. **The impact of climate change.** The flow of ecosystem services is at risk from climate change. Healthy ecosystems buffer investments and livelihoods from the impacts of extreme weather conditions. For instance, it is estimated that the cost of climate change could be as high as 6.7% of gross domestic product per year in Thailand and Viet Nam by 2100.¹¹ At the same time, ecosystems serve as effective carbon sinks. The GMS has significant potential for carbon capture due to its high to moderate forest cover (at least 25% of land area in several countries); however high deforestation and forest degradation rates need to be stemmed through sustainable forest management measures.¹²

6. **Future development prospects.** The GMS has strong prospects for continued economic and social prosperity.¹³ The GMS's ECP has established a solid foundation characterized by the 3 C's: "connectivity" through extensive physical infrastructure; a strong sense of "community" through regional cooperation; and "competitiveness" through improved institutions and human resources. Future investments (i.e., transport, energy, urban development) will primarily be in green field sites, presenting opportunities to adopt a resource efficient and low carbon development pathway from the outset and leapfrog the pitfalls of a costly "grow now—clean up later" development model. Indeed, the GMS's future global "competitiveness" will hinge on adopting such a pathway. This will require the capacity to discern environmental and climate-related risks, and the ability to systematically integrate environmental risk mitigation and new green investment opportunities within a multisector development context. The enabling policy, institutional, and governance conditions must be established with the corresponding technical and human resource capacity.

7. Building on lessons from phase 1 and other environmental management efforts, the TA will (i) proactively engage sector agencies, including finance and planning agencies, to adopt a multisector approach to systematically assess and integrate environmental challenges and opportunities at upstream planning stages; (ii) strengthen analytical approaches, including economic analysis of ecosystem values, in TA activities; (iii) strengthen institutional capacity, especially at the subnational level, for multisector collaboration; (iv) anchor TA interventions in country systems and aim to inform policy and legislation; (v) expand the information and knowledge flow from the EOC by creating an environmental operations network across the GMS; and (v) engage more effectively with ADB country programs to build synergy and complementarity between national and regional approaches.

⁹ United Nations Economic and Social Commission for Asia and the Pacific. 2010. *Paths to 2015: MDG Priorities in Asia and the Pacific—Asia-Pacific MDG Report 2010/11*, (New York); and United Nations Development Program. 2010. *Human Development Report 2010*. New York.

¹⁰ World Bank. 2011. *World Development Indicators—Poverty headcount ratio at national poverty line (% of population)*. Washington, DC.

¹¹ ADB. 2009. *The Economics of Climate Change in South East Asia: A Regional Review*. Manila.

¹² ADB and RECOFTC. 2010. *National REDD+ Strategies in Asia and the Pacific: Programs and Challenges*. Manila.

¹³ Growth rates of 5%–10% are projected; see International Monetary Fund. 2011. *World Economic Outlook Database—April 2011*. Washington, DC.

III. THE PROPOSED TECHNICAL ASSISTANCE

A. Impact and Outcome

8. The impact of the TA will be improved biodiversity conservation and climate resilience across the GMS. The TA will integrate sound environmental management, biodiversity conservation, and climate resilience measures into the GMS ECP. The TA outcome will be an environment friendly and climate-resilient GMS ECP.

B. Methodology and Key Activities

9. The TA will adopt a programmatic approach to achieve the above outcome. It will support activities in priority economic corridors targeted by the ECP and in priority transboundary biodiversity conservation corridors and landscapes.¹⁴ The TA is aligned with the strategic framework for the GMS ECP (2012–2022) and will complement several regional and country-specific TAs dealing with different aspects of the environment and climate change. In particular, the TA will complement: (i) the proposed regional investment framework for GMS corridor development; (ii) the Core Agriculture Support Program II; (iii) promoting renewable energy, clean fuels, and energy efficiency in the GMS; (iv) harnessing climate change mitigation initiatives to benefit women; and (v) the GMS Biodiversity Conservation Corridors Project.¹⁵ The TA comprises four outputs.

10. **Output 1: Environmental planning systems, methods, and safeguards improved** will involve the application of planning tools such as strategic environmental assessments (SEAs), spatial multicriteria analysis, and extended economic analysis to development strategies and plans for selected sectors and economic corridors. The capacity to address environmental safeguards in key sectors will also be strengthened under this output. The assessments, applied at the early stages of planning, will support internalizing environmental risk management measures and environment- and climate-friendly alternatives (e.g. resource-efficient and low-carbon measures). They will also enable policy conditions and institutional arrangements to improve environmental sustainability and safeguard the performance of GMS ECP investments.

11. **Output 2: Management of transboundary biodiversity conservation landscapes and local livelihoods improved** will support biodiversity conservation measures in critical transboundary landscapes in the GMS. It will support sustainable livelihoods for local communities and also enhance the performance of investments in the economic corridors by maintaining and improving the flow of ecosystem goods and services. Activities will include: (i) improving and updating biodiversity profiles in conservation landscapes; (ii) providing economic and other analysis to support the development of value chains of ecosystem-based goods and services that will promote rural livelihoods; (iii) strengthening biodiversity conservation corridor management and monitoring; and (iv) improving compliance with multilateral environmental agreements on the movement of wildlife, timber, and other natural resources. Output 2 is expected to be complemented by a regional program on forest and biodiversity conservation, funded by the Global Environment Facility.

12. **Output 3: Climate-resilient and low-carbon strategies developed** will promote climate-friendly development within the GMS through the integration of climate-change

¹⁴ While economic corridors enhance “physical connectivity,” biodiversity conservation corridors support “ecosystem connectivity” to accommodate movements of species between core areas. These corridors are embedded within wider conservation landscapes, which provide services based on ecosystem functions.

¹⁵ ADB. 2010. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Grants for Greater Mekong Subregion Biodiversity Conservation Corridors Project*. Manila.

mitigation and adaptation considerations for key development sectors. Activities will focus on vulnerability assessments and adaptation strategies, including ecosystem-based adaptation, for rural communities dependent on agriculture or tourism-based livelihoods. Special consideration will be given to measures benefiting women and ethnic minorities. Synergies between climate-change adaptation and conventional disaster risk reduction measures will be supported. Low-carbon strategies and monitoring, reporting, and verification systems will be developed for transport, energy, and other relevant sectors. Activities under this output will also support reduced emissions from deforestation and degradation readiness.

13. Output 4: Institutions and financing for sustainable environmental management improved will support capacity development to strengthen institutional arrangements and enabling policies for effective regional cooperation on environmental management within the overall framework of the GMS ECP. Activities will focus on mainstreaming environment- and climate-friendly measures through multisector investment planning in priority economic corridors. This output will also support the development of enabling policy and regulatory conditions to promote conservation and ecosystem management through incentive-based mechanisms (e.g., payment for ecosystem service schemes targeting hydropower, tourism, or urban water supply and by harnessing global climate finances). Activities will also promote private financing for conservation and ecosystem management through appropriate public-private partnerships and innovative financial instruments (e.g., biodiversity offsets targeting logging and mining operations and philanthropic support).

C. Cost and Financing

14. The total cost of the TA is estimated at \$14.8 million equivalent. ADB will finance \$0.8 million on a grant basis from its Technical Assistance Special Fund (TASF-IV) and the Government of Finland will cofinance, and ADB will administer, \$14.0 million equivalent. The GMS governments will provide in-kind contributions in the form of staff assigned to supervise, implement, coordinate, and monitor TA activities, and office space for national support units (NSUs). The detailed cost estimates are in Appendix 2. The TA covers the first 4 years (2012–2015) of the CEP-BCI (2012–2016) PFD as explained in para. 2. The scale of activities and duration of the TA will be revised to cover the full scope of the CEP-BCI PFD (2012–2016) as additional cofinancing becomes available.

D. Implementation Arrangements

15. The TA will be implemented from 1 January 2012 until 31 December 2015.¹⁶ The respective WGE focal agency of each country will be responsible for implementing the TA.¹⁷ Following a programmatic approach, the WGE focal agencies will prepare annual work plans and budgets (AWPBs) in coordination with relevant national and provincial sector agencies (i.e., in the agriculture, energy, tourism, and transport sectors), the Economic Corridor Forum, and the Phnom Penh Plan Secretariat. They will also liaise with development partners (including nongovernment organizations) and ADB resident missions to ensure complementarity between respective environmental and climate-related programs and projects. The AWPB will be adopted at the WGE annual meetings and progress will be reviewed at the semiannual meetings. Activities included in the AWPB will be implemented through letters of agreement between ADB and, as appropriate, the WGE focal agency, other national or subnational sector line agencies, nongovernment organizations, and academic or research institutions acting as implementing agencies for the TA.

¹⁶ Following “no-objection” approval by the countries.

¹⁷ The responsible WGE focal agencies are: the Ministry of Environment (Cambodia), the Ministry of Environmental Protection (PRC), and the Ministry of Natural Resources and Environment (Lao PDR, Thailand, and Viet Nam).

16. Following implementation arrangements established during phase 1 of CEP-BCI, the EOC will be responsible for timely and effective delivery of the TA.¹⁸ The EOC will continue its role as the technical secretariat to the WGE, specifically as a subregional knowledge hub and resource and referral center on environmental management tools and practices, socioeconomic and biophysical information, and expertise in environmental and climate-related fields. NSUs established under phase 1 will be further strengthened to support the respective WGE focal agency with TA implementation. NSU staff will facilitate coordination of activities and meetings, monitor progress of AWPBs, update geographic information systems (GISs) and environmental information systems, and assist with reporting to the WGE. Details of EOC and NSU roles and responsibilities are in Appendix 3.

17. The TA will require the services of international consultants (up to 175 person-months) and national consultants (up to 751 person-months). Following ADB's Guidelines for the Use of Consultants (2010, as amended from time to time), international consultants will be engaged either as individuals (to staff the EOC and for some program activities and NSUs) or as a firm (for implementing selected program activities).¹⁹ The engagement of national consultants will be delegated to the EOC in accordance with arrangements satisfactory to ADB. Over the course of the TA, GMS country specialists (an estimated 47 person-months) will be deputed (on secondment) and GMS interns engaged in the EOC.²⁰ Equipment for the EOC and the NSU will be procured by ADB according to ADB's Procurement Guidelines (2010, as amended from time to time).²¹ Equipment will be handed over to the respective implementing agencies upon completion of the TA.

18. Disbursements under the TA will be made in accordance with ADB's *Technical Assistance Disbursement Handbook* (2010, as amended from time to time). An advance payment facility will be used to disburse funds to (i) national implementing agencies and partners, including NSUs; and (ii) the EOC, under ADB's Thailand Resident Mission, to cover operating costs and travel expenses of EOC staff and consultants.²² The advance payment facility will be replenished on submission of a statement of expenditures. Implementing agencies and partners will be required to maintain project accounts and have these accounts audited periodically.

IV. THE PRESIDENT'S RECOMMENDATION AND DECISION

19. The President recommends that the Board approve ADB administering a portion of technical assistance not exceeding the equivalent of \$14,000,000 for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion, Phase 2, to be financed on a grant basis by the Government of Finland. If the Board approves ADB administering the technical assistance, the President acting under the authority delegated by the Board, will approve ADB providing the balance of the technical assistance not exceeding the equivalent of \$800,000 on a grant basis for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion, Phase 2.

¹⁸ Under supervision of ADB, which serves as the executing agency.

¹⁹ Selection method will be determined based on terms of reference, in consultation with Central Operations Services Office.

²⁰ On arrangements agreed with EOC.

²¹ Equipment procured for EOC under ADB's TA for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion will continue to be used and upgraded during the TA. Equipment for NSUs, such as computers and other office equipment, to be decided during implementation.

²² Including ADB staff serving as resource persons to the TA.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
<p>Impact</p> <p>Improved biodiversity conservation and climate resilience across the GMS</p>	<p>Compared to 2011 baselines by 2022:^a Forest patch sizes maintained in GMS biodiversity conservation corridors and landscapes</p> <p>Climate change adaptation and disaster risk preparedness improved in at least 500 communities in GMS conservation landscapes</p>	<p>National and FAO forestry reports</p> <p>EPA and environmental performance index reports</p> <p>Provincial and local development plans</p> <p>BCC socioeconomic baseline in Cambodia, the Lao PDR, and Viet Nam</p> <p>CEP-BCI progress reports</p>	<p>Assumptions</p> <p>GMS governments remain committed to inclusive growth and sound environmental practices.</p> <p>Investment financing (public and private) is available.</p> <p>Risk</p> <p>Impact of rapid economic growth outpaces environmental response times.</p>
<p>Outcome</p> <p>Environment-friendly and climate-resilient GMS ECP</p>	<p>Compared to 2011 baselines, by 2015: ECP portfolio comprises at least 20% of pro-environment and climate-resilient investments</p> <p>Livelihoods (cash and noncash elements) of at least 50% of participating households in the conservation landscapes are improved, with at least 35% women beneficiaries</p>	<p>GMS sector and line agency reports</p> <p>Regional, national, and sector publications on economic indicators</p> <p>Reports to GMS ministers' meetings and EMM</p> <p>CEP-BCI progress reports</p>	<p>Assumptions</p> <p>GMS governments remain committed to mainstreaming environmental concerns.</p> <p>Community and local agency support and ownership of activities continue.</p> <p>Risk</p> <p>Short-term development needs override long-term sustainable development priorities.</p>
<p>Outputs</p> <p>Environmental planning systems, methods, and safeguards improved</p>	<p>By 2015: Environmental and social considerations included in at least 10 GMS sector or corridor strategies and plans</p> <p>At least 150,000 people in the GMS economic corridors benefit from environmental measures, at least 35% of them women</p> <p>At least 100 agency staff (at least 35% women) able to implement safeguard assessments</p>	<p>GMS sector plans and strategies</p> <p>National environmental and social safeguards regulations and guidelines</p> <p>GMS country state of the environment reports</p> <p>CEP-BCI progress reports and baseline database</p>	<p>Assumption</p> <p>Sector agency support is received for environmental initiatives.</p> <p>Risk</p> <p>Sector authorities promote unsustainable development for short-term revenue target gains.</p>
<p>Management of transboundary biodiversity conservation</p>	<p>By 2015: Biodiversity corridors are gazetted in at least three GMS countries.</p>	<p>Provincial regulations, decisions</p> <p>Provincial land-use plans</p> <p>GMS program evaluation</p>	<p>Assumption</p> <p>GMS cooperate on cross-border conservation activities.</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
landscapes and local livelihoods improved	Co-management and maintenance of areas designated for strict protection is in place in at least three landscapes Payment for environmental services guidelines developed in at least two countries	reports TRAFFIC and WWF reports on wildlife and timber trade Program baseline and progress reports Socioeconomic surveys	Risks Conservation and sustainable livelihoods gains negated by adhoc development Growing demand for wildlife and forest products
Climate-resilient and low-carbon strategies developed	By 2015: At least 3 national, provincial, or city-based MRV systems developed At least three investment proposals on low-carbon technologies prepared Climate change coping strategies adopted by at least 100 community groups, with at least 35% women beneficiaries	ADB climate change fund progress reports GMS ECP sector progress reports GMS country REDD reporting GMS business forum reports	Assumptions Availability of funds for climate change activities Sufficient demand for low-carbon and energy-efficient growth Risk Affordability and accessibility of climate proofing technology
Institutions and financing for sustainable environmental management improved	By 2015: NSUs fully operational in at least four countries At least 50% of EOC professional staff are from GMS, at least 40% of them women At least two bankable private sector projects in environment and natural resources developed and collaboration secured	Government circulars CEP-BCI progress reports	Assumption Sufficient financial resources and support for environmental service delivery Risk Sustainable financing systems generate only limited income, with high transaction costs.

Activities with Milestones	Inputs (\$'000)
Output 1: Environmental planning systems, methods, and safeguards improved	ADB and Cofinanciers: 14,800
1.1 Build subregional and national SEA capacities, with at least two SEAs per year starting in 2012	Output 1: 4,867
1.2 Build capacity for environmental safeguards, through engagement with at least ten projects and/or programs in the GMS by 2013	Output 2: 3,790
1.3 Strengthen country environmental monitoring processes, with protocols for at least three national systems established by 2015	Output 3: 1,657
	Output 4: 3,716
	Contingency: 770
Output 2: Management of transboundary biodiversity conservation landscapes and local livelihoods improved	
2.1 Improve and update biodiversity profiles in conservation landscapes, with at least one profile completed by 2013	

Activities with Milestones	Inputs (\$'000)	
2.2 Support value chain development based on ecosystem goods and services, with recommendations for four investment projects by 2015		
2.3 Strengthen biodiversity conservation corridor management and monitoring in biodiversity conservation landscapes, establishing cross-border management arrangements in at least two transboundary landscapes by 2015	Item	Amount (\$'000)
2.4 Improve compliance with multilateral environmental agreements on the movement of wildlife, timber, and other natural resources by supporting at least two cross-border initiatives by 2015	Consultants	6,237
	GMS country implementation and partnerships	3,600
	Equipment	402
	Training	1,390
	Surveys	260
	Miscellaneous administration and support costs	2,141
	Contingencies	770
Output 3: Climate-resilient and low-carbon strategies developed		
3.1 Support climate-resilience measures and synergies between adaptation and disaster risk reduction strategies in agriculture, natural resources, and tourism sectors by identifying at least two adaptation projects for financing by 2015		
3.2 Support low-carbon strategies and MRV frameworks in energy and transport sectors, with at least two investment proposals developed by 2014		
3.3 Support country REDD readiness and piloting, with at least two REDD readiness plans developed by 2015		
Output 4: Institutions and financing for sustainable environmental management improved		
4.1 Strengthen subregional-, national-, and subnational-level capacity for environmental management and monitoring, with particular emphasis on the roles of the WGE and NSUs for delivering subregional outcomes and impacts, with all NSUs functional by 2014		
4.2 Policy and institutional support for sustainable financing of conservation and ecosystem management, with at least one payment for ecosystem services scheme initiated by 2014		
4.3 Facilitate PPPs for conservation and ecosystem management, with at least one PPP arrangement developed by 2015		

ADB = Asian Development Bank; BCC = Biodiversity Conservation Corridors; CEP-BCI = Core Environment Program and Biodiversity Conservation Corridors Initiative; EPA = environmental performance assessment; ECP = economic cooperation program; EMM = environment ministers' meeting; EOC = Environment Operations Center; FAO = Food and Agriculture Organization of the United Nations; GMS = Greater Mekong Subregion; Lao PDR = Lao People's Democratic Republic; MRV = monitoring, reporting and verification; NSU = national support unit; PPP = public-private partnership; REDD = reduced emissions from deforestation and degradation; SEA = strategic environmental assessment; TRAFFIC = the wildlife trade monitoring network (www.traffic.org), WGE = Working Group on Environment; WWF = World Wildlife Fund.

Note: Detailed activity milestones will be identified by GMS countries in the first quarter of 2012 during inception.

^a Baselines for selected indicators are available on the EOC website at <http://www.gms-eoc.org/index.php/resources/resource-list.html>

Source: Asian Development Bank.

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
Asian Development Bank ^a	
1. Consultants	
a. Remuneration and per diem	
i. International consultants	2,565.00
ii. National consultants	2,857.00
iii. Greater Mekong Subregion country specialists on deputation	118.00
b. International and local travel	579.00
c. Reports and communications	118.00
d. Greater Mekong Subregion country implementation and partnerships ^b	3,600.00
2. Equipment	402.00
3. Training, seminars, and conferences	
a. Facilitators	278.00
b. Training program	1,112.00
4. Surveys	260.00
5. Miscellaneous administration and support costs ^c	2,141.00
6. Contingencies	770.00
Total	14,800.00

^a Financed by the Technical Assistance Special Fund (TASF-IV) of the Asian Development Bank (ADB) and by the Government of Finland. The cofinancier fund is administered by the ADB on a front-loaded basis. This amount also includes ADB's administration fee, audit costs, bank charges, and a 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.

^b Includes funds for national support units in Greater Mekong Subregion countries, partnership agreements, and service contracts

^c Includes \$725,000 for publication and media documentation

Source: Asian Development Bank estimates

GREATER MEKONG SUBREGION ENVIRONMENT OPERATIONS CENTER

A. Background and Purpose

1. The Greater Mekong Subregion (GMS) environment ministers' meeting in Shanghai, People's Republic of China, in May 2005, and the second GMS summit in Kunming, People's Republic of China, in July 2005, endorsed the implementation of the Core Environment Program (CEP) and its flagship component, the Biodiversity Conservation Corridors Initiative (BCI). The GMS environment ministers also endorsed the establishment of the Environment Operations Center (EOC) in Bangkok, Thailand, to provide operational capacity to the Working Group on Environment (WGE) and to implement CEP-BCI. The EOC was duly established under the TA of the Asian Development Bank (ADB) for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion.¹
2. The GMS EOC facility will continue under the proposed TA and serve as WGE secretariat for coordinating with development partners and GMS countries and as a program management unit. The EOC will coordinate and facilitate the timely and effective implementation of the GMS CEP in collaboration with GMS governments, local communities, development partners, non-state implementing partners, and service providers. The establishment of the EOC has helped maximize program synergies, and reduce transaction costs and operational burdens on implementing agencies and program partners; it has created a platform for multisector planning, with responsibility for implementation lying with field-level sector agencies.
3. Over phase 1 of CEP-BCI, the EOC has evolved into a credible knowledge hub on GMS environmental matters. The geographic information system (GIS)-based information system built over phase 1 serves as a valuable resource for spatial and analytical assessments and as a monitoring and evaluation tool. In addition, the EOC has produced a range of useful knowledge products and services, including a comprehensive website, which will continue to serve as an information clearinghouse for environmental management best practices and socioeconomic and biophysical information on the GMS. The EOC will also be a subregional referral center for expertise on environmental planning, biodiversity conservation, and climate change.
4. In this context, the EOC will continue to support ADB operations (i.e., loans and TA projects in energy, transport, tourism, and agriculture sectors) by responding to technical queries on socioeconomic and biophysical aspects of the GMS. In line with the long-term vision of the EOC becoming a fully GMS-owned and -supported technical secretariat on environment and climate-change matters, EOC staff will increasingly be recruited from the GMS.
5. The EOC will house the TA's core technical team. Overall coordination of the TA as well as financial and administrative functions will be based at the EOC. A GMS national will be identified to serve as the EOC's chief of operations (COO). The core technical team will comprise international and GMS national specialists. GMS nationals will have program coordination, financial, and administration responsibilities.

¹ ADB. 2005. *Technical Assistance for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion*. Manila (TA 6289-REG).

B. Environment Representation in Greater Mekong Subregion Working Groups

6. Building sustainability and environment into GMS development programs and projects will require close linkage between the WGE and other GMS working groups. Under ADB's TA for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion, the WGE has interfaced with other working groups to mainstream the environment into their sectors. It will continue to do so by keeping those other groups informed of environmental trends and regional concerns, helping them review strategies and programs, contributing to strategy and investment design, and preparing environment safeguards and mitigation measures. The WGE will seek to (i) make development actions more sustainable, and (ii) build environmental components into development activities.

C. Functions of the Greater Mekong Subregion Environment Operations Center

7. The overriding concern of the WGE and the EOC is to conserve the natural systems of the GMS for the ecosystem services they provide, to protect and enhance environmental quality, and to ensure sustainable development in the GMS. The EOC's primary function must be to help define and keep watch on those areas that must be kept in their natural state for the broad development benefits they provide to the local, national, and subregional economies. The EOC will focus on five main tasks as described below.

8. The five main tasks of the EOC are:

- (i) GMS environmental information and knowledge management:
 - (a) maintaining and sharing environmental information (from various sources, including environmental assessments of development projects and sector strategies);
 - (b) keeping track of trends and problems in subregional environment reporting;
 - (c) analyzing and planning strategies to address current and emerging issues (such as climate change and air pollution) related to environmental and natural resource maintenance; and
 - (d) taking an active part in communications and information networking.
- (ii) GMS environmental management and conservation:
 - (a) managing the GMS CEP;
 - (b) setting the framework for environmental safeguards and codes of practice for key development sectors;
 - (c) preparing the GMS environment action plan, and reviewing and revising it regularly, in keeping with GMS development programming cycles;
 - (d) implementing the BCI; and
 - (e) attracting finance for new environmental initiatives to meet changing needs.
- (iii) Sustainable development design, environmental assessment, and oversight:
 - (a) providing strategic environmental assessments of sectors;
 - (b) contributing to the design and sustainability of development projects;
 - (c) carrying out environmental reviews of strategies and plans; and
 - (d) monitoring and reporting on performance.
- (iv) Coordination and liaison:

- (a) convening regular meetings of development partners and stakeholders to keep them informed of progress, and nurturing the GMS environmental partnership for the implementation of the GMS action plan and CEP; and
 - (b) convening regular meetings with stakeholder groups to engage them in program development, implementation, and monitoring.
- (v) Acting as WGE secretariat. The WGE is the steering and oversight body responsible for implementing the GMS CEP. It must meet at least twice a year, with each member country convening meetings and facilitating in-country activities under the CEP. The EOC has taken over the secretariat and program support functions for the WGE under ADB's TA for the Core Environment Program and Biodiversity Conservation Corridors Initiative in the Greater Mekong Subregion; the EOC will continue to administer these.

D. Functions of the National Support Units (NSUs)

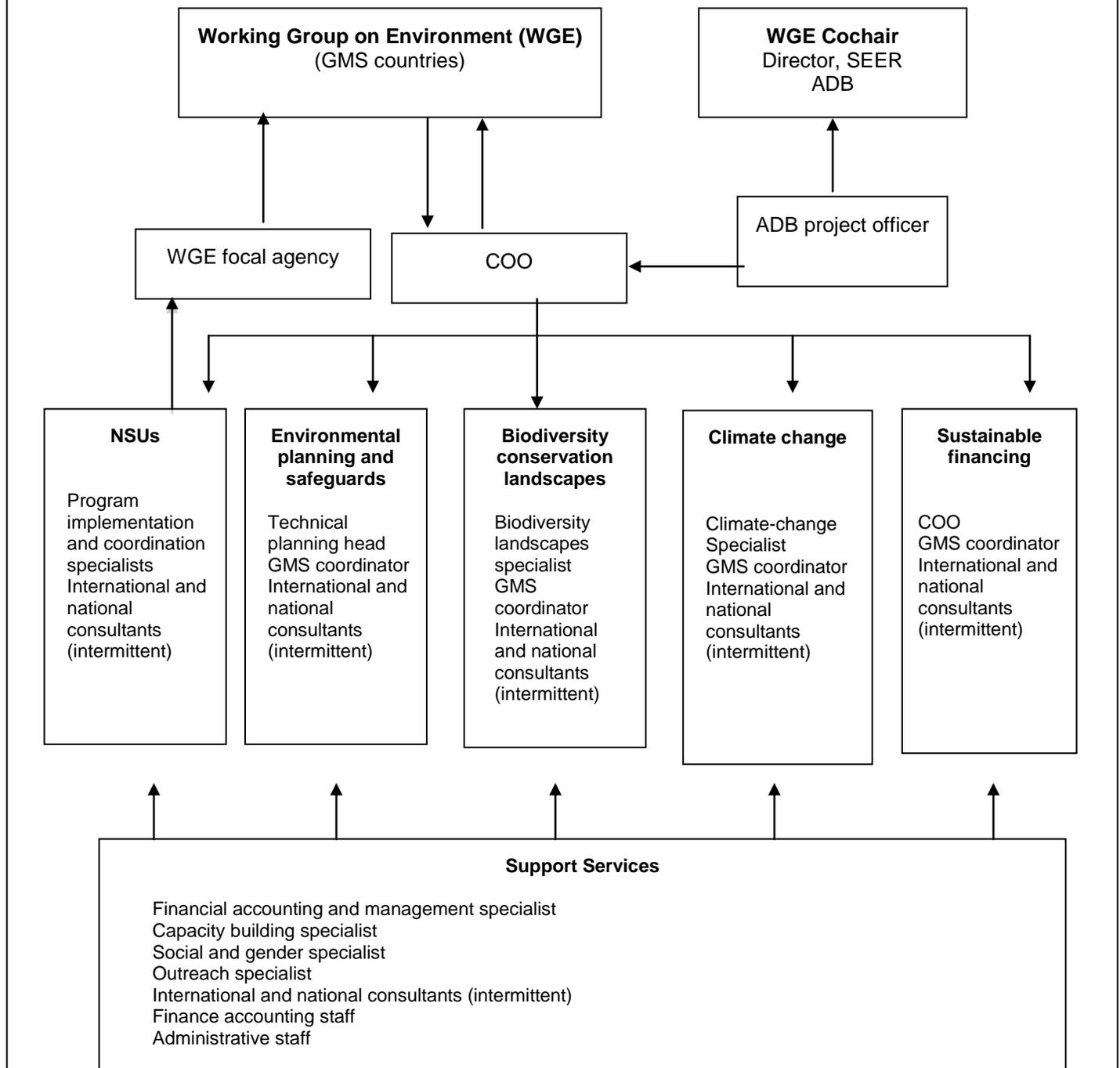
9. Fully functioning country national support units (NSUs) will be formed to support the WGE focal agency to implement CEP-BCI activities at the subnational and national levels. They will facilitate coordination of activities and meetings, monitor progress of CEP-BCI annual work plans and budgets, update GIS and environmental information systems, and assist with reporting to the WGE. The NSU will be staffed with technical and administrative national consultants, recruited according to ADB's Guidelines for the Use of Consultants (2010, as amended from time to time). The composition of NSU staff will depend from country to country, but will include at least three staff responsible for the above task.

10. Under the auspices of the WGE focal points, the NSUs will work closely with country implementing agencies, partners, and ADB resident missions to identify opportunities for collaboration and environmental mainstreaming. NSUs will also provide management and administration support. They will liaise closely with country implementing agencies and partners and provide annual work plans and budget estimates to the EOC. The NSUs will provide mid-year progress and expenditure reports.

11. An ADB project officer based at the Thailand resident mission will supervise the EOC. The EOC operational team will be managed by the COO from a GMS country, who will be responsible for overall program delivery and effectiveness. The COO will be assisted by the following:

- (i) technical program head and environmental planning specialist,
- (ii) biodiversity conservation landscapes specialist,
- (iii) climate change specialist,
- (iv) GIS and knowledge management specialist,
- (v) capacity development specialist,
- (vi) social and gender specialist,
- (vii) outreach specialist,
- (viii) program implementation and coordination specialists (NSUs and EOC),
- (ix) financial accounting and management specialist,
- (x) programmatic technical and implementation support specialists, and
- (xi) support staff.

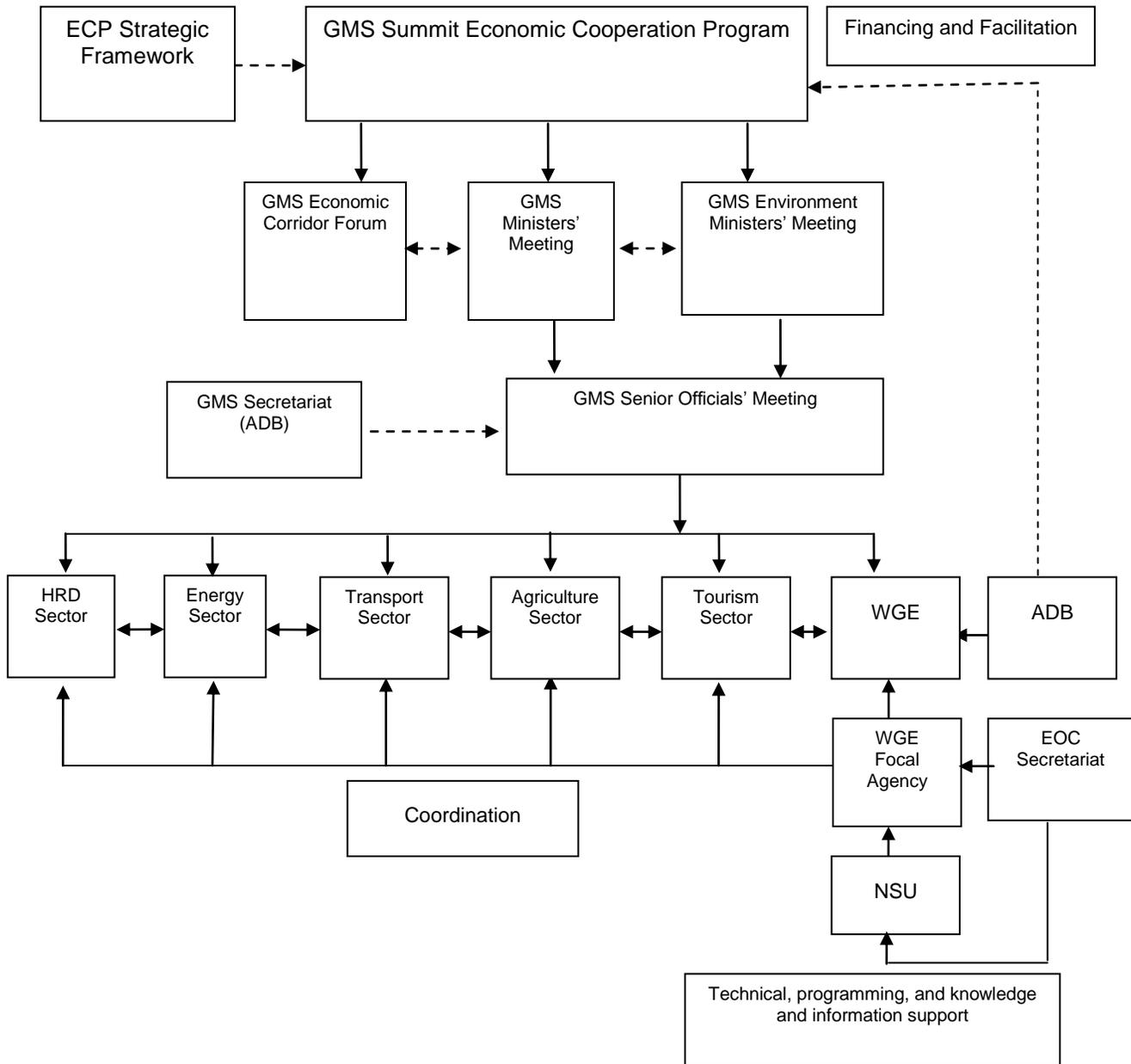
Figure A3.1: Environment Operations Center Setup



ADB = Asian Development Bank, COO = chief of operations, GMS = Greater Mekong Subregion, SEER = Environment, Natural Resources, and Agriculture Division.

Source: Asian Development Bank.

Figure A3.2: Core Environment Program–Biodiversity Conservation Corridors Initiative Organizational Structure



ADB = Asian Development Bank, ECP = economic cooperation program, EOC = Environment Operations Center, GSM = Greater Mekong Subregion, HRD = human resources development, NSU = national support units, WGE = Working Group on Environment.
 Source: Asian Development Bank.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

1. The following sections describe the general roles and responsibilities of Environment Operations Center (EOC) professional and technical staff, national support unit (NSU) coordinators, and administrative and support positions. A total of 175 person-months of international consultants and 751 person-months of national consultants will be required.

A. Chief of Operations (Greater Mekong Subregion national, 36 person-months)

2. The Chief of Operations (COO) will be the representative head of the Core Environment Program and Biodiversity Conservation Corridors Initiative (CEP-BCI) and the Greater Mekong Subregion (GMS) Environment Operations Center (EOC). The COO will support GMS country Working Group on Environment (WGE) and cross-sector line agencies in CEP-BCI planning, monitoring and program reporting, policy dialogue, and representational matters. The COO will work with the WGE, the GMS secretariat, and other GMS Economic Cooperation Program (ECP) focal agencies to implement a coordinated strategic approach to achieve CEP-BCI objectives. S/he will take the lead in discussing policy issues with GMS countries; follow up on incorporating environmental considerations into subnational, national, and regional investment decisions; and liaise with GMS country focal agencies and the Asian Development Bank (ADB), reporting to the WGE and the environment ministers' meetings (EMMs). Specific tasks of COO include:

- (i) providing strategic direction to the program and identifying opportunities to further embed it within GMS economic cooperation, environment, and climate-related platforms;
- (ii) assuming overall responsibility for achieving the program's impacts and outcomes and overseeing routine operations with the support of EOC staff;
- (iii) engaging in strategic dialogue with senior decision-makers in the GMS, nongovernment and academic or research institutions, and development partners;
- (iv) serving as a representative of the CEP-BCI at appropriate regional, national, and subnational events, including engaging with the WGE and other subregional entities of the GMS ECP; and
- (v) leading resource mobilization activities through dialogue with GMS governments and development partners.

B. Technical Program Head and Environmental Planning Specialist (1 international, 36 person-months)

3. The technical program head, working with other technical leads, will help the COO implement the CEP-BCI. The program head takes the lead in technical planning and implementation matters, helping GMS countries incorporate environmental considerations into subnational, national, and regional investment decisions. The specialist will provide inputs in environmental planning, performance assessment, and safeguard functions. The technical program head will:

- (i) develop and update annual work plans and budgets in collaboration with WGE focal agencies and ADB and with technical support from EOC staff;
- (ii) propose agreed actions to achieve program objectives, in consultation with the COO;
- (iii) direct the technical team to achieve work plans and deliverables on time, providing assessments, analysis, and concept notes to the ADB project officer,

- monitoring firms and consultants on short-term assignments, and assisting with follow-up on procedural issues with GMS countries and ADB;
- (iv) produce technical materials, guidelines, and reports (i.e., policy briefs, concept papers) in close collaboration with EOC technical lead staff;
 - (v) oversee coordination of technical inputs of consultants engaged under the program (working at the EOC and through NSU);
 - (vi) conduct environmental planning activities related to strategic environmental assessments (SEAs), geographic information system (GIS)-based spatial multicriteria analysis, and application of other strategic planning tools and processes, in consultation with the WGE and other sector line agencies;
 - (vii) provide monitoring and evaluation inputs to economic corridor-level SEAs and general program monitoring;
 - (viii) conduct country diagnostic studies (identifying relevant policies, regulations, operation guidelines, and implementation manuals) on environmental safeguards equivalence;
 - (ix) strengthen environmental and social safeguard systems in selected GMS , enabling environment and key sector ministries to improve safeguard application and enforcement;
 - (x) support GMS national monitoring and reporting systems, collate and update baseline data and compilations from country, regional, and other databases;
 - (xi) assist in monitoring subregional compliance in the framework of multilateral agreements; and
 - (xii) consolidate and provide technical progress reports at 6-month intervals to the COO for submission to the WGE, development partners, and ADB.

C. Biodiversity Conservation Landscapes Specialist (1 International, 24 person-months)

4. The biodiversity conservation landscapes specialist will be responsible for identifying and achieving landscape-level biodiversity conservation outcomes across the GMS, particularly in areas impacted by the GMS ECP. The specialist will:

- (i) identify and assess the potential impacts of national policies, socioeconomic development, and other sector plans (in the transportation, energy, tourism, agriculture, and other relevant sectors) on biodiversity conservation landscapes, with support from technical specialists and other stakeholders;
- (ii) identify the geographic boundaries of biodiversity conservation landscapes based on current land-use plans, ecosystem profiles, and spatial multicriteria assessments, specifying suitability mapping for maintaining biodiversity corridors and habitat connectivity;
- (iii) promote a biodiversity conservation landscape approach in GMS national biodiversity action plans;
- (iv) support GMS countries to develop the appropriate policy and and or enabling conditions needed to establish and maintain biodiversity conservation landscapes and corridors;
- (v) incorporate available biodiversity baseline information into biodiversity conservation landscape profiles and maintain updated baseline data by landscape;
- (vi) support the creation of early warning mechanisms that identify climate-change impacts, support disaster prevention activities, and enhance coping mechanisms of local communities;

- (vii) oversee and guide technical inputs for program implementation, monitoring and reporting on transboundary biodiversity corridor and landscape activities in GMS countries; and
- (viii) submit technical progress reports and updates to the technical program head every 6 months for consolidation into the program progress report.

D. Climate-Change Specialist (1 international, 36 person-months)

5. The specialist will work with the WGE and GMS focal agencies in the transportation, energy, tourism, and agriculture and natural resources sectors to integrate mitigation and adaptation measures into economic development plans that maintain biodiversity and ecosystem services and sustain economic development under anticipated climate-change impacts in the GMS. Such activities include the implementation of carbon-neutral transportation corridors, reduced emissions from deforestation and degradation (REDD+), and supporting sustainable finance mechanisms (e.g., payment for ecosystem services). The climate-change specialist will:

- (i) develop and update policy papers that identify priority adaptation measures for the WGE, the GMS secretariat, and cooperating focal agencies;
- (ii) identify potential investments in the GMS ECP and ADB's country partnership strategies that could be negatively affected by climate change;
- (iii) conduct cost-benefit analyses, as appropriate, based on economic assessments of business-as-usual, climate-change adaptation or alternative strategies;
- (iv) develop measurable indicators for program outputs, outcomes, and impacts;
- (v) develop energy demand management strategies to support GMS energy sector development plans;
- (vi) mainstream energy demand management and REDD+ strategies into economic development policies and plans;
- (vii) support the development of sustainable forestry strategies and private sector investment and policy-enabling conditions to achieve climate-change mitigation outcomes; and
- (viii) submit technical progress reports to the technical program head every 6 months.

E. Geographic Information Systems and Knowledge Specialist (1 international, 12 person-months; 1 national, 18 person-months)

6. The specialist supports the development of the GMS EOC knowledge and information database and the application of decision support tools and related modeling approaches. Together with the WGE, the GMS secretariat, and the other ECP focal agencies, s/he will:

- (i) establish a database that will serve as an information hub for the GMS ECP;
- (ii) complete a needs assessment for the database;
- (iii) identify data sources that can be incorporated into or linked to the database;
- (iv) establish and update GIS-based spatial biophysical and socioeconomic baseline assessment tools;
- (v) establish linked-in centers in national databases;
- (vi) develop a servicing approach and protocol for updating the database;
- (vii) develop supporting tools for use in SEAs, environmental impact assessments, and associated environmental monitoring assessments and modeling approaches;

- (viii) support the development of GIS-based assessment tools such as DevMap, SMCA, climate-change adaptation models, and ecosystem services valuation modeling tools;
- (ix) create, revise, or update spatial data on EOC website and the online GMS Atlas;
- (x) develop a protocol for using and contributing to the database; and
- (xi) submit technical progress reports to the technical program head every six months.

F. Capacity Development Specialist (1 national, 30 person-months)

7. The capacity development specialist will support the WGE, the GMS secretariat, and EOC task leaders to create conditions under which the regional vision adopted by the CEP-BCI and the EOC areis fully owned by GMS countries and their implementation agencies are capable of carrying it out. The specialist will work with EOC task leaders to develop rigorous approaches to capacity building, identify training needs and participants, develop training support programs to meet technical needs, develop short modules linked to specific outputs, and support a learning-by-doing approach structured to factor participant feedback into the way the output is reached. The specialist will monitor project and activity implementation progress and support technical consultants to adjust planned training activities as needed, with minimum supervision.

G. Social and Gender Specialist (1 national, 36 person-months)

8. The social and gender specialist will have work experience with ethnic minorities, livelihoods, and gender. The specialist will support the WGE, the GMS secretariat, and EOC task leaders in documenting social analyses and updating socioeconomic monitoring data, disaggregated by gender and ethnicity across the GMS countries. The specialist will review existing information, and collate information that has been generated based on ADB's policy, guidelines, and strategies on poverty reduction analysis, gender development action, indigenous peoples resettlement, and participatory approaches. The specialist will monitor impacts on indigenous peoples, with due attention to the institutional capacity of the implementing agencies, in accordance with national laws and regulations and ADB's operations manual and policy on indigenous peoples. In particular, s/he will assess the role and capacity of national women's unions and groups that are active in promoting gender balance and their possible contributions during implementation.

H. Outreach Specialist (1 national, 36 person-months)

9. The outreach specialist will ensure that sufficient awareness exists about the CEP-BCI and its support for the GMS ECP on three levels: (i) increased and improved awareness in mainstream society; (ii) improved awareness of the program in the GMS secretariat, focal agencies, ADB, and potential partner agencies; and (iii) improved awareness and ability to articulate program impacts, outcomes, outputs, activities, and their specific values to policy decision makers, the private sector, development, and implementing partners. The specialist will help technical staff effectively communicate simple and understandable messages about the highly technical aspects of the program to program clients, partners, and civil society.

I. Program Implementation and Coordination Specialists Based in the NSU and the EOC (1 national, NSU, 240 person-months; EOC 144 person-months)

10. The national program implementation and coordination specialist will:
- (i) disseminate analytical skills (e.g., SEAs, spatial multicriteria analysis, and environmental performance assessment);
 - (ii) facilitate CEP-BCI integration into other relevant sector- and climate-change bodies;
 - (iii) improve environmental information and monitoring capacity at the national level;
 - (iv) integrate CEP-BCI activities into the country program strategy and country environmental analysis processes in the resident mission;
 - (v) support implementation of regional initiatives; and
 - (vi) create a knowledge and information network between the WGE, the EOC, the national NSU, other national working groups, and development and implementing partners.

J. Financial Accounting and Management Specialist (1 national, 48 person-months)

11. The financial accounting and management specialist will:
- (i) devise guidelines to set up and operate disbursements, invoices, and claim settlements;
 - (ii) open and maintain project account ledgers, prepare statements of accounts and expenditures, and support external audits, following up with responses;
 - (iii) follow up on timely disbursements to partner organizations and assist in their queries;
 - (iv) follow up on monthly liquidation of advance and imprest account facilities used by partner organizations under the CEP-BCI and ensure that partners in the GMS countries are submitting properly documented claims;
 - (v) administer the administration and miscellaneous budget line to cater to EOC operations, travel advances, and liquidation by consultants and EOC staff; and
 - (vi) provide timely financial reports to the COO and task leaders for submission to the WGE.

K. Programmatic Technical and Implementation Support Positions (intermittent international inputs of 67 person-months; intermittent national inputs of 163 person-months)

12. The programmatic technical and implementation support positions will focus on the development and application of tools and approaches related to spatial planning and analysis, biophysical and socioeconomic monitoring and profiling; climate and environmental risk assessment and management; ecosystem valuation and economic assessments; carbon accounting and financing; legal, policy, and regulatory assessments and development; institutional assessments and development; and environmental financing. These positions will help EOC and NSU staff implement program activities, adopting methodologies appropriate to local biophysical and socioeconomic conditions found throughout the GMS.