

**ASIAN DEVELOPMENT BANK**

**TAR: OTH 36037**

**TECHNICAL ASSISTANCE**

**FOR**

**NATIONAL PERFORMANCE ASSESSMENT AND SUBREGIONAL  
STRATEGIC ENVIRONMENT FRAMEWORK IN THE GREATER MEKONG  
SUBREGION**

**December 2002**

## ABBREVIATIONS

ADB	–	Asian Development Bank
GMS	–	Greater Mekong Subregion
IA	–	implementing agency
IGES	–	Institute for Global Environmental Strategies
NIES	–	National Institute for Environmental Studies, Japan
RRC.AP	–	Regional Research Center for Asia and the Pacific
SEF	–	Strategic Environment Framework
SEMIS	–	Subregional Environmental Monitoring and Information System
TA	–	technical assistance
UNEP	–	United Nations Environment Programme

## NOTE

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

## I. INTRODUCTION

1. The Greater Mekong Subregion (GMS) Program was initiated in 1992 to facilitate sustainable economic growth and to improve the living standards of the people of the GMS, which consists of Cambodia, Lao People's Democratic Republic, Myanmar, Thailand, Viet Nam, and Yunnan Province of the People's Republic of China. At the Tenth and Eleventh Ministerial Conferences on Subregional Economic Cooperation held in Yangon (27-29 November 2001) and Phnom Penh (23-25 September 2002), the Ministers agreed on the need for a common strategic environmental framework for protecting the environment and ensuring community interests, expressed their appreciation for the first phase of the Strategic Environment Framework (SEF),<sup>1</sup> and endorsed the recommended second phase.

2. During the Eighth Meeting of the GMS Working Group on Environment in April 2002, the country representatives recognized the importance of developing environmental performance review systems at the national and subregional levels in order to incorporate environmental considerations in national development policies and economic plans and to incorporate the results of national analyses in the SEF to further strengthen its dynamic utility. Thus the representatives unanimously supported the overall concept of the proposal on "National Performance Assessment and Subregional Strategic Environment Framework" as the follow-on project to the Asian Development Bank (ADB)-financed SEF.<sup>2</sup>

## II. ISSUES

3. GMS countries have undertaken programs intended to lessen the degradation of the environment and natural resources, in particular to counteract deforestation and urban pollution, and to support sustainable development, including efforts to promote integration of environmental concerns into economic and social decision making. Like most developing countries, the GMS countries have limited institutional capacity or information on environmental quality and trends to support such strategic planning. To enable informed development decision making, it is essential to establish an effective performance assessment system supported by timely information using reliable environmental indicators.

4. The GMS comprises approximately 250 million people with an overall gross domestic product of about \$190 billion. GMS countries are home to various ethnic minority groups, many of whose territories span national boundaries. The GMS has a rich and diverse natural resource base, which has historically supported economic development and sustained rural livelihoods. In recent years, these natural resources have come under increasing stress from the combined effects of rapid demographic and economic change, unsustainable exploitation, the impact of development programs and projects, and the relative weakness of protective and regulatory institutions.

5. In 1992, the GMS countries entered into a program of economic cooperation with the assistance of ADB. The GMS partners recognized at the outset the potential of development projects for adverse social and environmental effects. Many of the adverse impacts are avoidable through proper planning, suitable mitigation actions, and ancillary policies. A number of mechanisms are in place within the countries to integrate environmental and social concerns into the development process, and thus provide guidance towards project selection and modification as well as the needed ancillary policies. However, experience at the level of projects as well as ecosystems and communities indicate that these safeguards are far from effective and that the difficult environmental problems and their solutions cross national

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<sup>1</sup> ADB 1998. *Strategic Environmental Framework for the GMS*. Manila.

<sup>2</sup> The proposed TA first appeared in the *ADB Business Opportunities* on 27 June 2002.

boundaries. Some of these deviations are the result of persistent gaps in knowledge, capacities, and institutions, which lead to inadequate decisions and implementation arrangements. This suggests the need for a dynamic regional strategic environmental framework, built on assessments of national environmental performance in meeting environmental objectives.

6. The SEF project is a combination of analytical, participatory, and policy-oriented processes that together constitute a strategic platform for guiding investment decisions in the GMS. The first phase of the SEF was to propose a strategic platform to guide investment decisions in the infrastructure sectors in the GMS with the aim of making such investments compatible with the demands of environmental and social sustainability. The outputs of the first phase have included (i) a set of databases, general purpose software, and methodologies designed to support decision making on infrastructure investments in the GMS; (ii) a number of analytical methodologies, including the identification and analysis of hotspots, review of case study projects at various stages of implementation, and framing of different scenarios for the development of the subregion; and (iii) a set of goals for sustainable human development in the region. The SEF software and databases are available and relevant for decision making by ADB and the GMS countries. In particular, they can assist national level policy makers in formulating better development plans and analyzing and assessing their potential impacts; private sector entities in designing more sustainable infrastructure projects; nongovernment organizations and local communities in accessing information needed for more effective participation in national and regional decision making; and regional associations and intergovernmental organizations (e.g., ADB, the Mekong River Commission, and the Association of Southeast Asian Nations) in developing better integrated regional plans, providing more effective oversight and assessment, and supporting more informed regional agreements. The main recommendation of the first phase of the SEF is to maintain and refine the SEF system, which includes further data collection, the refinement of guidance on procedures and methodologies, and training in and dissemination of the developed methodologies.

7. Studies of environmental disasters and long-term regional environmental changes have consistently found that the overwhelming proportion of ecological damage and human loss is highly concentrated in vulnerable ecosystems and communities, especially ethnic minority communities. Therefore, identifying the regions and peoples at greatest risk from human-induced changes and natural variation, and assessing the sources and causes of their vulnerability, will help promote more sustainable development. Accordingly, the hotspot approach was carried out by the first phase of the SEF through five identified priority hotspots in the GMS. However, as one of the rich and diverse natural resource bases in the world, the growth of trade and investment flows and the accelerating development of energy and transportation resources in the GMS have led to the characterization of the entire subregion as the new frontier of Asian economic growth. Thus, it is obvious that the development of the SEF needs to be expanded beyond hotspots to the entire subregion. Based on the recommendations and lessons learned from the first phase of the SEF, the second phase will be aimed at facilitating decision making, first, by creating a data warehouse, which will structure and organize the relevant data and information in the national and subregional levels in order to make it readily accessible to decision makers; second, by providing performance assessment methodologies; and third, by establishing a framework and platform through which new knowledge will constantly be added to the existing databases.

### III. THE TECHNICAL ASSISTANCE

#### A. Purpose and Output

8. The goal of the technical assistance (TA) is to promote sustainable development in the GMS through the creation of national and subregional environmental performance assessment systems in the GMS countries, and development of national and subregional capacities for implementing this assessment. The primary purposes of the TA are to facilitate at the national and subregional levels (i) informed decision making through better understanding of environmental conditions, trends, and impacts; (ii) effective and efficient national environmental program management and improved public accountability for results; and (iii) reporting of national, subregional, and international environmental information and performance assessment on environmental issues of regional and global importance. The TA will also facilitate analysis of the development effectiveness and performance-based lending criteria of aid organizations through the creation of systems on environmental indicators and performance assessments and the development of local capacity for carrying out the performance assessments. The framework summarizing the objectives, goals, scope, inputs, outputs, and performance targets of the TA is given in Appendix 1.

#### B. Methodology and Key Activities

9. **Activity 1.** Development of prototypes of (i) a set of core indicators, (ii) a database, and (iii) technical guidelines. A generic set of core indicators and prototype environmental database for the GMS countries will be prepared to support the performance assessments for sustainable development and global environmental protection. Technical guidelines, supported as appropriate by a set of models, will be prepared for performance assessments and integration of environmental concerns into economic and social policies. These will be used as baselines to be refined for specific purposes during implementation of the individual country-specific and subregional activities. In parallel with the preparation of these tools, technical training in the use of the guidelines will be conducted for GMS staff ultimately responsible for the information collection and analysis.

10. **Activity 2.** Country-specific activities will include (i) needs assessments and gap analyses; (ii) development of indicators, computer models, and databases; and (iii) establishment of national performance assessment systems and implementation of the national assessments. Country-specific needs assessment and gap analysis will be conducted in each participating country to identify essential institutional, technical, and human development needs, taking into account the technical guidelines. Country-specific indicators, computer models, and databases will be prepared in consideration of country-specific priorities. Based on these, country-specific performance assessment systems will be developed, and national performance assessments will be implemented in each participating country.

11. **Activity 3.** Subregional-specific activities will include (i) needs assessment and gap analysis; (ii) development of indicators, computer models, and database; and (iii) establishment of a performance assessment system and implementation of the SEF. Subregional needs assessment and gap analysis will be conducted taking into account the technical guidelines. Subregional indicators, computer models, and the database will be prepared in consideration of subregional priorities. Based on these, a subregional performance assessment system will be developed, and subregional performance assessment will be implemented.

12. The activities will constitute the SEF, for enabling and guiding the harmonization of policy, legal, and administrative frameworks; and coordination of investment programs and development plans. Given that the purview of this framework is subregional or supranational, its

focus is on the range of investments and decisions that will have a cross-boundary impact, either because they are located in more than one country or because their social, environmental, demographic, or economic impacts extend beyond national boundaries. Many adverse impacts of development projects could be avoided by using better and more informed project preparation and selection methods.

13. Building on the above tasks, the SEF will further include (i) the development of a user-friendly and menu-driven general purpose software package that offers decision makers decision support tools and information to help them assess the complex social and environmental impacts of projects and programs; (ii) identification and promotion of such procedures, policies, and actions to ensure cumulative environmental assessments, sharing of information, inventories of plans and projects, and analysis of alternatives; (iii) development as an integral component of the SEF platform, through a regional consultative process of a set of goals for sustainable human development in the region; and (iv) conversion of such goals into region-specific planning assumptions, institution-specific decision guidelines, and explicit recommendations to governments and aid agencies in the form of strategic interventions.

14. **Activity 4.** Dissemination of outcomes will focus on the set of continuous performance assessment indicators, computer models, databases, and model performance assessment systems at the national and subregional levels. To share lessons learned through the projects, subregional as well as regional workshops will be held. Possible follow-up actions are to be discussed, and expansion of similar activities to other countries in the region will be considered. The outcomes of the TA will also be disseminated globally as a good practice, by taking advantage of various international forums and through the Internet.

### **C. Cost Estimates**

15. The total cost of the TA is estimated at \$2.4 million. ADB will provide \$800,000 equivalent on a grant basis from the ADB-funded TA program. The Global Environment Facility will provide \$800,000 of cofinancing on a grant basis.<sup>3</sup> Additional funding of \$500,000 will be provided and administered by the United Nations Environment Programme (UNEP) (\$200,000) and the Institute for Global Environmental Strategies/National Institute for Environmental Studies (IGES/NIES) (\$300,000). The six GMS governments will make in-kind contributions in the form of office space, local travel, remuneration of counterpart professional and support staff, cost of data acquisition, office facilities and utilities, use of available equipment and all data. These contributions are estimated at \$300,000 equivalent in total. Detailed cost estimates are presented in Appendix 2.

### **D. Implementation Arrangements**

16. ADB will be the Executing Agency for the TA. A steering committee for the TA will be established including representatives of the GMS countries, ADB, UNEP, IGES, and NIES, to be chaired by the representative of ADB. Members from the GMS countries will be selected from national organizations participating in the GMS Working Group on Environment, which also will be the implementing agencies for the TA in each country. Steering committee meetings will be held before important subregional and national activities are undertaken either in actual meetings or through teleconferencing. A project monitoring feedback mechanism and regular reporting will facilitate effective implementation of the TA.

17. The TA secretariat will be established at the UNEP Regional Research Center (RRC.AP) in Bangkok. A full-time TA coordinator will be appointed by UNEP-RRC.AP and financed by

<sup>3</sup> Chief Executive Officer and Chair an of GEF endorsed cofinancing of the Project on 26 November 2002.

UNEP. Two full-time administrative/research assistants, financed by the ADB grant, will support the coordinator in carrying out day-to-day TA activities. The activities planned require skills in indicator and database development and performance assessment as well as experience in the region. Thus, the secretariat will consist of international three consultants to be recruited under the TA, plus experts to be seconded by participating organizations such as IGES on a part-time basis. In the meantime, a national coordinating committee in each participating country and an expert group for the TA will be established to coordinate national activities for the TA as well as provide technical support for implementing it. At least three expert group meetings will be organized to review the draft and other findings of the secretariat on the list of draft indicators, framework for database and computer modeling, and guidelines for indicator compilation and performance assessment. The meetings will include experts from the selected countries and representatives of participating organizations as well as subregional organizations such as the Mekong River Commission.

18. Three international consultants to be recruited under the TA should have expertise in (i) integrated economic and environmental development planning, 12 person-months; (ii) environmental policy and management, 6 person-months; and (iii) environmental monitoring and database, 6 person-months. The local consultants from the GMS countries (12 persons in total: 2 from each country) will provide a total of 120 person-months of inputs in the areas of economic and environmental development planning, environmental policy and management, and environmental monitoring and database. Consultants will be recruited in accordance with ADB's *Guidelines on the Use of Consultants* and other arrangements satisfactory to ADB for the engagement of domestic consultants. Consultants will be recruited as individuals or from firms and/or institutions. Office space and basic office equipment will be provided by UNEP-RRC.AP. Computers and software to be used during the TA will be procured by ADB through the TA secretariat in accordance with ADB's *Guidelines for Procurement*. The terms of reference for consulting services are outlined in Appendix 3.

19. The TA will be completed in 3 years, commencing in January 2003 and ending in December 2005. The inception report will be discussed in an inception workshop in the third month after mobilization of the TA coordinator. Quarterly progress reports will be prepared by the TA secretariat, published on the RRC.AP web site, and discussed via the Internet. The interim report summarizing the progress and outlining the continuing work will be discussed in a three-day interim review workshop in May and October of 2004, respectively. The final workshop to discuss the final report will be held in October 2005. To ensure that the TA will be well implemented, ADB, in consultation with UNEP, will monitor and periodically review the progress of its implementation through (i) quarterly progress reports; (ii) a review workshop held every year with participation from the countries, the steering committee organizations, and other potential aid organizations; and (iii) at least three annual review missions, particularly to review the inception, interim, and draft final reports.

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

20. The President, acting under the authority delegated by the Board, has approved (i) ADB administering a portion of technical assistance not exceeding the equivalent of \$800,000, to be financed on a grant basis by the Global Environment Facility; and (ii) ADB providing the balance not exceeding the equivalent of \$800,000 on a grant basis for the National Performance Assessment and Subregional Strategic Environment Framework in the Greater Mekong Subregion, and hereby reports this action to the Board.

## TECHNICAL ASSISTANCE FRAMEWORK

Design Summary	Indicators and Targets	Monitoring Mechanisms	Assumptions and Risks
<b>Goals</b>			
Promotion of sustainable development in GMS through creation of national and subregional environmental performance assessment systems in the GMS countries, and development of national and subregional capacity for implementing the environmental performance assessment	Development, amendment , and implementation of national and subregional plans and programs as well as individual projects in line with sustainable development	Policy dialogue with national governments and GMS-WGE	Consensus and commitment of countries in GMS to develop, amend, and implement their plans, programs, and projects based on the environmental performance assessment, and they maintain their capacity
<b>Purposes</b>			
1. Informed decision making through better understanding of environmental conditions, trends, and impacts  2. Effective and efficient national and subregional environmental program management and improved public accountability for results	Development, amendment, and implementation of national and subregional plans and programs as well as projects	Policy dialogue with national governments and GMS-WGE, review the draft regional CSP	National governments and GMS-WGE develop, amend, and implement their plans, programs and projects based on the environmental performance assessment.
3. Support of national, subregional, and international demand for environmental information and performance assessment on issues of regional and global importance	Submission of improved reports based on the environmental performance assessment	Evaluation of national, subregional, and international mechanisms on the reports, such as SOE, AEO, and GEO	National governments prepare reports based on the environmental performance assessment.
4. Facilitation of reviewing effectiveness of programs and projects, including those receiving GEF support	Output from the review of identified programs and projects	Evaluation by aid agencies of the review	Projects are identified and reviewed appropriately.
5. Support of performance-based assistance requirements by aid organizations	Utilization of the performance assessment in guiding future development plans	Evaluation of regional CSP, CSPUs	The outcome of the performance assessment fits the requirements of the assistance.
<b>Outputs</b>			
1. Baseline information, and specific information on plans, programs, and projects	Sufficient information is collected.	Expert meetings, review workshops, and interaction between secretariat, participating countries, related organizations, and other stakeholders	Sufficient information is collected, and substantive and substantial discussions made

Design Summary	Indicators and Targets	Monitoring Mechanisms	Assumptions and Risks
2. Measured trends and future projections	Useful trends and projections are shown.		
3. Targets and goals for sustainable human development	Persuasive target and goals are identified.		
4. Guidelines and recommendations to governments, aid agencies, and other stakeholders	Instructive and beneficial guidelines and recommendations are prepared		The governments of GMS countries will use the mechanism and materials produced by the TA.
<b>Activities</b>			
1. Development of generic/prototype (i) set of core indicators, (ii) database, and (iii) technical guidelines	These outputs will be obtained in the first year.	Expert meetings, review workshops, and interaction among secretariat, participating countries, related organizations, and other stakeholders	Strong consensus can be reached on the performance assessment
2. Country-specific (i) needs assessment and gap analysis; (ii) development of indicators, computer models, and database; (iii) establishment of performance assessment system and implementation of the assessment; and (iv) case studies	Outputs on (i) and (ii) will be obtained in the second year, and that of (iii) and (iv) in the second and third year.		Agencies holding information share the information freely.
3. Subregional (i) needs assessment and gap analysis; (ii) development of indicators, computer models, and database; and (iii) establishment of performance assessment system and implementation of the assessment	Output of (i) and (ii) will be obtained in the second year, and that of (iii) in the third year		Active participation of participating countries, related organizations, consultants, and other stakeholders in the activities
4. Dissemination of outcomes	Subregional and regional workshop for the dissemination	Presentation at international forums	Appropriate international forums are identified.
<b>Inputs</b>			
1. Consultants (i) International (ii) Domestic (iii) Travel/per diem	24 person-months (\$480,000) 120 person-months (\$480,000) \$214,000	Project implementation progress reports  TA review missions	Consultants are competent.  Adequate and timely provision of counterpart budget, staff, and facilities
2. Computers and software	\$30,000		
3. Training/seminars/conferences	\$242,000		
4. Research (data collection, etc.)	\$306,000		
5. Secretariat/Counterpart staff/others	\$614,000		
6. Contingencies	\$34,000		

AEO=Asian Environment Outlook, CSP=Country Strategy and Program, CSPU=Country Strategy and Program Update, GEF=Global Environment Facility, GEO=Global Environment Outlook, SOE=state of the environment, TA=technical assistance.

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

Item	Foreign Exchange	Local Currency	Total Cost
<b>A. Financing by ADB</b>			
1. Consultants			
a. Remuneration and Per Diem			
i. International Consultants (12 person-months)	240,000	0.00	240,000
ii. Domestic Consultants (60 person-months)	0.00	240,000	240,000
b. Per Diem			
i. International Consultants	24,000	0.00	24,000
ii. Domestic Consultants	0.00	24,000	24,000
c. International and Local			
i. International Consultants	29,000	0.00	29,000
ii. Domestic Consultants	30,000	0.00	30,000
2. Computers and Software	30,000	0.00	30,000
3. Training, Seminars, and Conferences	50,000	16,000	66,000
4. Data Collection and Quality Check	20,000	10,000	30,000
5. Secretariat			
a. Reporting and Dissemination	20,000	0.00	20,000
b. Communications	20,000	0.00	20,000
c. Interpreter/Translation	30,000	0.00	30,000
6. Contingencies	10,000	7,000	17,000
<b>Subtotal (A)</b>	<b>503,000</b>	<b>297,000</b>	<b>800,000</b>
<b>B. Financing by GEF</b>			
1. Consultants			
a. Remuneration			
i. International consultants (12 person-months)	240,000	0.00	240,000
ii. Domestic Consultants (60 person-months)	0.00	240,000	240,000
b. Per Diem			
i. International Consultants	24,000	0.00	24,000
ii. Domestic Consultants	0.00	24,000	24,000
c. International and Local Travel			
i. International Consultant	29,000	0.00	29,000
ii. Domestic Consultants	30,000	0.00	30,000
2. Training, Seminars, and Conferences	60,000	96,000	156,000
3. Data Collection and Quality Check	20,000	20,000	40,000
4. Secretariat			
a. Reporting and Dissemination	0,000	0.00	0,000
b. Communications	0,000	0.00	0,000
c. Interpreter/Translation	0,000	0.00	0,000
5. Contingencies	10,000	7,000	17,000
<b>Subtotal (B)</b>	<b>413,000</b>	<b>387,000</b>	<b>800,000</b>
<b>C. Financing by UNEP</b>			
1. Counterpart Staff	100,000	0.00	100,000

<b>Item</b>	<b>Foreign Exchange</b>	<b>Local Currency</b>	<b>Total Cost</b>
2. Secretariat (Office Accommodation)	100,000	0.00	100,000
<b>Subtotal (C)</b>	<b>200,000</b>	<b>0.00</b>	<b>200,000</b>
<b>D. Financing by IGES/INES</b>			
1. Counterpart Staff	80,000	0.00	80,000
2. Data Collection and Quality Check	200,000	0.00	200,000
3. Training, Seminar, and Conference	20,000	0.00	20,000
<b>Subtotal (D)</b>	<b>300,000</b>	<b>0.00</b>	<b>300,000</b>
<b>E. Government Financing</b>			
1. Counterpart Staff		120,000	120,000
2. Office Accommodation and Transport		120,000	120,000
3. Data Collection		36,000	36,000
4. Administrative Support	0.00	24,000	24,000
<b>Subtotal (E)</b>	<b>0.00</b>	<b>300,000</b>	<b>300,000</b>
<b>Total</b>	<b>1,476,000</b>	<b>924,000</b>	<b>2,400,000</b>

ADB=Asian Development Bank, GEF=Global Environment Facility, IGES=Institute for Global Environmental Strategies, NIES=National Institute for Environmental Studies of Japan, UNEP=United National Environment Programme.

Source: Asian Development Bank estimates.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. International Consultant on Integrated Economic and Environmental Development Planning

1. The consultant will be recruited for 12 person-months for a period of 3 years, and will be based in Regional Research Center (RRC.AP) of the United Nations Environment Programme (UNEP) in Bangkok. The consultant's tasks will include, but not be limited to, the following:

- (i) Advise on confirmation of and, as necessary, on elaboration or revision of the terms of reference for the other consultants under the TA, with close reference to the TA framework and the schedule of activities detailed in the TA documents. Advise the TA secretariat on the preparation and conclusion of contractual arrangements between the Asian Development Bank and implementing agencies (IAs) for the TA.
- (ii) Review the environmental performance system of several international and relevant organizations including the Organization for Economic Cooperation and Development, World Bank, United Nations Council for Sustainable Development, UNEP, and others as appropriate. Examine and compare the potential use of those systems to develop environmental performance assessment system at the national and subregional levels in the Greater Mekong Subregion (GMS).
- (iii) Review existing subregional plans for social, economic, environmental, and natural resource development in the region; and review environmental laws, regulations, economic and social development plans, and the state of the environment of each GMS country, including major environmental issues currently facing them. Formulate the needs assessment and gap analysis for each GMS country and the subregion.
- (iv) Review the reports prepared by other consultants, formulate a generic set of core indicators and technical guidelines related to the performance assessment, guide the local consultants to formulate country-specific indicators and technical guidelines, and provide training to the people who will be responsible for the implementation of national environmental performance assessment.
- (v) Advise the GMS countries to implement national performance assessment, and formulate the subregional performance assessment report based on the national performance assessment by each GMS country.
- (vi) Develop a user-friendly and menu-driven general purpose software package that provides decision makers with tools and information to help them assess the complex social and environmental impacts of projects and programs.
- (vii) Advise the TA secretariat on arranging the training program, and support the TA coordinator in the preparation of papers for the annual review by ADB, GMS Working Group on Environment, and the steering committee of TA implementation.

## **B. International Consultant on Environmental Policy and Management**

4. The consultant will be recruited for 6 person-months for a period of 1 year, and will be based at UNEP-RRC.AP in Bangkok. The consultant's tasks will include, but not be limited to, the following:

- (i) Review existing subregional plans and policies for environmental protection and natural resources conservation including biodiversity management; and review national environmental laws, and natural resource management regulations. In collaboration with the domestic consultants, analyze the lessons learned and identify gaps between the existing management system and a system necessary for effective management of the environment and natural resources.
- (ii) Review existing national policies and regulations on pollution control and prevention in the region. In collaboration with the domestic consultants, analyze the lessons learned and identify gaps between the existing management system and a system necessary for effective management of pollution control and prevention.
- (iii) In collaboration with the IAs and domestic consultants, formulate generic core indicators and technical guidelines related to the performance assessment of natural resources development and management as well as pollution control and prevention; formulate an appropriate institutional structure on the implementation of performance assessment at the national and subregional levels; formulate an institutional strengthening program to ensure the sustained implementation of performance assessment; and assist the TA secretariat to implement the institutional strengthening and training programs.
- (iv) Prepare, for review by the TA coordinator and the international consultant on integrated economic and environment development planning brief monthly progress notes and an end-of-assignment report providing activity output indicators and making recommendations.

## **C. International Consultant on Environmental Monitoring and Database**

5. The consultant will be recruited for 6 person-months for a period of 1 year, and will be based at UNEP-RRC.AP in Bangkok. The consultant's tasks will include, but not be limited to, the following:

- (i) Review previous state of the environment and the Asian Environment Outlook for the region; carry out detailed consultations and surveys with stakeholders in each of participating countries on data needs, data sources, and data collection activities; and analyze the lessons learned and identify gaps between the existing monitoring system and a system necessary for effective management and performance assessment.
- (ii) Review previous and existing activities in the subregion on environmental information system development such as Subregional Environmental Monitoring and Information System (SEMIS) I and SEMIS II; carry out detailed consultations and surveys with stakeholders in the GMS on data needs, existing data sources, and data collection activities; and analyze the lessons learned and identify gaps

between the existing information system and a system necessary for effective management and utilization.

- (iii) Carry out consultations on the technical establishment of the GMS Environmental Information Database (EID) that will be used for subregional and national environmental performance assessment.
- (iv) Prepare specific technical schemes on the design and establishment of the GMS-EID and national environmental information database (NEID), based on the results of SEMIS I and SEMIS II as well as the consultation and survey conducted earlier.
- (v) Formulate a long-term plan on the management of GMS-EID and NEID, including institutional and financial arrangements in collaboration with IAs and domestic consultants; and assist the TA secretariat in implementing institutional strengthening and training programs.
- (vi) Prepare, for review by the TA coordinator and the international consultant on integrated economic and environment development planning brief monthly progress notes and an end-of-assignment report providing activity output indicators and making recommendations.

#### **D. Domestic Consultants**

6. Consultants from the GMS countries will provide a total of 120 person-months of input to assist and support the international consultants and the TA secretariat in implementation of the TA. Domestic consultants will be selected in accordance with the needs of the TA and the implementation plan. The domestic consultants will be guided by the international consultants and the TA secretariat, and will be based in each of the participating countries. The main tasks of the domestic consultants will include, but not be limited to, the following:

- (i) Review existing national plans for social, economic, environment, and natural resources development; review environmental laws, policies, regulations, and state of the environment, including remaining major environmental issues currently facing the country; and draft a national report on needs assessment and gap analysis.
- (ii) Assist in the development of the generic set of core indicators that will be formulated by the international consultants; and under the guidance of the international consultants and the IA, formulate country-specific indicators and technical guidelines.
- (iii) Build up local contacts and partnerships at both the national and local levels for information collection, production, and distribution; and assist in the development of a national environmental information database.
- (iv) Assist IA and the TA secretariat to implement an institutional strengthening and training program within the country, including consultation meetings.

- (v) Prepare, for review by the IA of the country, the TA coordinator, and the international consultants, brief monthly progress notes and an end-of-assignment report providing activity output indicators and making recommendations.