

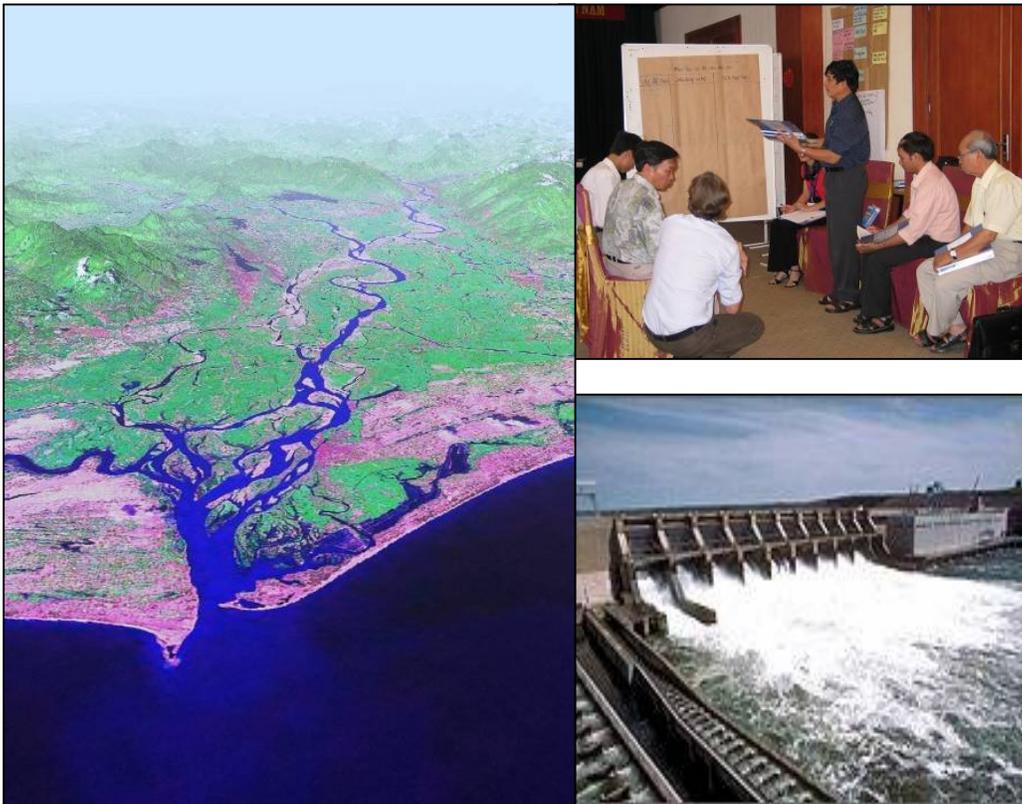
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**GREATER MEKONG
SUBREGION (GMS) CORE
ENVIRONMENT
PROGRAM**

GMS Environment
Operations Centre
Asian Development Bank



[SEA IN THE GMS]

Strategic Environmental Assessment in the GMS
Status report

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This report has been prepared by Bruce Dunn and Jeremy Carew-Reid of ICEM – International Centre for Environmental Management for the GMS Environment Operations Centre, Bangkok, Thailand. The report was commissioned by the GMS EOC following a planning session held to develop Component 1: Environmental Assessment of Economic Corridors and Sectors for the GMS Core Environment Program (9-10 August 2006), in Bangkok, Thailand. During the meeting presentations on the current status of strategic environmental assessment (SEA) were given by country delegates from Cambodia, the People’s Republic of China, Lao People’s Democratic Republic, Myanmar, Thailand and the Socialist Republic of Vietnam and by international organisations involved in SEA. This report provides an expanded summary of those presentations supplemented by a rapid review of country and international SEA initiatives in the GMS. Sincere thanks are given to all participants at the meeting for their ongoing contributions to the report.

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SUMMARY

This Report on the Status of Strategic Environmental Assessment in the Greater Mekong Sub-region has been prepared as a benchmark and guide to the use of SEA in the GMS countries. The report is part of the preparatory phase of the GMS Core Environment Program (CEP) Component 1 which seeks to integrate environmental and social concerns into the development of economic corridors and sectors in the region. The report is based on presentations and discussion by members of the GMS Working Group on Environment and their international partners at a special planning session on the CEP Component 1 in August 2006. It is a briefing paper to the WGE to be regularly updated as SEA systems and capacities in the region evolve. The report guides the identification of program priorities and potential linkages with existing SEA projects and initiatives in GMS countries. A summary of the report's key sections and findings is provided below.

The GMS Economic Cooperation Program

The GMS Economic Cooperation Program (GMS Program) promotes investment in priority sectors of transport, energy, telecommunications, and tourism to maximize the pace of economic growth and development. Three economic corridors are the focus of large transport infrastructure investments to optimize cross border trade and economic “connectivity” between GMS countries. To date, infrastructure projects worth \$3.4 billion have been, or are being, implemented, with more than \$30 billion dollars of investment promoted. These investments have potentially far reaching environmental impacts which need to be considered within development planning processes in the GMS.

The GMS Core Environment Program

The GMS Governments have adopted the Core Environment Program (CEP) to help address those environmental impacts and to provide for environmentally sound and sustainable development in the region. The CEP is a systematic and integrated regional approach to conserve the natural systems of the GMS. It has five inextricably linked components which provide the means to address the immediate and long-term stresses that rapid economic growth would otherwise have on the environment and natural resources.

CEP Component 1

Component 1 of the CEP — Economic Corridors and Sector Environmental Assessment — deals with potential cumulative and multiplier impacts of the many interconnected projects in seven key development sectors and along the three priority economic corridors. Component 1 will be implemented in three phases running over nine years to 2015. Component 1 seeks to integrate environmental and equity considerations into economic development. To achieve that, the Component promotes and supports the use of a number of tools – the most important is Strategic Environmental Assessment (SEA).

Strategic Environmental Assessment

SEA, which includes assessments of cumulative impacts, addresses broad strategic issues usually relating to more than one project and defines approaches for managing them. SEAs follow similar steps to EIA but have much larger boundaries in terms of time, space and subject coverage. SEAs serve as an umbrella level of analysis that feeds more specific EIAs and improves their quality. SEAs can lead to (i) program level and cross sectoral intervention

and mitigation, (ii) institutional adjustments, (iii) procedural and policy innovation, and (iv) adjustment to economic investment options to emphasise sustainability and equity.

In Component 1, a key focus will be developing a regional approach for sustainable development planning. SEA and other integrating tools will be applied through intensive engagement with the main economic sectors and planning bodies which are shaping GMS and national development strategies and plans. Most important for this engagement is the system of working groups of government representatives operating at GMS level including the Working Group on Environment (WGE).

The SEA Status Report

Internationally, SEA is gaining acceptance as an important tool for integrating environmental considerations into strategic planning processes. In the GMS, a number of governments, including the Peoples Republic of China (PRC) and the Socialist Republic of Vietnam (Vietnam) have adopted national systems of SEA. Yet, legal and policy systems, institutional arrangements and human capacities for SEAs of policies, plans, and programs (PPP) across GMS countries are at widely differing levels of development.

For SEA to be accepted and effectively used as a tool for environmental integration across the whole GMS, the status of existing systems and capacities for SEA in each country should be well understood. This will enable Governments and the CEP Component 1 to target key capacity deficiencies and identify priorities for improvement. The need for a GMS SEA status report was identified by WGE members as an important step for the CEP at a planning meeting held in Bangkok to develop CEP Component 1.

There is a paucity of information on SEA systems in GMS countries. This report therefore aims to provide an initial assessment, which will be built on and refined over time through ongoing collaboration with the WGE and country delegates and through more detailed in-country assessments. The Status Report was undertaken as a rapid desk-top assessment. The assessment relied primarily on information presented by six GMS country representative and their international partners at the August 2006 CEP Component 1 planning meeting. This information was supplemented with a review of existing project documents and through requests for further information from country and organisation representatives.

SEA Status in the GMS

Within the GMS, SEA systems are most advanced in the PRC and Vietnam. In these two countries policy commitments for SEA have been included within legal frameworks. The legal framework in each country focuses on EIA/SEA of government plans and programs. The legal frameworks do not extend to environmental assessment of government policies. The legal frameworks and implementation guidance in each country is generally consistent with the OECD guidance on SEA.

Of the two countries, practical SEA experience in the PRC is more advanced, with more than ten pilot projects completed. Vietnam's experience in SEA is more recent, with relatively few pilots undertaken. Over the next year however, experience in SEA in Vietnam will increase significantly with more than a dozen pilot projects planned. These projects include SEAs of national and provincial socio-economic development plans and land use plans and SEAs in the hydropower, agriculture and industry sectors.

Within the other GMS countries – Cambodia, Lao PDR, Myanmar and Thailand – legal frameworks for SEA are yet to be developed and practical experience of SEA is in the earliest stages. Thailand is the only country that has made policy recommendations for the adoption of SEA.

Within Cambodia and Lao PDR, current human and institutional capacity for SEA is severely limited with capacity building efforts focused mainly on strengthening existing EIA systems. One major pilot SEA has been undertaken in Lao PDR for the National Hydropower Plan, with a focus on the Nam Thuen II Hydropower Project.

Environmental assessment procedures are least developed in Myanmar, which has no legal requirements for EIA or SEA. While policy commitment to developing an EIA system was made in Myanmar in 1997, it is yet to be fully implemented, with EIA undertaken only on an *ad hoc* basis. Human and institutional capacity for SEA is therefore severely limited.

Opportunities for linkages with CEP Program 1

Based on the review of SEA in the GMS, a number of opportunities for collaboration and linkage with the CEP have been identified. These include:

1. Emerging Regional Initiatives

- *Development of SEA tools for River Basin Development Planning* – The MRC is developing and testing a number of approaches for using SEA as a tool for basin development planning in the Mekong River Basin. This includes approach to determining the likely environmental impacts of developments within and across sectors. There is an opportunity for the EOC to collaborate with the MRC in developing a sectoral approach to SEA in the GMS through the pilot testing of tools and approaches for river basins.
- *Development of guidelines for transboundary EIA* – In response to a number of issues relating to transboundary impacts associated with national development projects within the Lower Mekong Basin, the MRC has developed an approach to transboundary EIA. Given the strategic level of such considerations, there may be a number of lessons applicable to the development of future protocols for SEA in the GMS.
- *Development of hydropower guidelines and safeguards for the Lower Mekong Basin.* The MRC, WWF and ADB are collaborating in preparing environmental guidelines for hydropower development in the Lower Mekong Basin. In developing the guidelines a series of national SEAs of hydropower developments within river basins in the Lower Mekong are proposed. A clear linkage exists between this proposal and the CEP Component 1 proposal to undertake an SEA of the GMS Energy Strategy and provide support to national level energy sector pilots.

2. National SEA Pilots

Within GMS countries there are a number of pilot SEA projects that can provide useful experiences and methodologies for SEA work in the GMS. Of particular relevance are recent

and ongoing projects focused on regional planning, hydropower, agriculture and transport. These pilots include:

- Preliminary SEA of the Great Western Development Strategy in PRC (SEPA / World Bank)
- SEA of the Dali-Liang Railway in Yunnan Province, PRC (ADB).
- SEA of the National Hydropower Plan with a focus on Biodiversity, Vietnam (MONRE / World Bank)
- Pilot SEA of the Hydropower Plan in the Vu Gia-Thu Bon River Basin, Vietnam (MONRE / ADB).
- SEA of Nam Thuen II Hydropower Project in Lao PDR (STEA / World Bank)
- SEA of the Agriculture Sector Development Plan in Quang Nam Province in Vietnam (MONRE / SIDA / SEMLA)

Methodologies and outcomes from these projects should be evaluated and lessons learned reported to the WGE and incorporated into the Component 1 program.

3. Existing SEA Training Initiatives in the GMS

Within the GMS, a number of training initiatives have the potential to be further developed and adapted for wider application in sub-region. These include:

- *The GTZ / InWEnt SEA Training Manual*: This manual has been developed based on the Harvard Case Study Method and the OECD Guidance on SEA. The training manual can be tailored for specific countries and sectors through the adaptation of teaching slides and the development of local case studies based on pilot project experience. The training manual is being trailed in Vietnam and Indonesia and could provide a useful format for future training in the GMS.
- *The World Bank SEA Distance Learning Package*: This course was developed jointly by the World Bank, China State Environmental Protection Administration (SEPA) and the International Association for Impact Assessment (IAIA). The course provides PowerPoint presentations and video lectures and is accessible online. The materials provided by the program are currently in English and Chinese and could be translated into other languages for broader use in the GMS.

4. Existing SEA Communication Networks

Professional networking and communication forums will need to be encouraged within and between countries to develop SEA capacity in the GMS. An SEA-Asia e-discussion group is in place in response to this need but is not well known or widely used. The list could be more broadly promoted and used to share experiences from SEA activities in the GMS.

5. Recommended linkages with the GMS CEP Component 1

The final section of this report outlines the recommended activities of the CEP Component 1 to build on and support existing initiatives and to strengthen capacity in SEA to be reflected in the Component's program document and operational plan for phase 1.

1 INTRODUCTION

This report provides a rapid review of the status of development of Strategic Environmental Assessment (SEA) capacity in the GMS countries. It is prepared as a briefing to the GMS Working Group on Environment to guide and focus implementation of the WGE's Core Environment Program. The report provides an initial benchmark against which future status reports will be prepared on a regular basis. It identifies the fields where progress is being made in some of the GMS countries, identifies the gaps and points to specific interventions needed at regional level to promote transboundary collaboration and harmonisation in the use of SEA.

1.1 BACKGROUND ON THE GMS CEP

The GMS Economic Cooperation Program (GMS Program) promotes investment in priority infrastructure sectors of transport, energy, telecommunications, and tourism to maximize the pace of economic growth and development in the subregion. Three economic corridors are the focus of transport and infrastructure investments to create cross border trade opportunities. To date, infrastructure projects worth \$3.4 billion have been, or are being, implemented. A development matrix comprising over 300 projects and up to \$30 billion of investment is being promoted to foster further massive development in the subregion, with potentially extensive environmental impacts.

To address these environmental impacts and to promote environmentally sound and sustainable development in the GMS, the six GMS Governments approved a Core Environment Program (CEP) and the establishment of the Environment Operations Center (EOC), to support CEP implementation and act as secretariat to the GMS Working Group on Environment (WGE). The CEP is a systematic and integrated regional approach to conserve the natural systems of the GMS for the ecosystem goods and services they provide. It has five inextricably linked components which provide the means to address the immediate and long-term stresses that rapid economic growth would otherwise have on the environment and natural resources of the sub-region.

1.2 CEP COMPONENT 1

1.2.1 OVERVIEW AND OBJECTIVES

Component 1 of the CEP — Economic Corridors and Sector Environmental Assessment — deals with potential cumulative and multiplier impacts of the many interconnected projects in seven key development sectors and along three priority economic corridors¹ on sustainability, critical ecosystems and biodiversity, and the poor and disadvantaged. It is to be implemented in three phases running over nine years to 2015. Component 1 seeks to integrate environmental and equity considerations into economic development. To achieve that, the Component promotes and supports the use of a number of tools – the most important is SEA, which itself is a family of tools to ensure that economic forces are kept in balance with the capacity of natural and social systems to sustain them.

¹ The corridors involve five transport routes crossing and linking the GMS countries in various combinations. They are the focus of major transport system projects and both subregional and bilateral agreements on trade, power interconnection and generation, tourism, and telecommunications.

1.2.2 ROLE OF SEA IN THE CEP

Many policies, programs and plans have broad reaching environmental implications that cannot be adequately or efficiently captured in the context of project-specific environmental assessment. Strategic Environmental Assessment, which includes assessments of cumulative impacts, addresses the broader strategic issues usually relating to more than one project and defines approaches for managing them. SEAs follow similar steps to EIA but have much larger boundaries in terms of time, space and subject coverage. SEAs serve as an umbrella level of analysis that feeds more specific EIAs and improves their quality. SEAs can lead to (i) program level and cross sectoral intervention and mitigation, (ii) institutional adjustments, (iii) procedural and policy innovation, and (iv) adjustment to economic investment options to emphasise sustainability and equity.

In Component 1, a key focus of the program will be in developing a regional approach for sustainable development planning. SEA and other integrating tools will be applied through intensive engagement with the main economic sectors and planning bodies that are shaping GMS and national development strategies and plans. Most important for this engagement is the system of working groups of government representatives operating at GMS level.

1.2.3 ROLE OF WGE

The CEP is the operational program of the WGE. The WGE is the centre piece for action at the GMS level, with the national environment agencies and their economic planning counterparts the main partners for harnessing inter-sectoral involvement at country and local level. Component 1 aims to strengthen the WGE as a proactive and influential GMS body. It aims to strengthen the status and roles of the national environment agencies in mainstream economic development. The WGE members will be actively involved in all sub-components including the design and field implementation of the SEAs of economic corridors and sectors. Members of the GMS sector WGs will also be involved through the national inter-sectoral task teams, as will dedicated task teams for pilot SEAs.

1.3 RATIONALE AND OBJECTIVES OF THE STATUS REPORT

1.3.1 RATIONALE

Internationally, SEA is gaining acceptance as an important tool for integrating environmental considerations into policies, plans and programs. The development assistance community is also adopting SEA polices and procedures guided by the OCED Development Assistance Committee.

In the GMS, the Peoples Republic of China (PRC) and the Socialist Republic of Vietnam (Vietnam) have adopted national systems of SEA. However, legal and policy frameworks, institutional arrangements and human capacities for SEA across GMS countries are at widely differing levels of development.

For SEA to be accepted and effectively used as a tool for environmental integration into strategic planning processes across the whole of the GMS, the status of existing systems and capacities for SEA in each country need to be well understood. This will enable the CEP Component 1 to target key capacity deficiencies and identify important entry points for SEAs of GMS development sectors and corridors. A GMS SEA status report was identified as an

important step for the CEP in August 2006 by WGE members at a planning meeting held in Bangkok to develop Component 1. At this meeting an initial rapid assessment of SEA status in the GMS was conducted through presentations and facilitated discussions between country delegates. At the conclusion of the meeting it was agreed that the outputs of the initial assessment should be supplemented with further information and developed into a full status report.

1.3.2 OBJECTIVES

Building on the outcomes of the initial rapid assessment of SEA status undertaken in August 2006, this Status Report aims to assess the current status of national systems, policies, institutional arrangements and human capacities for SEA in GMS countries. The report has three main objectives:

1. To rapidly identify institutional and human capacity building needs for SEA in the GMS;
2. To assess opportunities for the CEP to link with existing national SEA programs and projects; and,
3. To establish priorities for the first phase of the CEP Component 1.

There is little information on SEA systems in GMS countries. The report therefore aims to provide an initial assessment, which will be built on and refined over time through ongoing collaboration within the WGE and contributions from country delegates and through more detailed in-country assessments.

1.4 METHODOLOGY FOR THE STATUS REPORTS

This Status Report on SEA capacity development in GMS countries was undertaken as a rapid desk-top assessment. The assessment relied primarily on information presented by six GMS country representative and their international partners at the August 2006 CEP Component 1 planning meeting. This information was supplemented with a review of project and program documents and through requests for further information from country the representatives.

Due to rapid nature of the assessment, the status report may contain gaps and areas of incomplete knowledge. This report is therefore intended as an initial review of the current status of SEA, and will be developed further over time as more detailed country analyses and capacity needs assessments are undertaken.

2 SEA AS A DEVELOPMENT PLANNING TOOL

2.1 DEFINITION OF SEA

The OECD DAC Guidance on strategic environmental assessment uses the term SEA to describe *analytical and participatory approaches that aim to integrate environmental considerations into policies, plans and programs and evaluate the inter linkages with economic and social considerations.*² The purpose of SEA is to ensure that environmental

² DAC Network on Environment and Development Cooperation, 2006, *Good practice guidance on applying strategic environmental assessment (SEA) in development cooperation*, Third Draft, note by the delegation of the United Kingdom and the UNDP, meeting on 16 February 2006.

considerations and alternatives are addressed as early as possible in the planning process, on a par with economic and social factors.³

In general, the term SEA is used exclusively for assessments of policies, plans and programs (PPPs). PPPs are 'strategic' in that they determine the general direction or approach to be followed towards broad policy goals (Box 1). In contrast, the term "environmental impact assessment" (EIA) is used for assessments of specific projects.

One of the advantages of SEA is that it introduces environmental considerations into decision making early, before project location and scale decisions have been made. SEA also allows decision makers to focus on the environmental effects of strategic choices, before specific projects are considered. Thus, compared to a project-level EIA, an SEA can consider a broader range of alternative proposals and mitigation measures.⁴

Box 1: Defining policies, plans and programmes (PPPs)

Policy: A general course of action or proposed overall direction that a government is or will be pursuing and that guides on-going decision-making.

Plan: A purposeful forward looking strategy or design, often with coordinated priorities, options and measures that elaborate and implement policy.

Programme: A coherent, organised agenda or schedule of commitments, proposals, instruments and /or activities that elaborate and implement policy.

Source: Sadler and Verheem (1996).

The scope of SEA is much broader than project level EIAs and is not restricted to consideration of environmental effects alone. Implementation measures associated with policies and programs often cause direct economic and social effects. These economic and social effects often cause indirect environmental effects. In addition to direct and indirect effects, SEAs should consider "cumulative impacts;" i.e., impacts on the environment that result when the effects of implementing the proposal are added to the effects of other past, present and reasonably foreseeable future actions. Cumulative impacts are important because impacts of individual projects may be minor when considered in isolation, but significant when the projects are viewed collectively.⁵

2.2 SEA METHODS

SEA can be seen as a family of approaches using a variety of tools for environmental and cumulative impact assessment of strategic level policies, plans and programs. Legal frameworks for SEA, often adapted from EIA procedures, have been adopted in a growing number of countries. In Europe, the acceptance of SEA as an important tool for promoting sustainable development has led to adoption of an SEA Directive in 2001 and SEA Protocol to the UN Economic Commission for Europe Convention on EIA in a Transboundary Context (2003). Both instruments prescribe an EIA-based procedure for SEA that draws heavily on

³ Sadler, B. and R. Verheem, 1996, Strategic Environmental Assessment: Status, Challenges and Future Directions, Ministry of Housing, Spatial Planning and the Environment, The Netherlands.

⁴ ADB (2003) Environmental Assessment Guidelines, Asian development Bank, Manila.

⁵ ADB (2003) Environmental Assessment Guidelines, Asian development Bank, Manila.

the earlier European EIA Directive (1997). Many observers expect the SEA Directive and the SEA Protocol to become international reference standards for SEA and over time the Protocol may become a catalyst for other regions to develop their own multilateral SEA frameworks.⁶

Methodologies for SEA are often a systematic process involving several key stages:

1. *Scoping*: identifying relevant environmental and socio-economic issues for consideration in the SEA and key stakeholders
2. *Establishing the baseline*: establishing the current state of the environment and socio-economic conditions and trends and their likely evolution in the current development context (ie without the implementation of the focal PPP)
3. *Assessment of impacts of the PPP*: assessment of positive, negative and cumulative impacts of the PPP on the environmental baseline.
4. *Environmental management and monitoring*: developing environmental management and monitoring systems for the implementation of the PPP including terms of reference for future EIAs triggered by the PPP.
5. *Decision support and reporting*: providing early and effective decision support to the planning and decision making process, particularly regarding environmental mitigation measures and development opportunities and alternatives.

For each stage in SEA, a variety of tools may be applied depending on a number of key factors including the availability of data, level of definition of the PPP, knowledge of direct and indirect impacts and available time and budget for the SEA.

SEA can be undertaken as either a rapid or detailed assessment. Within a rapid assessment the focus is on identifying key issues and impacts at a broad level to provide early identification of strategic environmental issues and impacts. For a detailed assessment process, which is more data, time and cost intensive, in-depth assessment of issues, scenarios, impacts and alternatives is undertaken. A broader range of tools may also be used when needed and appropriate, such as modelling, multi-criteria and economic valuation. Between the two extremes of rapid and detailed assessments, a continuum of more or less intensive approaches is possible. SEAs should be designed based on:

1. Suitability to the required planning context, time frame, and institutional capacity;
2. Data availability and reliability;
3. Level of PPP focus;
4. Needs and requirements for stakeholder participation and engagement;
5. Complexity of issues and the range potential development scenarios to be considered;
6. Need for consideration of broader social and economic dimensions; and
7. Budget and time constraints.

2.3 WHY IS SEA IMPORTANT IN THE GMS?

Within the GMS, many large scale investments are being promoted to foster further development in the subregion, with potentially serious environmental impacts. Of particular

⁶ Dalal-Clayton, B. and Sadler, B. (2005) *Strategic Environmental Assessment: A Sourcebook and Reference Guide to International Experience*. Earthscan, London.

concern are potential cumulative and multiplier impacts of the many interconnected projects in seven development sectors and along three priority economic corridors.

From a sustainable development perspective, many policies, programs and plans for GMS development have broad reaching environmental implications that cannot be adequately or efficiently captured in the context of project-specific environmental assessment. SEA is therefore an essential tool for GMS countries to assess cumulative impacts and addresses the broader strategic issues relating to more than one project, especially those with transboundary effects.

3 PRIORITY AREAS FOR SEA FOCUS IN THE GMS CEP PROGRAM

Over the duration of the CEP Component 1 (2006-2015), SEAs will be carried out for the three GMS economic corridors (Figure 1) and seven key development sectors (Box 2).

The economic corridors and sectors have been selected as targets for SEA for several reasons:

1. The economic corridors are the focus of large targeted investment strategies, which include major transport system projects and bilateral agreements on trade, power interconnection and generation, tourism, agriculture, and telecommunications. Interconnected projects along entire corridors may as a result have cumulative and multiplier impacts on: sustainability; critical ecosystems and biodiversity; and the poor and disadvantaged. These impacts are likely to be significant and will require an integrated approach to management. Corridor-wide SEAs are therefore needed as a basis for shaping and guiding development and for setting the context for more detailed environmental assessment.
2. The GMS development program is organized largely on a sectoral basis with a significant proportion of the investment directed into the subregion focused on sector developments. Agriculture and natural resources, energy, industry and trade, tourism, transportation, and telecommunications are the most important sectors within national planning frameworks and also have the clearest linkages to the environment.

Box 2: Priority focal areas for SEA in the GMS CEP Program

A. Economic Corridors

1. North-South Economic Corridor
 - Western Arm (Kunming-Chiang Rai- Bangkok)
 - Eastern Arm (Kunming-Hanoi-Haiphong)
 - Eastern Extension (Kunming-Nanning-Hanoi-Haiphong)
2. East-West Economic Corridor
 - Mawlamyine (Myanmar) – Danang (Viet Nam)
3. Southern Economic Corridor
 - Northern Arm (Bangkok – Quy Nhon)
 - Southern Coastal Corridor (Bangkok-Phnom Penh-Ho-Chi Minh City)

B. Economic Sectors

1. Energy: hydro-electricity, oil/gas, transmission
2. Transport: roads, railways, airports, ports
3. Tourism: infrastructure development, maintenance/enhancement of “product”
4. Agriculture: irrigation, upland land management
5. Forestry: logging, plantation, illegal trade
6. Fisheries: commercial wild harvest, aquaculture
7. Water: flood management, infrastructure, extraction, navigation

In addition to specific corridor and sector SEAs, priority will be given to capacity building for SEA by assisting GMS countries to develop SEA systems, institutional arrangements, and human capacity. Capacity building is seen as a cross cutting theme for effective corridor and sector SEAs.

Component 1 will also seek to influence the content of strategies and plans that help shape the GMS sector and corridor development planning process. This will be achieved by promoting innovation in policy outcomes and planning procedures, as well as harmonization of environmental assessment procedures for SEA across the subregion.

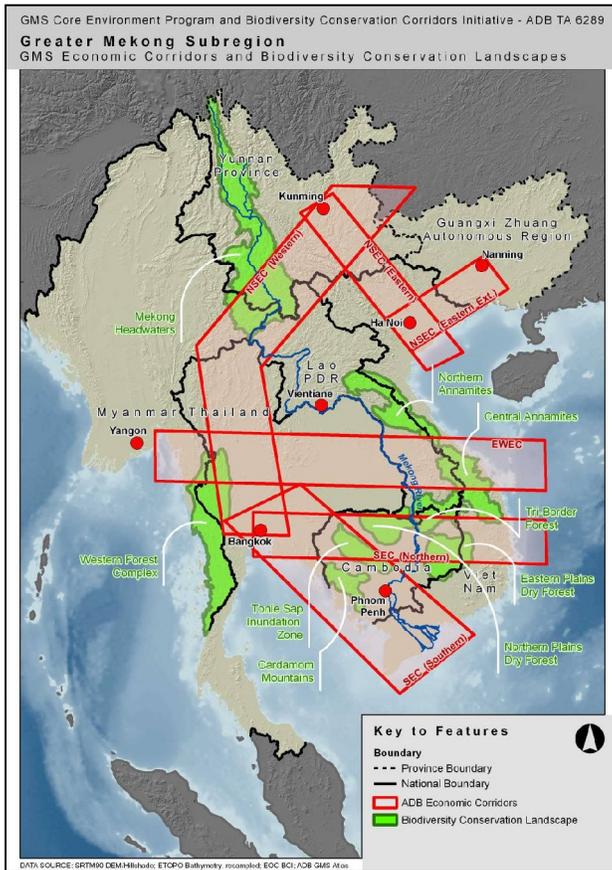


Figure 1: GMS Economic Corridors

4 STATUS OF SEA DEVELOPMENT IN THE GMS

4.1 SEA INITIATIVES AT REGION LEVEL

4.1.1 USE OF SEA IN ADB OPERATIONS

ADB is seeking to encourage developing member countries (DMCs) to adopt SEA as an approach for assessing national development strategies and policies to ensure better integration of environment into policy making and program formulation.

Within ADB operations, SEA is used as a tool for environmental assessment of program and sector loans. For program loans, SEA can be used to help prepare the matrix of environmental impacts of policy and institutional actions, mitigation measures, and the institutional basis for implementing mitigation measures and monitoring program. It can also be used to review environmental sustainability objectives of the program and propose a set of criteria, targets or indicators for evaluating the effects of the loan⁷.

For sector loans, SEA can help with the cumulative impact assessment of all projects envisioned as a part of the loan. It can also enhance the efficiency of subproject-level initial environmental examinations (IEEs), by avoiding the need to redo analyses for issues covered adequately in an SEA for the entire sector. The assessment of subprojects can therefore concentrate on the site-specific impacts of the subproject⁸.

4.1.2 USE OF SEA BY MRC

Another important regional body is the Mekong River Commission (MRC). The new MRC was formed in 1995 when Cambodia, Lao PDR, Thailand and Viet Nam signed The Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin on joint management of their shared water resources and development of the economic potential of the river. The MRC serves its member states by supporting decisions and promoting action on sustainable development and poverty alleviation as a contribution to the UN Millennium Development Goals. In 2002, China and Myanmar became “Dialogue Partners” of the MRC (MRC, 2006). The MRC has an important role in promoting regional approaches to integrating environmental considerations into development planning in the Mekong River Basin. It is a key institutional partner for the EOC in implementing the CEP.

There are a number of emerging regional initiatives involving MRC with relevance to the CEP Component 1 program. These include:

1. *MRC: Development of SEA tools for Basin Development Planning* – The MRC is currently developing and testing a number of approaches for using SEA as a tool for basin development planning in the Mekong River Basin. The current approach envisages SEA operating on two parallel levels: (i) Level 1 – an approach to determine likely environmental impacts of developments within and across sectors; and (ii) Level 2 – an approach for screening individual proposals for projects and programs within sectors (Waters, 2006). The MRC’s approach for Level 2 SEAs is being tested, while the approach for Level 1 SEAs is yet to be implemented. There is therefore an opportunity for the CEP to collaborate with the MRC in developing a sectoral approach to SEA in the GMS through the pilot testing of tools and approaches.
2. *MRC – Development of guidelines for transboundary EIA* – In response to a number of issues relating to transboundary impacts associated with national development projects

⁷ ADB (2003) Environmental Assessment Guidelines, Asian development Bank, Manila.

⁸ ADB (2003) Environmental Assessment Guidelines, Asian development Bank, Manila.

within the Lower Mekong Basin, MRC has developed an approach to transboundary EIA. Given the strategic level of such considerations, there may be a number of lessons that applicable to the development of future protocols for SEA in the GMS.

3. *MRC / WWF / ADB – Development of hydropower guidelines and safeguards for the Lower Mekong Basin.* The MRC, WWF and ADB are currently collaborating to develop consistent approaches to hydropower development in the Lower Mekong Basin. It is envisioned that such guidelines would ultimately be adopted by Lower Mekong country governments. In developing the guidelines it is proposed to undertake a series of national SEAs of hydropower developments within river basins in the Lower Mekong. Through the experiences accumulated in these pilots, guidelines would be developed. A clear linkage exists between this proposal and the CEP Component 1 proposal to undertake an SEA of the GMS Energy Strategy and provide support to national level energy sector pilots.

4.1.3 WORLD BANK SEA DISTANCE LEARNING PACKAGE

World Bank's SEA Distance Learning Course was developed jointly by the World Bank, China State Environmental Protection Administration (SEPA) and the International Association for Impact Assessment (IAIA) in collaboration with other local and international institutes. The objectives of the course are to: (i) raise decision makers' awareness about SEA and its importance, (ii) enhance the knowledge and skills of practitioners for SEA preparation, (iii) introduce latest international and domestic SEA experiences and good practices, and (iv) foster partnerships with and strengthen the capacity of relevant government agencies and training institutes in SEA training. PowerPoint presentations and video lectures are accessible online.⁹ The materials provided by the program are currently in English and Chinese and could potentially be translated into other languages for broader use in the GMS.

⁹ <http://info.worldbank.org/etools/docs/library/107861/sea/sea/index.html>

5 COUNTRY STATUS REPORTS

Presented below are SEA status reports for each of the six GMS countries: Cambodia; PR China; Lao PDR, Myanmar, Thailand, and Vietnam. The reports, which are presented in alphabetical order, consider the following issues:

1. *Policy commitments to SEA*, including opportunities and impediments for the development of SEA frameworks and systems.
2. *Legal and regulatory frameworks for SEA* including the status of existing and proposed systems.
3. *Human and institutional capacity-building status* including: training systems and resources; SEA guidance documentation (general and sectoral); institutional arrangements; and SEA networks (communications, information dissemination, professional networks, web-sites etc.)
4. *Pilot projects* – including a brief overview of selected past and proposed future projects with relevance to the CEP Component 1.

Following the country status reports is a brief review of a number of regional initiatives that are currently being undertaken with respect to SEA.

5.1 CAMBODIA

5.1.1 POLICY COMMITMENTS

The Ministry of Environment (MOE) in Cambodia has recently developed a Strategic Plan to 2008 (2004). This plan provided commitment to developing new environmental legislation, strengthening procedures for project level EIA and the monitoring of projects (Chanrithy, 2006). At this stage there have been no clear commitments to the development of SEA systems or other forms of strategic level assessments of PPPs.

5.1.2 LEGAL AND REGULATORY FRAMEWORKS

Cambodia's Constitution lays the foundation for the elaboration of subsequent laws related to natural resource and environmental management. In particular, Article 59 states that: "the State shall protect the environment and balance of abundant natural resources and establish a precise plan of management for land, water, air, wind, geology, ecological systems, mines, energy, petrol and gas, rock and sand, gems, forests and forestry products, wildlife, fish and aquatic resources" (Chanrithy, 2006).

The *Law on Environmental Protection and Natural Resource Management*, 1996 (LEPNRM) provides a framework for governing environmental protection and natural-resources management. It requires the Royal Government to prepare national and the regional environmental plans and sub-decrees concerning a wide range of environmental issues, including environmental impact assessments, pollution prevention and control, public participation, and access to information (World Bank, 2006).

In 1999 a revised *EIA Sub-Decree* was issued requiring EIAs to be undertaken for various kinds and scales of projects including projects and investments submitted to the Council of Development of Cambodia (CDC) for approval. Implementation is overseen by the

Department of EIA Review within the Ministry of Environment (World Bank, 2006). The *EIA Sub-Decree* does not however extend to environmental assessment of PPPs.

5.1.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

Within Cambodia, environmental management falls under the responsibility of the Secretary of State for the Environment (SSE), which was established in 1993 and the Ministry of Environment, which contains a Department of EIA Review. While MOE has in recent years improved staff capacity for EIA management, there is at present no capacity for undertaking SEAs (World Bank, 2006). There are also no guidelines or frameworks for developing an SEA system. At the time of preparing this status report, it remains unclear the extent to which SEA concepts have been introduced to Cambodia through donor supported training programs. It is however likely that the extent of training has been limited and given the lack of policy and legal commitments to SEA in Cambodia. It is therefore recommended that any initial capacity building initiatives focus on high level awareness raising regarding the potential benefits of SEA. Such programs could be integrated within the MOE Action Plan for 2008, which aims to increase environmental awareness and human resource development for environmental management.

5.1.4 PILOT PROJECTS

To date, there have been no SEA pilot projects focusing on PPPs in Cambodia. Future capacity building would therefore be enhanced through practical first hand experience in SEA. For the GMS CEP program, entry points for SEA pilots could include sector strategies (energy, tourism or transport) or the National Strategic Development Plan 2006-2010 (NSDP), which provides a comprehensive framework for development through prioritising strategic goals and critical macro-targets to be achieved by 2010.

5.1.5 COUNTRY STATUS SUMMARY

There are currently no legal or policy commitments to SEA development in Cambodia. Willingness by the Royal Government to adopt SEA is also unclear. Facilitating interest and awareness regarding the use and benefits of SEA in Cambodia should therefore be considered an initial priority. This could best be facilitated through a program of introductory training and awareness raising and through practical demonstration of the SEA process within pilot case studies. Successful demonstration pilots within other GMS countries should also be used to promote the concept of SEA and may provide useful experiences that may be adapted to the planning context in Cambodia. For pilot projects to be successfully implemented, institutional and human capacities for SEA in Cambodia must also be strengthened. An initial starting point would be within the MOE, which is responsible for overall environmental management in the country. Capacity building should then be extended to sector planning agencies by integrating their involvement through pilot projects.

5.2 PEOPLE'S REPUBLIC OF CHINA (PRC)

5.2.1 POLICY COMMITMENTS

Former President Jiang Zemin indicated in 1996 at the Fourth National Environmental Protection Meeting that *"it is necessary to establish a mechanism of integration of*

environment and development in decision-making (IEDD) when formulating significant economic and social development policies, and planning major resources exploitation and making important project decisions”

In addition, there are a number of documents and regulations that stress the importance of introducing the concept of SEA into administrative decision-making processes including:

1. *21 Century Agenda of China: White Book of China’s Population, Environment and Development (1994)*, which states “Establishment of Sustainable Development Impact Assessment System should be stipulated in law making. When government departments formulate proposals of regulations, policies, plans, programs and projects, the evaluation of their impacts on sustainable development should be implemented”.
2. *21 Century Agenda of China’s Environmental Protection (1995)*, which states that the “State Environmental Protection Administration (SEPA) and local Environmental Protection Bureaus (EPB) shall actively participate in [the] decision-making process of formulating important technical and economic policy making and the IEDD of national and regional development.”
3. *The State Council’s Decision on Some Environmental Protection Problems (1996)* which states that “When making momentous decisions on social and economic development, including: regional and resources development programs, urban and industrial planning, adjustments of industrial structure and productivity, integrated justification of economic, social and environmental benefits and costs shall be made”

5.2.2 LEGAL AND REGULATORY FRAMEWORKS

The PRC was one of the earliest developing countries to introduce EIA requirements in 1979 (Li Wei, 2006). These requirements focused on EIA of projects and did not extend to PPPs. An SEA requirement has however been recently introduced, with the adoption of the *Environmental Impact Assessment Law of the People’s Republic of China, 2002* (EIA Law), which became effective in September 2003. Although the EIA Law does not modify the existing EIA system in a radical way, the new law does make mandatory an environmental assessment beyond EIA for government plans and programs. The idea of extending SEA application to policies, which was included in the earlier drafts of the law, was rejected due to objections from concerned government departments (Li Wei, 2006).

The scope of the EIA Law extends to:

1. Land use planning (LUP);
2. Development of economic zones, watersheds and marine areas; and
3. Ten “special” sector plans including: industry, agriculture, animal husbandry, forestry, energy development, water conservation, traffic, city construction, tourism, and natural resources.

Under the EIA Law, SEA should be undertaken as an integrated part of the planning process. The SEA should include a statement and analysis of the current environmental situation, forecast and assessment on possible environmental and cumulative impacts caused after the plan is implemented, and countermeasures recommended for preventing or mitigating any adverse environmental impacts (SHEN Zhen-yao *et al.*, 2004).

The EIA law also encourages public participation and some forms of SEA are subject to comments by not only experts and concerned government agencies, but also the public. For example, a plan which may cause an adverse impact on the environment directly involving citizen's environmental rights and interests, must invite public comments (Li Wei, 2006).

Implementation of the EIA Law is administered by the Department of Supervision and Management within SEPA. This department is in charge of overseeing and coordinating EIA nationwide. The Appraisal Centre for Environment and Engineering (ACEE) is responsible for conducting technical reviews, research, and training for licensed agencies. Responsibility for approval of plans and projects under the EIA Law is jurisdictional, with Environmental Protection Bureaus (EPBs) at national, provincial, and county levels having approval powers (Li Wei, 2006).

5.2.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

To support the implementation of SEAs of plans and programs under the EIA Law, draft technical guidelines were developed in 2004 and are currently undergoing a trial period (SHEN Zhen-yao *et al.*, 2004). Up to this point there had been few SEAs conducted by state agencies in the PRC and recognition, understanding and practical experience was limited. To improve this situations, SEPA released in 2006 the “*Notification of Developing the First Experimental Works of SEA Nationwide*” (document No.[2006]-57). This document aims to address a number of problems in the process of promoting SEA in China and seeks to:

1. Enhance recognition and understanding of SEA;
2. Improve the working system for SEA;
3. Enrich practical experience in SEA; and
4. Building technical capacity for SEA project implementation.

Key target groups for SEA capacity building are SEPA, EPBs and sectoral agencies responsible for the special plans identified in the EIA Law, namely: industry, agriculture, animal husbandry, forestry, energy development, water conservation, traffic, city construction, tourism, and natural resources.

SEA capacity is weakest with EPBs, particularly at provincial levels. For example, in Yunnan Province, SIDA (2006) identified the following SEA capacity limitations:

1. Lack of awareness and deep understanding of the concept of EIA/SEA application in the planning process at provincial, prefecture and county level, both at government and NGO levels;
2. Lack of familiarity of recently developed guidelines and laws on EIA/SEA;
3. Lack of information and feed back from previous EIA application experiences;
4. Lack of comprehensive understanding on the application of EIA/SEA by NGOs/other stakeholders;
5. Lack of involvement of other stakeholders in the implementation of EIA/SEA;
6. Lack of communication and exchange between government organs and other stakeholders

Through the “*Experimental Works Program*” SEPA aims to improve these capacity gaps through the development of SEA guidance resources, training and pilot projects. This work is being supported by a number of donor programs and through inputs from academic

institutes such as the Beijing Normal University, which has a number of practitioners with good experience in SEA. A summary of recent capacity building activities is listed in Table 1.

Table 1: SEA Capacity Building Activities in the PRC

Activity	Comments	Target Group	Agency Donor
1. SEA Technical Guidelines (2004)	Guidance on implementing SEA under the EIA Law.	State agencies involved in implementing SEA and other SEA practitioners	SEPA
2. SEA Public Participation Guidelines (2006)	Guidelines for public participation and related management methods	State agencies involved in implementing SEA and other SEA practitioners	SEPA
3. Strategic Environmental Assessment (SEA) Distance Learning Course	Web based materials in Chinese and English including course notes and video. http://info.worldbank.org/etools/docs/library/107861/sea/sea/index.html	Government officials responsible for making and implementing policies, plans and programs at the local, regional and national level and professionals involved in SEA process. Trainers and representatives of academic, research, and other civil society groups	World Bank / SEPA / IAIA ¹⁰
4. SEA Training Course (2004)	Lecture program on SEA (3 days)	?	GTZ ¹¹ / SEPA
5. SEA Training & Capacity Building in Yunnan Province (2006)	<i>Aims to "improve the capacity of Yunnan provincial and local EPBs to fulfil their anticipated roles in conducting EIA/SEAs in good collaboration with other stakeholders in Yunnan"</i>	Yunnan provincial and local Environmental Protection Bureaus (EPBs). NGOs in order to strengthen dialogue and collaboration between environmental authorities and NGOs.	SIDA
6. Environmental Impact Assessment (EIA) and Strategic Environmental Assessment Training program (2006)	The program is five weeks long and held in Sweden (3 weeks) and China (2 weeks). The programme is organized in collaboration with the Chinese State Environmental Protection Administration (SEPA).	Decision-makers and specialists at environmental authorities and environmental organisations as well as planners and managers in line ministries and sector organisations. Professionals carrying out EIAs are a more secondary target group, as the program focuses more on the role of representatives from government agencies and authorities.	SIDA

5.2.4 PILOT PROJECTS

While SEA was adopted more than 10 years ago in the Hong Kong Special Administrative Region (SAR), only a limited number of case studies have been completed in other areas.

¹⁰ International Association of Impact Assessment (IAIA)

¹¹ Sino-German Program – Pilocoy Advisory Service & Environmental Management for Enterprises.

Since 1995 ten SEA pilots have been implemented in a range of sectors (e.g. energy, toxic chemicals, automobiles) and regions (e.g. national, provincial and economic zone) (Li Wei, 2006). A brief summary of selected projects is provided in Table 2.

Table 2: Selected SEA Projects Completed in PRC (1995-2004)

Project Name / Year	Organisation	Comments	Reference
1. SEA for enforcement of the Air Pollution Prevention and Control Law of P.R. China	Environmental and Economic Policy Research Center of SEPA	The impact of implementing new pollutant discharge rates in industrial sectors was the focus of this SEA. The economic tolerance of industry and the general public, and the effects of this law on market prices were taken into consideration and then cost-benefit analysis undertaken. It was found that the cost of investment in pollution prevention and control could be balanced by environmental benefits.	Bao <i>et al</i> , 2004
2. Retrospective SEA of the strategy of "Changchun Economy-Technology Development Zone (CETDZ)"	Environmental Sciences Institute of Northeast Normal University	SEA was retrospective and highlighted significant social-economic and environmental impacts explicitly and potentially induced by CETDZ strategy. The analysis focused on the policies of investment preference and their effects.	Bao <i>et al</i> , 2004
3. SEA of the National Hazardous Chemicals Regulation 1995-1996	Environmental Sciences Institute, Beijing Normal University SEPA	Public participation was highlighted, to determine when it is relevant and necessary for SEA at regulation level and how it should be carried out This was a tentative work on SEA of a regulation closely related to public health and safety.	Bao <i>et al</i> , 2004
4. SEA of Shangxi Coal and Electricity Development Strategy, 1997.	Environmental Sciences Institute, Beijing Normal University SEPA Shanxi Province Government	Environmental impact of the strategy developing raw coal on and electricity export simultaneously was analysed his was a research to measure strategic environmental impact on quantitative monetary basis	Bao <i>et al</i> , 2004
5. EIA of Chinese Automobile Industry Policy (CAIP),1998.	Environmental Sciences Institute, Beijing Normal University SEPA	Analysis on the targets and relevant policies and regulations of CAIP. Correlation of pollution status and automobile development levels. Recommendations for modification and environmental counteracts were presented. (case study by doctoral – CAIP implementation had already commenced)	Doctoral dissertation of Beijing Normal University, 1997 <i>C.-K. Bao et al Environ. Impact Asses. Rev 24 (2004) 27-46</i>
6. EIA of Economic Structure Adjustment in Jiangsu Province	Jiangshu Province EPB	Demonstration study sponsored by Jiangshu Province's "Philosophy and Social Science Funds". Trends	Shanghai Environmental Sciences, 1999

Project Name / Year	Organisation	Comments	Reference
1999 Jiangshu Province EPB		in pollution due to economic structural adjustments were predicted.	6(18):252–254
7. SEA of China Energy Strategy System (CESS) 1998– 2000	Changchun Institute of Geography, Chinese Academy of Sciences	Energy strategy was assessed including consideration of environmental impact identification, prediction, and assessment; mitigation measures and Economic analysis. Recommendations for adjustment of energy strategy system were made.	Doctoral dissertation of Changchun Institute of Geography, Chinese Academy of Sciences, 2000.

Of the above projects, many have been carried out retrospectively after the commencement of plan implementation or have been undertaken as doctoral studies. For the GMS CEP Component 1 Program, there are two projects that may provide useful experiences for future SEA work: (1) SEA of Shangxi Coal and Electricity Development Strategy, 1997; and (2) SEA of China Energy Strategy System (CESS) 1998– 2000. Reference materials for these SEAs are however currently unavailable.

Since April 2006, SEPA has commenced a series of SEA projects within its “*Experimental Works Program*” including SEAs of:

1. Ningdong Coal Chemical Base Planning of Ningxia Hui Autonomous region
2. Industry Development Planning of the Three George Reservoir Area of Chongqing
3. Short-run Planning of Urban Light Railway Transportation of Shanghai
4. Development Planning of Nansha Area of Guangzhou
5. Dali-Lijang Railway (ADB supported)
6. Preliminary SEA of the Great Western Development Strategy (WB supported)

Of these projects, the Dali-Lijang Railway (ADB funded) and the Preliminary SEA of the Great Western Development Strategy (WB funded) relate to areas within the GMS. At the time of writing, detailed information on the Dali-Lijang Railway in Yunnan was unavailable. It does however seem likely that there would be possible overlap with the proposed SEA of the north-south economic corridor or the SEA of the transport sector in Component 1. Potential project linkages should be explored further during the screening phases for any future SEAs in the region. The preliminary SEA of the Great Western Development Strategy (Box 3) is also likely to provide useful experiences and inputs for an SEA of the north-south economic corridor due to coverage of strategic level development and environment linkages in Yunnan and Guang Xi Provinces.

Box 3: Preliminary SEA of the Great Western Development Strategy.

The Great Western Development Strategy (GWDS) was developed in 1999. The objective of the GWDS is to promote economic growth in the western regions of the PRC and reduce the economic and poverty gap between the West and the East. In addition the GWDS aims to improve the ecological conditions in the west and strengthen the environmental protection during the development of the area. The region included in the GWDS covers an area of 6.6 million km (68.8% of the PRC) and has a population of 355 million (28% of the PRC).

The GWDS is a comprehensive strategy which considers a range of planning issues including: macro planning; land use planning; water resource development planning; education and capacity building

planning; development of science and technology; agriculture development planning; highway development planning; railway development planning; energy development planning.

The aim of the SEA was to assess potential environmental issues associated with the implementation of the GWDS and demonstrate the effectiveness of SEA as a decision support tool. In addition the SEA of the GWDS was seen as an opportunity to promote the implementation of new EIA law and provide a good-practice SEA example of large-scale strategies. The strategy also proposed five Key Development Domains (KDD): water resource planning; land use planning; energy development planning; eco-environmental construction (biodiversity conservation) planning; and tourism development planning. These KDDs were developed in detail and were used as a focal area for the SEA.

The methodology used in the SEA was consistent with international SEA guidance and mainly used impact matrices and scenario development.

The SEA identified that the natural resource base in western China is vulnerable to human pressure and can be easily degraded. The following issues were identified as key concerns for the region's nature and environment:

- Water shortage and over-exploitation;
- Land degradation, through soil erosion ,desertification, and salinization, through processes of overgrazing, steep slope
- Terrace cultivation, inappropriate irrigation and reclamation of wasteland;
- Forest deterioration (illegal logging and fuel wood collection);
- Pollution (soil, water, air) from industrial emissions and untreated; and municipal wastewater and solid-waste.
- Loss of biodiversity and ecosystem services.

Some of the key finding of the SEA included:

- Industry is often highly inefficient and reliant on out-dated techniques, leading to resource waste and over use.
- In many provinces authorities still have the 'pollute now – clean up later' approach, and development is being led by importing dirty industries from the East.
- Economic under-performance of new industries has led some local authorities to turn a blind eye towards polluting industries and deforestation.
- Land allocation for forestation has been poor, often leading to failed projects and wasted financial resources

For the GMS, the SEA and its methodology provides a useful example of how a rapid SEA can be undertaken for a development strategy with a large geographic area with multiple sector focus, and with limited time and resources.

Source: Li Wei, 2006.

5.2.5 COUNTRY STATUS SUMMARY

SEA capacity in the PRC is the most advanced in the GMS. This capacity development has been led by strong policy statements recognising the need for developing systems for integrated and strategic environmental assessment. These policy statements have been supported by legislation, which now requires SEAs of a range of government plans. The legislation does not however extend to government policies and could in the future be extended into this area. Since the passing of the EIA Law in 1999, the PRC had developed guidelines for SEA implementation and public consultation and has with the assistance of a number of donors, developed training materials and resources. These provide a useful

framework for future capacity building. Current gaps include a lack of specific guidance on undertaking SEA of key sectors such as energy, transport and tourism.

A wide variety of pilot activities have also been undertaken in the PRC. These assessment have often however been undertaken a ex-post assessments. This highlights a need for improved planning for SEAs and greater coordination and cooperation between SEPA and sectoral planning agencies to ensure that SEAs are undertaken effectively and in timely manner. Institutional strengthening with respect to SEAs should also be considered for key agencies in charge of undertaking and appraising SEAs, particularly EPBs.

For the GMS there have however been a number of SEA pilots that may be built upon or used as scoping inputs into future SEAs proposed under CEP Component 1. These include: (1) SEA of China Energy Strategy System (CESS); (2) SEA of the Dali-Lijang Railway and the (3) Preliminary SEA of the Great Western Development Strategy.

5.3 LAO PEOPLES DEMOCRATIC REPUBLIC (LAO PDR)

5.3.1 POLICY COMMITMENTS

The *National Strategy on Environment to the year 2020 and Action Plan for the year 2006-2010* identifies as a priority “the development of policies, strategies and legal frameworks to manage the environment, conserve natural resources, and to take measures to prevent the adverse impact of natural phenomena”. In addition, the Action Plan priorities: the reform of institutions to ensure their appropriateness for effective environmental management and monitoring; and the development of improved environmental and social assessment and to ensure that all development projects and operation have undertaken environmental assessment. While these statements show willingness by the government to strengthen current environmental assessment and management systems, it is currently unclear if this commitment extends to SEA.

5.3.2 LEGAL AND REGULATORY FRAMEWORKS

The *Law on Environment Protection 1999* (LEP); and its supporting *EIA Decree, 2000* (No: 1770/STEA) and *Regulation on Environmental Assessment, 2002*, requires that all projects and activities that have an impact on the environment (including social impacts), go through an assessment process prior to the approval and implementation. The LEPs focus is on the assessment of projects and does not extend to SEA of PPP.

Currently there is no policy or legal commitment for the adoption of an SEA system. Some discussion within the Science Technology and Environment Agency (STEA) has been undertaken regarding the possible development of an SEA system for National Development Plans.

5.3.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

Human and institutional capacity for SEA in Lao PDR is limited. At present there are no ongoing SEA capacity building initiatives and guidelines for SEA are yet to be developed. For EIA in Lao PDR, the Science and Technology Environment Agency (STEA), is the responsible agency. For SEA to implemented STEA would need to be strengthened and awareness and experience in SEA increased.

5.3.4 PILOT PROJECTS

At the present, only one pilot SEA project has been undertaken in Lao PDR using an SEA type approach. This was the Strategic Impact Assessment (SIA) of the Nam Theun II Hydropower Project, which was supported by the World Bank and ADB. This assessment, on cumulative environmental and social impact assessment of a series of hydropower projects proposed in Lao PDR over a 20 year period. The aim of the assessment was to contribute to the understanding of the impacts of hydropower development in Lao PDR and recommend measures to strengthen the sector in order to manage the sector in an environmentally and socially sustainable manner (Norplan, 2004).

The two primary institutions in Lao PDR with regard to environmental assessment and safeguarding associated with hydropower development are; the Social and Environmental Management Division under Department of Electricity (DOE), Ministry of Industry and Handicraft (MIH); and the Department of Environment under the Science Technology and Environment Agency (STEA). A more limited role was played by the Environmental Management Unit under the Electricité du Lao (EdL) (Norplan, 2004).

5.3.5 COUNTRY STATUS SUMMARY

There is currently no legal framework for SEA in Lao PDR and at this stage there has been no clear policy commitment by the government for the adoption of SEAs of PPPs. Correspondingly, human and institutional capacity for SEA in Lao PDR is limited. Given the current status of SEA development in Lao PDR, capacity building efforts will need to focus initially on general awareness raising and introductory level training for government staff within STEA and key sector agencies.

For the GMS, the SIA of Nam Thuen II Hydropower Project, which focused on assessing the environmental and social impacts of a range of hydropower projects proposed for Lao PDR in the next 20 years. Experience from this project may provide useful inputs for future SEAs in the GMS Energy Sector.

5.4 MYANMAR

5.4.1 POLICY COMMITMENTS

Environmental assessment, management and monitoring systems within Myanmar are the least developed of all GMS countries. While Myanmar has developed a number of environmental related laws and regulations, these have so far not extended to EIA or SEA. Policy commitments to institutionalising environmental assessment procedures and requirements in Myanmar have however been made through the Myanmar National Agenda 21 (1997). This agenda outlines a number of key activities required for the establishment of an EIA system including:

1. Drafting legislation to empower the National Commission for Environmental Affairs (NCEA) to conduct and evaluate EIA and implement and draft EIA policies and guidelines and checklists for specific sectoral areas. .
2. Identification of key sectors/projects for immediate application of EIA.

3. Identification of the levels and stages of activity which will be subject to EIA and draft a time-line for the implementation and application of EIA. (D.H. Nyo Nyo, 2006).

These policy commitments do not however extend to SEA of PPPs.

5.4.2 LEGAL AND REGULATORY FRAMEWORKS

A draft *National Environmental Protection Law* (EPL) was drafted in 2000. This law is currently still pending and at this stage does not include requirements for strategic level environmental assessments.

5.4.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

Environmental impact assessments have to date been undertaken in Myanmar on *ad hoc* basis only. Systematic procedures for environmental assessment are therefore lacking, as is human and institutional capacity to implement them. Initiation of strategic level assessment frameworks within this capacity vacuum is likely to be difficult and it is recommended that any support initiates focus on strengthening draft frameworks and capacity for EIA prior to initiating SEA programs. Key needs include:

1. Supporting the completion and approval of the EPL.
2. Formation of an Environmental Protection Agency with clear statutory powers;
3. Developing closer cooperation and coordination between the NCEA and other sector ministries for development planning and project appraisal;
4. Developing methodologies and guidelines for environmental assessment in different sectors;
5. Developing environmental information databases; and
6. Training key staff within government agencies (D.H Nyo Nyo, 2006).

Current capacity building activities in Myanmar have been limited due to existing sanctions that prevent the ADB and the World Bank from providing investment loans and direct technical assistance. Other international organisation such as UNEP, ESCAP and Hanns Seidel Foundation are however active in Myanmar and are currently helping NCEA to enhance awareness and formulate a framework for integrating environmental consideration into sustainable economic development (D.H Nyo Nyo, 2006). The extent to which these programs deal with SEA is currently unknown.

5.4.4 PILOT PROJECTS

There have been no pilot SEA projects undertaken in Myanmar. Due to the limitations of current sanctions, the establishment of direct technical assistance programs will remain difficult in foreseeable future. It is therefore recommended that attempts be made to involve representatives from Myanmar in capacity building activities linked to SEA pilots within the GMS region. This could be facilitated through ongoing involvement in the WGE or through participation in other working groups or training events and forums. Indirect support activities may also be developed by identifying opportunities to support UNEP or NGO program currently operating in Myanmar.

5.4.5 COUNTRY STATUS SUMMARY

Environmental assessment, management and monitoring systems within Myanmar are the least developed of all GMS countries. Myanmar does not currently have legal requirements for either EIA or SEA and EIAs of investment projects are only undertaken on an *ad hoc* basis. Human and institutional capacities for both EIA and SEA are therefore weak and will require major strengthening efforts before SEA systems can be initiated. A key priority for capacity development is supporting the finalisation and adoption of the draft *National Environmental Protection Law* (2000). This would allow the NCEA to proceed further with developing national environmental standards and systems for EIA and potentially SEA in the future. Direct technical assistance from ADB in Myanmar is however currently constrained by existing sanctions. It is therefore recommended that the CEP provided support to Myanmar by involving the NCEA and other sector representatives in pilot SEA activities in other parts of the GMS through involvement in the WGE and by invitation to key capacity building events in the region.

5.5 THAILAND

5.5.1 POLICY COMMITMENTS

In 2004, the National Environment Board (NEB) recommended to develop systems for SEA reporting in parallel with PPP formulation at regional and sectoral levels as a way of reducing conflict and encouraging sustainable development. To operationalise this recommendation the NEB appointed a subcommittee – the “Subcommittee of Strategic Environmental Assessment (SCSEA)” – to consider and develop SEA systems. The responsibility of the subcommittee was to make policy recommendations regarding the adoption of SEA and to prepare a framework and tools for SEAs in the government planning sector (Paranan, 2006).

5.5.2 LEGAL AND REGULATORY FRAMEWORKS

The *Enhancement and Conservation of National Environmental Quality Act (1992)* requires EIA to be undertaken at the project level, but does not require EIAs or SEAs to be undertaken of PPPs. The Ministry of Natural Resources and Environment (MONRE) through the Office of Natural Resources and Environment Police and Planning (ONEP), has however in 2003 undertaken a review of the whole EIA system and made recommended regarding: the type and size of EIA works; EIA procedures; funding; organisation; expert panels; public consultation; and consultant registration (Pantumsinchai et al., 2004). The recommendations do not however extend to SEA, and to date the legislation has not been updated despite recommendations from the SCSEA regarding the legal adoption of SEA.

5.5.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

Despite the lack of a legal framework for SEA, a number of SEA capacity building initiatives have been undertaken. This has included in June 2005, the publication of *Interim Guidance Notes on Piloting for a Country EA System* by ONEP, which includes country environmental analysis (CEA) and SEA (Unkulvasapaul, 2005). For SEA, the guidance materials on SEA are consistent with international practice based on a process of: screening; scoping; assessment and review (Paranan, 2006). The guidance material is however introductory and will require further review and strengthening.

In addition, a number of training courses on SEA have been undertaken, including an SEA training course funded by the Thailand National Institute of Public Health. There is also currently a proposal to undertake an SEA Training of Trainers program in Thailand supported by GTZ and an individual SEA Training of Trainers course proposed for January 2007 by the Faculty of Environmental and Resource Studies at Mahidol University.

From an institutional perspective, there is limited capacity within MONRE to undertake SEAs. For SEA systems to be developed, strengthening institutional strengthening would also be required for sectoral agencies responsible for government planning.

5.5.4 PILOT PROJECTS

To date, there has only been one SEA pilot recorded in literature from Thailand. This was a *an independent SEA of shrimp farming* (2001), which was undertaken to assist the Swedish International Development Agency (Sida) to decide whether to support this industry (Lindberg & Nylander 2001). The aim was to assess the situation of the coastal shrimp farming industry in the southeast of Thailand. The SEA compared the most common types of farming methods used with a number of alternatives. The study was conducted in five provinces and included interviews with shrimp farmers and well as experts in government departments, universities and environmental organisations. The report compares the environmental and socio-economic impacts of the different shrimp farming systems (Dalal-Clyton & Sadler, 2005). The project did not however have a capacity building component and was largely undertaken as an expert assessment.

It is therefore clear that if Thailand is to effectively develop and SEA system, practical experience involving MONRE, universities and other key sectoral agencies is needed.

5.5.5 COUNTRY STATUS SUMMARY

Despite recommendations from the National Environment Board to develop an SEA system, SEA is not legally required in Thailand. Initial work on developing general SEA guidelines for Thailand has however been undertaken. These efforts, which have been conducted by the Subcommittee for SEA, MONRE and ONEP, provide an initial framework from which a legal framework could be developed. Consensus and high level government support for such an initiative will however need to be developed through a combination of awareness raising and pilot demonstration. Support for MONRE to develop a legal framework is also recommended.

Human and institutional capacity for SEA in Thailand is also very weak with only limited practical application undertaken in the country. Significant capacity building will therefore be required within MONRE and other sector agencies involved in planning (eg. in the energy, transport and tourism sectors). This could be effectively facilitated by developing pilot projects in order to develop experience, trial methods under local planning contexts and showcase the benefits of the SEA tool for sustainable planning and development.

5.6 SR VIETNAM

5.6.1 POLICY COMMITMENTS

The momentum for developing an SEA framework in Vietnam has been growing for a number of years, with several recent government policy initiatives calling for strategic-level evaluation of policies, programmes, and plans and the integration of environmental considerations into development planning.

Of particular importance are the following strategies:

1. *Comprehensive Poverty Reduction and Growth Strategy (2002)*, which calls for a full and active integration of “*environment and natural resource issues into the master plan for socio-economic development in provinces, districts, [to] ensure that development is sustainable and does not cause degradation in natural resources*”.
2. *National Strategy for Environmental Protection to 2010 and Vision to 2020 (2003)*, which places a high priority on the “*integration of environmental considerations into socio-economic planning*” by 2010 and includes a call for the introduction of strategic environmental assessment.
3. *Strategic Orientation for Sustainable Development in Vietnam (Vietnam Agenda 21 Strategy) (2004)*, which sets as an objective: “*socio-economic development [that] is closely bound to environment protection and improvement*”

While these strategies have incrementally led to a greater awareness by policy makers regarding the need for environmental protection and integration within PPP formulation, practical implementation has proved difficult despite a number of pilot initiatives such as the Vietnam Capacity-21 project is organized by the Ministry of Planning and Investment (MPI). One example of the need for further efforts towards environmental integration is the recently adopted National Socio-economic Development Plan (2006-2010), which has only limited consideration of environmental issues and few targets for achieving environmental sustainability.

5.6.2 LEGAL AND REGULATORY FRAMEWORKS

One impediment to environmental integration in Vietnam has been a lack of regulatory requirements for environmental assessments of PPPs under the *Law on Environment Protection 1993 (LEP)*. This law has however been recently revised in 2005 and as of July 2006, SEA is legally required under Article 14 for national, provincial and inter-provincial strategies, planning and plans including:

1. National socio-economic development strategies, planning and plans.
2. Strategies and plans for development of branches or sectors on a national scale.
3. Socio-economic development strategies, planning and plans of provincial level or regions.
4. Plans for land use, forest protection and development; exploitation and utilization of other natural resources in inter-provincial or inter-regional areas.
5. Plans for development of key economic regions.
6. General planning of inter-provincial river watersheds.

Responsibility for conducting SEAs of these planning documents falls on the state agency responsible for the strategy or plan development. SEA reports will be appraised by an “Appraisal Council”, which will be established by the agency with legal authority to approve the subject plan.

The new LEP (2005) is supported by:

1. *Decree No. 80/2006/ND-CP (August 2006)*, which guides implementation, reporting and appraisal arrangements and includes a detailed list of strategies and plans that require SEA. The decree also outlines institutional responsibilities for SEA and SEA reporting requirements.
2. *Circular 08/2006/TT-BTNMT (September 2006)*, which provides detailed guidance and instructions on the implementation of the LEP provisions relating to SEA. The circular also provides in Annex 1, detailed guidance on the required contents on an SEA report.

The provisions of the LEP and supporting Decree and Circular are generally consistent with current approach to SEA adopted in Europe and those promoted by the OECD. The legal framework also prescribes that SEA in Vietnam should be undertaken as an integral part of strategy and plan development. This means that SEA should be undertaken prior to plan approval, rather than as an ex-post analysis. The LEP does not however require SEA for government policies.

5.6.3 HUMAN & INSTITUTIONAL CAPACITY-BUILDING ACTIVITIES

While Vietnam has now established a legal framework for SEA, the capacity to implement the SEA provisions of the LEP remains low. In particular, knowledge and experience of SEA, especially at a provincial level is limited. In addition, government agencies required to undertake SEA are yet to establish the institutional mechanisms needed to effectively implement and appraise SEAs. A key impediment in this area is a lack of clear and systematic planning processes and limited cross-sectoral and institutional coordination mechanisms.

A number of capacity building and pilot projects for SEA are however currently being implemented in Vietnam. This work is being coordinated by MONRE and the Department of Environmental Impact Assessment and Appraisal (DEIAA). To support the implementation of SEA, MONRE is in the process of developing an overall ‘road map’ for SEA capacity building. The road map aims to develop institutional and human capacities for SEA through the development of practical implementation guidance, training and pilot projects. The road map also aims to facilitate more harmonised interventions by donor projects. The initiative is currently in its early stages of development and will require further support in order to develop a more thorough programmatic approach to long term capacity development.

Key target groups for SEA capacity building include: national level ministries and provincial departments involved in socio-economic, land use and sector planning; and national institutes and universities involved in teaching, training and consultancy activities.

A number of key capacity building initiatives are currently being implemented or planned for 2006-2007. These include:

1. *Technical Guidance* – Draft technical guidance for SEA have been developed by MONRE with the support of the Swedish funded SEMLA¹² project. This guidance is

¹² Strengthening Environmental Management of Land Administration (SEMLA)

designed to provide non-legal guidance for practitioners involved in SEA implementation. The guidance is consistent with current European practice and in particular the approach being adopted for the implementation of SEAs of EU Cohesion Policies¹³.

2. *SEA Training* – Specific SEA training in Vietnam is currently being supported by GTZ¹⁴ and the SEMLA program. In addition GTZ, through its Rioplus project, has developed a global SEA training manual based on the Harvard Case Method of teaching. GTZ and MONRE currently propose to develop the manual further, with specific SEA training case studies based on lessons learned from pilot projects being integrated into the manual. It is envisioned by MONRE that this manual will become the basis of SEA training in Vietnam in the future and will be linked to a training of trainers program.

In addition to these specific training activities, SEA training in Vietnam is also being linked to on-the-job training through pilot projects supported by a number of donors and technical assistance projects. These projects are discussed further in the section below.

3. *Institutional Strengthening* – Institutional arrangements and capacity building for sectoral SEAs are currently weak and have so far received relatively limited support. Within the hydropower sector, there are currently two projects (ADB & World Bank funded), which aim to support pilot SEAs and institutional strengthening for organisations involved in the planning and implementation of SEAs, namely MONRE, Ministry of Industry (MOI) and Electricity of Vietnam (EVN). In addition, the SEMLA project is currently supporting pilot SEAs and institutional strengthening for land use planning. Institutional strengthening for SEA in other sectors such as transport, energy (excluding hydropower), mining, tourism and forestry have so far received limited or no support. These sectors should be considered as priorities for future SEA support. Key target groups for institutional strengthening include: Ministry of Planning and Investment (MPI); Ministry of Agriculture and Rural Development (MARD); Ministry of Fisheries (MOFi); Ministry of Construction (MOC); and Ministry of Transportation (MOT).
4. *Professional Networks and Communication* – There are currently no formal networks or regular information dissemination mechanisms established for SEA in Vietnam. Professional networking has so far been limited to periodic workshops or conferences organised by MONRE through support of donor organisations. There is however a current proposal by GTZ to support SEA development in Vietnam through the funding of a part-time SEA coordinator whose role would be to assist MONRE in further developing its capacity building program and to assist regular communication between organisations and individuals involved in SEA in Vietnam. In addition MONRE has proposed to hold regular donor coordination meetings as a way of facilitating more effective donor program targeting and harmonisation in Vietnam.

¹³ Greening Regional Development Program (GRDP), 2006. *Handbook on SEA for Cohesion Policy 2007-2013*. GRDP Partnership.

¹⁴ German Technical Cooperation (GTZ).

5.6.4 PILOT PROJECTS

Over the past 5 years there have been a number of pilot SEA projects undertaken in Vietnam. A brief summary of past projects is provided in Table 3.

Table 3: Selected SEA pilots completed in Vietnam (2000-2005)

Project Name / Year	Organisation	Comments	Reference
SEA of Land Use Planning for Ha Long City in Quang Ninh Province	Institute of Geography-Vietnamese Academy of Sciences and Technology (VAST) and the Vietnam Environmental and Sustainable Development Institute (VESDI)	Ex-post evaluation of the plan utilising GIS tools to identify environmentally vulnerable areas in Han Long Bay World Heritage Area for decision support.	Quyen, 2006
SEA of the Dai Tu District Social and Economic Development Plan (SEDP) in Thai Nguyen Province	GTZ Tam Dao National Park Management Project and the Centre for Research in Rural and Urban Planning Environment	Ex-post evaluation focusing on improved management of the Tam Dao National Park buffer zone.	GTZ, 2005
Pilot SEA, of the Ha Tay SEDP.	Civil Engineering Department of Hanoi University	Ex-post evaluation using primarily environmental check-lists and GIS tools to identify key environmental issues in the province.	Dang <i>et al</i> , 2006
Integrated Strategic Environmental Impact Assessment of Port Developments in Ba Ria – Vung Tau Province.	Vietnam - Belgium Cooperation Program	Used GIS and multi-criteria analysis techniques to evaluate alternative port development scenarios on the surrounding estuarine environment.	Dong, 2006.

The majority of these projects have been undertaken as ex-post assessment (ie as separate analyses undertaken after the finalisation of the focal plan). In all of these cases a lack of legal imperative for SEA integration has reduced the effectiveness of the assessments ability to influence the decision making process. In addition, the Ha Long Bay and Ba Ria – Vung Tau studies have used primarily EIA techniques focusing on environmental mitigation aspects rather than more strategic level interventions into the planning process.

Since 2005 and following the passing of the LEP, a relatively large number of pilot projects have either commenced or will be undertaken in 2006-2007. These pilot SEAs are described in detail in Annex XX and are summarised below:

1. *Socio-economic development planning (SEDP)*: up to six pilots at provincial and district levels proposed, with two commenced in 2006 (GTZ, SEMLA, MONRE).
2. *Land use planning (LUP)*: up to three pilots at provincial and district levels proposed for 2006 (SEMLA, MONRE).
3. *Hydropower sector*: two pilot SEAs commenced, one focused on biodiversity impacts of the national hydropower plan (World Bank) and one focused on hydropower power projects in Vu Gai-Thu Bon River Basin (Quang Nam Province) (ADB)
4. *Industry sector*: one pilot SEA at an inter-provincial scale (MONRE, MOI).

5. *Agricultural sector*: one pilot SEA at an inter-provincial scale (MONRE, Ministry of Agriculture and Rural Development (MARD))

5.6.5 COUNTRY STATUS SUMMARY

In the past two years there have been significant advances in the development of SEA in Vietnam. This has included the adoption of a legal framework for SEA and the initial development of general guidance material on SEA implementation. Institutional and human capacities for SEA are however limited due to a lack of practical experience. For successful SEA implementation in Vietnam, it is critical that the first pilot projects are successfully adapted to local capacities and planning contexts and cover a wide spectrum of planning levels and sectors. Targeted support activities in the next 2-5 years will therefore be important in assisting Vietnam develop its capacity.

Proposed pilot projects include SEDPs, LUPs and sectors pilots in hydropower, industry and agriculture. There are no pilot projects proposed in the energy (excluding hydropower), tourism, transport, mining or fisheries sectors. Pilot projects in these sectors are constrained by a lack of institutional capacities within government agencies. This is needed for government to effectively plan and implement sectoral level SEAs as an integrated part of their own planning systems. Institutional strengthening for key national and provincial agencies is therefore needed. The pilot SEA in the hydropower sector being implemented by the ADB (TA VIE-4713) should provide a useful methodology for this process.

Human capacity for SEA is also limited. Future pilot projects will be a key factor in strengthening these capacities but will need to be supported by the institutionalisation of SEA training within national academic and vocational systems. Support activities in this field including training of trainers and the development of a national SEA training manual will assist this process, although further support is needed to increase training coverage at provincial levels and in sectors that are not currently exposed to pilot activities.

6 OVERVIEW OF SEA DEVELOPMENT STATUS FOR THE GMS

6.1 OVERVIEW OF STATUS REPORTS

Within the GMS, SEA systems are most advanced in the PRC and Vietnam (Table 4). In these two countries policy commitments for integrating environmental considerations into development planning through strategic level environmental assessments have now been included within legal frameworks. Legal frameworks in each country focus on EIA/SEA of government plans and programs, but do not currently extend to SEA of policies. The legal frameworks and implementation guidance for SEA in each country is generally consistent with the OECD guidance on SEA.

Of the two countries, SEA experience in the PRC is more advanced, with more than ten pilot projects having been undertaken. These have included SEAs of the National Hazardous Chemicals Regulations; Shangxi Coal and Electricity Development Strategy, the Chinese Automobile Industry Policy; Economic Structure Adjustment in Jiangsu Province and the Chinese Energy Strategy System. In contrast, Vietnam's experience in SEA is very recent, with relatively few pilots having been undertaken. Over the next year however, experience in SEA in Vietnam is likely to increase significantly with more than a dozen pilots projects proposed. These projects include SEAs of national and provincial socio-economic

development plans and land use plans and SEAs in the hydropower, agriculture and industry sectors.

Within the remaining GMS countries – Cambodia, Lao PDR, Myanmar and Thailand – legal frameworks for SEA are yet to be developed and practical experience of SEA is largely lacking. Of these countries, Thailand is so far the only country that has made policy recommendation for the adoption of SEA for PPPs (in 2000). Thailand has also developed interim guidance on piloting SEAs in 2005. Despite these positive initial developments, pilot SEAs programs in Thailand are yet to be fully developed.

Within Cambodia and Lao PDR, current human and institutional capacity for SEA is severely limited with present capacity building efforts being focused mainly on strengthening existing EIA systems. One pilot SEA has however been undertaken in Lao PDR for the National Hydropower Plan, with a focus on the Nam Thuen II Hydropower Project.

Environmental assessment procedures are least developed in Myanmar, where there are currently no legal requirements for EIA or SEA. While policy commitments to developing an EIA systems have been made in Myanmar (in 1997), these commitments are yet to be fully realised, with EIA currently only undertaken on an *ad hoc* basis. Human and institutional capacity for SEA is therefore severely limited.

Table 4: Summary of SEA Status in the GMS

GMS Countries	Policy commitments to SEA of PPPs*	Laws/regulations with SEA requirements for PPPs	Commencement of training & other capacity building initiatives for SEA of PPPs	Pilot SEA of PPPs planned or undertaken.	Comments
Cambodia	Ministry of Environment – Strategic Plan to 2008 (2004) – commitment to EIA & monitoring of projects (but not PPPs)	Environmental Protection Law (1999) & Sub-decree on EIA. Focus is on EIA of infrastructure projects.			Currently there are no legal requirements or policy commitments for SEA. System and institutional capacity development is needed in the long term. Human capacity support is needed to increase participation in CEP Component 1.
China	Prime Minister Jiang Zemin's statement in 1996 calling for integrated environment and development in decision making for PPPs	EIA Law (2003) – requires environmental assessment of government plans.	Technical guidelines for SEA currently being developed Training and capacity building has been undertaken over the last 10 years including a national training program (SEPA), an ADB modular EIA course, SIDA's regional training program & WB / IAIA's distance learning program and web resources.	A wide range of pilot SEAs have been undertaken with further projects proposed. Some important projects include: <ul style="list-style-type: none"> • Ningdong Coal Chemical Base Planning of Ningxia Hui Autonomous region • Industry Development Planning of the Three George Reservoir Area of Chongqing • Short-run Planning of Urban Light Railway Transportation of Shanghai • Development Planning of Nansha Area of Guangzhou • Dal i- Lijang Railway (ADB) • Preliminary SEA of the Great Western Development Strategy (WB) 	System and institutional development for SEA in China is well advance. There is good experience in pilot project implementation to date with a number of projects completed that can provide useful experience for SEA in the GMS.
Lao PDR		Law on Environment Protection (1999) & Regulation on Environmental Assessment. Focus of assessment is at the project level.		SEA of the Nam Theun II Hydropower Project (WB) – a hybrid between project and area-based (watershed) SEA.	Currently there is no policy or legal commitment for the adoption of an SEA system. Some discussion within the Science Technology and Environment Agency has been undertaken regarding the possible development of an SEA system for National Development Plans.
Myanmar		There are a range of environment related regulations but no requirements for EIA or			There are no requirements for EIA or SEA within the current system. EIAs undertaken are on an ad hoc basis only. Current capacity for SEA very limited.

GMS Countries	Policy commitments to SEA of PPPs*	Laws/regulations with SEA requirements for PPPs	Commencement of training & other capacity building initiatives for SEA of PPPs	Pilot SEA of PPPs planned or undertaken.	Comments
		SEA..			
Thailand	Recommendation from National Environment Board (2004) to enhance organization for SEA reporting in parallel with PPP formulation at regional and sectoral levels.	Enhancement and Conservation of National Environmental Quality Act (1992) – focuses on EIA at project a level.	Detailed guidance on SEA is currently being developed. International training course on SEA – funded by Thailand National Institute of Public Health		While there are currently no requirements for SEA of PPPs, recommendations for development of an SEA system and some initial capacity building initiatives have been undertaken.
Viet Nam	Prime ministerial call for integration of environmental considerations in planning & decision making.	Environmental Protection Law (2005) – requires SEA of national and provincial government strategies, plans and programs. Decree and circular for SEA implementation is currently being drafted.	Technical guidance for SEA implementation currently in draft. Support for capacity building currently being provided by a number of donors (ADB, WB, GTZ, SIDA). A number of SEA training courses already conducted at national and provincial levels. Proposals for adaptation of international training materials for use in Viet Nam.	A number of pilot projects undertaken in relation to socio-economic development planning at provincial and district levels. Pilot projects currently proposed in a number of relevant sectors with relevance to the GMS CEP: <ul style="list-style-type: none"> • SEA of the hydropower sector with a focus on biodiversity (WB) • SEA / CIA of multiple hydropower projects in the Vu Gia – Thu Bon River Basin (ADB) • SEA in Industry Sector (GoV) • SEA of agriculture rural development Sector (GoV) • SEA of land use plans (SIDA/SEMLA) – multiple provinces • SEA of socio-economic development plans (GTZ) – 2 provinces • SEA of the northern economic zone (GoV). 	Legal requirements for SEA are now in place and systems and institutional capacity is in an early stage of development. National capacity is still low but is being supported by multiple donor inputs linked to pilot projects in various sectors and at various levels.

7 OPPORTUNITIES FOR LINKAGES WITH CEP PROGRAM 1

Based on the review of SEA in the GMS, a number of opportunities for collaboration and linkage with the CEP have been identified. These are outlined below:

7.1 NATIONAL SEA PILOTS

Within GMS countries there are a number of pilot SEA projects that have already undertaken. A number of these have direct relevance to GMS CEP priorities and need to be critically reviewed in terms of the lesson learned and their application to proposed CEP Component 1 pilots. A number of additional pilot projects, particularly in the PRC and Vietnam are also either in progress or will be commenced in 2006-2007. These projects may provide opportunities for linkage with GMS pilots (Table 5).

Table 5: CEP Priority Corridors and Sectors and Links with National SEA Pilots

GMS CEP Priorities	Pilot SEAs with useful experience in GMS	Opportunity for linkage with CEP
A. Economic Corridors		
1. North-South Economic Corridor	Preliminary SEA of the Great Western Development Strategy in PRC (SEPA / World Bank)	Completed project with useful methodology for future rapid SEAs. Considers key environmental issues in Yunnan sections of the N-S Corridor.
4. East-West Economic Corridor		
5. Southern Economic Corridor		
B. Economic Sectors		
8. Energy: hydro-electricity, oil/gas, transmission	SEA of the National Hydropower Plan with a focus on Biodiversity (MONRE / World Bank) Pilot SEA of the Hydropower Projects in Quang Nam Province (MONRE / ADB). SIA of Nam Thuen II Hydropower Project in Lao PDR (STEA / World Bank)	Project is in progress – may provide useful methodology for future SEA in hydropower and energy sectors, particularly with regards to biodiversity. Project is in progress – may provide useful methodology for future SEA in hydropower and energy sectors, particularly with regards to comprehensive watershed planning. Complete project - may provide useful methodology for future SEA in hydropower and identification of critical issues for hydropower.
9. Transport: roads, railways, airports, ports	SEA of the Dali-Liang Railway in Yunnan Province, PRC (ADB).	Transport sector in Yunnan sections of the N-S Corridor.
10. Tourism: infrastructure development,		

GMS CEP Priorities	Pilot SEAs with useful experience in GMS	Opportunity for linkage with CEP
maintenance/enhancement of “product”		
11. Agriculture: irrigation, upland land management	SEA of the Agriculture Sector Development Plan in Quang Nam Province in Vietnam (MONRE / SIDA / SEMLA)	Project is in progress – may provide useful methodology for future SEA in agriculture sector
12. Forestry: logging, plantation, illegal trade		
13. Fisheries: commercial wild harvest, aquaculture		
14. Water: flood management, infrastructure, extraction, navigation		ADB / WWF / MRC collaboration to develop guidelines for hydropower in the GMS.

7.2 SEA TRAINING INITIATIVES

Supporting the development of SEA training programs and resource materials is another area where opportunities for CEP program linkages exist. In particular the GTZ/InWEnt SEA Training Manual and the World Bank SEA Distance Learning Package provide opportunities for linkage. A summary of possible opportunities are provided below:

GTZ / InWEnt SEA Training Manual: In 2006 GTZ/InWEnt developed a training manual for SEA using the Harvard Case Method approach and the OECD Guidance on SEA. The approach uses a series of case studies, which are presented to trainees within a dynamic action learning environment that facilitates practice in undertaking a pilot SEA within a class room environment. The training manual can be tailored for specific countries and sectors through the adaptation of teaching slides and the development of local case studies based on pilot project experience. To support the further development of the training resources, GTZ proposed to provide some backstopping support for local adaptation and link material through the OECD SEA Taskforce website. It is also proposed that the development of a training pool within developing countries be supported through training of trainers. The training manual is currently being trailed in a number of countries including Vietnam and Indonesia. Within Vietnam, the manual is in the process of being adapted to the Vietnam context and has been translated for local use. In 2007 it is proposed that a number of donor projects collaborate through MONRE to develop specific case studies for SEDPs, LUP and the hydropower sector. This program provides a useful example of how donor projects can collaborate to develop and promote locally adapted training materials and may provide a useful format for future training development in the GMS.

7.3 SEA COMMUNICATION NETWORKS

The SEA-Asia e-discussion group (powered by ListServ) was created in response to the increasing demand for knowledge-sharing and information exchange on SEA. The SEA-Asia listserv is an online discussion forum for professionals interested in and/or working on SEA-related issues in Asia to share knowledge and experiences aimed at mainstreaming and advancing environmental concerns in development policies, programs, and plans in Asian countries (World Bank, 2006).

To join the listserv, please e-mail : join-sea-asia@lists.worldbank.org

For more information please see:

<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/EXTEAPREGTOPENVIRONMENT/0,,contentMDK:20784209~menuPK:502915~pagePK:34004173~piPK:34003707~theSitePK:502886,00.html>

The SEA-Asia e-discussion group is not widely known or used. An opportunity exists to promote the list as a way to develop broader networking on SEA within the GMS and broader Asian region.

8 PRIORITY SUPPORT ACTIONS FOR SEA WITHIN THE CEP COMPONENT 1 PROGRAM.

8.1 STRENGTHENING OF LEGAL FRAMEWORKS FOR SEA

Legal frameworks for SEA exist in the PRC and Vietnam. These systems are quite comprehensive but over time should be reviewed as lessons learned from pilot projects are evaluated. Legal systems in the PRC and Vietnam do not currently extend to SEA of policies and there is currently some resistance to extending these existing legal requirements. This is due partly to a lack of practical experience in implementing the current requirements and also due to the potential affects such conditions may place on government's autonomy to direct social and economic policy.

In Cambodia, Lao PDR and Thailand, existing systems are focused on project level EIA and there are currently no systems in place for integrating environmental consideration upstream in the planning process. Providing support for SEA systems development in Cambodia, Lao PDR and Thailand is therefore a priority if SEA is to be developed as a planning tool across the GMS. Thailand in particular is in a good position to develop SEA systems as policy commitments for SEA have already been made and interim guidelines have been developed. To achieve this goal, it will be important to initially increase awareness of the use and benefits of SEA for sustainable strategic planning. This can be achieved through a combination of general awareness-raising for leaders, introductory training for environment and sectoral staff and most importantly, through demonstrating the benefits of SEA through targeted pilot projects and disseminating lessons learned.

In Myanmar, where environmental management capacity is least developed, this process will most likely require a longer term vision. An initial priority for Myanmar is to support existing proposals to develop a national EIA system and to develop a statutory environmental protection agency. This should be seen as a prerequisite for any future development of SEA frameworks.

For the GMS as a whole, the development of harmonised systems for SEAs of regional and national strategies would assist in facilitating greater integration of environmental consideration within development planning, particularly with regards to transboundary issues. The development of a regional protocol for SEA in the GMS would be an important step in facilitating this process and would provide a set a set of agreed principles for the use of SEA in the GMS. The current EU protocol on SEA and the Espoo Convention on

Transboundary EIA would provide useful starting points for the development of a future convention.

Summary of Key Priorities

- Monitor the implementation of pilot project undertaken within the existing legal frameworks in the PRC and Vietnam and assist with the analysis of lessons learned in order to progressively improve implementation guideline and decrees.
- Identify opportunities for integrating environmental considerations into government policy formation in the PRC and Vietnam.
- Support capacity building for the development of legal frameworks for SEA in Cambodia, Lao PDR and Thailand.
- Support the implementation of a framework for EIA and a national environmental protection agency in Myanmar.
- Development of a regional protocol for SEA in the GMS agreed to be all governments.

8.2 SUPPORTING PILOT SEA PROJECTS

Currently, there are no established procedures for integrating environmental considerations into regional planning for the GMS. As a result, current strategy and plan development for economic corridors and sectors lacks consideration of strategic level environmental issues. Establishing a process for SEAs of corridors and sector plans in the GMS should therefore be seen as a key priority for the CEP. It is recommended that this process be facilitated by demonstrating the use and benefits of SEA through national and GMS wide pilot projects in the three economic corridors and seven priority sectors.

8.2.1 SECTOR PILOTS

For the first phase of the CEP Component 1 Program, sectors to be given priority should be those which (i) are most influential in shaping the environment and use of natural resources, (ii) receive ecosystem services which are critical their continued productivity, (iii) require priority support in achieving sustainability in their activities, and (iv) have the capacity to contribute substantively and financially to ecosystem maintenance. Applying those criteria to the seven key sectors, two are identified for focussed attention in Phase 1:

- Energy (hydro-electricity, oil/gas, transmission), and
- Tourism (infrastructure, intensity of development, maintenance and enhancement of “product”)

The other five sectors should be addressed in Phase 2 and 3 of the Component and as funding becomes available. Operational plans will be prepared for subsequent phases at the end of each phase. The sector SEAs should be closely linked and integrated with the economic corridor assessments concerned with cumulative and multiplier effects of all development sectors in the target geographic areas. The transport sector is a driver for overall development in the economic corridors and should therefore receive special attention in the SEAs for each corridor.

Energy Sector: For the energy sector, there is an opportunity to link a pilot SEA directly into the ongoing strategic planning process of the GMS Working Group on Energy – its draft development strategy would be a primary target of the SEA. The purpose of such an SEA

would be to influence and contribute to the strategy in substantive ways through the SEA process and report.

The energy sector strategy and plans of individual GMS governments would be a secondary target for a pilot SEA. In this regard there would be an opportunity to link an SEA of the GMS Energy Strategy with SEAs at national levels. One existing linkage would be through the current SEA of the Vietnam hydropower plan. ADB is about to commence a Technical Assistance in support of Electricity of Vietnam (EVN) and MONRE - TA 4713-VIE: Capacity Building in the Strategic Environmental Assessment of the Hydropower Sector. The project will support a pilot SEA of the Vu Gia – Thu Bon River Basin in Vietnam and may provide a framework for future SEAs in the GMS involving hydropower planning at a river basin level

Tourism Sector: Within the tourism sector, there is also an opportunity to link an SEA pilot directly into the work of the GMS Working Group on tourism. The intent of such a pilot would be to influence future tourism development in the region by influencing the way the current GMS strategy is interpreted and implemented and by ensuring it proceeds with appropriate safeguards.

The tourism sector strategy and plans of the Royal Cambodian Government could be a secondary pilot target through linkage with the ADB TA 6279, which would aim to help the GMS tourism sector emphasize the Northeast and Southwest BCI regions in Cambodia. There are substantial complementarities between the GMS tourism plan and the Cambodian national ecotourism strategy and a strong ecotourism network is developing in the country involving the private sector.

8.2.2 ECONOMIC CORRIDOR PILOTS

Within the GMS NSEC there are currently 47 investment projects proposed with a total projected investment of almost 10 Billion US\$. Across the corridor these projects are likely to have significant cumulative and multiplier effects, which will require assessment. There is therefore a critical need for a pilot SEA to address the environmental impacts of development in the corridor. Priority areas for the pilot assessment would be: (i) transboundary areas along the corridor; (ii) the transport alignments and (iii) the areas of high value for biodiversity and ecosystem services. The BCI pilot in Xishuangbanna (Yunnan Province, PRC) could be considered as a focus of the assessment as such an SEA would provide consideration of a broad spectrum of development and environment issues that are present in other areas of the GMS. In this way the SEA could provide a testing ground for future SEA. In addition the SEA could build on existing outputs from the preliminary SEA of the GWDS.

An SEA pilot in the NSEC should lead to:

1. an initial zoning of the corridor and environmental safeguards and prescriptions for the most important zones
2. pro-poor and pro-environment investment options for the corridor, and
3. it should seek to influence (i) the NSEC pre-investment study which has recently commenced and (ii) the GMS Transport Sector Strategy which is in final draft form and future GMS transport plans.

Pilot projects will also provide a focused and practical capacity building opportunity and an avenue for demonstrating benefits and trialing methodology. Key focal groups for

involvement in SEA pilots should be the WGE and environment and sector agencies involved in national planning processes.

Summary of Key Priorities

- SEA of the N-S Economic Corridor
- SEA of the GMS Tourism Strategy
- SEA of the Cambodia Tourism Plan
- SEA of the GMS Energy Strategy
- SEA of the Vietnam National Energy Plan.

8.3 SUPPORTING INSTITUTIONAL STRENGTHENING

For the effective long term integration of SEA within government planning processes, it will be critical that the capacity of government institutions is strengthened. This would be best achieved through institutional participation within the pilot projects proposed above. Institutional strengthening should focus on a number of groups including the WGE, national environmental protection and management agencies and sectoral planning organisations (Table 6). Institutional strengthening should assist national agencies to integrate SEA into planning processes through a better understanding of:

1. The process of sector plan preparation;
2. Key entry points for the consideration of environmental factors;
3. The linkages between sector planning and broader country level socio-economic and land use planning; and
4. The relationships between different sector plans.

The aim of this support would be to assist sectoral agencies to more effectively integrate environmental consideration more effectively at an earlier stage in the planning process and encourage broader sectoral collaboration and coordination.

Table 6: Key target groups for SEA pilots and institutional strengthening in Phase 1 of the CEP Component 1 Program.

Pilot Focus	Key Target Groups
<i>GMS Energy and Tourism Sector Strategies</i>	<ul style="list-style-type: none"> • WGE • WG on Energy • WG on Tourism
<i>Energy Sector Pilot in Vietnam</i>	<ul style="list-style-type: none"> • Ministry of Natural Resources & Environment • Electricity of Vietnam • Ministry of Industry
<i>Tourism Sector Pilot in Cambodia</i>	<ul style="list-style-type: none"> • Council of Development Cambodia • Ministry of Environment • Ministry of Tourism.
<i>N-S Economic Corridor</i>	<ul style="list-style-type: none"> • Environmental agencies (PRC, Lao PDR, Vietnam, Thailand) • Ministries of Transport (PRC, Lao PDR, Vietnam, Thailand)

Summary of Key Priorities

- Strengthen the WGE in GMS
- Strengthen the WGs on Tourism, Transport and Energy in GMS
- Provide focused institutional capacity building for national environment and sector agencies through support linked to national pilot projects in energy, transport and tourism.
- Supporting improved inter-institutional coordination within and between countries, with a particular focus on improved inter-sectoral and transboundary coordination.

8.4 SUPPORTING HUMAN CAPACITY DEVELOPMENT

A prerequisite to the adoption of SEA as an integrated planning tool in the GMS is the development of human capacities. This should involve

1. Increasing awareness regarding the use and benefits of SEA.
2. Developing skills on SEA through training courses, training of trainers, training institutionalisation and on-the-job learning linked to pilot SEA initiatives.
3. Supporting long-term professional development and information exchange through networks and forums.

Priorities for human capacity building in Component 1 should be based on the following criteria:

1. Contribution to developing harmonised systems for SEA in the GMS, particularly within countries where national systems for SEAs of PPPs are lacking or incomplete.
2. Contribution to building capacity within the institutions and agencies responsible for development planning in the GMS priority sectors and corridors.
3. Contribution to building long term capacity for SEA training within national training institutions.
4. Contribution to promoting improved professional networks and regular information and experience exchange in the GMS.

Applying these criteria, human capacity-building initiatives in the Component 1, should focus on:

1. *Improving awareness of the use and benefits of SEA* for integrated and sustainable development planning in the GMS, with a focus on priority sector agencies and high level decision-making bodies. Priority countries for awareness-raising should be Cambodia, Lao PDR, Myanmar and Thailand.
2. *Providing on-the-job training linked to pilot SEAs* – by involving members of the WGE, sector working groups and dedicated task teams – in the regional and national pilot SEAs, particularly within the energy, tourism and transport sectors and corridor assessments.
3. *Supporting national SEA training programs* through targeted training activities that are linked to national, regional and sectoral SEA pilots and through the training of national trainers and the development of national curricula. Target groups should include key national staff from all priority sectors, as well as university and training institutions. Opportunities for linking with the further development of the GTZ/InWEnt SEA Training Manual and the World Bank / IAIA SEA Distance Learning Package should be further explored.

4. *Assisting the development of implementation guidance materials* for SEAs of key development sectors in the GMS. These materials should be prepared based on the lessons learned from sector pilots and should be adapted to national legal frameworks.
5. *Supporting the development of professional networks* and regular information and experience exchange in the GMS. This should be achieved through the development of national and regional networks and through providing opportunities for regional forums and conferences.

Summary of Key Priorities

- Awareness-raising on the use and benefits of SEA targeting Cambodia, Lao PDR, Thailand and Myanmar.
- Introductory training on SEA targeting Cambodia, Lao PDR, Thailand and Myanmar.
- Developing training case studies based on pilot SEA experiences in the GMS.
- Developing SEA sector guidance materials for the priority development sectors in the GMS, commencing with energy, tourism, transport and corridor planning.
- Establishing mechanisms for professional networks and regular information and experience exchange in the GMS.

9 REFERENCES

- ADB (2002) Environment Policy, Asian development Bank, Manilla.
- Bao, C.H. and Shang, J.C. (1999). To build the theories and methods system of Strategic Environmental Assessment in China. *Environment Herald*, (5): 1-4.
- Bao Cun-kuan, Lu Yong-sen and Shang Jin-cheng (2004) "Framework and operational procedure for implementing Strategic Environmental Assessment in China" in *Environmental Impact Assessment Review*. Vol. 24 (2004) pp 27–46
- Chanrithy, C. (2006) Status of SEA Development in Cambodia. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- Dalal-Clayton B. and Sadler B. (2004) Strategic Environmental Assessment: a sourcebook and reference guide to international experiences. IIED, London, UK. (<http://www.iied.org/>).
- European Union Parliament (2001) Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and programs on the Environment. http://ec.europa.eu/environment/eia/full-legal-text/0142_en.pdf
- Htwe Nyo Nyo (2006) Status of SEA Development in the Myanmar. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- Huynh Thi Mai (2006) Status of SEA Development in the Vietnam. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- LI Wei (2006) Status of SEA Development in the People's Republic of China. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- Lindberg, T. & Nylander, A. 2001. Strategic environmental assessment on shrimp farms in the southeast of Thailand. *Minor Field Studies* No. 176. <http://mkb.slu.se/helpdesk/otherservices/publications.asp>
- NORPLAN (2004) Lao PDR Hydropower Strategic Environmental Assessment (final report). <http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/LAOPRDEXTN/0,contentMDK:20296229~pagePK:141137~piPK:141127~theSitePK:293684,00.html>).
- NORPLAN (2004) Cumulative Impact Analysis and Nam Theun 2 Contributions (final Report). (<http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/LAOPRDEXTN/0,,contentMDK:20296229~pagePK:141137~piPK:141127~theSitePK:293684,00.html>).

- OECD DAC Network on Environment and Development Cooperation (2006) Good Practice Guidance on Applying Strategic Environmental Assessment (SEA) in Development Cooperation. OECD, Paris. <http://www.oecd.org/dataoecd/4/21/37353858.pdf>
- Paranan, E (2006) Status of SEA Development in the Thailand. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- Sadler, B. and R. Verheem (1996) Strategic Environmental Assessment: Status, Challenges and Future Directions, Publication No.53, Ministry of Housing, spatial Planning and the Environment, Den Haag, The Netherlands.
- Shen Zhen-yao, Ding Xiao-wen and Yang Zhi-feng (2004) "Construction of Plan Environmental Impact Assessment System in China" in *Environmental Informatics Archives*, Volume 2, International Society for Environmental Information Sciences.
- Singsavanh Singkavongxay (2006) Status of SEA Development in the Lao People's Democratic Republic. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- Swedish International Development Assistance (SIDA) (2006). *Terms of reference for Consulting Services for Yunnan Environmentally Sustainable Development Capacity Building Project*. SIDA.
- Tran V.Y., Quyen N.H. and Can L.T. (2004) SEA of Halong Bay – Quang Ninh Province.
- UNECE (1991) Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) - the 'Transboundary EIA Convention'. UNECE. <http://www.unece.org/env/eia/eia.htm>
- UNECE (2003) Protocol on Strategic Environmental Assessment (Kiev, 2003) - the 'SEA Protocol'. UNECE. http://www.unece.org/env/eia/sea_protocol.htm
- Unkulvasapaul M. (2005) in World Bank, 2006 Environmental Impact Assessment Regulations and Strategic Environmental Assessment Requirements: Practices and Lessons Learned in East and Southeast Asia. World Bank, Washington.
- Waters, M. Mekong River Commission: SEA Systems and SEA Experiences at Regional Level. Planning Workshop on Strategic Environmental Assessment of Economic Corridors and Sector Strategies in the Greater Mekong Subregion 9-10 August 2006, Thailand Resident Mission
- World Bank (2006) Environmental Impact Assessment Regulations and Strategic Environmental Assessment Requirements: Practices and Lessons Learned in East and Southeast Asia. World Bank, Washington. <http://www.worldbank.org/eapenvironment/sea-asia>.

Key Legal Documents

- Kingdom of Cambodia: Sub-decree on Environmental Impact Assessment Process (1999)
- People's Republic of China: Environmental Impact Assessment Law (2002)
- Lao People's Democratic Republic: Regulations on Environment Assessment (2000)
- Kingdom of Thailand: Enhancement and Conservation National Environmental Quality Act (1992).
- Socialist Republic of Vietnam: Law on Environment Protection (2005)

10 ANNEXES

10.1 LIST OF PARTICIPANTS FROM THE PLANNING WORKSHOP ON SEA OF ECONOMIC CORRIDORS AND SECTOR STRATEGIES IN THE GREATER MEKONG SUBREGION - 9-10 AUGUST 2006, THAILAND RESIDENT MISSION

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10.2 SUMMARY LIST OF PILOT PROJECTS

Below is provided a list of recent and current pilot SEA projects in the GMS. It is acknowledge that a number of data gaps and deficiencies are contained with the list. The list is therefore provided as an initial starting point from which a future data base of SEA projects and experiences may be developed. The authors would greatly appreciate any information that could be provided to update and refine the accuracy of the lists.

Cambodia SEA Projects

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
No information available.							

PR China SEA Projects

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
Ningdong Coal Chemical Base Planning of Ningxia Hui Autonomous region						Largest coal reserves in china	
Industry Development Planning of the Three George Reservoir Area of Chongqing							

PR China SEA Projects

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
Short-run Planning of Urban Light Railway Transportation of Shanghai						Build an efficient, high-speed urban passenger transport network consisting of rail transport supported by buses and streetcars.	
Development Planning of Nansha Area of Guangzhou						Industrial zone developments centred around deep water port in Nansha	
Dali-Lijang Railway	ADB			Yunnan			
Preliminary SEA of the Great Western Development Strategy	World Bank	SEPA		PRC Western Region		Rapid SEA of regional development strategy covering 74% of the PRC.	Professor Li Wei - Beijing Normal University. Email: <weili@bnu.edu.cn>

Lao PDR SEA Projects¹

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
SEA of the Nam Theun II Hydropower Project – a hybrid between project and area-based (watershed) SEA.	World Bank	Science Technology & Environment Agency	National		Complete	Cumulative environmental and social impact assessment of a series of hydropower projects proposed in Lao PDR over a 20 year period.	

Myanmar SEA Projects¹

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
No information available							

Thailand SEA Projects¹

Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
No information available							

SR Vietnam SEA Projects¹

No.	Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
1	SEA of provincial socio-economic development plan (SEDP) 2006-2010	GTZ	DONRE	Provincial	Vinh Phuc Province	Aug 06 - Jan 07	Focus on integrating environmental considerations into the SEDP	Herbert Christ (GTZ) <herbert.christ@gtz.de>; Bruce Dunn (ICEM) <eco_cat@yahoo.com.au>
2	SEA of district socio-economic development plan (SEDP) 2006-2010	GTZ	DONRE / DPC	District	Son Duong District, Tuyen Quang Province	Aug 06 - Jan 07	Focus on integrating environmental considerations into the SEDP	Herbert Christ (GTZ) <herbert.christ@gtz.de>; Bruce Dunn (ICEM) <eco_cat@yahoo.com.au>
3	Environmental monitoring program for integration of environmental indicators the into SEDP process (continuation of pilot SEA of district SEDP in 2005)	GTZ	DPI / DPC	District	Dai Tu District, Thai Nguyen Province	Jan 06 - Dec 06	Focus on management of Tam Dao National Park and buffer zone.	Herbert Christ (GTZ) <herbert.christ@gtz.de>; Nguyen Thi Loan (HNU) <hanhloan@hn.vnn.vn>

SR Vietnam SEA Projects¹

No.	Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
4	Comprehensive SEA of hydropower sub-sector with a focus on biodiversity impacts	World Bank	MONRE / MOI / EVN	National	National	Apr 06 - May 07		Phyl Brylski (WB) <pbrylski@worldbank.org>; Jeremy Carew-Reid (ICEM) <jecr@icem.com.au>
5	Capacity building for SEA in the hydropower sub-sector with a focus on strategic and cumulative impact assessment of hydropower projects in the Vu Gia - Thu Bon River Basin	ADB	MONRE / MOI / EVN	Provincial	Quang Nam	Oct 06 - Nov 07	Consideration of 6-8 proposed hydropower projects in combination with key sector impacts (roads, mines, agriculture, irrigation, energy, fisheries) and biodiversity	Jeremy Carew-Reid (ICEM) jecr@icem.com.au; Bruce Dunn <eco_cat@yahoo.com.au>
6	SEA of the land use plan and planning of the province until 2010.	Government of Sweden	MONRE / DONRE	Provincial	Ba Ria Vung Tau	2006-2006		Per Bertilsson - per.bertilsson@ramboll.se
7	Pilot SEA of the the Thanh Thuy Economic Zone	Government of Sweden	MONRE / DONRE	Regional	Thanh Thuy Economic Zone (Ha Giang Province)	2006-2007		Per Bertilsson - per.bertilsson@ramboll.se

SR Vietnam SEA Projects¹

No.	Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
8	SEA of the land use planning integrated with environmental protection requirements for Yen Thanh District	Government of Sweden	MONRE / DONRE	District	Yen Thanh (Nghe An Province)	2006-2007		Per Bertilsson per.bertilsson@ramboll.se
9	SEA of the land use planning integrated with environment requirements for An Nhon District	Government of Sweden	MONRE / DONRE	District	An Nhon (Binh Dinh Province)	2006-2007		Per Bertilsson <per.bertilsson@ramboll.se>
10	SEA of socio-economic development planning (SEDP)	Government of Sweden	MONRE / DONRE	National or Provincial ?	?	2006-2007	Focus area and plan not yet specified. Two projects proposed	Per Bertilsson <per.bertilsson@ramboll.se>
11	SEA of regional or sector development strategies	Government of Sweden	MONRE / DONRE	National / Regional ?	?	2006-2007	Focus area and plan not yet specified. Two projects proposed. To be financed through SEMLA Expansion Funds. SEA in Coal Mining Sector suggested.	Per Bertilsson <per.bertilsson@ramboll.se>

SR Vietnam SEA Projects¹

No.	Project Focus	Donor Agency	Government Executing Agencies	Level	Location	Status	Comments	Contacts
12	SEA in industry sector	Government of Vietnam	MONRE / MOI	Regional	?	2006-2007?	Focus area and plan not yet specified. Project initiated and led by MONRE	Nguyen Khach Kinh <kinhhang@yahoo.com>; Le Hoai Nam - <lenamnew@yahoo.com>
13	SEA in agriculture sector	Government of Vietnam	MONRE / MARD	Regional	?	2006-2007?	Focus area and plan not yet specified. Project initiated and led by MONRE	Nguyen Khach Kinh <kinhhang@yahoo.com>; Le Hoai Nam - <lenamnew@yahoo.com>
14	SEA of a land use plan in a the central economic zone.	Government of Vietnam	MONRE / DONRE	Regional	Central Economic Zone	2006-2007?	Focus area and plan not yet specified. Project initiated and led by MONRE	Nguyen Khach Kinh <kinhhang@yahoo.com>; Le Hoai Nam - <lenamnew@yahoo.com>
15	SEA of socio-economic development planning at a regional level (2-3 provinces)	Government of Vietnam	MONRE / MPI	Regional	2-3 provinces	2006-2007?	Focus area and plan not yet specified. Project initiated and led by MONRE	Nguyen Khach Kinh <kinhhang@yahoo.com>; Le Hoai Nam - <lenamnew@yahoo.com>