

STRATEGIC ENVIRONMENTAL ASSESSMENT IN THE GREATER MEKONG SUBREGION



The Greater Mekong Subregion (GMS) is one of the world's fastest growing regions and the majority of its people have benefited considerably from recent development gains. However, the rapid pace of economic development, and the reliance on natural resources to underpin GMS economies, has been accompanied by considerable environmental damage.

The subregion is losing valuable natural capital through the overexploitation of land, forests, water, wildlife and fisheries, and by environmental pollution. Unless better planned and managed, this resource-intensive development approach could lead to resource scarcity, price shocks, and environmental damage that impacts livelihoods and puts businesses at risk. Better planning and management will help keep the subregion's natural capital intact and enable the GMS to realize more inclusive and sustainable development.

One of the major challenges for development planners in the GMS is to better understand a fuller range of economic, social, and environmental implications of policies, plans, and programs. Such knowledge can assist decision makers to better ensure that development maximizes its benefits to society and helps maintain natural capital for future generations.

This brief promotes the value of strategic environmental assessment (SEA) to assist GMS decision makers to more effectively balance economic, social, and environmental considerations early in development planning processes. It draws on lessons from the GMS Core Environment Program's (CEP) experience applying SEA for energy, land use, and subregional strategic planning processes.

Key Messages on the Benefits of Strategic Environmental Assessment

1. Improves the performance and efficiency of policy and planning by minimizing adverse impacts on environment and society.
2. Helps to avoid costly mistakes and missed opportunities caused by inadequate information about impacts and trade-offs.
3. Provides a framework for project-level assessment and coordination, in particular to understand cumulative impacts and reduce duplication.
4. Builds consensus and public trust through its multistakeholder and participatory focus.



An Introduction to Strategic Environmental Assessment

SEA is an approach to support more effective, efficient, and sustainable decision making for development. It utilizes a range of analytical and participatory tools to understand the environmental, social, and economic effects of proposed policies, plans, and programs. SEA is most useful when it is adopted at the outset of formal planning processes and aligned with planning phases, enabling assessments to provide valuable information at critical stages and decision points. For example, SEA can help inform and fine-tune the objectives of policies, plans, and programs by assessing their underlying risks and assumptions. SEAs are particularly useful in identifying and determining “hidden” costs and benefits (externalities) that may otherwise be overlooked in decision making. SEAs can also provide frameworks for environmental impact assessment of projects, saving time and money and contributing to more efficient and effective national systems of environmental safeguards.

Legal definitions for SEA vary from country to country, ranging from the full incorporation of sustainability criteria to the use of assessments for environmental safeguards,

and each country needs its own specific procedures and guidelines. Reflecting the wide range of policies, plans, and programs, and differing country contexts in which these are applied, there is no one-size-fits-all SEA process. One of the key strengths of SEA is that it is easily adapted to specific and varying information needs. For example, SEA can utilize different tools for analyzing environmental or socioeconomic effects (e.g., geographic information systems or network analysis) and comparing planning options (e.g., risk, cost-benefit, scenario analyses, or opinion surveys).

Central to all SEAs is an emphasis on multistakeholder participation throughout the assessment process. Typically, this involves planning authorities, government officials from multiple sectors, private sector interests, experts from research institutes and universities, and community representatives. Multistakeholder participation helps generate a common pool of knowledge, stimulates discussions on planning options, and provides opportunities for stakeholders to understand each other’s interests, thereby reconciling differences. It also ensures more transparency in the SEA process, which leads to greater acceptance and legitimacy of findings and recommendations.

Common steps for applying SEA are shown in Box 1.

Box 1: Common Steps for Strategic Environmental Assessment

- 1. Establish the context:** Screening, setting objectives, identifying stakeholders, and developing a communications plan.
- 2. Implement the SEA:** Initiate stakeholder dialogue, clarify the SEA scope, analyze relevant institutions, analyze alternatives and impacts, and organize quality assurance.
- 3. Inform/influence decision making:** Make public the SEA report, formulate recommendations, and communicate with planners and politicians.
- 4. Monitor:** Monitor the implementation of recommendations and actions, evaluate, and feedback to decision-making and political processes.

Source: Adapted from the Organisation for Economic Co-operation and Development.



Overview of Strategic Environmental Assessment in the Greater Mekong Subregion

During the past decade, the value of SEA has gained recognition in the GMS, reflected by supportive legal frameworks and its emerging use in development policy and planning processes. The People's Republic of China (PRC) and Viet Nam have legislative requirements for SEA and are experienced in its application. The Lao People's Democratic Republic (Lao PDR) recently included provisions for SEA in its revised Environmental Protection Law and Thailand has begun drafting SEA legislation. Both Cambodia and Myanmar have recently shown interest in developing a legal basis for SEA. In the countries without a legal basis established, SEA has mainly been applied as capacity-building pilot exercises.

In the GMS, as elsewhere, there can be resistance to SEA within development sectors due to perceptions that it is both time-consuming and costly. However, due to the inherent flexibility of SEA, the approach can be applied as a relatively quick exercise with a narrower scope to reduce time and information requirements. SEA costs are often negligible in comparison to the costs associated with failed plans or programs.

Since 2006, CEP has supported GMS governments to improve their strategic planning, with a major focus on introducing and strengthening SEA use in the subregion. This has included awareness-raising activities and building institutional and technical capacity by bringing together government planners and experts to undertake SEAs. CEP has focused on land use and energy planning, recognizing that they both entail high demand for, and significant impacts on, natural capital. Pilot SEAs conducted under CEP have promoted integrated, multisector planning processes both nationally and by sector (e.g., socioeconomic development or energy sector planning) as well as area-based planning (e.g., provincial land use plans, river basin plans, and economic corridor plans).

The following examples illustrate how SEA can positively contribute to GMS policy and planning, focusing on national and subnational energy and land use planning, as well as subregional strategic planning processes.

Energy Sector Planning

With CEP support, the Government of Viet Nam undertook an SEA of its national power development plan for 2011–2020 (PDP VII). This contributed to a plan that aimed for better energy security, lower investment costs, improved distribution of benefits, and less negative environmental and social impacts.



The SEA involved a robust analytical framework and extensive stakeholder engagement to understand the implications of future energy demand in the country and identify potential alternative energy mixes. The SEA provided evidence that energy efficiency measures would decrease electricity demand equivalent to 16 coal-fired power plants by 2030 compared to a business-as-usual approach. This would entail an energy saving of over 56 million tons of coal per year by 2030, significantly reducing greenhouse gas emissions and other air pollutants. These emissions savings would have considerable benefits in terms of reducing climate change, acidification, and risks to human health. The economic value of these social and environmental benefits was calculated at \$3.3 billion by 2030. Similarly, increasing the proportion of renewables in the energy mix would further reduce environmental and social costs by an estimated \$1.7 billion by 2030. The SEA highlighted that investments in energy efficiency and renewable energy would result in a more diversified energy portfolio, enabling greater energy security for Viet Nam and less reliance on imported thermal energy and hydropower.

Influenced by these SEA findings and recommendations, the PDP VII was revised with the aim of achieving a less thermal-reliant energy mix and better integration of climate change considerations, with aggressive targets for energy efficiency measures and cleaner renewable energy technologies.

Land Use Planning

Limited land and ever increasing demand from a wide range of stakeholders means land use planning in the GMS is often complex and challenging. In 2010, as part of its SEA capacity building, CEP supported Viet Nam's Ministry of Environment and Natural Resources to conduct an SEA of the Quang Nam Provincial Land Use Plan (2011–2020).

The SEA involved extensive modeling using geographic information systems, multicriteria analysis as well as other tools. As a result, land use planners developed a far greater understanding of how future land demand would affect the performance of the agriculture, energy, and tourism sectors in the province. It also provided planners with various options for land use and pinpointed potential land use conflict scenarios between sectors, such as areas where agriculture expansion would overlap with the need for intact watersheds to support hydropower. With the Ministry of Agriculture and other sectors involved throughout modeling and scenario development, the SEA process was able to facilitate effective cross-sector dialogue to identify land use arrangements to balance energy, agriculture, and environment sector interests.

During the SEA, land use planners gained important knowledge about the socioeconomic value of ecosystem services for different land uses, such as the importance of forest integrity for flood control and landscape water regulation. This subsequently influenced the government to



formally recognize biodiversity conservation corridors as a valid land use option, as well as to introduce a hydropower watershed Payments for Forest Environmental Services scheme in Quang Nam in 2012.

Subregional Strategic Planning

The emergence of subregional strategic planning processes including under the GMS Economic Cooperation Program (ECP) have created opportunities to better plan land use, infrastructure, and urban development investments across borders. Applying SEA at this level can help strengthen the sustainability of subregional economic development and ensure natural capital is maintained in important GMS transboundary biodiversity landscapes.

In 2009, CEP conducted an SEA of the ECP's North–South Economic Corridor Strategy and Action Plan. The SEA engaged stakeholders from major development sectors in the PRC's Yunnan Province, the Lao PDR, and Thailand, who together identified environmental and social effects from the corridor. A major finding was that construction of roads near transboundary biodiversity landscapes could significantly contribute to the fragmentation of ecosystems and increase land conversion to rubber plantations and other commercial crops. The recommendations from this SEA have since helped guide the design and implementation of CEP activities, particularly in the management of transboundary biodiversity landscapes.

Also under the ECP, in 2012 and 2013, CEP applied a spatial multicriteria assessment (an important SEA tool) to screen the \$50 billion pipeline of investments in the GMS Regional Investment Framework (2012–2022). The analysis provided useful insights for GMS decision makers on how best to enhance and sustain the performance of development sector investments while simultaneously protecting natural capital. In particular, by mapping environmental risks and economic opportunities, the assessment gave planners valuable insights on the suitability of geographic areas for certain types of investments. For example, it identified low, medium, and high-risk landscape (high risk = environmentally sensitive) and the suitability of different types of investments for each landscape.

Scaling Up Strategic Environmental Assessment in the Greater Mekong Subregion

Drawing on GMS and global SEA experience, the following areas need addressing to improve the uptake of SEA in the subregion.

SEA legal frameworks and enabling environments are required

To further SEA uptake in the subregion, Cambodia, Myanmar, and Thailand will need to establish supporting



legal frameworks, complemented by technical guidelines on procedures and tools (e.g., stakeholder participation and appraisal procedures and modeling and valuation analytical tools). For the Lao PDR, the PRC, and Viet Nam, which have legal SEA frameworks, the challenge is to more strongly anchor SEA in their respective planning processes.

SEA capacity needs strengthening in countries

Even with an SEA legal framework in place, building the institutional and technical capacity within a country to systematically implement good quality SEAs is a long-term process and requires considerable resources. An effective approach is to utilize experts (often from outside the country) to mentor and support government departments and their officials to conduct SEA. Establishing a regional SEA community of practice in the GMS could add value by facilitating the exchange of experience, knowledge, and best practices between countries.

Greater communication efforts are needed to dispel misconceptions about SEA

One factor contributing to the slow uptake of SEA in the GMS is the perception that it is a costly and time-consuming regulatory hurdle. Greater efforts are required to better communicate the value of SEA to sector ministries in ways that effectively emphasize and demonstrate how SEA tools can be adapted and utilized to assist planner's specific decision-making information needs.

In addition, many SEA reports contribute to negative perceptions. Often running into hundreds of pages, overly dense in information and technical jargon, and poorly laid out, such reports can be challenging and confusing to read. More communication-friendly SEA reports are needed, which are accompanied by summary versions with key information and recommendations targeted specifically for busy decision makers.

Monitoring and evaluating of SEA outcomes needs improving

Demonstrating the performance of an SEA in contributing to environmentally sound and sustainable planning outcomes can be difficult. While it is usually straightforward to document how an SEA influenced a planning process, there is typically a lack of follow up and monitoring to determine how SEA influenced the implementation and effectiveness of a policy, plan, or program. This is partly due to there often being a lag of years between an SEA being conducted, a plan being implemented, and the results of that plan materializing. Ideally, all SEAs should have at least a simple monitoring and evaluation framework, supplemented by periodic and systematic reviews of SEA influence and impacts in each GMS country. Evaluation information on successful SEAs can then be utilized to improve future SEA application and to demonstrate, with evidence, the benefits of SEA.





About the Core Environment Program

The Core Environment Program (CEP) supports the Greater Mekong Subregion (GMS) in delivering environmentally friendly economic growth. Anchored on the Asian Development Bank's (ADB) GMS Economic Cooperation Program, CEP promotes regional cooperation to improve development planning, safeguards, biodiversity conservation, and resilience to climate change—all of which are underpinned by building capacity. CEP is overseen by the environment ministries of the six GMS countries and implemented by the ADB-administered Environment Operations Center.

Cofinancing is provided by ADB, the governments of Finland and Sweden, the Global Environment Facility, the People's Republic of China Regional Cooperation and Poverty Reduction Fund, and the Nordic Development Fund.

Find out more: www.gms-eoc.org

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