

**Support to carrying out pilot
Strategic Environmental Assessment
of Socio-economic Development Master Plan
in Red River Delta area to 2020**

Lessons learnt

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ABBREVIATIONS:

DSI	Development Strategy Institute
EIA	Environmental Impact Assessment
MONRE	Ministry of Natural Resources and Environment
MPI	Ministry of Planning and Investment
SEA	Strategic Environmental Assessment
SEDMP	Socio-Economic Development Master Plan

Executive Summary

This report presents lessons from a pilot project that supported undertaking of strategic environmental assessment (SEA) of the Socio-Economic Development Master Plan for Red River Delta (hereafter RRD SEDMP).

This SEA has been conducted by a internal working group which operated within the Development Strategy Institute (DSI) which is a planning arm of the Ministry of Planning and Investment (MPI) of the Socialist Republic of Vietnam. The SEA tested an assessment methodology recommended in the draft MPI Guidelines for SEA of Socio-Economic Development Strategies, Master Plans and Plans. The entire SEA process was facilitated by the World Bank and was supported by one International Consultant and two Local Consultants (see chapter 1 for details).

Chapter 2 summarizes the key strengths of this pilot SEA as follows: (i) consolidating information on key environmental issues; and (ii) generating multiple proposals for environmental mitigation and enhancement measures in the study area. The weaknesses of the SEA process were (i) only partial linkages between the SEA and the SEDMP elaboration and (ii) Limited consultations with relevant stakeholders.

The pilot SEA has generated several lessons regarding SEA methodology and process management in specific conditions of Vietnam. These are described in the Chapter 3. The most important lessons are:

1. The MPI draft SEA guidance provides a solid framework for the practical application of SEA in socio-economic planning, however this guidance may benefit from simplification.
2. Climate change concerns are likely to play an increasingly important role in the SEA system.
3. SEAs which start ahead of the respective planning process can be more useful than ex-ante SEAs.
4. SEA provides the MPI structures with an effective tool for consolidating environmental information in Vietnam. The MPI might wish to require all authorities which undertake SEA to make the relevant SEA reports available to MPI agencies, to all public authorities, or public at large.

1 Introduction to this pilot SEA

In 2009, the Development Strategy Institute at the Ministry of Planning and Investment requested the World Bank in Vietnam to assist the Institute in conducting "Pilot strategic environmental assessment to socio-economic development master plan in Red River Delta area to 2020"

This project aimed to test and demonstrate suitable approaches to conducting SEA that can be flexibly applied during socio-economic planning and can be used to influence choices made by the planning team.

The project results and products were to be supplied to the Ministry of Planning and Investment (Development Strategy Institute) and the World Bank in order to popularize agencies and provinces/cities.

During the project inception, the World Bank agreed that the Development Strategy Institute will be in charge of managing and coordinating of implementation of the pilot SEA project. The Institute proposed to set up working groups including domestic and foreign experts with practical experience in SEA in Vietnam to execute pilot SEA.

The whole SEA process was guided by recommendations contained in the MONRE's draft General Technical Guidelines on SEA¹ and MPI's draft Guidelines for SEA of Socio-economic Development Strategies, Master Plans and Plans². Adhering to this guidance, the SEA process involved the following tasks:

- Identifying environmental and socio-economic issues and trends need to be examined in the process of SEA implementation.
- Describing the sequence of the main environmental trends which maybe happen in the future in the case of not executing the plan.
- Assessing the affects of environmental, socio-economic issues of proposed development option.
- Examining and comparing proposed development options with the main related agencies.
- Assessing the affects of environmental issues of component projects which are proposed in the detailed plan.
- Assessing the affects of environmental issues of all projects which are proposed in the detailed plan.
- Proposing the ways to prevent, reduce or compensate for environmental negative effects.
- Drawing up the SEA report and submitting to be appraised.
- Evaluating and reporting the key lessons learnt in the whole project (i.e. effectiveness of the assessment approach and methodology, key challenges in the project executing, recommendations for future SEA practice in relevant planning processes conducted by DSI/MPI)

¹ MONRE (2008) General Technical Guidelines on Strategic Environmental Assessment in Vietnam. Ministry of Natural Resources and Environment, Hanoi. 2008

² Guidelines for Strategic Environmental Assessment (SEA) of Socio-Economic Development Strategies, Master Plans and Plans. Viet Nam – Denmark Development Cooperation in the Environment. Draft 2, December 2008.

The SEA relied primarily on an analysis of long-term trends in the key relevant environmental issues that would arise if the development patterns promoted in the existing SEDMP were to continue in the next planning cycle. The trend analysis was chosen since it is the main analytical technique recommended within the draft MPI and MONRE technical guidance on SEA. This method is logical, it can utilise different information and cope with data gaps and it can be easily understood and double-checked by the relevant stakeholders.

The trends in key environmental issues without the SEDMP and with the SEDMP were described through:

- Analytical story lines : description of key trends, their main drivers and key concerns and opportunities arising from these trends;
- Maps showing spatial development patterns;
- Graphs and simple calculations that illustrate evolution of key issues and/or their drivers over time.

2 Strengths and weaknesses of the pilot SEA

This ex-ante SEA focused on plan which was under elaboration. The SEA was required under the Article 14 of the Law on Environmental management and has it produced a formal SEA report that had to be appraised by MONRE.

The following features can be seen as the main strengths of this pilot SEA:

- **Very informative analyses of the evolving environmental baseline and resulting development constrains in the study area.** The trend analyses produced within this SEA offer comprehensive and systematized information about relevant environmental baseline trends. The information is concise and presents surprisingly deep insights into environmental challenges in the study area. It well points out the environmental priorities that need to be considered in the planning process (e.g. water resource management, air pollution, waste management, soil degradation, coastal erosion and climate change risks). The minor comment is that biodiversity-related concerns could have been elaborated a little more detailed and some analyses could be merged since they address similar issues from different perspectives. However, this is a marginal concern and the baseline analyses are otherwise of very high quality.
- **Clear and sharp assessment of environmental risks posed by the proposed SEDMP.** The SEA provides calculations or summary analyses of significant impacts that will be caused with the continuation of the current development patterns and implementation of the SEDMP. The only minor comment on this front is that the SEA should normally provide reference to the source of data. Obviously, the SEA expert of the DSI drew on multiple documents that should be ideally referred to not only for reasons of transparency but also because they provide valuable information for external audience.

- **Providing comprehensive recommendations for environmental mitigation and enhancement measures.** For each of the identified issues, the SEA identified wealth of recommendations for managing the expected environmental impacts within acceptable limits. The SEA is exceptionally informative and thoughtful on this front. The only minor comment is that SEA does not clearly point out priorities among the multiple proposed recommendations for mitigation and enhancement measures. In this regard, it would be beneficial if future processes of this type could provide summary recommendations using e.g. template provided in the annex 3 to this report.

The key weaknesses of the entire SEA process were:

- **Only partial linkages between the SEA and the SEDMP elaboration.** The SEA was conducted as an 'ex-ante' process which was fully embedded in the work of the planning team. It was interesting to observe that the SEA expert had to use formal communication channels to provide inputs to the planning team which in turn had to approve them or reject them. While this is understandable in the context of internal administrative setting within the DSI, it would be desirable if the future SEA processes within DSI could facilitate direct communication between the SEA experts and planning team members. SEA is about dialogue and search for win-win options. The SEA experts also typically obtained only the draft planning documents on which they could comment but advice provided on already drafted planning documents was bound to have only limited effects on decision-making.
- **Limited consultations with relevant stakeholders.** The SEA has been largely conducted as an expert process that included only two consultations – one extensive scoping workshop and a working meeting of relevant DSI staff members to review the draft outcomes of the SEA process. The expert nature of SEA did not allow this SEA to stimulate fundamental discussions about environmental feasibility of the ongoing development trends in the study area. Consequently it is unclear how many proposals contained in the SEA will be supported by the relevant authorities and senior officials in the provinces covered within this SEA.

None of the above issues however do not decrease the analytical quality of the SEA process. They are mentioned only as the reminder for the future replication of such processes within the DSI.

Overall, the SEA is of an exceptionally high quality. It is remarkable how many insightful analyses and proposals could be produced by a member of the planning team within the SEA process. This indicates that SEA can be easily conducted by in-house staff members of the planning authorities which have access to internal documents of the planning authority and can obtain data from relevant agencies with environmental mandates. Such in-house SEA experts naturally need to be provided with sufficient resources to carry out the assessment.

3 Lessons learnt from this process

The pilot SEA provides a wealth of lessons which can be summarized as follows:

1. **The MPI draft SEA guidance provides a solid framework for the practical application of SEA in socio-economic planning, however this guidance may benefit from simplification.** This pilot offers a practical demonstration which shows that the MPI draft SEA guidance provides a solid framework for the practical application of SEA in socio-economic planning. The pilot SEA team found this guidance helpful and clear and no changes in the methodology suggested in this draft guidance are needed as far as the overall analytical approach is concerned.
2. **It may be beneficial to start SEA ahead of the planning process rather than conducting it as an ex-ante exercise.** Ex-ante SEAs are currently portrayed as the best practice on international level and are hence promoted in Vietnam as well. However, experience from this pilot SEA indicates that it may be very useful to start the SEA processes ahead of the actual elaboration of the respective plans. Initiating SEA e.g. 6-10 months already before starting the elaboration of the respective SEDMP would enable the SEA team to support the planning process with some potentially very useful inputs, such as:
 - (i) Identification of key issues of concern (the MPI draft guidance - SEA Step 3)
 - (ii) Consolidated analysis of environmental context showing environmental risks of current development patterns in the study area and outlook into the future (the MPI draft guidance - SEA Step 4); and
 - (iii) Recommended alternative development options with less adverse, and ideally more beneficial impacts (the MPI draft guidance - SEA Step 5).

Such early inputs from the SEA can provide useful guidance for the elaboration of the relevant SEDMP. The early start enables the SEA to deliver these specific inputs to the SEDMP elaboration in time. The remaining steps in the SEA process (e.g. assessment of future environmental and socio-economic trends with the SEDMP; proposals for mitigation and enhancement measures and management and monitoring arrangements; and compilation of the SEA Report and its submission to the relevant authorities for appraisal) can be then conducted concurrently with the relevant steps of the SEDMP elaboration, exactly as proposed in the draft MPI guidance.

The DSI or MPI could find it useful to consider this recommendation, promote such early start of SEAs and possibly integrate suggestions on conducting prior SEAs into its draft guidance (section which deals with 'Linking SEA with planning'). The International Consultant can, if needed, provide more specific suggestions on how to describe such prior/advance SEAs in the MPI guidance.

3. **SEA provides MPI structures with an effective tool for consolidating environmental information in Vietnam.** SEDMPs cover all aspects of economic development. Environmental context and trends which are analyzed within these SEAs as part of their baseline studies can be, if done well, used for multiple purposes. In the case of the study area pilot SEA, it became e.g. clear that the graphs, maps and trend analyses which were compiled within this SEA became more comprehensive than formal SOE reports in the study area. SEA process facilitated sharing of information between the relevant authorities, it helped to check the data quality and organised this information in one systematic framework. Such baseline analyses may appear costly in the first SEAs but future SEAs can build on consolidate baseline analyses and become much cheaper. Since the MPI is reportedly interested in simplifying data gathering efforts and decreasing the overall financial requirements for implementing the Vietnamese SEA system, DSI might wish to require all authorities which undertake SEA to make the SEA reports available to MPI structures, or to all public authorities at large. Such arrangement would allow any future SEAs undertaken to use, verify or supplement environmental baseline analyses contained in previous SEAs.

4. **Climate change concerns are likely to play an increasingly important role in the SEA system.** The MPI draft guidance in its Annex 6 presents a very useful framework for considering climate change issues within the Vietnamese SEA system. However, experience from this pilot SEA indicates that this particular annex may be currently too detailed to be easily absorbed by local authorities and SEA practitioners. It may be beneficial to summarize main practical suggestions contained in this annex through a short checklist that highlights the key issues that can be easily considered when conducting the SEA. The annex to this report presents an example of a simplified checklist what was used in our pilot SEA.

Annex 1: Example of climate change checklist used within the pilot SEA

MONRE Climate Change Scenarios for the study area

Climate change concerns	Year 2050 ³	Year 2070 ⁴	Year 2100 ⁵
Temperature raise (and heat waves)	1.1 C increase	1.5C increase	2.0 – 2.5oC (relative to 1980-1999) under a moderate A1B scenario
Trends in rainfall in rainy season	Increase by 0-5%	Increase by 0-5%	The rainfall may annually increase by 10-15% compared to 1990.
Trends in rainfall in dry season	Either decrease by 5% or increase by 5%	Either decrease by 5% or increase by 5%	Rainfall may increase by 20% in the dry season
Sea level raise (SRL) - approx. increase by 5 cm every 10 years	Up to 33 cm	Up to 45 cm	Over 70 cm

Potential climate change impacts and risks in key vulnerable sectors

Coastal urban areas and coastal tourism facilities

- Which areas are vulnerable to coastal erosion due to ongoing sea level raise and tropical cyclones? These areas will be affected by predicted sea level raise inundation (by over 70 cm by 2100 and increased intensities of tropical cyclones).
- Which areas are vulnerable to supply shortages due to extensive pumping of ground waters? These areas will be affected by reduced fresh water availability and salt water intrusions.

Inland urban areas

- Which urban areas are vulnerable to water shortages? These may be further constrained by reduced availability of fresh water (due to reduced dry season flows) and/or worsening of fresh water quality (due to increased pollution concentrations during reduced dry-season flows)?
- Which urban are vulnerable to local flooding and rainwater drainage during high rainfall episodes? These episodes may be more severe.

Agriculture

³ MONRE. 2009. Study on Vietnam Climate Change Scenarios. Institute of Hydrometeorology and Environment, March 2009

⁴Ditto

⁵ MONRE. 2008. National Target Program to Respond to Climate Change. Ministry of Natural Resources and Environment, Hanoi.

- Which agricultural areas are vulnerable to water shortages? They will face an increased water demand due to increased temperatures and evapotranspiration.
- Which agricultural areas already experience significant damages to crops through uprooting during storms? These losses may be more severe due to predicted increase in intensity of cyclones.
- Which agricultural are vulnerable to sea level raise inundation, floods, water logging or salinisation? It may be useful to consider gradual phasing out of agricultural activities in flood prone areas and in those areas affected by 2050 sea level raise scenario (which is 33 cm).

Forestry

- Which forests in mountainous areas are vulnerable to soil erosion?
- Which forest areas are vulnerable to wildfires and insect attacks?
- Which forest areas are vulnerable to uprooting through uprooting during storms? These losses may be more severe due to predicted increase in intensity of cyclones.
- Which coastal forests are being affected by increasingly intense cyclones, sea level raise, water logging or changes in salinity levels?

Fisheries and aquaculture

- What are the changes in the composition and productivity of coastal and marine fisheries?
- Are the changes in water salinity having any impacts on species that are sensitive to this issue (including shell fish and oysters). Some brackish species may be impacted by changes in water salinity during freshwater flushing into brackish systems.
- Which mangrove ecosystems and coastal forests may be lost due to sea level raise, water logging and changes in salinity levels?

Transportation

- Which seaports, wharfs, storage yards and warehouses can be affected by 2100 sea level raise (70 cm), storms and coastal erosion?
- Which railways and road networks may be damaged or inundated due to sea level raise, floods and erosion?
- Which railways and road networks may act as an important barrier during floods?
- Which roads/rail-lines are vulnerable to landslides during high rainfall episodes?

Industry

- Which industrial parks are vulnerable to flooding or 2100 sea level raise inundation (70 cm)?
- Which industrial parks may have problems with drainage during high rainfall events?
- Which industrial activities will require intensive cooling? They may need to consider increased cooling costs?