

Review of First Application of SEA to Energy Planning in the case of Vietnam PDP VII

Nguyen Huu Thien
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Objective

- **Objective 1:** To examine whether the process of the SEA for PDP7 followed the existing Vietnamese regulations/guidelines for SEA.
- **Objective 2:** To examine whether the process of the SEA was in line with international best practices and performance criteria for good SEAs.



Finding - Advantages

- This SEA was the first time and SEA was conducted for the energy sector (what about SEA for PDPVI). It helps to change the practice of energy development that in the past did not take into account social and environmental costs
- In terms of timing, while most of the pilots SEAs in Vietnam before the passage of the 2005 Environment Protection Law were undertaken as ex-post assessments, the current SEA was conducted concurrently with the PDP VII and completed before the approval of the PDPVII to enable environmental issues were considered at early stages of development planning.



Finding – Advantages (cont)

- It provided a comprehensive analysis of impacts of each type of power generation.
- It had influence on decision-making.
 - Close some thermal power plants
 - Recommend measures for demand side management
 - Increase the number of small hydropower plants by 4%.

Finding – Advantages (cont)

- The PDP VII working group considered two other alternatives that the SEA working group proposed, which were:
 - To increase electricity efficiency and conservation rate from 3% in the base case to 5-8% as set out in the National Strategy for Electricity Efficiency and Conservation (equivalent to a reduction of 14,600 MW)
 - To increase the rate of electricity generation from renewable energy and nuclear power from 4.1% in the base case to 8-10% as set out in the National Energy Development Strategy (equivalent to a reduction of 6,200 MW from coal-fired thermal power production)

Finding – Advantages (cont)

- By and large, SEA is conducted consistently with international standard.
- SEA has established requirements and objectives of the plan
- Make it clear to the necessity of SEA
- Identify the key issues and impacts that need to be considered
- Understand the importance other impacts, identify benefits and cost.
- Work out measures to avoid, mitigate and compensate impacts.
- Describe the plan's effect on environment and solutions to this.
- Have clear reason for approving, disapproving or amending the plan.



Finding – Advantages (cont)

- The SEA addressed all of the typical questions for an SEA
 - What is the existing situation (in a particular sector or region)?
 - What are the goals and objectives of the policy, plan, or program? Do these support relevant government policies (especially those related to the environment and sustainable development)?
 - What are the feasible options for delivering the policy, plan, or program?
 - What are the most pronounced environmental issues (positive and negative) associated with each of the preferred option?
 - How significant are these environmental effects?
 - What can be done to avoid or lessen negative effects/issues and to enhance positive ones?
 - What is the most feasible policy, plan, or program?
 - How can environmental effects be measured, monitored, and reported?



Finding – Advantages (cont)

- With regards to uncertainties, the SEA report provides a section on “unreliability of data” (but it did not inform decision makers where to be particularly cautious and which strategic paths to take upon new insights from improved quality of data. See more discussion below).

Finding -- Weaknesses

- Though the SEA set out clear objectives for assessment, the objectives are biased towards accepting the economic growth rate as first priority and SEA is used in a reactive way to mitigate environmental and social impacts of the default first (economic) priority, namely economic growth rate.
- The SEA therefore is more an impact-based SEA than an Objective-led SEA where environmental management and sustainability objectives are the starting point of the SEA.
- Specifically, for the strategic issues assessed, no sustainability objectives were set for each of the objective and due to that the final conclusion of the SEA stated that “the study in the SEA shows that the PDP VII is necessary to meet economic development needs. During the implementation of the PDP VII, impacts upon people and the environment and other social impacts are inevitable”.
- “Inevitable” here can imply that they must be accepted in the name of economic growth rate.

Finding – Weaknesses (cont)

- Thought the SEA was conducted concurrently with the formulation of the PDP VII, so the SEA was conducted in a timely manner; the SEA could not provide guidance to the subsequent SEAs the hydropower component as most of the hydropower projects under PDP VII were either under construction or already committed.
- The SEA claimed that it assessed the most effective, least costly (taking into account full economic costs) methods for meeting this likely future demand. However, the SEA was overconfident in many of the recommended mitigation measures.
- The final selection of the preferred option was based on the assumption that most of the impacts could be mitigated while many of the recommended mitigation measures were only theoretical ideas that have not been verified.

Finding – Weaknesses (cont)

- The SEA also did not say how much of the impacts could be mitigated through these recommended ideas. Typical examples of the unverified ideas are such as that the SEA states that:
- The risk of negative impacts on forest resources in affected areas can be mitigated through the introduction of a community forestry program in areas where there is a risk of increased stress on forestry resources (section 5.1.3.1).
- The impact on the availability of aquatic resources is like to be severe. It is estimated that over 100,000 people live within one kilometer of the affected river stretches and rely on the aquatic resources to varying extents. These can be mitigated by the introduction of measures such as aquaculture development, introduction of hatcheries to reintroduce productive fish species and the development of alternative livelihood options (section 5.1.3.1).
- With regards to risk to biodiversity, the mitigation measures should also include exploring costs and technical feasibility of transferring key endangered species to new habitats (section 5.1.3.1).
- One of the mitigation measures recommended by the SEA was an education and awareness program on the importance and value of biodiversity resources to be developed for implementation both at the sites where schemes are constructed and for wider stakeholders involved in the sector (section 5.1.3.1).

Finding – Weaknesses (cont)

- The SEA came to the conclusion that the optimal scenario for power development for PDP VII, on the ground of economic efficiency and feasibility, is the base scenario that the PDPVII proposed. The SEA did consider 2 alternative scenarios:
- The scenario 1 is about increasing efficiency rate from 1-3% in the base scenario to 5-8%. However, then it went on to conclude that investment for reducing power loss through transmission line is too high (1,164.4 million USD) without comparing with environment and social costs of the base scenario.
- The scenario 2 is to increase renewable energy use from 3.8% to 4% to 8-10%. However, then it went on to conclude that the potential for using renewable energy for power production is very low because of the low technical and economical efficiency and that investment for power development using renewable energy is often higher than other traditional forms of power development. SEA did not consider an option to subsidize renewable energy to reduce environmental impacts.

Finding – Weaknesses (cont)

- Many of the statements in the SEA report were not substantiated or evidence-based, such as:
- The world economy is in the process of post-crisis recovery and development, which provides Vietnam with good opportunities to promote trade and attract foreign investment. Economic development creates greater demand for electricity and presents a larger market for electricity (5.1.1)
- SEA stated that power demand is closely linked with GDP growth rate. GDP growth rate of the base case scenario was 7.46% for the period 2011-2015 and the associated projected power demand growth rate is 13% for the same period. Actual GDP growth rate in 2013 was only 5.0% in 2012 and forecasted by ADB to be around 5.2%. Meanwhile, a recent World Bank report says that Vietnam is experiencing a longest spell of slow growth since the onset of economic reform in the late 1980s; Real GDP grew by 5.25 percent in 2012, the lowest level since 1998; Declining investment rate, low PMI and slumping retail sales; Across the board decline in investment rates: Total investment has fallen from 29.6 percent of GDP in the first quarter of 2013 from 38.5 percent in 2010. The same report says that economy is expected to grow at a moderate rate around 5.3 percent during 2013 and 5.4 percent in 2014.
- The SEA did not say what should be done if economic growth is higher or lower than expected.

Finding – Weaknesses (cont)

- Conflict of interest. The SEA was led by the same Institute that prepared the PDPVII. Five members of the SEA including the team leader were at the same time team members and team leaders of the PDPVII. The SEA team is headed by the IE Director who is also the chairman of the PDP VII, and IE Deputy Director who is vice chairman of PDP VII.
- This on the one hand enhances ownership of planners of the SEA process and make it easier to communicate between the two working teams, but on the other can present a risk of conflict of interest and the tendency that the SEA group can be biased toward justifying and endorsing the PDPVII without due scrutiny of the plan as the result is susceptible to influence from analysts personal values and opinions.



Finding – Weaknesses (cont)

- Conflict of interest aside, there is also a risk that when the SEA team is also led by the planning team, it is difficult for them to depart from prior knowledge, experience, and beliefs to explore new ideas.
- This can result in rejecting new ideas or in only minor changes to the current planning practice.

Finding – Weaknesses (cont)

- The statement by the SEA that collecting payment for environmental services as piloted in Lam Dong and Son La as a way of internalizing a series of costs that have been traditionally treated as externalities into the calculations of costs and benefits for power projects including costs of impacts such as environmental pollution, gaseous emissions, damage to the integrity of the ecosystems in the expansion of the transmission system is misleading.
- In fact, the pilot schemes for payment for forest environment services as piloted in Lam Dong and Son La only collected payments from hydropower to pay for maintenance of remaining headwater forests to maintain lifespan and operation efficiency of reservoirs through maintaining water sources and reducing sedimentation of reservoirs.
- Whether or not the payments help address pollution, gaseous emissions, and damages to the integrity of the ecosystems, especially downstream of the reservoirs is questionable.

Finding – Weaknesses (cont)

- The SEA called for more import from neighboring countries without analysis of the trans-boundary impacts, especially of hydropower impacts from Lao and Cambodia on the Mekong Delta in Vietnam. In particular,
- The SEA supported the idea of importing power from the proposed Luang Prabang dam which is one of the 11 proposed mainstream Mekong dams.
- The SEA also supported the idea to import power from Cambodia when more hydropower plants have been built on the Mekong mainstream in Cambodia.
- SEA made an argument that “Vietnam is a densely populated country. Conflicts over land and the associated impacts have always been problematic. In general, the potential generation capacity in neighboring countries brings with it less environmental and social impact per kWh because fewer people are affected. Therefore, it makes regional, economic and environmental sense for Vietnam to pursue with vigor grid interconnections with Laos, Cambodia and China at locations that offer favorable conditions for doing so. Vietnam is currently doing this but it needs to be encouraged and developed further”.
- This statement is mainly based on the number of people displaced from dam sites. The assumption that power generation in neighboring countries is with less environmental and social impact per kWh because fewer people are affected is questionable. Hydropower on the mainstream Mekong, for example, can potentially affect livelihoods of 18 million people in the Mekong Delta.

Finding – Weaknesses (cont)

- While the SEA working group paid attention to reducing reliance on the international fuel market to ensure energy security, at the same time it called for more import from neighboring countries to create another kind of reliance without due analysis of implications.
- In the section that describes the general natural and socio-economic conditions of the areas under the PPPs as required by the Circular 05-2008/TT-BTNMT, much information provided in the SEA is redundant and not focused on the identified strategic issues.



Conclusion

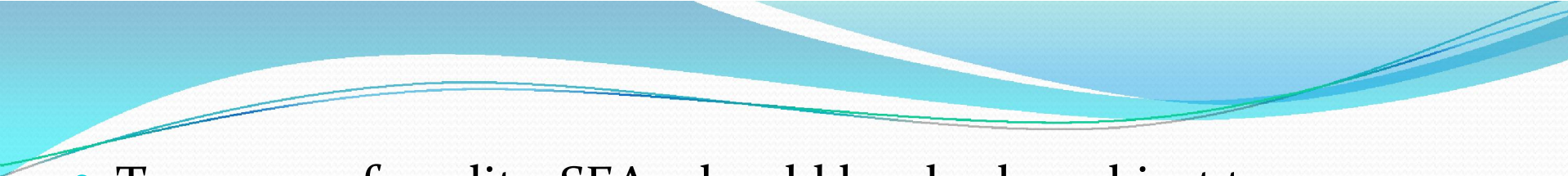
- The SEA was thorough and well-structured, based on existing data and literature. It had major impact on the PDPVII.
- In terms of procedure and contents, it was a good SEA in compliance with existing legal guidelines for SEAs in Vietnam and in line with international best practice and performance criteria. The SEA helps facilitate stronger representation of social and environmental issues in decision making.

Several drawbacks of the SEA process included:

- Funding was inadequate for more robust analyses as pointed out in the SEA report.
- The SEA was done in a reactive manner in mitigating negative impacts of power development demand that has to be achieved to accept the default economic growth priority.
- The SEA could not provide guidance to subsequent SEAs of sub-components of the plan as most of the hydropower projects under PDPVII were already under construction or committed.
- The SEA exerted over-confidence in recommended mitigation measures which need to be verified.
- Some of the statements in the SEA need to be substantiated.
- The call for increase in import of energy from neighboring countries was without analysis of impacts on the Mekong Delta.
- The SEA did not undergo an independent check.
- Conflict of interest in that many of the members including team leaders were involved in both the preparation of the PDP VII and the SEA for the PDP VII.

Recommendation

- The SEA has set a good example in proving that SEA is a useful tool for early integration of sustainability into development decision making so it should be used as a tool for other PPPs (Policies, Programs, Projects).
- While the close integration between planning and SEA process needs to be maintained, to avoid conflict of interest and the risk of the SEA being dominated by the PPP and serve to endorse the PPP, it is recommended that the team members doing the SEA and those formulating the PPP should have separate functions and responsibilities and should not overlapped, at least at leadership level.
- as guided by Maria do Rosário Partidário (2012), it is very important that SEA and policy-making/planning processes share several activities, such as fact-finding, information, stakeholder's engagement and public participation.
- In setting objectives for SEAs, sustainability and environmental management objectives should be the starting point. Particularly, sustainability objectives should be set for each of the identified strategic issues and the SEA team should start from there and work backward into identifying impacts of the proposed PPPs, exploring alternatives, and finally informing decision makers on strategic decisions to make as well as strategic trade-offs in full knowledge of what at risks.

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- To ensure of quality, SEAs should be also be subject to independent, third-party check and the SEA reports should be made available to the public for comments.
 - Uncertainties should be acknowledged and built into the final recommendation for approval of the PPPs. Decision makers should be informed where high uncertainties remain so that they should be particularly cautious in making decisions and which strategic paths to take upon new insights learned from improved information and reduced uncertainties.
 - Funding for SEAs should be sufficient to allow robust analyses and to avoid over-confidence in untested theoretical ideas and assumptions.
 - **In general**, SEA in PDPVII can be regarded as a breakthrough in institutionalizing SEA for PPPs (Policies, Programs, Projects) in Vietnam.