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EAEF Sustainable Energy Partnership Opportunities between EU and ASEAN

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**Developing a SEA platform for power
sector integration in the Lower Mekong
Countries**

EAEF Project 31-2002



Overview of presentation

- ❑ Context
- ❑ Rationale
- ❑ Objectives
- ❑ Partners and participation
- ❑ Approach and tools
- ❑ Case studies
- ❑ Main recommendations
- ❑ Follow-up activities



Project team

- ❑ SEI (Sweden) – extensive experience from energy and environment planning in the LMC, as well as policy development support.
- ❑ CEERD (Thailand) – long experience in support for regional and national energy programmes.
- ❑ VTT (Finland) – long experience in energy market integration.





Context

- ❑ Drive for regional economic integration
- ❑ Portfolio of infrastructure development project

But...

- ❑ Degradation of environmental systems and valuable ecosystems
- ❑ Distribution of impacts (cross border and cumulative)
- ❑ Exclusion, vulnerable communities
- ❑ Regional economic differences



Rationale/Background

Strategic Environment Framework Project (ADB, MRC, UNEP, SEI)

- > Regional: hotspots, spatial patterns of regional integration
- > Time: long-terms trends, scenario analysis
- > Vulnerability: localized impacts, vulnerability assessment, sustainable livelihoods, hotspots
- > Perspectives: stakeholder analysis, participatory tools
- > Sectors: social and environmental concerns into economic decisions

- ❑ Poor assessment frameworks
- ❑ Complexity of assessment, persistent gaps in knowledge and absence of tools
- ❑ Lack of capacity and tools
- ❑ Need for closer bi- and multilateral coordination



Objectives

The ultimate goal of the proposed project is to support investments in the power sector in the LMC that are environmentally and socially sustainable

The objectives of this action included:

- Development of a “platform” for the consideration of environmental and social aspects, as well as cumulative and indirect impacts, are considered at an earlier stage in the planning process than currently takes place.

- Support and developing the capacity to internalize strategic environmental assessment in the regional power sector collaboration and integration.

Disseminate and engage planners in the use of decision support tools and information to help assess the complex social and environmental impacts of projects and programs.



Partners and participation

As the issues are both national and regional in scope, the partners were invited to reflect this.

- National planning bodies (e.g. ministries)
- National implementing bodies (e.g. utilities)
- Regional bodies (e.g. Mekong River Commission)
- Research institutions



Approach

Many issues are transboundary, but legislation, planning and investments are done at national level.

For this reason, the project focused on national assessment and planning processes for which there is an explicit need for cross-border collaboration and consultation.

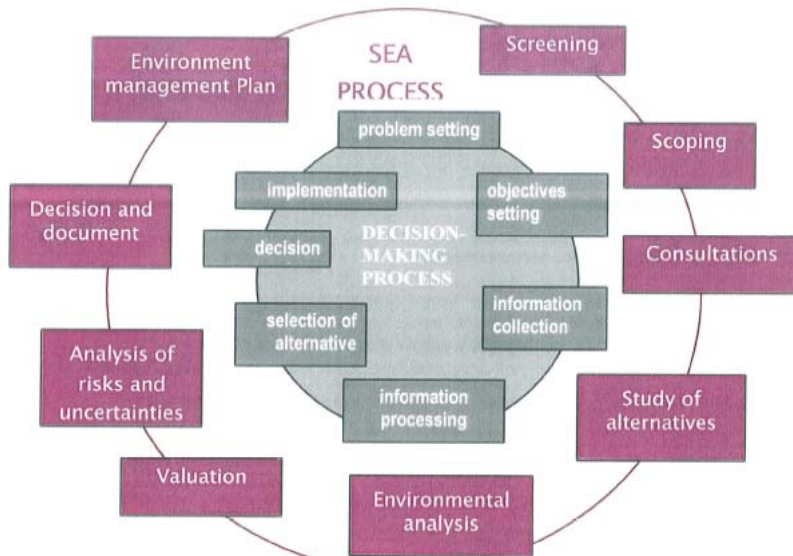


Approach (cont)

- ❑ Strategic assessment and planning framework adapted
- ❑ Several iterations of co-creative policy workshops to define and develop national cases (based on current energy sector plans).
- ❑ Range of tools and methods (problem trees, stakeholder analyses, alternatives generation, energy systems and markets models, public consultations, CBA, MCA, LCA etc) used on the national cases.



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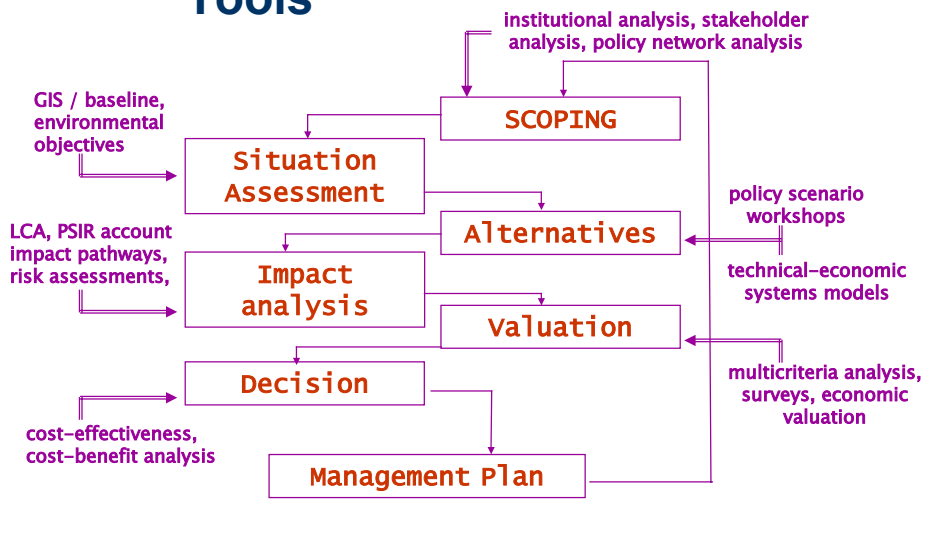
Source: Adapted from SEI (2004), Report II.



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Tools





Case study approach

Each case was developed based on the following criteria:

- ❑ Current infrastructure development plans in which several alternatives are presented (e.g. the ASEAN and ADB scenarios)
- ❑ Clear regional dimension (e.g. upstream-downstream for large hydropower)
- ❑ Controversial issues involved (e.g. regional electricity pricing)



Case study approach (cont)

Each case was evaluated in several steps based on the SEA cycle in order to:

- ❑ Identify alternatives, impacts and valuation criteria
- ❑ Explore potentially controversial issues
- ❑ Develop frameworks for consultations, both national public processes and cross-border impacts
- ❑ Identify entry points for SEA in national planning processes
- ❑ Support internalisation of strengthened strategic planning and consultations in regional energy sector integration



Cambodia

How to meet the target of 70% household electricity access by 2030 with

- Extended integration?
- Limited integration?



Lao PDR

How to meet the target of 90% household electricity access with a generation mix of:

- 80% hydropower, 20% thermal generation?
- 80% imports, 20% renewables?
- 100% hydropower?



Thailand

How to meet projected electricity demand by 2020 with public acceptance under different external integration scenarios:

- No new interconnections?
- Some new interconnections?
- Full implementation ADB-GMS “extended cooperation scenario 2”?
- Fully integrated transmission systems and markets?



Vietnam

How to meet projected electricity demand by 2020 under different emission standards for thermal power plants:

- Baseline (current) standards (average)?
- Proposed (stricter) standards?
- Lower standards?
- No standards?



Main recommendations

- ❑ A SEA process is a long process (even longer than the actual infrastructure development itself), not a single intervention or manual.
- ❑ The process should be owned and led by the institution responsible for energy sector planning.
- ❑ SEA can be approached with a wide range of levels of ambition, a full assessment is a very large and costly undertaking – the investment in consultations and assessment must match the severity of the issue.
- ❑ There is a trend towards legislating SEA processes nationally, which will need to be coordinated across the region
- ❑ For large regional programmes (e.g. pipelines, roads, dams etc) it is critical to take a holistic perspective on cumulative and long-term impacts, negative as well as positive



Follow-up activities

- ❑ During 2006-2008, Stockholm Environment Institute SEI experts provide technical support to the strategic assessment of the ADBs *GMS Energy Sector Strategy* which is proposing regional strategies to expand cooperation among the GMS countries.
- ❑ The current round of activities focuses on input into the GMS Energy Sector Strategy Interim Report, a consolidated set of total environmental costs for the energy conversion technologies for each of the GMS economies.
- ❑ SEI is also involved in the EAC and ECOWAS (East and West Africa) regional energy sector integration/coordination processes using many similar approaches