

# Strategic Environmental Assessment (SEA) for Master Plan Studies in Developing Countries: Experiences under JICA's Guidelines for Environmental and Social Consideration

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## 1. Background and Purpose of the Study

Strategic Environmental Assessment (SEA), which was first introduced in Europe and North America, is now broadly utilised and institutionalised in not only developed countries but also a number of developing countries as well as various development agencies.

While the term has a wide variety of definitions and interpretations depending on the countries or institutions concerned, “in general, SEA refers to a formal, systematic process to analyse and address the environmental effects of policies, plans and programmes and other strategic initiative” (UNEP, 2004). In relation to development assistance, OECD (2006) refers SEA to a range of “analytical and participatory approach that aims to integrate environmental considerations into policies, plans and programs and evaluate the inter linkages with economic and social considerations”.

Japan International Cooperation Agency (JICA), which is a bilateral development aid agency of Japan, has conducted its environmental and social considerations at the Master Plan<sup>1</sup> (M/P) and/or Feasibility Study levels, which are at the early stages of project cycle. In particular, after the introduction of JICA's Guidelines for Environmental and Social Considerations in 2004, hereinafter referred as “the 2004 Guidelines”, JICA officially started to integrate the concept of SEA to its operations.

The 2004 Guidelines define SEA as “an assessment being implemented at the policy, planning and program level rather than a project-level EIA”, and then stipulate that

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<sup>1</sup> Master plan means the basic plan for the implementation of various long-term development projects

“JICA introduces the concept of SEA when conducting Master Plan studies, etc., and works with the recipient governments to address a wide range of environmental and social factors from an early stage. JICA makes an effort to include an analysis of alternatives on such occasions”.

In April 2010, new JICA Guidelines for Environmental and Social Considerations, hereinafter referred as “the New Guidelines”, were formulated following establishment of new JICA<sup>2</sup> in 2008. The New Guidelines clearly states that “JICA applies a Strategic Environmental Assessment (SEA) when conducting Master Plan Studies etc.”, and thus, introduction of SEA<sup>3</sup> has been further promoted.

In this paper, we first review the status of implementation of SEA for M/P studies to date and then analyse the advices given by the JICA Advisory Committee for Environmental Social Considerations and its predecessor, the Advisory Council, hereinafter referred as “the Advisory Committee” altogether, to these M/P studies to discuss the achievement, issues and possibility for improvement of JICA's SEA procedures.

## 2. SEA Procedures for M/P Studies

JICA's definition of SEA is quite simple as written in previous section and thus the actual implementation is quite flexible depending on the country and the plan concerned. The following procedure is indicated as the standard procedure under the New Guidelines.

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<sup>2</sup> New JICA was inaugurated with a merger between the existing JICA and the overseas economic cooperation section of the Japan Bank for International Cooperation, which now provides bilateral aid in the form of technical cooperation, ODA loans and grant aid programmes.

<sup>3</sup> The definition of SEA in the New Guidelines is same as the one in the 2004 Guidelines

- a. Survey of basic conditions (policies, regulations, geography, etc.)
- b. Formulate development scenario/ alternatives
- c. Scoping and setting indicators for evaluation
- d. Stakeholder meetings
- e. Survey, prediction, analysis, evaluation of impacts
- f. Mitigation measures
- g. Selection of programs/ projects
- h. Reporting (including stakeholder meetings if appropriate)

It needs to be noted that SEAs in JICA's context are usually conducted as environmental and social consideration studies (ESCSs) within the M/P studies.

### 3. Review of JICA's SEA Implementation

#### 3-1 M/P Studies for Review

For this review, we extract M/P studies which are categorized as environmental category "A" or "B"<sup>4</sup> under the New Guidelines and the 2004 Guidelines, and then select 86 studies of which final reports are open on the JICA web site. Since the New Guidelines are only applicable to those proposed after July 2010, no studies conducted under the New Guidelines are selected for further review. This is not necessarily a comprehensive review, but we consider that most of the SEAs or SEA type assessments JICA conducted in cooperation with its counterparts to date are included in these M/P studies.

#### 3-2 Framework for Categorisation

We first focused on how to differentiate SEAs from various ESCSs at M/P level. The definitions of SEA by the JICA Guidelines and UNEP (2004) indicate that SEA is an assessment process at policy, plan and programme levels. IAIA (2009) defines that SEA is a process and a tool for evaluating the effects of proposed policies, plans and programmes on natural resources, social, cultural and economic conditions and the

institutional environment in which decisions are made. M/P studies of JICA are in principle categorized as the plan level and the ESCSs usually cover not only environmental aspects but also socio-economic aspects and, thus, in a broad sense, most of the ESCSs conducted in M/P studies could be categorized as SEAs.

However, in practice, the contents of these ESCSs vary from one to another including a wide variety of studies. Some are clearly calibrated SEAs and others are simple subproject-based studies. Therefore, in this paper, we review these ESCSs more rigorously by using two additional criteria; one is the consideration of alternatives and/or zero options and the other is public involvement, both of which are commonly regarded key requirements for SEA.

In other words, we screened the M/P studies using four criteria, namely "implementation at plan level", "assessment from environmental and socio-economic aspects", "consideration of alternatives/zero options", and "public involvement". These four criteria are consistent with the requirements for SEA suggested by Harashina (2011).

#### 3-3 Results

While all of the 86 studies met the first and second criteria, the ones that include consideration of alternatives and/or zero options decrease to 50 studies, and the ones that explicitly involve affected residents and/or NGOs at the M/P level among the 50 are 33. We label the former as SEA with alternatives and the latter as SEA with alternatives/public. Most of category "A" studies and nearly one-third of category "B" studies met these additional criteria.

The Table.1 shows the results on sectorial basis. As we can see from the table, in energy sector and transport sector, SEA type approach is quite common. Other sectors such as water resources and agricultural development, on the other hand, seem to be less common. General feeling is that when the plans contain project components which are likely to extend significant negative impacts, such as large-scale infrastructure projects, well-structured SEA type assessments tend to be conducted. When the plans consist of small independent

<sup>4</sup> Category A: significant adverse impacts are expected, Category B: less adverse impacts than Category A

projects, such as small-scale water supply facilities, project-level assessment seems to be prevailing.

**Table 1. Distribution of M/Ps and SEAs on Sectorial Bases**

Sector	Transport	Energy	Environmental management	Urban/ regional development	Agricultural development	Disaster prevention	Water Resources	Private sector development	Total
Reviewed M/Ps	18	13	4	14	10	7	18	2	86
SEA/alternative*	12	12	0	8	5	4	8	1	50
SEA/alternative/public	9	8	0	5	2	3	5	1	33

\* : Among the 50, 4 studies consider only zero options.

Regarding the criteria, some of the studies do not contain, or at least we could not identify, consideration of alternatives and zero option at plan level.

These include the cases in which the scope of M/P is already focused and rooms for alternative consideration are limited and/or the cases in which environmental and social impacts are considered to be minimal and consideration of alternatives based upon these impacts is not meaningful.

While various types of public involvement including stakeholder meetings are conducted in many of the M/P studies, in some cases actual procedures are taken at the pre-feasibility study level and not M/P study level after specific sites are identified. There are also the cases that involvement of civil society could not be identified in the attendants of stakeholder meetings.

#### 4. Review of Advices Given by Advisory Committee

The Advisory Committee for Environmental and Social Considerations was established as a permanent third-party institution that gives advice to JICA in regards to the support for and examination of environmental and social considerations of JICA's cooperation activities under the New Guidelines (Murayama et al., 2012). The similar type of institution was also set up under the 2004 Guidelines even before, both of which were/are composed of external experts with necessary knowledge.

M/P studies, in particular the ones categorized as "A", are subject to the Advisory Committee. Among those M/P studies reviewed in this paper, 10 studies were reviewed by the

Advisory Committee and altogether 354 advices were submitted to JICA.

In general, advice by the Advisory Committee is to show JICA where issues exist in contemplating environmental and social considerations (Murayama et al., 2012) and, therefore, we consider by reviewing these advices that we can identify key issues and/or problems if any on implementing M/P studies including their ESCSs.

Since two sets of advisory documents are submitted to JICA per one project/study, i.e. at scoping stage and drafting stage, altogether 20 sets of advisory documents were submitted for the 10 studies. It needs to be careful that some of the studies include feasibility study component and, thus, not all of the advices are targeted to M/P studies. As a result of initial screening, ten advices among 354 are considered not to be directly relevant to M/Ps and thus excluded from the further review.

**Table 2. Indication from Advisory Committee**

No	Main Issues of Advices	No. of Advices
1	Relations to upstream/downstream plans	28
2	Revision/clarification of the contents of the plan	22
3	Operation/maintenance systems	5
4	Revision of scoping items	13
5	Assessment of environmental and social impacts (direct impacts)	64
6	Cumulative, indirect, future effects	18
7	Consideration of mitigation measures	59
8	Stakeholder meetings	32
9	Selection/comparison of alternatives	56
10	Confirmation/addition of basic data/information	24
11	Confirmation/revision of reporting	12
12	Capacity building of executing agencies	3
13	Formulation/implementation of monitoring plans	5
14	Consistency with JICA guidelines	3
Total		344

From the Table.2, we can see that advices regarding assessment of direct impacts are the biggest in number, followed by mitigation measures, selection/ comparison of alternatives, and then the advices regarding stakeholder meetings including their scopes, contents and descriptions. Since the number of studies we reviewed is limited and not all the advices are targeted to SEAs, it is difficult to judge what are main issues on conducting SEAs. However, we can at least say that selection/comparison of alternatives as well as stakeholder meetings are main issues in addition to assessment of direct impacts and consideration of mitigation measures at this stage.

Common Issues frequently raised in connection with the alternatives include process of alternatives selection, clarification of evaluation methods and comparison techniques, evaluation result of each environmental item, logic of weighting, and reasoning of the selection. Regarding the stakeholders meetings, selection of stakeholders, appropriate reporting and actual reflection of meeting results, as well as ways of information provision are often indicated.

## 5. Conclusion and Discussion

Based on the foregoing, it is obvious that JICA broadly facilitates SEAs and/or SEA type

studies at the M/P level under the 2004 Guidelines. These SEAs are utilised to select appropriate alternatives at upstream with clear evidences in a transparent manner. At the same time, some considerations, issues and ideas for improvement have become apparent for further promoting SEA approach.

It is important to take it into account that SEAs and/or SEA type studies of JICA are usually not independent SEAs but conducted as ESCSs as a part of M/P studies. Thus rigorously speaking, it might be more appropriate to call most of them as ESCSs based on SEA concept conducted at M/P level. While conducting SEAs as a part of M/P studies may have some strengths in terms of consistency and integration with the plan itself, it makes management and evaluation of the SEAs as independent study sometimes quite difficult.

On the other hand, in spite of the quite limited scope of this paper, i.e. limited to JICA's SEA at M/P level, a wide range of approaches could be observed. Planning process is multilayered, and how, when, and at what level these ESCSs and their specific actions should be conducted are after all dependent of individual cases. While diversity is one of major characteristics of SEA, this also makes effective management and quality control of SEA challenging. In particular, special consideration should be given to category "B" studies, which, in many cases, have limited resources for the ESCSs, compared to category "A" studies. To deal with this difficulty, setting a clear framework for SEA at the beginning of ESCSs seems to be a right way to improve the quality of SEA, focusing on specific key issues of individual studies.

With these findings in mind, JICA needs to make further efforts to improve its process for SEAs and also strengthen its knowledge and expertise of specific tools and processes, such as public participation measures and comparison of alternatives. At the same time, SEAs are integrated process of planning and, thus, capacity and institutional development of our counterparts to deal with the issues are vitally important.

The views and opinions revealed in this paper are those of authors and not necessarily reflect those of the organisation they belong to.

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