SEA of socio-economic plans in China: Issues and Outlook

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Abstract

This paper discusses briefly how Chinese Strategic Environmental Assessment (SEA), as one potentially effective instrument to integrate sustainability considerations in decision formulation, can be improved to help shape a sustainable urban socio-economic development future. It also captures the issues arisen from the implementation of SEAs on urban socio-economic plans (SEPs) in China from the perspective of practitioners and urban planners based both on literature review and interviews. In addition, the new Technical Guidance of Environmental Impact Assessment for Urban Master Plan will be also reviewed. Findings from this paper may contribute to filling the gap between current Chinese SEA practices and future policy level SEAs.

Key words: SEA, urban SEPs, China, environmental assessment issues

1. Introduction

The landscape of China has been urbanized rapidly in the past two decades. The urbanization rate is estimated to exceed 50% in 2012 or 2013 (Niu & Pan, 2009), and is heading towards 65% in 2050 as a goal set by the government (People's Daily Online, 2009). There have been 651 cities (prefectural- and county-level cities) in China in 2007, amongst which 284 are cities with population over 500,000 (NBSC, 2008). Will these new emerging cities be merely "powerful engines of consumption" (Gleeson & Low, 2000) or well-functioned as well as interconnected systems which provides better quality of life for their dwellers? Whether the potential implications from this massive transition will be tackled in a way that the cities' sustainability will not be compromised? These are the issues that require collective efforts from the decision makers, urban planners, and citizens immediately.

SEA is being practiced in many cities in China to examine the environmental dimensions of urban plans (see for example Che & Shang, 2004; Bao, 2007; Yun, Bao, & Ou, 2009). Issues and challenges in the application of SEA on urban socio-economic plans (SEPs) in China have been seen from years of practices. However, conducting SEA for urban SEPs is currently not a statutory requirement (SEPA, 2004; Zhu & Ru, 2008) but more as a "recommended" evaluation exercise. Hence, it is important and timely to examine the potentials and to identify actions for improvements so as to further strengthen this tool for its future implementation at policy level evaluation[1] in the country.

2. Issues from recent practices

Urban SEPs, such as urban master plan, are comprehensive plans directing the development for cities. A literature review and interviews with urban planners and SEA practitioners undertaken by the authors revealed three main issues arisen from the application of SEA on urban SEPs. They are probably also indicative of the issues of the implementation of SEA in

[1] Environmental assessment mechanism was first legislated by the Environmental Protection Law (1979) in China. Currently this system applies to almost all the sectoral plans, plans concerning land use, regional, river basin and marine area development according to the EIA Law (2003) - the SEA legislation in China. Current Chinese SEAs are mainly applied at the policy level, and have also been named as Plan EIA by some scholars, professionals, and domestic government documents.

China in general.

2.1 Late commencement of the SEA process

This is one of the most commonly mentioned issues in the literature (see for example Shu et al., 2006; Yang & Luo, 2008; Yang & Qian, 2008). The poor integration of SEA with the planning process has not only prevented the assessor from fully partaking in the planning process and to provide sound evaluation (Shu et al., 2006), but also lead to the divarication between the objectives and values of assessors and those of planners (Zhang, 2008).

Although the early start of SEA process is one of the principles underscored in the technical guideline, there is no dearth of cases in which the assessment has begun almost at the end of the planning process (Yang & Qian, 2008). Current regulations and technical guidance on SEA have been criticized for not providing sufficient information on how exactly to bridge the assessment and planning processes (Yang & Qian, 2008; Wang, 2009). Some even suggested that environmental authorities should formulate detailed regulations on how to further promote the implementation of SEA with the joint efforts from relevant departments (Feng & Zhang, 2008).

Such a request for better-defined and stronger regulations on the carrying out of an integrated SEA process is also evident from results of the interview with practitioners. For example, we have noted comments such as "we are powerless in bringing the SEA earlier"; "we do not know how exactly to do, and need authorities at higher level establish some sort of integration mechanism first"; "only if environmental authority can be politically more powerful, we can conduct SEA more smoothly". While feedbacks from the urban planners showed that the deficiencies of the regulation framework is not the whole story, as two interviewees (who have cooperated with SEA team before) noted: "we do not break any rules by entrusting SEA at a late stage in planning. And we (planning departments) do not know what exactly is needed in doing an SEA", " they (SEA practitioners) do not really know what the foci are in an urban plan".

2.2 Deficiencies in the approach, methodologies and being focused

The criticisms from the urban planners cast doubts on whether these SEAs can provide appropriate information to support decision-making. The use of appropriate approach and methodologies in SEA is one mostly mentioned challenge (see for example, Zhu & Wu, 2005; Jiao et al., 2008; Xiao & Qian, 2009). Current SEA practices have a strong legacy from project EIA which displays a high dependency on quantitative methods leading to time consuming assessment process – which is an "EIA legacy" (Zhao & Hu, 2007). The continuous practice of this "legacy" has attracted a great deal of criticisms and resulted in a growing awareness of the inability of the current approach in evaluating mega-plans (see for example, Jiao et al., 2008; Yang & Qian, 2008).

While practitioners provided a negative feedback when being questioned whether the current highly quantitative approach is sufficient in handling abstract plans - urban SEP in this case, some of them explained that "we have to use many numbers to be persuasive ... many decision-makers do not really believe our quantitative analysis". Others commented that "the contradiction is that we do not know what exactly to talk about such an abstract plan by using qualitative analysis, we are neither economists nor socialists". Many practitioners "look forward to new guidelines on how exactly to conduct SEA on these comprehensive urban plans".

The real issue behind all these is the limited capacity of current practitioners to carry out assessment for comprehensive

and semi-policy plans. Many SEA practitioners in China come mainly from three sources: (a) research institutes and universities with long commitment in the field of SEA; (b) those who used to work on project EIAs; and (c) planning and design work units from different industries (Zhu & Wu, 2005). In other words, there is a lack of SEA professionals with sufficient knowledge on assessing socio-economic plans (Zhao & Hu, 2007).

2.3 Inadequate public involvement

Good practices in this aspect have been available such as the SEA on the development plan for Dali City (Sun, 2009). Yet, public involvement has generally been implemented poorly even it is an integral part of the environmental assessment as regulated. According to the statistics on the plan EIA reports in Shanghai during 2003 to 2005, only 5% of the assessments being carried out had public participation in all the stages of the planning process (Ma, 2008).

Internet announcement, questionnaire, and expert consultation are the three main ways in gathering views from the public in the current SEA practices in China (Zhu & Wu, 2005). However, the feedbacks from non-experts are always very much limited (Xue & Dou, 2003) and sometimes there is simply no feedback to the internet announcement from the public (Meng et al., 2009).

What puzzles the practitioners most is how to identify the key stakeholders, especially for mega-plans. For urban development plans, it seems that such plans have "no direct impacts on the public" (Zhu & Wu, 2005, Xiao & Qian, 2009). This point of view is also shared by some other practitioners, which leads to a conclusion that expert consultation is a more effective and helpful part of public participation (Chen, 2009; Meng, et al., 2009). Information gathered from non-expert is likely to be less helpful or even tend to be misleading (Ma, 2008) for the identification of key environmental issues because membes of the public generally do not have sufficient knowledge about environmental assessment (Jiao et al., 2008).

3. Technical Guidelines of Environmental Impact Assessment for Urban Master Plan

A new technical guidance for SEA on urban master plan (draft for comments from government departments) has been formulated in 2009. This new guidance is a synthesis of the experiences from the pilot SEA studies in recent years and represents the state-of-art SEA approach in urban plan evaluation In China. Following a generic and systematic process, the methodology developed by the guidance is founded on three "cornerstones": carrying capacity analysis, environmental impact prediction and evaluation, and analysis of the consistency of the proposed plan with relevant policies/plans/legislations/regulations. Contents that should be considered in an SEA on urban master plan as defined in this guidance are summarized in Table 3.1.

Table 3.1 New Technical Guidelines of Environmental Impact Assessment for Urban Master Plan at a glance

Content	Method
Synthesize the plan	Emphasize on the layout, function area division, transportation system, landuse, and sectoral plans
Consistency analysis of the plan	Analyze the consistency between the plan and relevant policies/regulations/plans; between the layout and environmental sensitive areas; where there are any lessons from experience in the previous planning, or cases in other cities; etc.
Analysis and evaluation of current environmental status	Analyze the interrelationship between current positioning/scale/spatial structure/layout/infrastructure/land-use development and existing environmental issues in the city; evaluate the implementation of the environmental protection plan in the last round and the operation of the facilities; etc.
Analysis and evaluation of the baseline	· environmental baseline: natural condition, disaster, water resources, atmospheric environment, noise, the city's layout of industrial areas, etc · ecological baseline: regional ecosystem; environmental sensitive areas in the city/region; sensitivity and importance of these areas, etc · Status of resource use: land (agricultural, forestry use), water resource, energy, mineral, tourism sites, coastal

	line utilization; · Industrial development related pollution
Identify the environmental impacts and assessment indices	· Identify the environmental impacts base on expert consultation, matrix, network analysis, etc. · Set environmental objectives · Identify the assessment indices base on expert consultation, public participation, etc. they should be as quantifiable as possible
Resource utilization and carrying capacity analysis	Water, land resource, energy use Carrying capacity of aquatic, atmospheric environment, ecosystem
Impact environmental analysis and prediction	The environmental impact from city positioning, development direction, spatial structure, layout, transportation system, locations of industrial parks, infrastructures; analysis the capacity of the environmental management system; hazards, etc.
Comprehensive analysis of the plan	Feasibility analysis
Public Participation	Consultation meetings, questionnaires, announcements, via radio/television/internet, etc

4. Discussion and Conclusion

In reviewing current issues that have emerged from recent SEA practices in China, this study has put forth three recommendations which warrant immediate action so as to strengthen the capacity in implementation of SEA of mega-plans, and for the upstreaming of SEA into the policy level.

Firstly, practitioners should be more persuasive in carrying out an assessment, rather than merely conduct an "environmental research". Although the EIA law has been implemented for six years, there still seems to be a barrier in understanding the SEA process outside environmental departments. The planning system in China is very complicated and different plans may considerable overlap with each other (Geng, 2008). Hence it is important for practitioners to use persuasive and proactive strategy (such as workshops and seminars together with planning departments) to promote SEA (see also Bina, Jurkeviciute & Zhang, 2009). While it is true that more regulations/guidance can facilitate better integration between the SEA and planning process, we would argue that pilot studies did indicate that there is still room to initiate more interactive SEA process under the current institutional/regulatory framework (for example, Ma et al, 2008; Meng, et al., 2009). We would recommend the practitioners to be more than "technicians" and take more initiative in designing the SEA process.

Secondly, we would re-emphasize that SEA on urban SEPs should be integrative in content. The review of the new technical guidance, which represents a model of current Chinese SEAs on urban development plans, indicates limited considerations of social impacts, such as urban poverty, the inter-relationship between environment and poverty (SIDA, 2002; World Bank, 2009). It is the Millennium Development Goal 7 to alleviate urban poverty by calling for the improvement of their life quality. Urban poverty is only an example, other issues such as city efficiency, urban-rural linkage (Tacoli, 2003; World Bank, 2008, Xing et al., 2008) should also be considered by an SEA on urban SEP. By focusing overly on bio-physical impacts, practitioners may easily step into the "ivory of numbers" - which entails the risk of overlooking key sustainability issues, and may also impede the SEA from providing information in a timely manner so as to operate an interactive assessment process.

Capacity building for the practitioners is critical. What follows the second point is that there is an urgent need to develop interdisciplinary SEA team. SEA should be an opportunity to initiate multidisciplinary team work, and sound communication (RSPB; Fu, 2009). In addition to team up practitioners with diverse backgrounds, training on social impact assessment and stakeholder analysis should also be a priority. However, it may be impossible to provide well-defined

guidance on how exactly to conduct public involvement activities. Again, while there are many tools to enrich the knowledge of practitioners, they may still have to develop appropriate ad hoc process with the tools tailored according to various constrains.

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