

A STUDY ON THE SOCIAL IMPACT ASSESSMENT OF INFRASTRUCTURE PROJECTS IN CHINA

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Rapid urbanisation is a worldwide phenomenon nowadays, and this is particularly the case in developing countries like China, which have a dense population but an inadequate provision of infrastructure facilities. Over the years, China has been striving to improve its basic infrastructure for the betterment of national economy and living standard. Such rapid development necessitates careful planning and implementation to avoid the society being disadvantaged. In China, social impact assessment has been recognised by both the government and practitioners as an important aspect for infrastructure development these days as China's National Development and Reform Commission requires social impact assessment be contained within the feasibility study of any crucial investment projects since 2002. Today, many infrastructure projects including environmental improvements, transportation, energy scheme, water resources, and so on have incorporated social impact assessment in their planning. This paper first introduces the background of social impact assessment in China. The problems of the existing social impact assessment process in China are then highlighted by comparing its application in the U.S. Lastly, recommendations on SIA will be made with the aim to effectively and efficiently promote infrastructure construction in China.

Keywords: China, infrastructure projects, social impact assessment.

INTRODUCTION

As a developing country with the third biggest geographical area (i.e. approximately 9,600,000 square kilometres) and the largest population (more than 1.2 billion) in the world, China has tremendous potential for development (Okada 2000). In order to achieve a sustainable economic growth and to eradicate the impacts of the current financial tsunami on the nation's economy, the central government of China has put forward a series of plans to stimulate the economy, of which boosting the volume of infrastructure construction is emphasised. Such massive volume of infrastructure development will inevitably bring both benefits and costs to the society. While those works can support the economic development and improve citizens' living standard, they can also bring unfairness, inconvenience and dissatisfaction to certain groups of peoples. In order to maximise the social benefits and minimise any social discontentment, the impacts to the society should be carefully assessed before the infrastructure projects are conducted, and social impact assessment (SIA) is a mechanism to achieve this purpose.

According to the Interorganisational Committee on Guidelines and Principles for Social Impact Assessment (ICGPSIA) (1994) and Burdge (2003), SIA is a systematic analysis and a comprehensive estimation in advance of the possible social influence a

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proposed policy action (which may include the adoption of a new policy) or a government action (which may include the construction of a mega project) that will have on the life of individuals and communities. Wang and Li (2004a) believed that SIA can facilitate different stakeholders to participate in the project activities so as to optimise the project implementation plan and to reduce the social risks.

Although SIA has played a critical role in the planning of infrastructure projects in liberal countries, China is still at her infancy stage in implementing SIA for infrastructure projects as compared to other developed countries like the United States which has a relatively longer history and much broader experience in conducting this kind of assessment. In fact, the national guidelines and principles for SIA were first promulgated in 1994 in the U.S., almost ten years earlier than that in China (Burdge *et al.* 2003). The purpose of this paper is, therefore, to identify the current practice and the potential weaknesses of SIA in China by comparing with the system in the U.S., and to put forward a framework to improve the way in which SIA is conducted in China.

DEVELOPMENT OF SOCIAL IMPACT ASSESSMENT IN CHINA

Due to the implementation of more open policies like the transformation of economic system (i.e. transitioning from a planned economy to a market-oriented economy), urbanisation programmes (i.e. to encourage superfluous rural population to go to cities for jobs), and so on, China has transformed dramatically over the last thirty years. These have brought positive and negative influences to the Chinese society. While the rural population have come out of poverty, social problems such as high employment pressure in the city, insufficient social security and social services, and excessive land expropriation, have also emerged and become increasingly serious. From the end of the 1990s, plenty of infrastructure projects related to transportation, energy, telecommunications, and water supply have been commissioned to stimulate national economic growth. However, more attention was paid to the financial returns when constructing these mega infrastructure projects. The social benefits were ignored to some extent, which has led to serious social problems. For instance, the Three Gorges Dam project, the best known irrigation and water resource project in China which has successfully resettled at least 1.13 million people, is still receiving complaints due to the problems of land requisition (CIECC 2007).

The contentious issue of SIA being regarded as a less important aspect of infrastructure project construction began to change due to the issuance of the Guideline of Investment Project Feasibility Study by China's National Development and Reform Commission (i.e. the government's paramount department for planning) in 2002 (Wang and Li 2004b). The guideline requires SIA to be a compulsory component within the feasibility argumentation of any crucial investment project and it should deserve equal attention as other types of assessments such as economic assessment, financial assessment, environmental assessment, etc. (Chen and Ding 2007). Since then, SIA has become increasingly recognised by both the government and practitioners as a mechanism to help increase the effectiveness of the planning and implementation of infrastructure projects (CIECC 2007). Nowadays, various infrastructure projects including municipal environmental improvements, transportation, city gas, water supply and reuse, etc., have incorporated this instrument to achieve a sustainable development.

EXPERIENCE IN THE UNITED STATES

In order to better understand the social consequences of plans, programmes, policies and projects, a group of sociologists formed the Interorganisational Committee on Guidelines and Principles for Social Impact Assessment (ICGPSIA) in 1992 and outlined a set of principles and guidelines to improve the implementation of SIA in the U.S. (Burdge *et al.* 2003). Such principles and guidelines were first issued in 1994 and then updated in the 2003 version. Compared with the U.S., China is undoubtedly less developed in terms of SIA as it was not until 2002 that this type of assessment has begun to appear in the formal document of China's central government for the first time. Thus, it is worthwhile to comprehensively compare the SIA in China and the U.S. to determine how the Chinese SIA system can be improved.

Scope of implementation

The ICGPSIA guidelines relate SIA to the entire project cycle from general planning, detailed planning and funding, and construction to operation and decommissioning. By contrast, the SIA guidelines from China only focus on feasibility studies (Burdge *et al.* 2003; ICGPSIA 1994; Yu *et al.* 2002). For the other project stages, there have been no official guidelines in China outlining whether and how SIA should be conducted.

The Process

The Guideline of Investment Project Feasibility Study issued by China's National Development and Reform Commission in 2002 has roughly explained the three steps for conducting SIA during the feasibility study stage in China which include investigating social background information, identifying social influence factors, optimising implementation plans (Yu *et al.* 2002). However, both the 1994 and 2003 versions of the Guidelines and Principles for Social Impact Assessment in the U.S. have documented the steps in which SIA should go through (Figure 1). These steps are logically sequenced, and should help formalise the practice (ICGPSIA 1994).

Variables to be considered

The SIA variables identified by China's National Development and Reform Commission (2002) can be classified into three broad stages: (i) social influence analysis; (ii) compatibility analysis; and (iii) social risk analysis. The social influence analysis focuses on the changes in income, living standard, employment rate of local residents; the influence on the local culture, religion, education and sanitation; etc. Compatibility analysis, however, pays more attention to the attitudes of the local residents and organisations towards the construction and operation of the project. It emphasises on the question of whether the local technique capacity can promote the construction and operation of the project. Social risk analysis is important for those projects which could induce ethnologic or religious contradiction.

The overall SIA variables defined in the U.S. by ICGPSIA are similar to those identified in China but different in terms of grouping. They classified SIA variables into five categories: (i) population characteristics; (ii) community and institutional structures; (iii) political and social resources; (iv) individual and family changes; and (v) community resources. Besides, a matrix has been established in the Guidelines and Principles for Social Impact Assessment in the U.S. to reveal the major variables with different project settings (e.g. hazardous waste site, industrial plant, and so on) in different project stages (e.g. planning, construction, operation and decommission) (ICGPSIA 1994). However, the SIA variables have not been specified based on

different project settings and different project stages in China. The variables of SIA identified by China's National Development and Reform Commission in 2002 are mainly for investment projects (e.g. water, civil aviation, railways, etc.) during the feasibility study stage.

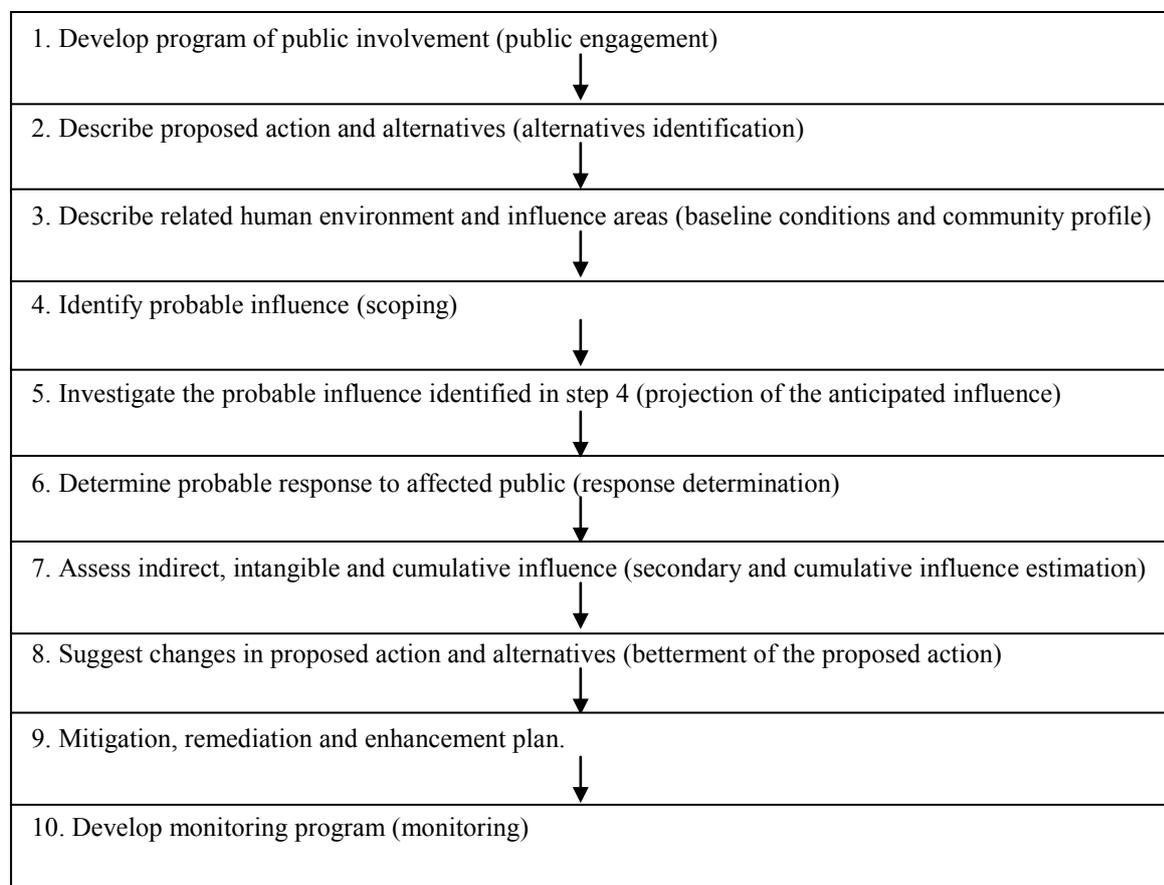


Figure 1: Ten steps in social impact assessment process in the U.S.

(Source: Burdge et al. 2003; ICGPSIA 1994)

Principles for SIA

China has not set up any unified principles to benchmark SIA for now. Yet, nine unified principles have already been established in the U.S. to provide guidance for SIA practitioner all over the country. Such principles include (i) effective and efficient public engagement during the process of affected group identification; (ii) clear identification of the groups that will be affected negatively and positively and pay more attention to the under-represented groups (such as the elderly, children, the poor, minorities, etc.); (iii) prioritise issues and public concerns and focus on the most significant ones due to the time and resource constraints; (iv) early identification of the methodology and assumptions adopted in SIA; (v) feedback the findings from SIA to project planners in time to make sure certain changes can be made to the proposed plans to mitigate the negative impacts; (vi) complete training and education system for SIA personnel; (vii) successful monitoring of the SIA variables as well as the contingencies; (viii) effective utilisation of the data source including published scientific literature, secondary data, and primary data from the affected area; and (ix) efficiently deal with the problem of absent information within the data source (ICGPSIA 1994). To promote SIA in China, unified principles should be set up as

soon as possible based on China's actual conditions by capturing the lessons learnt from the U.S.

PROBLEMS OF EXISTING SOCIAL IMPACT ASSESSMENT IN CHINA

China has been emphasising on SIA in recent years and has undoubtedly achieved great progress in coming up with a methodology for SIA (CIECC 2007). However, as described in some literature, China is still far from mature in terms of SIA implementation and the current SIA in China still needs major improvement in many aspects including awareness level, human resource, etc. (CIECC 2007; Wang and Li 2004c; Yu *et al.* 2002). Based on such findings from literature review on the deficiencies of SIA in China nowadays and the comparison with the U.S. approach, the following problems have been revealed in the process of SIA when it is applied to infrastructure projects in China.

Lack of recognition

It was in 2002 when the term SIA first emerged in the official document of China's central government. From then on, a scientific outlook on such development has been brought forward which pursued a moderately prosperous society in all respects by putting people first. Based on that notion, China should balance her economic development, environmental protection and social progress. However, the trend today is still to emphasise solely on economic advancement while neglecting the importance of building a harmonious society. Due to such *ex parte* consideration, SIA has not been sufficiently aware by construction practitioners and a comprehensive and whole cycle assessment system for infrastructure projects has not been set up in China till now (CIECC 2007).

Other reasons that lead to such insufficient recognition of SIA in China may include a lack of corresponding legislation and institutional framework to standardise and monitor SIA for infrastructure projects. In contrast, the implementation of environmental impact assessment in China has been proven to be more successful and effective due to the early promulgation of the environment protection law and the constitution of specified environment protection institutions (Wang and Li 2004c).

Insufficient implementation

Compared with the whole-cycle adoption of SIA in the U.S., the implementation of such assessment method in China is still insufficient. SIA being carried out in China today is mostly limited to the early project planning stage but not throughout the entire project cycle as in the case of the U.S. (Yu *et al.* 2002; Burdge *et al.* 2003). How to effectively and efficiently conduct SIA during the project planning, construction, operation and decommissioning stages shall be reconsidered by Chinese construction practitioners.

There are two main reasons that make the implementation of SIA in China a bit stagnated, and they are: (i) the traditional thinking of carrying out SIA by most construction practitioners in China as a passive activity to obtain approval of a project; and (ii) a lack of SIA professionals in charge of conducting this assessment in different project stages other than feasibility study.

Institutional weaknesses

It has been almost twenty years since the ICGPSIA was set up in the U.S., yet there is still no formal organisational system for SIA in China so far. Currently, no

institutional framework has been established in China to guide, standardise or monitor SIA for infrastructure projects among all the investment administrations and line ministries within both the central government of the country and the local government of each province in China (CIECC 2007).

Shortage of experts

In the U.S., cultivating talents for SIA is regarded as a major principle for carrying out this type of assessment all over the country (ICGPSIA 1994). Compared with the U.S., China is not doing as well in this aspect. People with both theoretical knowledge and practical experience cannot satisfy the huge demand of SIA work for infrastructure projects in China at present (CIECC 2007). Fortunately, such imbalance between few specialised professionals and huge SIA demand for infrastructure projects has begun to attract attention from the government as well as the public. Certain research institutes in social science and universities have organised seminars related to SIA and set up new undergraduate programmes to tap on this major market. Despite these efforts, more work should be attributed to aspects such as setting up special training institutions for SIA, and compiling systematic training materials in the near future (Wang and Li 2004c).

Lack of detailed guidelines and principles

To provide guidance for SIA practitioners, the ICGPSIA in the U.S. first introduced unified guidelines and principles for SIA in 1994 and then updated it to the 2003 version. These two versions of guidelines and principles both illustrate in detail the steps in which SIA should go through and the principles whereby SIA should follow. Besides, the variables of SIA with different project settings in different project stages are clearly specified (ICGPSIA 1994; Burdge *et al.* 2003).

Compared with the U.S., the supervision guideline of SIA in China has not been unified and standardised at the national level, which has undoubtedly brought difficulty to the implementation of SIA. The three-step process for conducting SIA and the variables of SIA in China which have been considered by Yu *et al.* (2002) as only applicable to the investment projects during the feasibility stage. No detailed implementation process of SIA or matrix showing the respective variables of SIA with different project settings in different project stages have been established in China as yet. Besides, the operational standards for implementing socio-economic investigation and compiling the final SIA report are still lacking (CIECC 2007).

RECOMMENDATIONS FOR IMPROVEMENT

Based on the U.S. experience in conducting SIA and the specific considerations of China's actual conditions which cover the political, social, economic and cultural aspects, the corresponding recommendations have been suggested in Table 1 with the aim to deal with the above-mentioned problems in the existing SIA process and thus help flourish infrastructure construction in China.

Table 1: Recommendations for improvement

Main problems in the existing SIA process for infrastructure projects in China	Corresponding recommendations for SIA improvement in China
Lack of recognition of SIA	<p>Gradually reform the traditional investment system and financing mode in China and pay equal attention to the social benefits as to the financial returns during the whole cycle of infrastructure projects and;</p> <p>Promulgate legislation of SIA and set up an appropriate institution to take charge of the whole-cycle project SIA at the national level and;</p> <p>Promote the basic knowledge of SIA.</p>
Insufficient implementation of SIA	<p>Change the traditional thinking on the role of SIA as being a tool for increasing the chance of getting project approved to an effective and efficient mechanism to achieve a sustainable development of the project and the whole society and;</p> <p>Educate both the professionals and general public on SIA by means of seminars, conferences, open forum, etc.</p>
Insufficient professionals and institutional weakness for SIA	<p>Establish formal organisational system for SIA through the central government of China and the local government at provincial level and;</p> <p>Constitute special training institutions for SIA and compile a series of training materials which can reflect the characters of SIA in different industries to equip practitioners the knowledge of this kind of assessment and;</p> <p>Set up new programmes that related to SIA in higher education institutions and;</p> <p>Enhance academic communication on SIA at both domestic and international scale.</p>
Insufficient detailed guidelines and principles for SIA	<p>Improve the current guidelines and principles for SIA to strengthen the details on the operational process, and variables corresponding to different project settings in different project stages and;</p> <p>Specify operational standards for implementing socio-economic analysis and compiling the final SIA report.</p>

FUTURE OF SOCIAL IMPACT ASSESSMENT IN CHINA

China is recently experiencing a rapid socio-economic development whereas some social issues have begun to emerge or even become worse including the unbalanced development between southeast littoral and northwest inland area, rural poverty, growing unemployment, etc. (CIECC 2007). All these emerging social problems have turned the focus of both the central government of China and the general public to consider any future national and local economic development from a social perspective. As one of the sectors that contribute significantly to the overall national economy in China, the construction industry also needs to pursue a sustainable development from the perspective of financial returns and social benefits. To achieve a balance between economic development and social progress, SIA is playing an important role in the society. Based on the effort of the central government and construction practitioners over the last decade, China has already made remarkable progress in improving the investment system and financing mode, updating the understanding of SIA, establishing a SIA methodology, forming a team of specialists for SIA, etc. (CIECC 2007). However, when compared to some developed countries

with a relatively longer history and more successful experience in SIA such as the U.S., China still has a long way to go. The future core work is to further enhance the SIA in China, and these would require promulgating new legislation on SIA at the national level, establishing detailed specification for SIA in different sectors, improving the current training system for SIA personnel, etc. (Wang and Li 2004c; CIECC 2007).

CONCLUSIONS

According to the comparison of SIA in terms of its development and implementation between China and the U.S., major problems existing in this assessment process in China has been identified which include a lack of recognition, insufficient implementation, weaknesses in institutional framework, shortage in professionals, inadequacy in supervision guideline and operation specification, etc.

Recommendations have been put forward which can be classified into three broad categories namely: (i) establishing institutions in charge of whole-cycle project SIA and instituting laws on SIA in the national level; (ii) improving the current guidelines and principles which are less detailed in terms of operational process and assessment index; and (iii) emphasising on education and training system for SIA personnel.

Based on the effort of the central and local government and practitioners in construction industry, the social impacts brought by major infrastructure projects in China would hopefully be properly addressed in future.

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