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Development and implementation of Strategic Environmental Assessment in Taiwan

Ming-Lone Liou^{a,*}, Yue-Hwa Yu^{b,1}

^a*Graduate Institute of Environmental Engineering, National Taiwan University,
9F-3, 100, Sec. 2, Heping E. Rd., Taipei 106, Taiwan, ROC*

^b*Graduate Institute of Environmental Engineering, National Taiwan University,
Room 302, No. 71, Chou-Shan Rd., Taipei 106, Taiwan, ROC*

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Abstract

Taiwan is one of the few Asian countries to have officially adopted Strategic Environmental Assessment (SEA) as one important means towards the achievement of environmental conservation and sustainable development. Despite implementation almost a decade ago, SEA remains premature in its development. This paper analyzes the progress and characteristics of SEA in Taiwan and, through examination of its limited case studies, reveals the positive and apparent influence of SEA on policy making. This paper also identifies the barriers hindering SEA's advancement and concludes with recommendations on strategies to overcome these obstacles.

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1. Introduction

Strategic Environmental Assessment (SEA) has evolved in the past decade out of the need for a broader, more comprehensive tool to assess the potential significant adverse environmental impacts of proposed policies, plans, and

* Corresponding author. Tel.: +886-2-2733-4773; fax: +886-2-2733-3293.

E-mail addresses: a4773@ms12.hinet.net (M.-L. Liou), yuehwayu@ccms.ntu.edu.tw (Y.-H. Yu).

¹ Tel.: +886-2-2363-6104; fax: +886-2-2362-8043.

programs (PPPs) early in the decision-making process (Dalal-Clayton and Sadler, 1999; Noble, 2000; Partidário, 1996; Sadler and Verheem, 1996; von Seht, 1999). SEA is a formalized, systematic process that integrates environmental considerations into decision making and aims to achieve sustainable development (Partidário and Moura, 2000; Thérivel et al., 1992; Thérivel and Partidário, 1996). When compared with Environmental Impact Assessment (EIA), SEA tends to be more proactive, accounts for the cumulative effects of environmental problems, and initiates and considers all plausible environmentally sound alternatives (Noble, 2000; Partidário and Clark, 2000). It was also argued that the adaptability and flexibility inherent in SEA is crucial to successful application in different cultural and decision-making environments around the world (Fischer, 2003; Thérivel and Partidário, 1996; Verheem and Tonk, 2000).

Taiwan began preliminary application of EIA on major public works in 1980. Over 200 projects were implemented with EIA prior to the EIA Act of 1994, the first official piece of legislation to mention SEA. As of the end of September 2003, Taiwan has applied SEA to three cases, and another case is currently under the public consultation process, yet, all differ with respect to their strategic level, scope, and assessment methods/techniques.

Via description of the current status of SEA in Taiwan as well as examination and performance evaluation of its three case studies, this paper illustrates the basic functions and benefits of SEA as applied in the Taiwan context. It also highlights the unique characteristics of Taiwan's SEA system and provides a comparison with international SEA trends.

The concluding sections identify barriers to the full implementation of SEA and recommend ways of overcoming obstacles to the development of a more comprehensive SEA system in Taiwan.

2. Development and current status of SEA in Taiwan

2.1. Legal background and motivation for SEA in Taiwan

Taiwan is a Newly Industrialized Country (NIC) located on the Pacific Rim of Southeast Asia. About 23 million people inhabit this semitropical island 36,500 km² in size. Annual per capita income in Taiwan reached US\$13,000 in 2002. In the 1970s, Taiwanese citizens began pressuring the government to invoke environmental quality and conservation measures in response to growing environmental degradation. Such degradation was due to neglect by the government to employ basic pollution control and treatment methods during heavy urbanization and industrialization. In an effort to improve environmental quality, the Taiwanese government implemented various environmental measures, the most important of which was the application of Environmental Impact Assessment.

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