

Regulatory Measures for Enhancing Public Participation in Strategic Environmental Assessment: Lessons Learnt from Taiwan

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Abstract

It is recognized that strategic environmental assessment enables public policy makers and other stakeholders to take environmental impact into consideration early in policies, plans, and programmes deliberation and formulation processes. Meanwhile, public participation is the cornerstone to enhance sustainability of policies, plans and programmes formulation, and strategic environmental assessment. However, a question has often been raised: 'Why is public participation so important but often ignored in strategic environmental assessment?' This research, on the basis of legal reasoning method, conducts an exploration of theory and practice regarding public participation in strategic environmental assessment. On one hand, it discusses the theoretical basis of public participation and the importance of carrying out public participation in strategic environmental assessment. On the other hand, it reviews thirteen strategic environmental assessment projects in Taiwan, and identifies shortcomings and challenges to conduct public participation in strategic environmental assessment. Finally, this research proposes how regulation can serve as a lever-like tool to enhance public participation in strategic environmental assessment and takes Taiwan as an example.

Keywords: strategic environmental assessment, environmental impact assessment, public participation, PPP formulation

1. Introduction

Environmental assessment is to assess, prevent and mitigate the adverse impact caused by activities, at the project level or in a strategic context, toward the environment. It is believed that strategic environmental assessment (SEA) enables public policy makers and other stakeholders to take environmental impact into consideration early in policies, plans, and programmes (PPP) deliberation and formulation processes so as to meet the expectations of a more sustainable framework (Gunn & Noble 2011; White & Noble 2013). The Preamble of the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (SEA Protocol) recognizes, 'the wider application of the principles of environmental impact assessment to plans, programmes, policies and legislation will further strengthen the systematic analysis of their significant environmental effects.' Furthermore, scholars and government practices in most developed countries have recognized that public participation is the cornerstone to enhance sustainability of PPP and environmental decision making (Doelle & Sinclair 2006; O'Faircheallaigh 2010; Therivel 2010). Public participation is a shift away from the conventional SEA formulation method which tends to only announce and defend PPP issuing agencies' positions. International legal instruments also strongly support public participation in SEA to avoid environmental disparity and ensure empowered, inclusive environmental justice. Article 7 of the UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) stipulates, '[e]ach Party shall make appropriate practical and/or other provisions for the general public to participate during the preparation of plans and programmes relating to the environment, within a transparent and fair framework, having provided the necessary information to the general public.'

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Although the function of SEA has been known and the importance of public participation has been acknowledged, a question has often been raised: 'Why is public participation so important but often ignored in SEA?' (Sinclair & Doelle 2003). Based on the method of legal reasoning, this article examines challenges to operationalize public participation in SEA in Taiwan, and then proposes the regulatory environment as a lever-like tool to tackle the problem. This article is composed of five parts including the Introduction and Conclusion. Part II discusses the theoretical basis of public participation and public participation in SEA. Part III analyzes the practice of public participation in SEA in Taiwan. It elucidates SEA regulations, reviews thirteen SEA projects, and identifies shortcomings and challenges to conducting public participation in SEA. Part IV suggests how regulation can serve as a key tool to enhance public participation in SEA and takes Taiwan as an example.

2. Public Participation in SEA: Theory

2.1 Public participation: what

Public participation refers to the process that occurs when an individual or a group is influenced positively or negatively by proposed PPP, and results in direct participation in PPP making processes (André et al. 2006; Marsden 2008). Public participation is a process that draws the general public to participate in decision-making, to provide diverse views during decision-making processes, and thus to enhance the quality of decisions (Environmental Protection Agency 2010). Public participation is a form of citizen power and a mechanism of power redistribution, which enables the disadvantaged, who had previously been excluded from the economic, social and political decision-making processes, to participate in future decision making and contribute to social reform (Arnstein 1969). Public participation and citizen participation are not exactly the same. While citizen participation emphasizes more on the participation of the lay public or groups when they have civic conscience and capability (bearing identity, rights, and obligations of citizenship) in PPP making processes, public participation tends to have a larger scope, which includes not only citizen participation but also the participation of any person beyond PPP makers and consultants for PPP formulation. That is to say, public participation would encompass related administrative agencies, scholars, experts, groups and the general public (Therivel 2010).

2.2 Public participation: why

The rationale of public participation is based on the nature of democracy (Cheyne 2015; Pallett 2015; Paloniemi et al. 2015). Since popular sovereignty belongs to the whole public, the general public has, in itself, the right to delegate legitimacy for governance of all public affairs, especially in the environmental sphere to prevent Hardin's Tragedy of the Commons. Meanwhile, the basic presumption of democracy is that the general public can determine about what they care most and what are most related to their interests (Fiorino 1996). Public participation assists the general public to build democratic literacy and capability, which can enable them to achieve a heightened degree of autonomy, self-determination, and thereby become 'qualified' citizens (Thompson 1970).

In a democratic country, if the will of the general public has not gone through certain processes of formation, convergence, and assembly, the public will may lack a consensus and be indistinct and uncertain. Hence, most modern democracies adopt representative democracy for their political structure, and accept universal suffrage and majority rule as their method of electing representative governance (Parkes et al. 2004). Under representative democracy, nevertheless, the predicament of alienation between the general public and elected officials inevitably occurs owing to the intrinsic flaws of the civil service systems, in the election system, the political party system, and the operational mechanisms of legislatures. Factors resulting in the alienation between the will expressed by elected officials and the will of the general public are the limits on their mutual comprehension, the difference in feelings, and the disparity in preferences of voters; the different defects of the election methods in different systems; the different shortcomings of operational methods of political parties; and the limited powers delegated to or resources of the legislatures, and so on (Considine 2005; Lindblom & Woodhouse 1993).

It is public participation that can mitigate the gap between the public will and elected officials. Unlike the influences of elections or public opinion, public participation has a direct impact on decision making processes. In terms of scientific evidence (provided by experts and scholars) and politics (supported by interest groups and the general public), public participation grants legitimacy to PPP formulation by administrative agencies and strengthens the accuracy and acceptability of those decisions.

Since the 1960s, following the fruitful economic development after the recovery period post-World War II, western democratic societies have become more diverse and the population has greatly increased. The eagerness of administrative agencies for expanded power is self-evident, as they seek to handle miscellaneous and toilsome affairs relating to economic, social, political, and cultural issues.

The regulation powers become too centralized in administrative agencies to be influenced and controlled by the general public. In addition, more and more distrust rises among the general public toward administrative agencies because of the defects of the 'bureaucracy' or 'technocracy,' such as with dogmatic, rigid, incompetent, extravagant and corruption cases. This is called 'the crisis of decline in deference' and will cause politicization in most professional and technical issues (Laird 1989). The contention of increasing public participation aims to lower the occurrence of that crisis. Since the 1990s, advocacy for local, community-based decision making and enhancing public participation has revealed a new era of profound shift in environmental decision making (Bohnet 2015; Cheyne 2015; Draskiewicz et al. 2015). Due to non-sustainable production, over consumption and rapidly increased pollution and waste in modern society, complex and serious environmental problems have spread out and are now acknowledged all over the world. The traditional command-and-control regulatory approach, which represents top-down, uniform standards, and single agency regulatory mechanisms, cannot function well anymore. It is urgent to find solutions to those environmental problems and to improve PPP formulation for environmental issues and integrated natural resources management (Foster 2002). Then, the mechanism to solutions is to give weight to public participation and to seek answers from those closest to environmental problems at the beginning of environmental decision making (Kriz 2001).

2.3 Incorporating public participation into SEA

There are naturally also strong roots in democracy explaining why SEA has to include public participation. Carrying out public participation in decision making obtains fruitful benefits as discussed above: ensuring popular sovereignty, legitimacy for decision making, improving acceptance and creditability of decision making, and reducing instances of crises of decline in deference. From a broader perspective, SEA is a form of decision making by administrative agencies since it represents evaluation and decisions on the potential environmental impacts caused by strategic activities. SEA can attain the same benefits as other decision making activities when their processes implement public participation.

To develop PPPs, the process can be divided into seven stages, which include: (1) defining the problems; (2) setting the goals; (3) identifying the criteria for evaluating alternative solutions; (4) proposing alternative solutions to the problems and reaching the goals; (5) evaluating alternatives based on the evaluation criteria; (6) recommending final solutions; and (7) implementing and monitoring the solutions (Walters et al. 2000). Different kinds and levels of public participation must be carried out in each of those seven stages to realize inclusive, environmental democracy. The evaluation criteria in the third stage means evaluations in the economic, social, environmental, foreign affairs, political, health, human security, and cultural contexts. From a narrower perspective, SEA is the embodiment of the evaluation in environmental aspect and, thus, SEA processes surely need to carry out public participation as well.

In 2008, the Canadian Environmental Assessment Agency promulgated its first 'Public Participation Guide' to help conduct meaningful public participation in environmental assessments. The Guide indicates that public participation can help to (1) make information about environment and possible environmental impacts available; (2) discover alternatives and methods to mitigate impacts on the environment; (3) understand public concerns and priorities; (4) establish a trusting relationship with the stakeholders to solve problems and achieve common goals; (5) increase transparency and accountability; (6) address public concerns as early as possible to avoid later conflicts, obstacles, and litigation; (7) correct wrong information or rumors; and (8) ensure the implementation of SEA. Therefore, meaningful public participation creates multiple benefits for SEA and is worth pursuing.

3. Public Participation in SEA: Practice in Taiwan

3.1 Public participation-related regulations of SEA in Taiwan

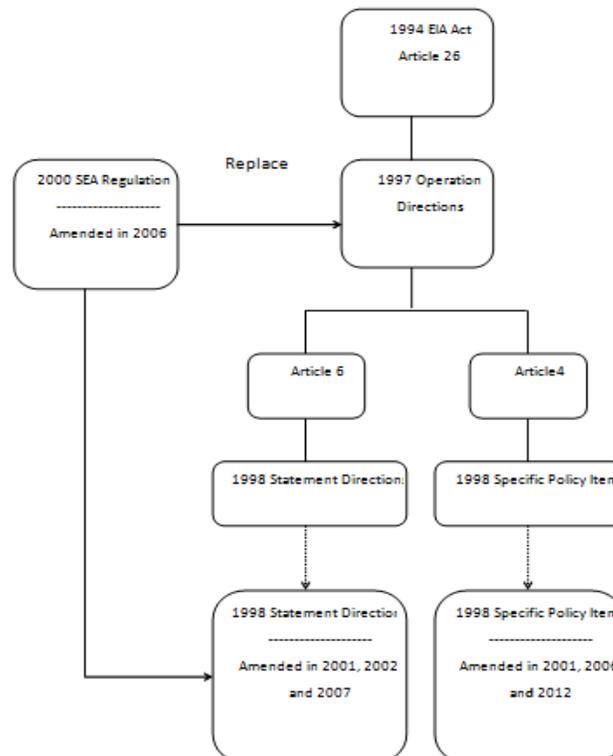
Taiwan environmental protection movements, including the Taiwan Green Party and Wild at Heart Legal Defense Association, emerged and evolved in tandem with the democratic progress in the mid-1980s and the 1990s (Tang & Tang 2000).

After the martial law was lifted in 1987, democratic elections in Taiwan were pervasively open to the general public not only in local government but also the central (Tien & Cheng 1997). The Taiwan Environmental Protection Administration (EPA) was established in 1987 under its first Director, Dr. Eugene Chien, and followed by the enactment of a spate of environmental regulations, including the Environmental Impact Assessment Act (EIA Act) which sets up the framework and bedrock of SEA. The only fly in the ointment is that rules with regard to public participation are few and fragmentary in Taiwan's existing SEA regulations.

3.1.1 Regulations of SEA

Not until 1994 did Taiwan enact environmental assessment laws both in the project-based EIA (EIA) field or SEA field. Since then, law-making processes regarding SEA have been underway. Currently, effective regulations of SEA in Taiwan include the 2006 SEA Regulations, the 2007 Statement Directions (authorized to be enacted pursuant to the authority of Article 6, Paragraph 2 of the 2006 SEA Regulations), and the 2012 Specific Policy Items (authorized to be enacted pursuant to the authority of Article 4, Paragraph 1 of the 2006 SEA Regulations). The Legislative Yuan, Taiwan's legislative body, passed the EIA Act in 1994 and Article 26 thereof provides, 'the central competent authority shall separately determine the environmental impact assessment process for government policy for which there is concern of environmental impact.' The EPA, in compliance with the EIA Act, issued the Operation Directions for Assessment of Environment Impacted by Government Policy (Operation Directions) in 1997 as the basic regulatory framework for SEA. According to Article 6 of the Operation Directions, which requires the central competent authority shall separately determine the criteria for recording items in an assessment report, the EPA published the Directions Governing Government Policy Assessment Statement (Statement Directions) in 1998. Meanwhile, based on Article 4 of the Operation Directions, the EPA promulgated the Specific Policy Items Requiring the Conduct of an Environmental Impact Assessment (Specific Policy Items) in the same year. From then on, strategic activities stipulated in the Specific Policy Items shall conduct assessments of their impacts on the environment. In 2000, the EPA promulgated the Regulations Governing Government Policy Environmental Impact Assessment (amended in 2006; SEA Regulations), which replaced the Operation Directions. Also, the 1998 Statement Directions were later amended in 2001, 2002, and 2007; the 1998 Specific Policy Items were amended in 2001, 2006, and 2012. Figure 1 illustrates the process of development of SEA regulations in Taiwan.

Fig. 1 Development of SEA Regulations in Taiwan



3.1.2 The SEA system

SEA is a systematic process, which aims to integrate environmental considerations into PPP making and supports more sustainable decision making (Liou & Yu 2004; Therivel 1992). Despite subtle differences in various SEA frameworks proposed by scholars, an SEA system, by and large, has seven stages: screening, scoping, assessing, reporting, involving, decision making, and monitoring (Fischer 2007). Similar to the seven SEA stages, Taiwan's SEA system has six steps except the stage of 'monitoring.' The framework of Taiwan's SEA system is regulated in the 2006 SEA Regulations with 9 articles in total. First, PPP formulating agencies start with the screening stage. They should carry out SEA if strategic actions are listed in the Specific Policy Items (see Table 1), or if not listed in the Specific Policy Items but those actions could have adverse impacts on the environment and are necessary to be assessed (Article 2, Article 3, and Article 4 of the 2006 SEA Regulations). Second, PPP formulating agencies proceed to scoping in order to determine the likely extent of the assessment, suitable methods of the assessment, and baseline information (Article 5 of the 2006 SEA Regulations) (Gibson 1993). Third and fourth, PPP formulating agencies conduct non-project-based environmental assessment (PPP environmental assessment) and provide an SEA statement according to the Statement Directions (Article 6 of the 2006 SEA Regulations). Fifth, PPP formulating agencies submit the SEA statement to the Taiwan EPA for consultation (Article 7 of the 2006 SEA Regulations). Also, they may provide the SEA statement to other related agencies or groups, and take their opinions, comments or recommendations into account (Article 7 of the 2006 SEA Regulations). Finally, PPP formulating agencies shall submit planned strategic actions appended with the SEA statement to the Executive Yuan (the executive Cabinet of Taiwan) or the central competent authority for approval (Article 8 of the 2006 SEA Regulations).

Table 1: Specific policy items

Policy Nam	Specific Policy Item
1. Industrial policies	The establishment of an industrial zone.
	Industrial policies affecting energy density base.
2. Mining industry development policies	Sand and gravel development and supply.
3. Water resources development policies	Water resources development policies.
4. Land use policies	The establishment of a golf course.
	Changes in scope of tap water quality and water volume protection areas.
	Changes in scope of drinking water quality and water volume protection areas.
	Newly determined or expanded urban planning programmes (using land area of 10 hectares or more).
	The regional plan at city/county levels.
5. Energy policies	Energy development policies.
6. Transportation policies	Major highway or railway development.
7. Waste disposal policies	Garbage disposal. (Transform Incinerator into regional bio-energy center, rejuvenate and revitalize landfill)
	The clearance of industrial waste.
8. Policies on radioactive nuclear waste storage	The management of radioactive waste.

3.1.3 Public participation-related regulations of SEA and system deficiencies

The SEA Regulations were promulgated in 2000, which replaced the 1997 Operation Directions and were amended in 2006. Article 7 of the 2006 SEA Regulations is the one of the only two rules which embraces public participation mechanisms. Article 7 provides, 'After making strategic environmental assessment statement, PPP formulating agencies shall consult the central competent authority and may consult other related agencies and groups, and then may take their opinions into account.' Under Article 7 of the 2006 SEA Regulations, administrative discretion could function and weaken the effectiveness of public participation in SEA in Taiwan. First, although consultation with the Taiwan EPA is compulsory, PPP formulating agencies have discretionary power to decide whether or not simultaneous consultation from other agencies or civil society or civic associations will be put into practice. Second, opinions acquired through consultation are not binding on PPP formulating agencies.

Third, because the first draft of the SEA statement has been produced before consultation proceedings, opinions from the consultation may be taken into only limited account. Finally, the general public, scholars, or specialists seem to be excluded from consultation proceedings according to the legal provisions of Article 7. Authorized by the higher hierarchical norm, the 2006 SEA Regulations, and the Statement Directions provides the other public participation mechanisms. Yet, again, the general public participation mechanism seems inadequate when compared to meaningful public participation. Paragraph 2 of Article 7 of the Statement Directions regulates the scoping stage and incorporates public participation into decision making processes. Paragraph 2 articulates, 'PPP formulating agencies may invite related agencies, groups, scholars, and experts to a scoping (tasking) meeting to determine the scope of assessment items mentioned in the paragraph 1.' Paragraph 2 subsuming public participation in the earlier stage of an SEA does strengthen the mechanism of public participation. However, PPP formulating agencies still have great discretionary power to decide whether or not a scoping meeting is needed, and the targeted public to whom should be invited. Opinions acquired from the scoping meeting are not binding, that is to say, PPP formulating agencies still have the power of determining the extent of each assessment item. The general public is still excluded from the scoping meeting although experts and scholars may be included.

3.2 Review of thirteen SEA projects in Taiwan

Data regarding public participation in SEA projects in Taiwan come from the EPA's official website, <http://www.epa.gov.tw>. Through the keyword, 'strategic environmental assessment' (in Chinese), all SEA projects are culled from the Environmental Impact Assessment Inquiry System, <http://eiadoc.epa.gov.tw>. Data of each SEA project are composed of an abstract Executive Summary, an approved SEA statement, and all meeting documents. Since the implementation of the 1997 Operation Directions, thirteen SEA projects have been carried out on the basis of the mandatory list of the Specific Policy Items. Those cases are as follows: (Table 2 describes the project name, approval date, proposing agency, and goal of the thirteen SEA projects.)

- (1) Industrial Zone Establishment Policy,
- (2) Golf Court Establishment Policy,
- (3) Taiwan Water Resource Development Plan,
- (4) Reduction Policy for the Water Supply Quality and Quantity Protection Area,
- (5) Transportation System between Taipei and Eastern Taiwan Development Policy,
- (6) Waste Disposal Policy,
- (7) Iron and Steel Policy,
- (8) Makung Urban Area Expansion Policy,
- (9) Taoyuan International Airport and Vicinity Area Plan,
- (10) Tucheng Urban Area Expansion Policy,
- (11) Maizaiyuan, Sanxia Urban Area Expansion Policy,
- (12) Sanchong and Luzhou Urban Area Expansion Policy, and
- (13) New Taipei City Regional Planning Policy

Table 2: Description of 13 SEA projects in Taiwan

Number	Project Name	Approval Date	Proposing Agency	Aim and Goal
1	Industrial Zone Establishment Policy	May 2001	Industrial Development Bureau of the Ministry of Economic Affairs	To be used as guidance for the future establishment of industrial zones to transform industrial structure, and balance regional development.
2	Golf Course Establishment Policy	June 2001	Sports Affairs Council of the Executive Yuan	To resolve the severe environmental damage caused by previous golf courses, and to open up, moderately and conditionally, golf course establishments.
3	Taiwan Water Resource Development Plan	December 2001	Water Resources Agency of the Ministry of Economic Affairs	To redirect Taiwan water resource planning from traditional watershed planning to regional water resource allocation, promote water conservation, enhance the efficiency of water use, and conduct moderate development of water sources.
4	Reduction Policy for the Water Supply Quality and Quantity Protection Area	April 2003	Water Resources Agency of the Ministry of Economic Affairs	To regulate the applications, case by case, for changes of the protected water areas.
5	Transportation System between Taipei and Eastern Taiwan Development Policy	December 2006	Ministry of Transportation and Communication	To satisfy the need for freight transportation between Taipei and eastern Taiwan, while taking into account the quality of life of the people in eastern Taiwan, especially indigenous communities.
6	Waste Disposal Policy	August 2012	Environmental Protection Administration of the Executive Yuan	To plan for the transition of incineration plants to biomass energy centers, and for the excavation, regeneration, and activation of landfills.
7	Iron and Steel Policy	January 2013	Industrial Development Bureau of the Ministry of Economic Affairs	To conduct overall planning of the iron and steel industry, and provide the government guidelines for the development of the iron and steel industry in the future.
8	Makung Urban Area Expansion Policy	December 2011	Penghu Islands County Government	To expand offshore island Makung urban planning area and provide overall transportation system and public facilities.
9	Taoyuan International Airport and Vicinity Area Plan	March 2013	Ministry of the Interior (Ministry of Transportation and Communication as the conducting agency)	To expand the Taoyuan Airport area, strengthen the role of it as an airline hub in East Asia, and provide a convenient environment for passenger and freight transportation in order to promote industrial development.
10	Tucheng Urban Area Expansion Policy	October 2013	New Taipei City Government	To expand Tucheng urban planning area and meet the needs for ecological protection and economic development.
11	Maizaiyuan, Sanxia Urban Area Expansion Policy	November 2014	New Taipei City Government	To expand Maizaiyuan, Sanxia urban planning areas and overall transportation systems, and to provide zoning guidelines for the development of business, industry and agriculture.
12	Sanchong and Luzhou Urban Area Expansion Policy	March 2015	New Taipei City Government	To expand Sanchong and Luzhou urban planning areas for the development of central parks in greater Taipei, and to improve the ecosystem and quality of life in greater Taipei.
13	New Taipei City Regional Planning Policy	May 2016	New Taipei City Government	To realize sustainable use of regional land and space, to provide development guidelines for all sectors of New Taipei City Government, and to improve capabilities for disaster prevention and resilience to climate change.

3.2.1 Public participation in SEA projects: from 1998 to 2001

The SEA proposals of the first three SEA projects (Projects 1, 2 and 3) were approved in 2001 (see Table 3). Public participation activities implemented therein were limited to one stage, that is, submitting the SEA proposal to the EPA for review and advice.

It is clear that the proposing agencies, in these three SEA projects, passively obeyed the mandatory regulation, Article 7 of the 2000 SEA Regulations, to 'submit the programmed to the central competent authorities for review and suggestions. 'The voluntary regulation in Article 7, to 'consult with related agencies or organizations for suggestions,' was not put into practice. The EPA held public hearings to abide by the Article 7 of the 2000 SEA Regulations. Public hearings provide information to the EIA Review Committee of the Environmental Protection Administration (EPA-EIARC) for reviewing the SEA proposal and giving its suggestions after receiving a SEA proposal. Sometimes, the ad hoc Panel of the EPA-EIARC may hold preliminary meetings to prepare for the formal EPA-EIARC meetings. Public hearings, held by the EPA in these three SEA projects, were conducted in a conventional way, which were open gatherings of officials, experts, scholars, organization representatives, and citizens. In public hearing activities, all participants were permitted to voice opinions, but officials were not obliged to act on them or to respond publicly (Williamson &Fung 2004). No more than thirty people were invited and then attended public hearings in each SEA project (some people who provided their opinions in written form but did not show up in the meeting were also counted as participants in this article). After public hearings, proposing agencies took those opinions into consideration and responded to them in written form for the EPA-EIARC meetings.

Table 3: Description of public participation in SEA projects from 1998 to 2000

Project Name	SEA Procedure and Public Participation Activities		
1. Industrial Zone Establishment Policy	December 2000	March 2001	May 2001
	EPA: Proposal received	EPA public hearing: Officials: 6 Experts and Scholars: 14 Organizations:5	EPA-EIARC meeting: Proposal approved
2. Golf Course Establishment Policy	February 2001	March 2001	June 2001
	EPA: Proposal received	EPA public hearing: Officials: 6 Experts and Scholars: 14 Organizations:6	EPA-EIARC meeting: Proposal approved
3. Taiwan Water Resource Development Plan	January 2001	March 2001	December 2001
	EPA: Proposal received	1. EPA public hearing: Officials: 6 Experts and Scholars: 14 Organizations:10 2.EPA-EIARC meeting 1	1.EPA-EIARC (ad hoc) preliminary meeting 2.EPA-EIARCmeeting 2: Proposal approved

3.2.2 Public participation in SEA projects: from 2002 to 2010

From 2002 to 2010, four SEA projects occurred (see Table 4). There were not only more stakeholders than those in Projects 1, 2 and 3 participating in public participation activities, but also more public participation activities were utilized. The cumulative number of people who attended public participation activities in Project 4 was fifty-five, in Project 5 was one hundred and eighty-two, and in Project 6 was forty-sixty. And the number swiftly increased to three hundred and nineteen in Project 7. Meanwhile, before submitting SEA proposals to the EPA for reviews and advice, these four projects held scoping meetings, which did not happen with Projects 1, 2 and 3. The reason to have scoping meetings is that the Statement Directions were revised in 2001 and stipulated, 'while determining the assessment content, strategy proposing agencies may...hold scope assessment meetings.' Coexisting with scoping meetings, Projects 4 to 7 also held consultative meetings, in which experts, scholars, organization representatives and related agencies were invited to participate. Although SEA-related regulations did not set up provisions regarding holding the consultative meetings, key reasons to carry out these meetings were: (1) before the scoping meeting, the consultative meeting was implemented to discuss and collect opinions about possible scope, facets, significance, and details of the assessment for efficiently reaching a consensus in the future scoping meeting; and (2) after the scoping meeting, the scope, facets, significance, and details of the assessment still needed to be clarified by stakeholders for completing the SEA proposal.

Table 4: Description of public participation in SEA projects from 2002 to 2010

Project Name	SEA Procedure and Public Participation Activities					
4. Reduction Policy for the Water Supply Quality and Quantity Protection Area	October 2002	January 2003	February 2003	March 2003	April 2003	
	WRA* scoping meeting: Officials: 18 Experts and Scholars: 2 Organizations: 12	WRA consultative meeting: Officials: 16 Experts and Scholars: 3	EPA: Proposal received	EPA public hearing: Officials: 4 Experts and Scholars: 0 Organizations: 1	1.EPA-EIARC (ad hoc) preliminary meeting 2.EPA-EIARC meeting: Proposal approved	
5. Transportation System between Taipei and Eastern Taiwan Development Policy	May 2006	June 2006	August 2006	September 2006	November 2006	December 2006
	MTC** consultative meeting: Officials: 36 Experts and Scholars: 0 Organizations: 0	MTC scoping meeting: Officials: 27 Experts and Scholars: 9 Organizations: 4	MTC consultative meeting: Officials: 35 Experts and Scholars: 2 Organizations: 9	EPA: Proposal received	1.EPA public hearing: Officials: 36 Experts and Scholars: 2 Organizations: 22 2. EPA-EIARC (ad hoc) preliminary meeting	EPA-EIARC meeting: Proposal approved
6. Waste Disposal Policy	June 2010	January 2011	March 2011	July 2011; October 2011	December 2011	
	EPA scoping meeting: Officials: 10 Experts and Scholars: 7 Organizations: 6	EPA consultative meeting: Officials: n/a Experts and Scholars: 7 Organizations: 0	EPA public hearing: Officials: 14 Experts and Scholars: 0 Organizations: 2	EPA-EIARC (ad hoc) 2 preliminary meetings	EPA-EIARC meeting: Proposal approved	
7. Iron and Steel Policy	November 2008; December 2008; June 2009; October 2009; November 2009	December 2008; April 2009	April 2010	September 2010	December 2010; April 2011	January 2013
	IDB*** 5 consultative meetings: Officials: 25 Experts and Scholars: 39 Organizations: 20	IDB: 2 scoping meetings: Officials: 14 Experts and Scholars: 18 Organizations: 11	IDB 3 public hearings: Officials: 30 Experts and Scholars: 46 Organizations: 87	1. EPA: Proposal received 2. EPA public hearing: Officials: 24 Experts and Scholars: 2 Organizations: 3	EPA-EIARC (ad hoc) 2 preliminary meetings	EPA-EIARC meeting: Proposal approved
<p>*WRA stands for the Water Resources Agency of the Ministry of Economic Affairs. **MTC stands for the Ministry of Transportation and Communication. ***IDB stands for the Industrial Development Bureau of the Ministry of Economic Affairs.</p>						

3.2.3 Public participation in SEA projects: from 2011 to 2015

Six SEA projects had been conducted from 2011 to 2015 (see Table 5). All of these projects were related to urban planning or regional planning since Item 4 (Land Use Policies) of the 2001 Specific Policy Items was amended. In 2006, one new policy item, 'newly determined or expanded urban planning programs (using land area of 10 hectares or more),' was added into the item list. In 2012, one more new policy item, 'the regional plan at city/county levels,' was added. Thus, urban planning and regional planning became a subject which needs to conduct SEA before approved. Public participation activities carried out during this period were to some extent different from those in Project 4 to 7 (from 2002 to 2010). First, only one project, Project 9, in 6 SEA projects held the scoping meeting. Two reasons could explain this distinction. On one hand, the scoping meeting, regulated in Article 7 of the 2001 Statement Directions, is a voluntary rule, not mandatory.

On the other hand, most of proposing agencies thought that SEA projects related to urban planning or regional planning were not so sophisticated in terms of SEA scoping that there were no needs to hold scoping meetings before submitting SEA proposals to the EPA. Second, based on the same logic that SEA on urban planning or regional planning were uncomplicated, all SEA projects in this period did not hold any consultative meetings before their documents were docketed at the EPA. Third, it seems that to conduct consultative meetings or scoping meetings are still necessary during SEA processes although proposing agencies did not think so at the early stage of SEA processes. As evidence showed in Project 9 to 13, either the EPA or the proposing agencies held consultative meetings or scoping meetings after SEA proposals were sent to the EPA. Fourth, the documents (Minutes of EPA consultative meeting in November 2012 in Project 9; Minutes of EPA public hearing in June 2008 in Project 10) revealed that proposing agencies did not initiate consultative meetings or scoping meetings voluntarily after SEA proposals were sent to the EPA. Instead, meetings were requested by officers, experts, scholars or organization representatives during the EPA consultative meetings or public hearings because they believed that well-designed public participation activities will improve outcomes of SEA.

Fifth, as reasons explained in the Fourth, supra, for the better quality of SEA and to be consistent with the requirement from officers, experts, scholars or organization representatives, Projects 9, 10, 11 and 13 tried to invite the general public to join public participation activities. Opinions of the general public were taken into account before review meetings of the EPA.

Table 5: Description of public participation in SEA projects from 2011 to 2015

Project Name	SEA Procedure and Public Participation Activities				
8. Makung Urban Area Expansion Policy	April 2011	May 2011	September 2011	August 2012	
	EPA: Proposal received	EPA public hearing: Officials: 15 Experts and Scholars: 0 Organizations: 2	EPA-EIARC (ad hoc) preliminary meeting	EPA-EIARC meeting: Proposal approved	
9. Taoyuan International Airport and Vicinity Area Plan	November 2012; December 2012; February 2013	December 2012; January 2013	January 2013	February 2013	March 2013
	EPA 3consultative meetings: Officials: 86 Experts and Scholars: 38 Organizations: 0	Taoyuan Local Governments 10 public hearings : Officials: n/a Experts and Scholars: n/a Organizations: n/a Citizens: 5000	1. MTC* scoping meeting Officials: 23 Experts and Scholars: 0 Organizations:0 2. EPA: Proposal received	1. EPA public hearing: Officials: 61 Experts and Scholars: 5 Organizations: 7 2. EPA-EIARC (ad hoc): preliminary meeting	EPA-EIARC meeting: Proposal approved
10. Tucheng Urban Area Expansion Policy	January 2008	June 2008	July 2012; August 2012	October 2008; April 2009; January 2010; February 2010; July 2013	July 2009; October 2013
	EPA: Proposal received	EPA public hearing: Officials: 12 Experts and Scholars: 13 Organizations: 9	NTC 2 consultative meetings: Officials: 55 Experts and Scholars: 3 Organizations:3 Citizens: 71	EPA-EIARC (ad hoc) 5 preliminary meetings	EPA-EIARC 2 meetings: Proposal approved
11. Maizaiyuan, Sanxia Urban Area Expansion Policy	January 2012	December 2012	July 2013; August 2014	November 2014	
	EPA: Proposal received	EPA public hearing: Officials: 10 Experts and Scholars: 9 Organizations: 0	EPA-EIARC (ad hoc) 2consultative meetings Officials: 48 Experts and Scholars: 35 Organizations:2 Citizens: 7	EPA-EIARC meeting: Proposal approved	

12.Sanchong and Luzhou Urban Area Expansion Policy	January 2013	January 2013	June 2014	March 2015	
	EPA: Proposal received	EPA public hearing: Officials: 26 Experts and Scholars: 5 Organizations: 2	EPA-EIARC (ad hoc)consultative meeting: Officials: 16 Experts and Scholars: 14 Organizations:2	EPA-EIARC meeting: Proposal approved	
13.New Taipei City Regional Planning Policy	January 2014	January 2014	August 2014	April 2015	March 2015
	EPA: Proposal received	EPA public hearing: Officials: 65 Experts and Scholars: 15 Organizations: 9	EPA consultative meeting: Officials: 16 Experts and Scholars: 12 Organizations:0	EPA-EIARC (ad hoc)consultative meeting: Officials: 40 Experts and Scholars: 11 Organizations:16 Citizens: 3	EPA-EIARC meeting: Proposal approved
*MTC stands for Ministry of Transportation and Communication.					

3.2.4 Challenges to operationalize public participation in SEA in Taiwan

Taiwan government has so far conducted thirteen SEA projects, which demonstrate an increasing trend of carrying out more public participation activities and of more stakeholders attending public participation activities in SEA processes (see Figure 2 and 3; In Project 9, 5000 citizens attending Taoyuan Local Governments’ public hearings is exceptional. The number will not be counted in Figure 3). Nonetheless, these cases also indicate challenges to operationalize public participation in SEA in Taiwan when compared with meaningful public participation mechanisms. For instance, the number of attending stakeholders and the number of public participation activities held in each SEA process still grow slowly; public participation activities still lack diversity; and the real impact of stakeholders on decision-making is limited (more analysis in the foregoing section). It seems that almost all SEA projects in Taiwan were carried out after the central government or relevant agencies had made their mind to implement the chosen policy or plan. To conduct SEA process is akin to work done, *nunc pro tunc*.

Six key reasons, as scholars indicate in other cases, are consistent with the author’s own experience and two interview opinions, led to insufficient support for public participation by proposing agencies in Taiwan. Public participation would: (1) increase work load; (2) complicate PPP formulating; (3) delay PPP formulation; (4)increase costs; (5) frustrate PPP formulating agencies owing to their unfamiliarity with a variety of public participation activities; and (6) annoy PPP formulating agencies due to their lack of knowledge requiring organizational culture adjustment (Heiland 2005; Liou et al. 2006). These crucial reasons curb inner motivation of PPP formulating agencies and constitute obstacles to the implementation of public participation in SEA in Taiwan.

Fig. 2 Number of Public Participation Activities in SEA Projects

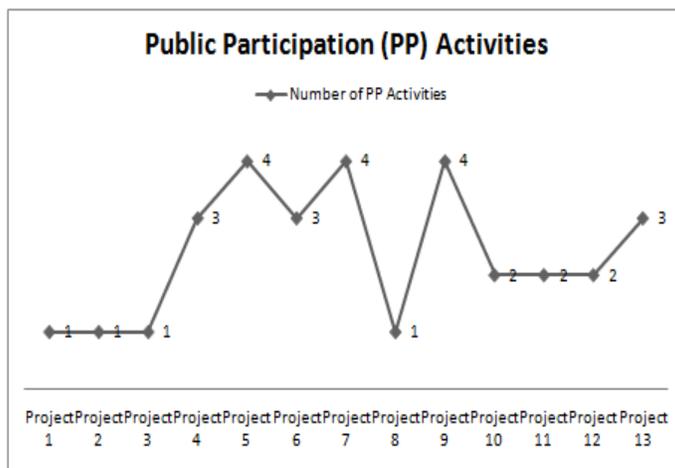
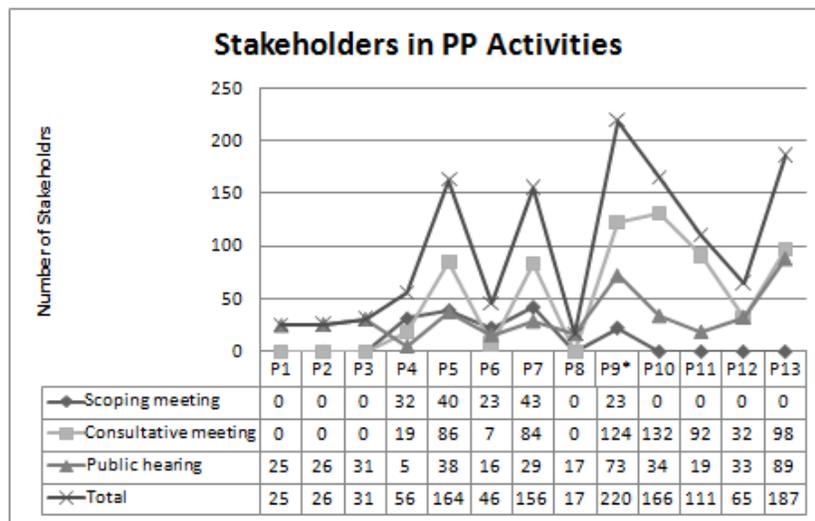


Fig. 3 Number of Stakeholders in Public Participation Activities in SEA Projects



It would be very meaningful to analyze how these obstacles work before and during SEA processes in Taiwan. The analysis can be conducted by empirical study through either qualitative or quantitative research. Also, on the basis of literature review, solutions to obstacles and problems may be discovered. Then, prioritized solutions can be shown and suggestions made as to how such obstacles may be overcome. However, since this article pays attention to the regulatory and legal dimension, the focal point becomes the unanswered question: ‘Why is there still such a limited degree of public participation in Taiwan’s SEA projects?’ The answer is simply that ‘it is required to carry out public participation mechanisms’ (Meyer-Steinbrenner 2005; Noble 2010; Shepherd and Bowler 1997).

The analysis of previous thirteen Taiwan SEA projects shows that four factors, directly or indirectly related to law and the regulatory environment, determine types of public participation and the extent to which stakeholders can get involved: (1) the regulation stipulates certain public participation activities (or not); (2) the regulation is mandatory (or voluntary) toward certain public participation activities; (3) non-stipulated public participation activities are needed (or not) to complete the stipulated public participation activities; and (4) non-stipulated public participation activities are requested (or not) by stakeholders when they get involved in the stipulated public participation activities in SEA processes.

Though, Noble (2010) emphasizes that ‘[b]y involving the general public in the decision-making process, it is possible to: define the problem more effectively; access a wider range of information, including traditional knowledge; identify socially acceptable solutions; ensure more balanced decision-making; minimize conflict and costly delays; facilitate implementation; reduce the possibility of legal challenges; [and] promote social learning’ (p. 181). The Taiwan government faces a challenge: the reluctance of SEA proposing agencies to implement public participation unless the law or regulations says so directly or indirectly. Following the same logic, sharpening the legal tools could be the key to ‘encourage,’ ‘drive’ and ‘force’ SEA proposing agencies to carry out adequate public participation activities with due diligence (Woods 2015).

4. Law as a Tool to Implement Taiwan Public Participation in SEA

Law has various functions in the light of its multiple properties. From a normative perspective, law, as a synonym of the legal system, ‘orders human activities and relations through systematic application of the force of politically organized society, or through social pressure, backed by force, in such a society’ (Black’s Law Dictionary 2001). From the *rule of law* perspective, law includes legal principles and legal rules, which are made of Constitutional, legislation, administrative regulations and judicial precedents, and are utilized or applicable to cases on the basis of hierarchy of law. Most of the time, lawmakers, as representatives of the people’s will, enact positive laws (statutes), which legitimize administrative PPP and regulations and become authoritative grounds of judicial decisions.

From PPP makers' perspective, law, broadly speaking, is a part of strategic activities and is used to deal with social problems; meanwhile, law, narrowly speaking, is a tool to legitimize solutions and assist them to reach the goal of the PPP. In order to encourage and force SEA proposing agencies to carry out meaningful public participation and to consider limited resources, it is appropriate and necessary to enhance the intensity and expand the scope of Taiwan SEA regulations regarding public participation. The following amendments to Taiwan SEA regulations of Taiwan are suggested:

- Article 7 of the 2006 SEA Regulations stipulates: 'After making strategic environmental assessment statement, PPP making agencies shall consult the central competent authority and may consult other related agencies and groups, and then may take their opinions into account.'
- Article 7 of the 2006 SEA Regulations should be revised as: 'After making strategic environmental assessment statement, PPP making agencies shall consult the central competent authority, other related agencies, groups, scholars and experts, and then shall take their opinions into account.'

The amendment version expands the scope of review for the first draft of the assessment statement to encompass experts and scholars. The amendment also includes the change of consultation requirement from 'voluntary' to 'mandatory.' The revision provides for a basic mechanism of public participation while the first draft of the assessment statement is ready.

- Paragraph 2 of Article 7 of the 2007 Statement Directions stipulates: 'PPP formulating agencies may invite related agencies, groups, scholars, and experts to a scoping meeting to determine the scope of assessment items mentioned in the paragraph 1.'
- Paragraph 2 of Article 7 of the 2007 Statement Directions should be revised as: 'PPP making agencies shall invite related agencies, groups, scholars, and experts to a scoping meeting to determine the scope of assessment items mentioned in paragraph 1.'

The amendment revises the regulation of conducting scoping meetings from 'voluntary' to 'mandatory.' It provides the basic mechanism for public participation at the early stage of the assessment process and before the first draft of the assessment statement is ready.

- Paragraph 1 of Article 8 of the 2006 SEA Regulations should be amended as: 'PPP formulating agencies shall invite the general public to participate in every stage of assessment, and ensure that due account is taken of opinions of the general public.'
- Paragraph 2 of Article 8 of the 2006 SEA Regulations should be amended as: 'The central competent authority shall provide guidance of public participation activities and techniques in strategic environmental assessment processes for PPP formulating agencies.'

Public participation mechanisms provided by Taiwan SEA regulations are limited to two ways. That is to say, the inquiry after the first draft of the assessment statement and public participation activities in the scoping meeting. However, both ways do not apparently provide participation mechanisms for the general public. Paragraph 1 of this amendment is added for the general public to attend meetings and is provided mandatorily by PPP formulating agencies at each stage of the process. Moreover, techniques, types, and methods of public participation in SEA processes should be diverse and adaptable in order to have meaningful public participation. Paragraph 2 of this amendment is added for central competent authorities to establish guidance on the types and methods of public participation, to assist PPP formulating agencies to provide proper public participation activities for related agencies, groups, scholars, experts, and the general public.

5. Conclusion and Follow-on Efforts

After reviewing thirteen SEA projects regarding public participation in Taiwan, this article explains that the importance, diversity, and proportionality of public participation have been toward an increasing trend. But there is still a long way to go toward meaningful and effective public participation. Were it not for legal requirements, PPP formulating agencies in Taiwan would lack motivation to put public participation into practice. It is necessary to revisit fundamental theories for public participation in SEA.

This could be viewed as a carrot-like approach to remind PPP formulating agencies of popular sovereignty and who (the general public) delegates power to them. Juxtaposed with fundamental theories, law could be used as a tool to drive and force PPP formulating agencies to conduct meaningful and effective public participation. And this could be viewed as a stick-like approach.

Law is not everything, but is a real something which can produce a great deal of leverage in SEA processes. Given that power to be shared is taken, not given in most cases, law can protect the general public to enjoy their legal rights and interests to receive relevant information, to join PPP formulation, to express opinions and have them taken into account. This article suggests a series of legislative changes to require PPP formulating agencies to conduct adequate public participation activities in SEA processes. That becomes the important step, if not the first step, for Taiwan to remove obstacles to meaningful public participation. Is everything all set? When the 'carrot' and 'stick' are ready, it is not yet clear how much effectiveness the public participation will have. The answer depends on the capability of key roles the general public and PPP formulating agencies. Mechanisms for capacity building are urged and more empirical research on the effectiveness of public participation activities needs to be explored further in Taiwan.

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