

行政院及所屬各機關出國報告
(出國類別：參加研討會)

「參加亞洲生產力組織環境影響評估與綠色生產力研
討會」報告書

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出國地區：斐濟

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摘 要

本次亞洲生產力組織係假斐濟舉行「環境影響評估及綠色生產力研討會」，希望推廣將綠色生產力（Green Productivity; GP）的觀念、實務經驗及方法整合納於環境影響評估（Environmental Impact Assessment; EIA）之中，以強化環境影響評估程序與效能，並促成永續發展及最佳化資源運用。

EIA 與 GP 兩者皆有同樣的預防概念 從源頭減少衝擊，及相同的預警原則 儘可能地不要對環境造成傷害，兩者皆存有永續發展的精神。

我國正積極推動成為「綠色矽島」，若能適時配合這波綠色生產力與綠色競爭力的國際趨勢，使其成為促進產業轉型和全面升級，與落實企業環保新契機，將可大為提昇我國國家競爭力。

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參加亞洲生產力組織環境影響評估與綠色生產力研討會報告

壹、目的

亞洲生產力組織(Asian Productivity Organization ; APO)係一非營利及非政治性的亞洲地區國際組織，一九六一年五月在日本東京成立，其主旨為對會員國工農與服務業提供技術、管理等服務，以提倡全面生產力之提昇。該組織近年來積極推動資源保存與環境保護工作，最近更不遺餘力地倡導綠色生產力(Green Productivity ; GP)觀念，以提昇企業生產力與環境保護。該組織每年均徵選亞洲各會員國環保工作人員支助參加有關綠色生產力與環境保護之研討會。

本次亞洲生產力組織係假斐濟舉行「環境影響評估及綠色生產力研討會」，希望推廣將綠色生產力的觀念、實務經驗及方法整合納於環境影響評估(Environmental Impact Assessment ; EIA)之中，以強化環境影響評估程序與效能，並促成永續發展及最佳化資源運用。本次研討會的主要目的是要讓參加的學員能夠了解 GP 及 EIA 的觀念、重要性及好處，並將 GP 的評估工具與技術整合於 EIA 方法之中，另亦藉由工作分組提供參與者一個實作經驗。

貳、研習過程

一、行程及課程主題

本次研討會之行程及課程主題如下：

七月二十七日(星期五)晚上啟程至雪梨轉機

七月二十八日(星期六)於雪梨轉機至斐濟納迪(Nadi)

七月二十九日(星期日)學員報到

七月三十日(星期一)開幕

講師及學員介紹

APO GP 活動簡介

EIA 及 GP 概述

EIA 及 GP 原則與觀念及其整合

EIA 及 GP 方法論概述及其整合

EIA 之立法與制度

分組及研討案例簡介

七月三十一日（星期二）環境衝擊概論

EIA 之範疇界定

環境衝擊之認知

分組討論

八月一日（星期三）環境衝擊之預測

減少環境衝擊之對策及技術

分組討論

八月二日（星期四）環境風險分析

EIA 之替代方案與評估

環境衝擊之監測

分組討論

八月三日（星期五）EIA 之事後稽核與評估

分組討論及報告

頒發結業證書及閉幕

八月四日（星期六）返程（由納迪經雪梨回台北）

八月五日（星期日）返抵台北

二、研習內容與重點

本次研討會參加國包括我國、斐濟、印尼、伊朗、日本、韓國、馬來西亞、蒙古、尼泊爾、巴基斯坦、菲律賓、斯里蘭卡、泰國以及越南等十四國二十五位代表，每一國代表均

提出與研討會主題有關之國家報告 (Country Report)，職所提之報告如附件一。

本次研討會主辦單位係以聘請講師講授 EIA 及 GP 概念及方法論為主，並將全體學員分為四組進行個案研討及實作練習為輔。

主辦單位邀請之講師有菲律賓的 Leong 博士、印度之 Modak 博士、新加坡的 Tay 教授以及斐濟的 Premila 女士。Leong 博士、Modak 博士及 Tay 教授分別針對環境影響評估及綠色生產力的有關事項作精闢的講解，三位講師均使用 Power Point 電腦軟體工具，並輔以詳實的講義，上課的內容聽起來簡明易懂，不致太艱深。Premila 女士則對 EIA 個案習作的案例作簡介，並協助進行案例研究。研習課程的主要內容如下：

(一) 環境影響評估之概念、原則及方法

「環境影響評估」係於擬定經濟開發計畫或措施時，就開發行為或政府對策對環境（包括生活環境、自然環境、社會環境及經濟、文化、生態等層面）所可能發生影響之程度及範圍，事前以科學、客觀、綜合之調查、預測、分析及評定，提出環境管理計畫及減少對環境造成負面影響的對策，進而公開說明，並付諸審查，以決定該項開發計畫或措施應否予以實施之制度。

藉由環境影響評估的實施，使政府或開發單位所釐訂的開發行為或措施，獲得下列成效：

- * 藉由事前的分析預測和評估，可發掘出使用環境資源的最適合開發替代方案及較佳的開發規模。
- * 事前了解衝擊問題所在，並確實執行減輕負面衝擊的相對策，使週遭環境和資源所遭受的不利程度及範圍降至最低。

- * 對因開發或使用環境資源所產生的福利或損失，予以合理的分配使用或補償，使可能發生的社會成本，予以內部化，促成社會正義。

環境影響評估必須在開發計畫的起始規劃階段即與實施，評估的項目與資訊包含自然環境（地形、地質、地震與斷層、土壤、水文、氣象、海象）、生活環境（水質、空氣品質、噪音、振動、廢棄物、排水防洪）、生態環境（陸域動物、陸域植物、河川生態、海域生態）、社經環境（人口特性、產業經濟、土地利用、公共設施、公共安全衛生、安居遷移、交通運輸、民意反應）、景觀環境（景觀美質、遊憩資源）及文化環境（古蹟遺址、宗教信仰、重要建築）等，尤須注意下列事項：

- 應包含所有可能受到影響的因素，包括社會及健康風險、長期累積性衝擊、大尺度效應等。
- 替代方案，包括規劃設計、位址、技術等。
- 永續性考量，包括資源生產力、同化能力、生物多樣性等。

環境影響評估的演進，依序為 Strategic EIA、Sectoral EIA、Regional EIA 及 Project EIA，EIA 原則的層面也隨其演進而改變，由早期的 Environmental Technology Assessment (for process) 到近期的 Life Cycle Assessment (for products)、至最近的 Environmental Management System (for management systems)。環境影響評估程序是一種互動循環式的程序，主要程序包括：Screening (篩選)、Scoping (範疇界定)、Identification (鑑別)、Predicting (預測)、Evaluation (評量)、Mitigation (減輕對策)、Reporting (撰寫報告)、Reviewing (審查)、Decision-making (決定)、Monitoring and managing (監督與管理) 等，而

且最好在每一個程序都納入 Public Involvement (公眾參與)。

環境影響評估過程中所使用的工具大致有：

- Ad Hoc Method
- Checklist
- Matrices
- Sectoral Guideline
- Networks
- Systematic Sequential Approach
- Map Overlays
- Geographic Information Systems
- Task Specific Computer Modeling
- Expert System

(二) 綠色生產力之概念、原則及方法

所謂「綠色生產力」就是在社會及經濟的發展上，以適當的技術、科技及管理系統，在製造業、農業、服務業及社區發展等相關領域內，提供與環境相容之產品及服務；換言之，綠色生產力是種同時提昇生產力與環境績效的策略，該策略乃運用生產力及環境管理工具、技術、技巧降低組織活動、產品、和服務造成之環境衝擊。綠色生產力亦是一集合環境、社會和商業及其他活動之策略。

在綠色生產力的認知裏，永續發展的精神在促進環境保護、產品品質及公司利潤上的同時改善，而為了達到這些目標，綠色生產力應用了許多現有的或發展中的措施，包含了基本的提昇績效措施，如廢棄物回收利用、污染預防、清潔生產等，以及較複雜的持續改善方法，如環境管理系統、企業環境績效評估、環境化產品設計、生命週期評估、綠色採購及工業生態化等。綠色生產力是一個介於環境績效及生產

力二者間的一個齒輪，它把環境保護及生產力提昇二者緊緊相扣，除了將生產力提昇所得之利益轉為環境保護持續改善之資源外，並可把環境績效之提昇作為永續發展之基礎。

GP 的指導性原則 (Guiding Principles) 包含生態及生產力二種取向：

1. Ecological principles (生態原則)
 - Eco-sustainability
 - Eco-efficiency
 - Polluter pays
 - Precautionary approach
 - Accountability
 - Ecological limits to growth
2. Productivity principles (生產力原則)
 - Profitability
 - Enhancing business opportunities
 - Competitiveness
 - Employer orientation

GP 的四個顯著的特色為：

1. Environmental compliance
 - Pollution prevention
 - Source reduction
 - End-of-pipe controls
2. Integrated people based approach
 - production-environment integration
 - team work
 - safe and healthy working conditions
3. Productivity improvement
 - Continuous improvement cycle

4. Information driven improvement

- measurement
- reporting
- disclosure

綠色生產力的方法論 (GP Methodology) 是根據 GP 的原則及應用 PDCA 循環所發展出來的，包含下列六個主要步驟：

1. 起始 (Getting Started)

- 建立 GP 工作小組
- 資訊收集與現地查訪

2. 規劃 (Planning)

- 鑑別問題與原因
- 設定目標及標的

3. GP 方案之產生、評價與選擇 (Generation, Evaluation and Prioritization of GP Options)

- 建立 GP 方案
- 對 GP 方案進行篩選、評價及排序

4. 執行 GP 方案 (Implementation of GP Options)

- 建立 GP 執行計畫
- 執行選定之 GP 方案
- 訓練、建立認知及能力發展

5. 監測與審查 (Monitoring and Review)

- 執行結果的監督與評價
- 管理審查

6. GP 之持續改善 (Sustaining GP)

- 修正與整合
- 鑑別及持續改善

配合 GP 方法論的各個步驟而使用的 GP Tools 有：

- Brain Storming

- Flowchart
- Process Flow Diagram
- Plant Layout
- Eco-Map
- Concentration Diagram
- Check Sheet
- Checklist
- Material Balance
- Energy Balance
- Work Sampling
- Cause-Effect Analysis
- Ishikawa Diagram
- Pareto Chart
- Control Chart
- Spider Web Diagram
- Failure Mode Effect Analysis
- Cost Benefit Analysis
- Benchmarking
- Decision Matrix

(三) 環境影響評估與綠色生產力的整合

EIA 與 GP 兩者皆有同樣的預防概念 從源頭減少衝擊，及相同的預警原則 儘可能地不要對環境造成傷害，兩者皆存有永續發展的精神。GP 的方法及經驗可以幫助在 EIA 過程中發展出有成本效益與環境可接受的環境管理計畫，GP 方案亦可在很多方面成為 EIA 可引用作為減輕對環境造成不利影響的對策。

EIA 的過程與 GP 概念及方法亦有相當多的互動關係，簡述如下表：

EIA	GP
Screening(checklist)	Not Applicable
Scoping (site visit, public consultation, examination of secondary data, workshop)	Walk through survey and information collection (site visit, team formation, walk-through, process flow diagram, layout)
Initial Environmental Examination (checklist, matrix, overlays, workshop)	Identification of problems and causes, Set objectives and targets (Eco-map, Ichikawa diagram)
Analysis of alternatives (brainstorming workshop)	Generation of GP options (brainstorming workshop)
Identification of preferred option (public consultation, weighted checklists or scaled/quantitative matrices, cost-benefit analysis, environmental risk assessment)	Screening and evaluation of GP options (cost-benefit analysis, weighted checklists, failure mode effects analysis, public/team consultation)
Prediction and assessment of impacts for the preferred option (math modeling, social impact assessment, environmental health impact assessment, environmental risk assessment)	Detailed evaluation of GP options (cost-benefit analysis, weighted checklists, failure mode effects analysis, public/team consultation)
Preparation of environmental management and monitoring plan (project planning techniques)	Formulate GP implementation plan, Training, awareness building and developing competence (project planning techniques)
Post-project monitoring, audit and reporting (checklists)	Monitoring and evaluation of results, Management review, Incorporate changes into organization's system of management, Identify and select next focus area for continual improvement (checklists)

(四) 分組案例研討與習作

主辦單位將所有學員分成四組，每組約有六至七位學員，再由各組各自帶開討論。本次研討會研討案例係就

Kontiki Investments Ltd. 將在斐濟 Denarau Island 投資設置觀光旅館的開發計畫作一環境影響評估。案例研究由 Premila 女士就案例背景資料作一概要說明，並提供該案例之相關資料，另亦帶領學員至預定開發場址作現場勘查。

分組案例研討的主要目的是希望學員利用 GP 工具與技術，如：cause-effect analysis, material balance, Eco-map 等，去執行這個開發計畫的 EIA。

各分組可從講義提供之資料及現場實地勘察，進行 EIA 及 GP 的練習、討論，並以團隊分工（Teamwork）模式獲得以下結果：

1. 考慮開發計畫的整個過程，包括：設置許可及土地取得、建造、營運、甚至結束營業等，找出重要的環境考量因素及社會考量因素，並找到必要的資訊以評估開發計畫對於環境及社會所可能造成的影響。
2. 找出可減輕及管理開發計畫對環境造成不利影響的對策，並採用 GP 策略及工具以提昇開發計畫的競爭力。
3. 提出監督管理策略以使開發計畫能有永續性的競爭力。

參、心得

參加此次研討會，藉由講師深入淺出的講解及分組討論的習作，使得個人對於環境影響評估（EIA）的概念、程序與方法；及綠色生產力（GP）的工具及技術能有相當的認識。其次，也了解到綠色生產力事一多重方法、系統化、生命週期取向及持續改善的活動，它可以應用整合於環境影響評估的程序中，在開發方案的考量及減輕不良影響的對策上，能夠提供甚多的助益，而且，綠色生產力的技術及方法亦可降

低符合環保法令的成本。

我國實施環境影響評估制度已有多年，然一般企業似乎仍視環境影響評估制度為畏途，甚至認為環境影響評估可能造成生產成本之增加。故若是能將綠色生產力的觀念及方法灌輸傳達給企業界，使其能夠整合應用於環境影響評估程序中，當能增進企業界做好環境影響評估的能力並提昇其生產力，使得環境影響評估不僅只做環境污染預防者的角色，而且還能成為創造生產力的角色。

肆、檢討與建議

- 一、環境影響評估的主要重點在預防及減輕開發行為對環境造成不良影響，藉以達成保護環境及維護國民生活品質的目標。自美國於 1970 年將環境影響評估制度納於國家環境政策法(National Environmental Policy Act)後，世界各國亦逐步跟進，參與本次研討會的十四個國家亦皆有實施環境影響評估制度。藉由環評的過程，促使開發計畫對環境資源作永續運用及發展，對於開發者或國家社會都是有正面意義的。
- 二、本次研討會並未請各國代表就其國家報告作簡報與討論，甚為可惜。但分組討論時，仍有就相關經驗作交流，各國環評程序大都相仿，整個環評所需時間則為一至三年不等。「預防」、「整體性」、「調和」及「民主」等可說是環評的基礎，惟各與會者表示，雖然「公民參與」是環境影響評估過程中很重要的部分，但對於「公民參與」往往演變成「公民反彈及抗爭」，亦皆感頭痛，由於這涉及各方的誠意與耐心，需由中央與地方政府合作，從當地的風俗民情、文化特質、人際關係及政治生態等，進行協商解決。

- 三、綠色生產力概念是一種生命週期的概念，此意謂著環境管理與生產力原則必須在開發計畫環境影響評估程序之初始階段即被整合納入。綠色生產力的方法論及其工具與技術不僅對於減輕不利的環境衝擊有相當幫助，而且對於資源利用最佳化及生產力的增進都有助益。
- 四、我國自民國七十七年來即引進污染預防理念，多年來實施之工業減廢即考慮如何從原物料減量及資源再利用以降低廢水、廢氣、廢棄物產生，減少對環境之負荷之污染預防觀念。綜觀國際環保發展趨勢，污染預防、清潔生產、綠色生產力等已成為追求「永續發展」風潮下的新趨勢，而我國正積極推動成為「綠色矽島」，若能適時配合這波綠色生產力與綠色競爭力的國際趨勢，使其成為促進產業轉型和全面升級，與落實企業環保新契機，將可大為提昇我國國家競爭力。
- 五、本次研討會頗受 APO 重視，成效亦獲學員肯定，算是一個成功的研討會。尤其，斐濟 FNTC 工作人員服務熱心，安排週延，令與會人員印象深刻。而我國執行多年之工業減廢、清潔生產、污染預防等工作成效亦頗獲 APO 及亞洲各國肯定。APO 係一知名的國際性組織，我國以中華民國名義加入為會員國，饒具價值，我國應積極參與，以增進與亞太地區國家間的交流，並協助提昇競爭力，為促進亞洲繁榮富足而努力，以期在亞太地區扮演舉足輕重的角色。

附件一

Environmental Impact Assessment System in Taiwan, R.O.C.

By

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1. Introduction

Over the past three decades, Taiwan has experienced a fast industrial growth, contributing to substantial improvement of national wealth and living standards. Unfortunately, because of a lack of an effective environmental program at the early stage of industrialization, we suffer a rather serious environmental degradation. The society is also troubled with environmental disputes and law suits, often resulting in civil disturbances and interruption and closure of manufacturing facilities. Also, environmental protection has become an ever-increasing concern to the public and has received wide-spread attention in Taiwan in recent years. The link between economic development and environmental protection has also become a controversial public issue.

Provisions related to environmental impact assessment (EIA) began appearing in developing countries' legislation during the 1970s, shortly after the US enacted the first national EIA law, the National Environmental Policy Act (NEPA) of 1969. To prevent further worsening of the environment, Taiwan government agencies also started in mid 1980s to adopt and implement EIA.

The development of the legal basis of the EIA system in Taiwan has been a gradual process as EIA was initially implemented through non-statutory administrative arrangements in 1985. A program for strengthening EIA implementation came into effect on Oct. 17, 1985. Several important national projects were requested to conduct EIA. A follow-up program for strengthening EIA implementation was enacted by the EPA in April of 1991. Then the Executive Yuan submit the Draft of EIA Act to the Legislative Yuan. The EIA Act was finally passed by the Legislative Yuan and promulgated and effective on Dec. 30, 1994. From that time, EIA shall be conducted for the development activities that are likely to have adverse impacts on the environment.

2. Current State of EIA in Taiwan

In Taiwan, the EIA Act was promulgated and effective on Dec. 30, 1994. The legal basis for EIA implementation, compliance monitoring, and enforcement was thus established. The enactment of this EIA Act is an important milestone in the evolution of Taiwanese EIA system and has significant implications on EIA practice. The "Responsible Agency" for the EIA Act is the Environmental Protection Administration (EPA) under the Executive Yuan at the central government; the Environmental

Protection Bureau of municipal government at the municipal level; or the County (or City) Government at the county (or city) government level. The Responsible Agencies for this Act at each level of government shall each establish an Environmental Impact Assessment Review Committee (“Committee”) to review environmental impact assessment reports and related matters.

According to the EIA Act, EIA shall be performed for the following development activities which are likely to have adverse impacts on environment:

- (1) Establishment of a factory or industrial park;
- (2) Construction of road, railway, mass rapid transit system, harbor or airport;
- (3) Extraction of gravel and soil and exploitation or extraction of ores;
- (4) Construction of reservoir, water supply, flood control and drainage facilities;
- (5) Development and exploitation of agriculture, forest and pasture lands and fisheries;
- (6) Development of recreational and scenic areas, golf courses, and sports fields;
- (7) Construction of cultural, educational and medical facilities;
- (8) Development of new townships and municipalities, skyscrapers and renovation of old municipal districts;
- (9) Construction of environmental protection facilities;
- (10) Exploitation of nuclear or other energies and construction of radioactive waste storage or treatment facilities; and
- (11) Other activities designated by Responsible Agency at the central government level.

In respect of the above said development acts for which environmental impact assessment is required, standards for determinations, detailed assessment items and Operational Guidelines to

Environmental Impacts Assessment have stipulated by the central competent authority in conjunction with government agencies concerned after promulgation for implementation rules of EIA Act and submitted to the Legislative Yuan for record.

The related statutes of EIA Act are as following:

- (1) EIA Items and Screening Criteria for Development Activities (1995. 10, 1997. 8)
- (2) EIA Act Operation Guidelines (1997. 12)
- (3) Organization Statute of EIA Review Committee (1995. 6)
- (4) Fee Collection Measures for EIA Review (1995. 9)
- (5) Implementation Rules for the EIA Act (1998. 11)

The environmental impact assessment process is designed to make full surveys, predication and assessment in advance on possible environmental impacts which may arise from the execution of projects, release the findings and listen to the views of community residents and so forth, so that environmental conservation measures may be implemented to the full. It is an effective means to prevent environmental pollution.

By following the EIA Act, a summary of procedures taken by project-undertakers is given below, also present the picture of consideration.

- (1) In regard to the impacts that are brought about by the projects, project-undertakers shall make prior surveys, estimate and assess in accordance with the guideline formulated upon consultation between the concerned ministers and the EPA, ROC. They shall then come out with a preparatory draft environmental impact statement of the first stage.
- (2) Project-undertakers shall serve public notice on, and send out the draft EIS and shall hold briefings.
- (3) Project-undertakers shall strive to understand the views of residents in the relevant areas on the draft EIS either they have to enter the second stage EIA or not.

- (4) After listening to those views, project-undertakers shall review the descriptions contained in the draft EIS, prepare a final environmental impact statement, serve public notice on, and distribute the statement.

It is stipulated that administrative agencies shall take account of environmental impacts on the final EIS in the licensing of subject projects and other cases. It is also stimulated that the competent minister shall listen to the views of the EIA Review committee of EPA both in the first and the second stages. Up to now, almost 1/3 projects have to enter the second stage EIA, due to their complicate environmental impact concerns need more detail assessment, the process is shown in Fig. 2.1.

When applying for permit of a development project, a undertaker shall submit an environmental impact statement to the government agency in charge of the end enterprise concerned, which shall in turn forward the statement to a competent authority concerned for examination.

The competent authority shall make a conclusion of its examination, publish the same in a public notice and inform the government agency in charge of the enterprise concerned and the developing project undertaker within fifty days upon receipt of the first stage environmental impact statement. However, under special circumstances, the examination period may be extended for another fifty days as the longest.

If the competent authority concerned considers that the second stage environmental impact assessment is not necessary based on the conclusion of examination and a permit is granted, the developing project undertaker shall hold a public explanation meeting.

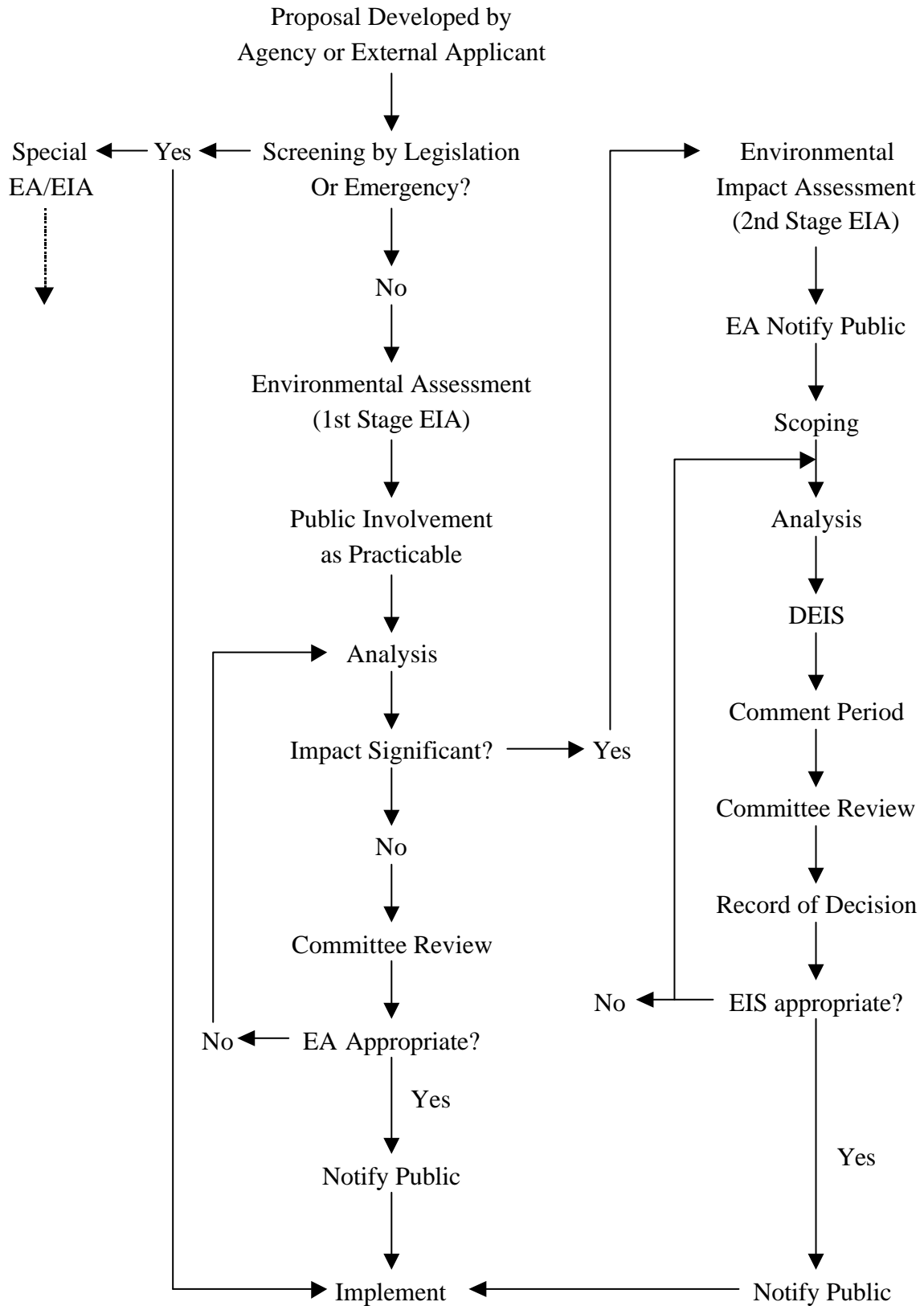


Fig. 2.1 EIA Legal Process in Taiwan

If the conclusion of examination mentioned reveals likelihood of significant impact on environment and the second stage environmental impact assessment is necessary, the developing project undertaker shall take the following steps:

- (1) To distribute the environmental impact statement to relevant government agencies;
- (2) To display or disclose the environmental impact statement at a proper place close to the site of development for a period of not less than thirty days; and
- (3) To publish in newspapers the name of the developing project undertaker, site of development, conclusion of examination, and the environmental impact statement.

The developing project undertaker shall hold a public explanation meeting upon expiry of the display or disclosure period mentioned in the preceding paragraph.

The relevant government agency or agencies mentioned in the preceding paragraph or local residents, if having any comments on the public explanation given by a developing project undertaker, shall present such comments in writing to the developing project undertaker within fifteen days after the public explanation meeting, with copies thereof furnished to the competent authority concerned and the government agency in charge of the end enterprise concerned.

The competent authority concerned shall after the public explanation meeting, invite representatives from the government agency in charge of the end enterprise concerned, relevant government agencies, organizations, scholars and specialists as well as local residents to get together to define the scope of assessment.

Matters of scoping to be defined as required in the preceding paragraph shall be as follows:

- (1) To confirm the feasible alternatives;

- (2) To confirm environmental impact assessment items and decide methods and frequency of investigation, forecast, analysis and evaluation;
- (3) Other matters related to environmental impact assessment operations.

A developing project undertaker shall, after taking into account of the comments from the competent authority concerned, the government agency in charge of the end enterprise concerned, relevant government agencies, scholars, specialists and organizations as well as local residents, prepare a draft of an environmental impact assessment report and submit the same to the government agency in charge of the end enterprise concerned.

Within thirty days after receipt of the draft of an assessment report, the government agency in charge of the end enterprise concerned shall, in conjunction with the competent authority concerned, members of the committee, other related government agencies, specialists, scholars, organizations and local residents, make an on-site survey, hold a public hearing and prepare the minutes thereof within thirty days for submission to the competent authority concerned.

The time limits prescribed in the preceding paragraph may be extended, if necessary.

The government agency in charge of the end enterprise concerned shall submit the on-sites survey records, public hearing minutes and the draft of assessment report as authority concerned for examination.

The competent authority concerned shall within sixty days make a conclusion of examination and serve the same to the government agency in charge of the end enterprise concerned and the developing unit; the developing unit shall modify the draft of assessment report based on the conclusion of examination.

Upon approval of the assessment report by the competent authority, summary of said report and the conclusion of examination shall be published in a public notice and in the government gazette. However, under special circumstances, the examination time may be extended but the extension shall be limited to no more than sixty days.

The government agency in charge of the end enterprise concerned shall not grant a permit to development act before completion of examination of an environmental impact statement or assessment report, and if a permit is already granted, shall cancel it upon request from the competent authority.

If the competent authority concerned determines that a development project shall not be allowed, the government agency in charge of the end enterprise concerned shall not grant a permit to the development act. However, the developing unit may submit a substitute plan to the competent authority for examination.

Contents of the original application in an approved environmental impact statement or assessment report shall not be changed without approvals from the competent authority and the government agency in charge of the end enterprise concerned.

In respect of grant of the above said approvals, if reconfirmation of environmental impact assessment is necessary, details thereof shall be stipulated in the Implementation Rules of this Act.

An amendment of the Environmental Impact Assessment Act Implementation Rules was approved by the Executive Yuan and formally announced on November 1999. The aim of the amended Rules is to encourage the creation of an environment whereby EIA consulting business can be distributed to small and medium size firms. According to the Rules, qualified EIA assessors to sign off on environmental impact statement (EIS) and EIA assessment reports will further emphasize the accumulation of EIA professional training and work experience.

To raise the efficiency of certification assessment work and encourage EIA consultants to improve the EIA technologies, the Rules specified that the procedure review process may be skipped if the comprehensive assessor's qualification meets the requirements of the amended Rules. However, if the aforesaid documents do not meet the EIA reviewing process, the competent authority can rescind the administrative privileges and rights of related general assessors and consultants. Therefore, the future EIA reports submitted by these firms will be checked thoroughly.

Another purpose of the amended Rules is to facilitate better

understanding of the public, and to more clearly define EIA importance. The Final decision of EIA has been classified as either “EIA approved” or “EIA conditionally approved” rather than “development activity accepted” or “development activity conditionally accepted”.

The first stage environmental impact statement shall include following chapters or information in Taiwan’s EIA Act:

- (1) Name and business place or office address of the developing unit;
- (2) Name, residence/domicile and uniform serial number of I.D. card of the responsible person;
- (3) Signature of the person(s) who made a consolidated assessment on the environmental impact statement and the writer(s) of the impact items;
- (4) Name and place of the development act;
- (5) Purpose and contents of the development act;
- (6) Various plans relating to possible impacts of the development act and the present environmental status;
- (7) Forecast of environmental impact possibly caused by the development act;
- (8) Countermeasures and alternate program of environmental protection;
- (9) Funds required for performing environmental protection work;
- (10) Summary of measures to prevent and reduce adverse impact of the development act on environments.

The second stage environmental impact statement shall cover following chapters or information:

- (1) Name, business place or office address of the developing unit;
- (2) Name, residence/domicile, and uniform serial number of I.D. card of the responsible person;

- (3) Signature of the person(s) who made a consolidated assessment on the assessment report and the writer(s) of the impact items;
- (4) Name and place of the development act;
- (5) Purpose and contents of the development act;
- (6) Present status of environments, primary and secondary scopes of possible impacts of the development act;
- (7) Forecast, analysis and evaluation of environmental impacts;
- (8) Measures to reduce or prevent adverse impact on environment;
- (9) Substitute program;
- (10) Consolidated environmental management plan;
- (11) Actions taken on comments from relevant government agencies;
- (12) Actions taken on comments from local residents;
- (13) Conclusion and recommendations;
- (14) Funds required for performing environmental protection activities;
- (15) Summary of measures to prevent and reduce adverse impacts of the development act on environments;
- (16) Reference documentation.

3. Conclusion

Taiwan has clearly embraced the concept of a comprehensive EIA system, which is clearly defined legally and, through the provision of general and technical guidelines, can be implemented in a logical, sequential process. The EIA system also incorporates the very important aspects of compliance and enforcement monitoring and reporting.

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