



(出國類別：開會)

「亞洲生產力組織(Asian Productivity
Orangization)
整合性廢棄物管理研討會」
出國報告

服務機關：行政院環境保護署
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出國地點：斐濟群島共和國(Republic of the Fiji Islands)
出國時間：99年6月19日至6月26日
報告日期：99年9月30日

摘 要

亞洲生產力組織(Asian Productivity Organization, *APO*)是一個非政治性、非盈利性的、非歧視性的區域政府間組織，其成立於 1961 年，總部設在日本東京。截至目前為止，*APO* 的會員有中華民國、印度、日本、韓國、尼泊爾、巴基斯坦、菲律賓、泰國、孟加拉、斐濟、香港、印尼、伊朗、馬來西亞、蒙古國、新加坡、斯里蘭卡、越南及寮國。該組織的目標在促成會員國“相互合作”，及藉由提高生產力，改善亞太地區及其成員國家的社會和經濟發展。

本次會議主題為「**Integrated Waste Management at Resorts, Hotels, and Restaurants**（旅館及餐廳之整合性廢棄物管理）」，透過 *APO* 會員國之間，不同國家間的法規政策及經驗分享，針對整合性廢棄物管理（特別是旅館及餐廳之廢棄物管理制度）進行研討，藉由學習最新之整合性廢棄物管理制度與知識，以期對目前旅館及餐廳廢棄物處理能有全新或更佳之解決方案，包括：整合性廢棄物管理機制（**Integrated Waste Management**）及綠色生產力（**Green Productivity, GP**）等工具。

此外，本次會議更實地參訪斐濟著名之觀光旅館，如斐濟香格里拉度假酒店(**Shangri-La's Fijian Resort and Spa**)及 **Outrigger on the Lagoon Fiji**，實際瞭解斐濟當地著名之觀光飯店、餐廳等之整合性廢棄物管理機制及具體措施，並針對其實際執行之方式、作法及遭遇問題進行交流，由各國代表提供相關意見。

綜覽整合性廢棄物管理制度，係融合 3R(Reduce、Recycle、Reuse)、節能減碳、綠色生產力及綠色旅遊等方式，針對廢棄物管理由源頭製造到最終處置均納入妥善管理之制度。此舉不僅能有效提升行政效率，更能收整合政策及法令、簡政便民之效，期盼能將整合性廢棄物管理機制融入我國現行制度中，有效提高為民服務效能，維護我國環境品質。

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第一章、緣起及出國目的

1.1、緣起：

亞洲生產力組織（APO）為提升各會員國之廢棄物管理制度，尤其係針對旅館及餐廳之廢棄物管理制度，汲取先進已開發國家對於廢棄物管理制度，提出整合性廢棄物管理（Integrated Waste Management），期望藉由各會員國代表之學習及經驗交流，有效提升或改善廢棄物管理及措施。

1.2、出國目的：

本次會議之目的，主要係學習並瞭解「整合性廢棄物管理（Integrated Waste Management）」制度之意涵與內容，並透過國際研討會方式，學習 APO 各會員國處理廢棄物之經驗，以及「整合性廢棄物管理」之概念與相關規定。

此外，本次主辦單位更特別安排斐濟當地著名旅館，如斐濟香格里拉度假酒店(Shangri-La's Fijian Resort and Spa)及 Outrigger on the Lagoon Fiji 等酒店，實地參訪國際連鎖五星級旅館，對於廢棄物管理之制度與措施，及斐地當地藉由融合「生態旅遊」及「節能減碳」相關措施之廢棄物管理制度。

同時，我國行政院環境保護署刻正積極推動「綠色消費」、「環保標章 (Green Mark)」及「環保旅館(Green Hotel)」等相關制度，期望藉由本次會議報告，與 APO 各會員國代表分享我國相關政策推動之經驗與成果，亦期

盼藉由政策成果分享與不同文化思維之交流衝擊，學習各國於「環保標章」及「環保旅館」之辦理推動情形及優點，作為我國推動整合性廢棄物管理之參考依據，更突破目前的瓶頸與困境，有效提高為民服務知能與效能。

第二章、開會行程

2010年6月19日(六) 啟程，出發經香港轉機至斐濟

2010年6月20日(日) 抵達斐濟南迪(Nadi)國際機場

2010年6月21日(一)

<Day 1> 21 June 2010, Monday	
Time	Agenda
08:30 – 09:00	Registration of Participants
09:00 - 10:00	Opening Ceremony Remarks by APO Representative Opening Speech by APO Director for Fiji (To be confirmed) Introduction of Experts and Participants Group Photo
10:00 – 10:30	Coffee Break
10:30 - 11:30	APO's Green Productivity (GP) Program in the region with special focus on the area of Waste Management (APO Representative)
11:30 – 13:00	Current Trend and Environmental Issues of Tourism in the Region (Dr. Chirapol Shintunava)
13:00 - 14:00	Lunch Break
14:00– 15:30	Green Certification Scheme for Resorts, Hotels, and Restaurants with an example of Indian Experience (Dr. Ravinder N. Batta)
15:30 – 16:00	Coffee Break
16:00 – 17:30	Case Study of Green Certification (Dr. Chirapol Shintunava)
19:00	APO Welcome Dinner

2010年6月22日(二)

<Day 2> 22 June 2010, Tuesday	
Time	Agenda
09:00 – 10:00	Importance and Current Issues of Waste Management at Resorts, Hotels, and Restaurants (Dr. Ravinder N. Batta)
10:00 – 10:30	Coffee Break
10:30 – 11:30	Success Case of Integrated Waste Management at Resorts, Hotels, and Restaurants – Thai Experiences (Dr. Chirapol Shintunava)
11:30 – 12:30	Success Case of Integrated Waste Management at Resorts, Hotels, and Restaurants – Indian Experiences (Dr. Ravinder N. Batta)
12:30 – 13:30	Lunch
13:30 – 15:00	Country Paper Presentations by Participants (Facilitator: APO Resource Persons)
15:00 – 15:30	Coffee Break
15:30 – 17:00	Country Paper Presentations by Participants (Facilitator: APO Resource Persons)

2010年6月23日(三)

<Day 3> 23 June 2010, Wednesday	
Time	Agenda
09:00 – 10:30	Introduction and Method of the Integrated Waste Management for Green Tourism (Dr. Ravinder N. Batta)
10:30 – 11:00	Coffee Break

11:00 – 12:00	Application and Sustaining the Integrated Waste Management for Green Tourism (Dr. Chirapol Shintunava)
12:00 – 13:00	Lunch
13:00 - 17:30	Site Visit (2 places – Large scale operation and medium/small scale operation) (The site visit will be made to resorts/hotel/restaurant which has implemented environmental and green measures for waste management)

2010年6月24日(四)

<Day 4> 24 June 2010, Thursday	
Time	Agenda
09:00 – 11:00	Marketing Strategies of Green Tourism (Resource Person to be confirmed)
11:00 – 11:30	Coffee Break
11:30 – 12:00	Introduction of Group Work (APO Resource Persons)
12:00 – 13:00	Lunch
13:00 – 17:00	Group Work on Establishing the Integrated Waste Management at Hotel (Facilitated by the APO Resource Persons)
19:00 –	Farewell Dinner Hosted by the TPAF

2010年6月25日(五)

<Day 5> 25 June 2010, Friday	
Time	Agenda
08:30 – 09:30	Finalization of Group Work Presentation (Facilitated by the APO Resource Speakers)
09.30– 12:00	Group Presentations & Discussion (Facilitated by the APO Resource Speakers)
12:00 – 13:00	Lunch
13:00 – 14:00	Examination
14:00 – 15:00	Course Evaluation
15:00 – 15:30	Closing Ceremony and Certificate Presentation

2010年6月26日(六) 經香港轉機返國。

第三章、會議過程



圖 1 亞洲生產力組織代表致詞



圖 2 地主國斐濟代表致歡迎詞



圖 3 會議現場



圖 4 會議情況



圖 5 我國代表桌牌



圖 6 出席代表大合照



圖 7 歡迎餐宴



圖 8 我國代表簡報情形



圖 9 斐濟香格里拉度假飯店污水處理設施



圖 10 香格里拉度假飯店生態處理池



圖 11 我國代表第 2 次簡報情形



圖 12 會議結束留影

第四章、心得與建議事項

4.1、心得

本次會議主題為「**Integrated Waste Management at Resorts, Hotels, and Restaurants**（旅館及餐廳之整合性廢棄物管理）」，透過 APO 會員國之間，不同國家間的法規政策及經驗分享，針對整合性廢棄物管理（特別是旅館及餐廳之廢棄物管理制度）進行研討，藉由學習最新之整合性廢棄物管理制度與知識，以期對目前旅館及餐廳廢棄物處理能有全新或更佳之解決方案，包括：

- （一）整合性廢棄物管理機制（**Integrated Waste Management**），包括「廢棄物定義與管制範圍界定」、「廢棄物收集、包裝、標示及貯存」、「廢棄物清運及處理」等議題，與會各國代表做了充分的意見交換與溝通，並分別從減少二次污染、強化稽查管制、管理實務、技術可行性及與國際接軌等不同面向進行熱烈討論。
- （二）綜覽整合性廢棄物管理制度，係融合 3R(**Reduce、Recycle、Reuse**)、節能減碳、綠色生產力及綠色旅遊等方式，針對廢棄物管理由源頭製造到最終處置均納入妥善管理之制度。此舉不僅能有效提升行政效率，更能收整合政策及法令、簡政便民之效，期盼能將整合性廢棄物管理機制融入我國現行制度中，有效提高為民服務效能，維護我國環境品質。

(三) 綠色生產力 (Green Productivity, GP)是要求企業在產銷過程，達到省資(能)源、低污染及再生、循環的三大原則，是同時兼顧生產力與環境績效的觀念。它源自於永續發展的兩大主力--「生產力的持續提升」與「環境資源的有效保護」。綠色生產力是一種強化生產力與環境績效的策略，藉著正確的、妥當的資源配置與管理，以及有效率的環境措施，達到提升生產效率的策略。要落實此一策略，必須慎重的選擇適當、創新的科學工程技術，及使用可靠、成熟、有效率的管理工具，以求產出高品質和符合環境要求的產品及服務。

(四) 另有關「環保旅館」推動部分，我國積極推動企業環境管理、節能措施、節水措施、綠色採購、一次用產品（即用即丟性）與廢棄物之減量、危害性物質管理、垃圾分類資源回收等 7 大項目，十分切合本次會議主題，我國相關制度與措施紛獲各國與會代表之肯定與認同，成功推展及分享我國推動「環保旅館」之相關經驗。

4.2、建議事項

- (一) 國際組織之研討會或相關會議，多以英文進行相關簡報及說明，建議與會代表除可於會前多加練習外，亦可將我國「觀光客倍增計畫」相關介紹短片適時於會議中展現，協助推動觀光外交，讓更多外國代表認識到臺灣的好山好水。
- (二) 斐濟共和國主要外匯收入源自於「觀光」，每年赴斐濟旅遊之歐美國家人數遠較亞洲國家旅客為多，斐濟更將「觀光業」視為該國最重要產業，政府並積極推動「整合性廢棄物管理」，融合 3R(Reduce、Recycle、Reuse)、節能減碳、綠色生產力及綠色旅遊等方式，針對廢棄物管理由源頭製造到最終處置均納入妥善管理之制度。建議我國亦可將「整合性廢棄物管理」，尤其應用於旅館及餐廳部分，優先推動，並於相關法律命令中明訂，強化管理制度之推動及執行，以實際行動守護環境。
- (三) 亞洲生產力組織（APO）常舉辦大型之國際研討會議或訓練課程，並提供相關經費補助予各會員國代表，建議本署可多參與該組織所舉行之國際會議，學習他國成功經驗，亦可將我國相關制度與措施分享於其他會員國，強化國際環保合作與外交關係。

The Policy and Measures for Green Resorts, Hotels in Taiwan



**Environmental Protection
Administration, ROC (Taiwan)**

Shih Ping-Hsin

18/80



行政院環境保護署
Environmental Protection Administration
Executive Yuan, R.O.C. (Taiwan)

Outline

- 1、Taiwan EPA
- 2、Green Mark Systems
- 3、The promotion for Green Hotels
- 4、Hotel business Green Mark Specification Standards
- 5、Green Hotel Case Study
- 6、Conclusion



Environmental load

Environmental Load Compared to Other Countries				
Density (per km ²)	Taiwan	USA	Japan	Germany
		multiples		
Population	638	20.0	1.9	2.8
Vehicles	591	22.4	2.5	3.8
Pigs	170	24.8	6.6	2.3

Sources :

<http://www.prb.org> (population) 、 <http://faostat.fao.org> (land area), <http://faostat.fao.org>

Notes :

Land area information – 2007 data

Vehicles information – US, Germany: 2007 data; Japan – 2008 data.

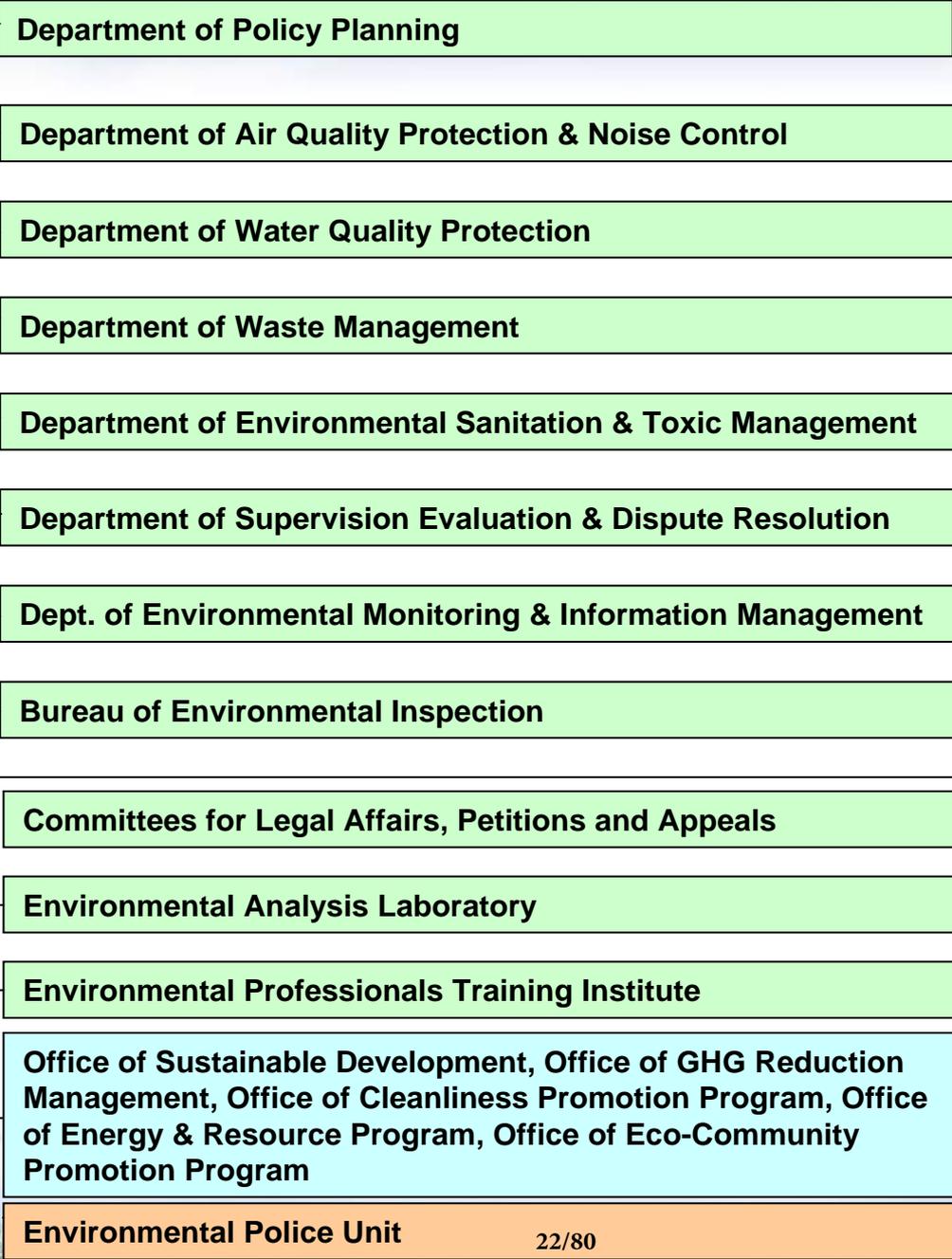
Pig information – Taiwan's data is until November 2009, the rest 2008 data

EPA Established in 1987

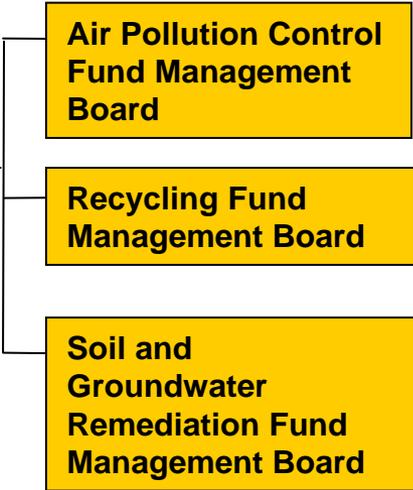
- **To improve environmental quality, the EPA was established in August 1987, setting a milestone in Taiwan's environmental protection efforts.**



Taiwan EPA

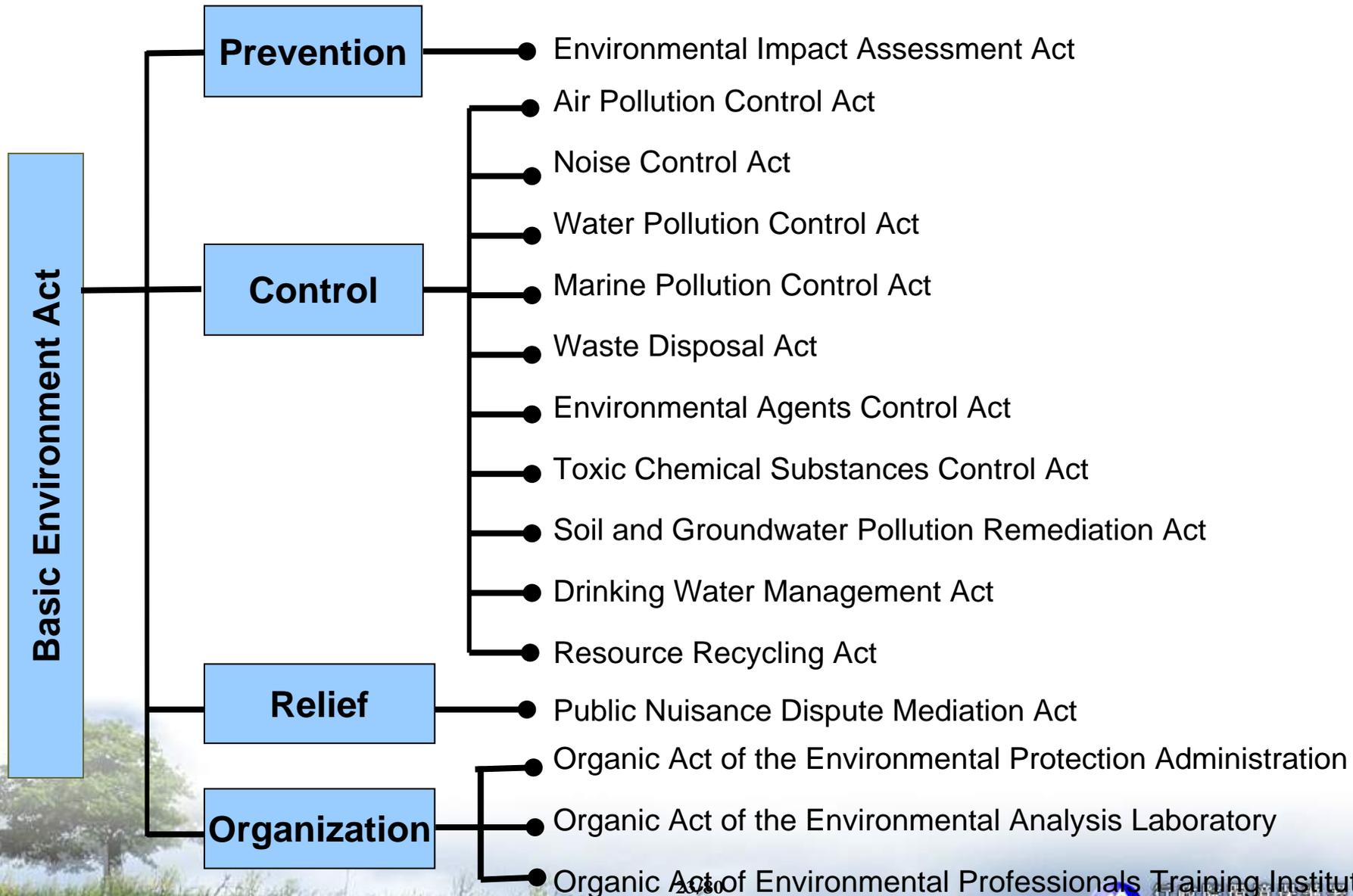


**Budget for 2010:
NTD13.36 billion
Total staff: 915**



25 Local Environmental Bureaus

Environmental Regulations



Our Vision

- **Blue skies and green earth**
- **Verdant mountains and pristine water**
- **Health and sustainability**

Green Mark systems





Order to facilitate the full selection of products with lower impact on the environment, since 1992 to promote the Green Mark system, from environmental protection product certification, marketing channel, green procurement and green consumer education and other aspects, to enhance the popularity of the Green Mark products knowledge and recognition of, and encourage priority to buy.



Environmental labeling and declaration

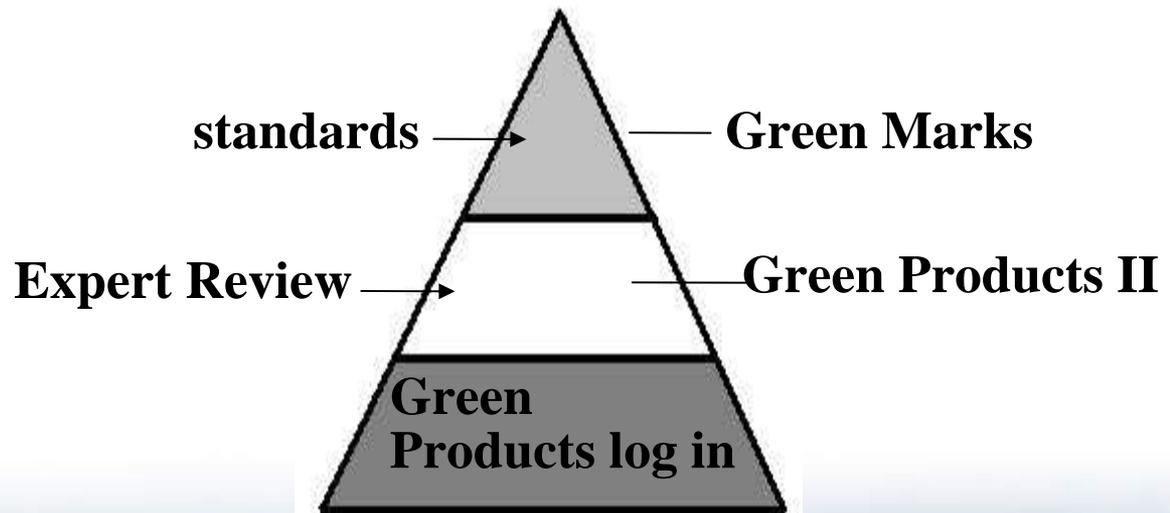
Definition : Providing a product (including services) environmental features information and recourse to consumers of all kinds of instructions, symbols or graphics.



Purpose : Encourage consumers to choose products with lower impact on the environment, thereby promoting other manufacturers and provide better products and services.



- Germany first push in 1977, a total of **50 countries** currently implementing the environmental mark, a total of **40 Green Mark organizations**.
- Identify "low-pollution, recycling, resource saving" product logo ,
- A **voluntary application** for government accreditation
- Green Mark products are certified through the government, consumers can buy safely.



Green Products Classification

TYPE	certification and issuance conditions	LOGO
I	TWEPA (Meet the specifications)	 Green Mark
II	TWEPA (non type I items, renewable materials, recyclable, low pollution or saving energy)	Issue documents
III	1. Bureau of Energy 2. Water Resources Agency 3. Architecture and Building Research Institute	 Save Energy  Save Water  Green Building

Comparison of Green Mark

	Save Resources			Recycle	Low-pollution
	Energy	Water	Material		
Save Energy	√				
Save Water		√			
Green materials			√	√	√
Green Mark	√	√	√	√	√




用電量
用水量
塑膠組件標示
包裝紙箱規格

都分別有清楚的標識及要求

30/80



環保零污染
 省水
 省電
 低噪音
 省洗劑
 洗淨力強
 高效率
 環保零污染之產品

Green Marks



Germany



Japan



China(P.R.C.)



USA 「GREEN SEAL」



ROC (Taiwan)



Canada



Nordic



European Commission



Singapore



France



Austria



Czech Republic



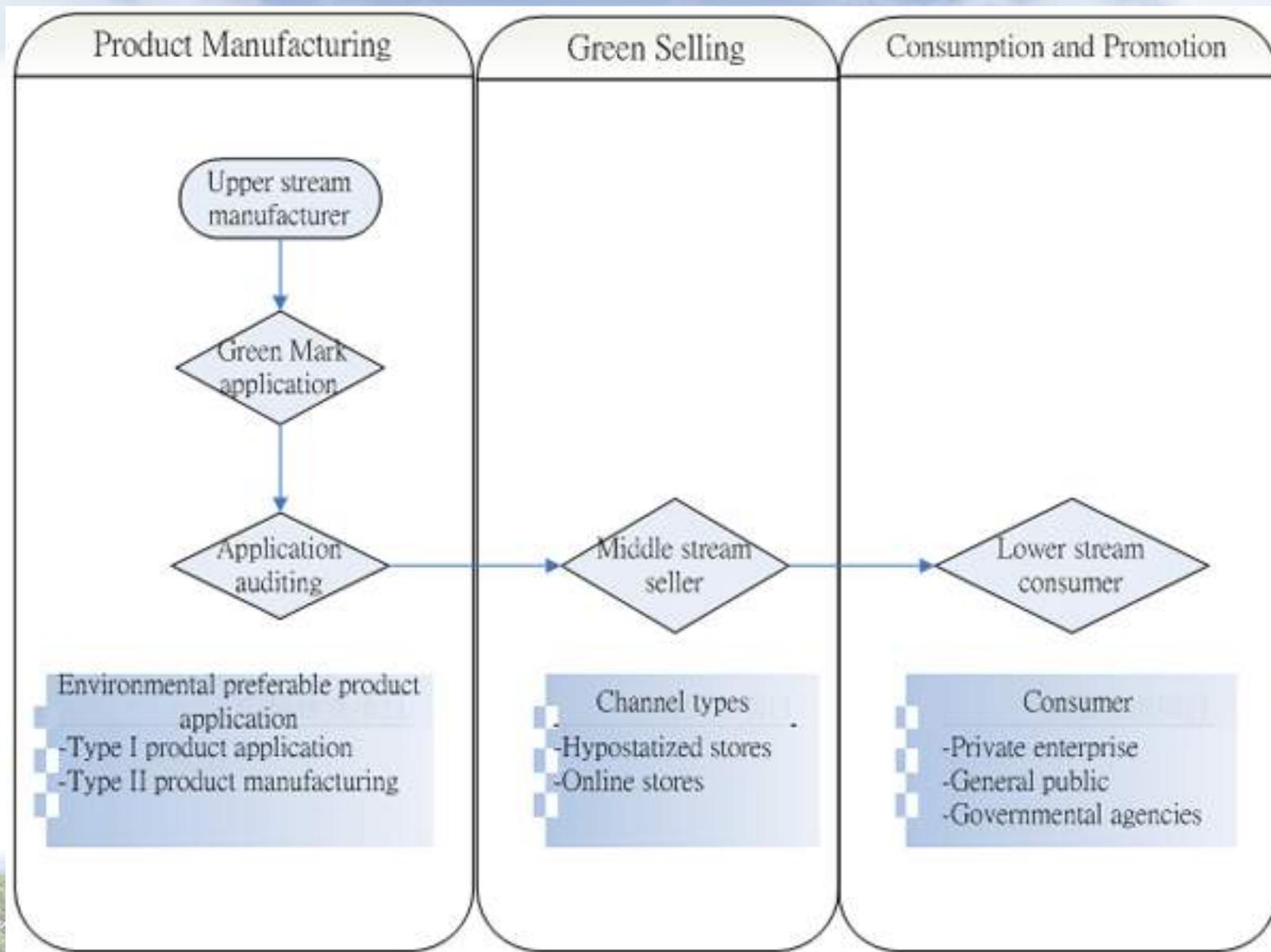
Korea

Green Mark verification mechanism and regulation

- **Green Mark Promotion Specification**
 - Basically this specification clearly defines what Green Mark is, specifies how to audit and manage the mark certification application, what business sector can apply, the certified enterprises' rights and responsibilities.
- **Establishment Specification**
 - It specifies the composition, responsibilities, and tasks of the Board.
- **The Type II Environmental Preferable Products Verification Specification**
 - It specifies the auditing, management, application process, rights and responsibilities of the applicant and Type II product certified manufacturers.
- **Environmental Preferable Product Standard Review Operation**
 - The Green Mark Specification Standard is developed and analyzed by the Institute of Environment and Resource and approved by the Green Mark Auditing Board.

Environmental preferable products promotion

- **Upper stream manufacturing** — There were 110 items falling under 14 categories, or 1,861 pieces of environmental preferable products certified by the EPA until September 2009.
- **Middle Stream Selling** — Many Green Mark certified products are obtainable in the hypostatized channels.
- **Lower stream consumption** — Through green procurement tool and internet, governmental agencies play leading role to make green procurement and encourage public to follow their steps. The website of purchasing environmental preferable products joins with green stores to offer a convenient purchasing channel to the general public.



Promotion Mechanisms of Environmental Preferable Product

The Existing Conditions at Various Stages of Environmental Preferable Products Promotion

	Types/Targets	Products/Procurement Amounts
Upper Stream Manufacturing	Type I environmental preferable products	<u>297 manufacturers, 1216 products</u>
	Type II environmental preferable products	<u>44 manufacturers, 156 products</u>
	Type III energy saving and water saving environmental preferable products	<u>21 products, 93 brands, 1281 energy saving products</u>
Middle Stream Selling	Channels	Mega-sized franchised selling, supermarkets, bookstores, stationers, franchised construction material selling, bathing equipment selling, franchised computer or home appliance selling, and convenience stores, online purchasing, and procurement made by Central China Trust.
Lower Stream Purchasing	General Public	Starting 2007, fictitious selling added in to reinforce green selling.
	Governmental Agencies	In year 2007, the green procurement amount for the Executive Yuan and other cities or municipalities is 63.8 billion dollars. The green procurement amount for the Office of President, the Legislative Yuan, the Examination Yuan, the Control Yuan, and the Judicial Yuan is 0.267 billion dollars.
	Enterprises	The total green procurement amount in year 2007 reached 0.6 billion dollars.

The result in 2009

- Expand the scope of toll-free consultant service to assist the Green Mark application and promotion
- New measures for Green Mark application
 - 1. Revise Green Mark application process
 - 2. Make Green Mark application become online application
- Expedite specification and standard edition
 - the “Ecolabel Specification Recommendation Study Process” was created to enlarge the scope of business participants and ensure all the relevant businesses are able to express their comments on the product specification.

The result in 2009

- Join the selling channels altogether and hold Green Selling Award
 - 1. Guide 1,500 retailers transformed into green stores, and reinforce selling of Green Mark products.
 - 2. Starting on year 2008, green store label and placard will be passed out to inform consumers of Green Mark product category the store is selling and where they are displayed.
 - 3. Green Selling Award was given to the prizewinners and the green store demonstration manual was established.



Expand the scope of green consumption education and propagation



Holding of Green Life Exhibition

2007綠色生活—能源、環保暨水科技展
珍惜資源、生活一點轉—
「綠色生活館」等你來呦！

活動與好康

票選吉祥物

綠色生活館吉祥物由您來決定！
以下有七個吉祥物，請您進行票選。最高票的即可成為「2007綠色生活館」吉祥物。
參與本投票活動之民眾，可由電腦隨機抽籤100位幸運者，獲得環保精美禮品。

備註：
1. 參加本活動者年齡須滿十五歲，主辦單位將通知其投票資格。
2. 投票名單每日上午10時更新，請注意票可更改之日期，以有標榜日期為準。
3. 票數已於9月17日(下午4:00)截止。

票計票數：190 票	票計票數：141 票	票計票數：104 票	票計票數：61 票
票計票數：137 票	票計票數：2843 票	票計票數：234 票	



Holding of Green Product International Symposium



The promotion for Green Hotels



- The benefits for Hotel Business :
 - Response the pressure of implementing the environmental protection.
 - Enhance the corporation images
 - Reduce operating costs
 - Lower one-time items, re-use tableware
 - Reduce the sheet towels replaced, energy-saving measures such as water
 - Combination of government resources
 - Government Green Procurement Promotion Policy
 - Environmental preferable products online purchasing
 - Favorable market segmentation

- **Stop or reduce offering one-time items**
- **Green Procurement**
- **Reduce pollution emissions**

Re-use tableware
Reduce the sheets and towels change frequency
Others

Voluntary measures



- **EPA regulations**
- **Saving energy, water**
- **Classify and Recycle the waste**

General measures

Green Hotels Contest

2007.12.25-2008.1.15

“ FASHION means be environmental!”

Self-Registered

Internet Recommendation

Confirm

**Resorts,
Hotels who did not violate the environmental laws and regulations within one year**

Vote

Onsite Inspection

Green Hotels

2008.1.15-2008.2.15

“You decide who is most environmental?”

低污染、可回收

2008

全國環保旅館大賽



活動首頁



活動介紹



活動說明



推薦說明



票選說明



我要推薦



我要票選



地球暖化，環境告急！你知道嗎？

當你入住旅館享受悠閒時，地球默默承受了多少損害嗎？環保旅館，已蔚為一種潮流時尚！

01 是要環保

即日起-2008/01/15

推薦環保旅館，大家一起來！

據統計中型旅館一周所耗費的資源，相當於一百個家庭一年累積下來的使用量。若能落實環保旅館，將可大幅減少對環境的破壞... [MORE](#)

02 你的一票，決定誰最環保

2008/01/21-2/15

環保旅館，你說的算！

誰才是你心目中最環保的環保旅館，由你來評選！參加環保旅館票選活動者，將有機會獲得價值三萬多元的筆記型電腦和多項好禮... [MORE](#)



2名

4名



10名



100名



100名



中獎名單公佈了！

價值三萬多元的筆記型電腦、電冰箱等多項好禮！趕快看看你是不是那個幸運兒呢！... [MORE](#)

你的一票，決定誰最環保 2008/01/21-2/15

一般旅館票選排行

觀光旅館票選排行

Green Hotel Contest homepage



The First Green Hotel in Taiwan

旅遊新聞 News

綜合新聞

國內旅遊新聞 | 國外旅遊新聞 | 旅遊行程快報 | 奇聞軼事 | 綜合新聞特區
旅遊健康資訊 | 專題報導 | 美食新聞 | 台灣好好玩 | 世界真奇妙

台灣旅館業界首創「綠色環保旅館」 [2007/10/25]

為響應「全球綠色環保旅館」之推行，六福集團旗下所屬之各國國際級飯店及休閒渡假飯店；墾丁六福莊泡湯渡假旅館、台北六福皇宮以及六福客棧，自2008年1月1日起，將不會主動提供或陳列任何拋棄式個人盥洗用品，（香皂、洗髮乳、潤髮乳及沐浴乳將繼續提供）。並自即日起，各所屬飯店會啟動三個月的宣導機制，於客房書桌及盥洗室內擺放宣導小卡，以推動此一環保概念予旅客。六福集團執行長莊豐如表示：「我們相信個人的舉手之勞，將能為減緩全球暖化現象盡一份心力，另外一方面，在推動此一環保運動的同時，我們也為可能造成的不便，向旅客致上萬分的歉意。」所以在住宿飯店期間內，若有個人盥洗用品需求，各營業單位的客房部服務人員，仍將會為旅客遞送免費相關清潔用品。



Hotel business Green Mark specification standards

Green Mark specification standards

- * Business environment management
- * Reducing energy measures
- * Saving water measures
- * **Green procurement**
- * **One-time use products (discard after using it)**
- * Reducing garbage amount
- * Hazardous material management
- * Garbage classified resource recovery

Green Hotel Case Study



Green Marks in various countries

USA	<ul style="list-style-type: none">•Green Seal Release the Green Hotel index•The first Green Hotel in USA--Gaia Napa Valley Hotel
Canada	Green Leaf hotel rating system
Korea	Forbidden One-time use products
Beijing	Without change of bed linen, towels for accommodation less than three days
Taiwan	<ul style="list-style-type: none">•Not initiative to provide one-time use products.•According to customers' will from changing the bed linen or not.

Gaia Napa Valley Hotel



"World's First" - Gold LEED Certified

Gaia's Green Features

- **Wood Based Materials**

- All lumber used for the hotel is FSC (Forest Stewardship Council). The Forest Stewardship Council (FSC) is an international network to promote responsible management of the world's forests.

- **Coatings, Adhesives and Sealants**

- Low VOC (volatile organic compound) sealants and adhesives were used throughout the hotel for carpet, construction. Low VOC paints were used throughout the hotel. Both these strategies help improve the air quality within the hotel and have a positive effect on human health by improving the quality of air.

- **Carpet**

- Carpet with recycled content. Our carpets contain post consumer recycled material in the backing, fiber and pad.



Gaia's Green Features

- **Water**

- The project achieved a water use reduction of about 40%. **DDLow flush toilets. All toilets produce 1 gpf (gallon per flush).** Standard toilets produce 1.6 gallons per flush. All of our guestrooms are equipped with low flow showerheads. The koi pond uses recycled water from the site, which is then filtered and cleaned prior to entering the pond.



Gaia's Green Features

- **Energy**

- All windows used are efficient, low energy transmittable and reduce glare. Solatube tubular skylights are used throughout the hotel including our conference rooms, lobby and the hallways. These skylights magnify the sun's rays to deliver abundant light into the property interior spaces during the day. We save electricity by using these skylights. **Solar panel provides 10% of our electricity. Cool reflective roof reflect heat therefore saving money in cooling costs.**

- **Recycling**

- Recycling bins in rooms and around property. Newspapers are not delivered to each occupied room. **Newspapers are located in the lobby available for guests who actually read them. Bulk soap and shower dispensers are used in all guest rooms.** This helps to eliminate hundreds of pounds of plastic containers and packaging daily from mini shower bottles and soap. Only recycled paper products are used at the hotel.

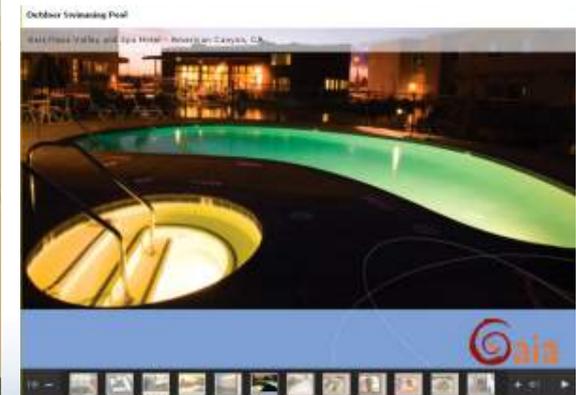
Gaia's Green Features

- **Landscaping**

- Chemical free landscaping. All of the fertilizers used for landscaping are all natural and chemical free. Native and climate-adaptive plants were used so water use for irrigating is very limited.

- **Cleaning**

- **Environmentally friendly cleaning products** are used to clean the property.



Green Hotels in Taiwan



Royal Chih-Pen Hotel



Their Green Features

- **One-time use products**

- Not initiative to provide toothbrushes, toothpaste, combs and razors, etc..
- If the tenant still need toiletries, hotel will be addressed on a **"green wash package"** to encourage consumers to bring their own personal package.
- If the tenant bring their own toiletries, the hotel would **offer a discount for room price.**



Their Green Features

- **Air conditioning:**

- Air exchange in winter to bring into the cold air and save the energy.
- During summer, using the night time off-peak electricity to produced 1500 tons of ice, melting the ice during the day time to provide the cold air for air conditioning.



Their Green Features

- **Water:**

- Recycle the wastewater(90M³/day) of swimming pool as the cooling water for the air conditioning.
- According to customers' will from changing the bed linen or not.
- Toilets wastewater form 16 lpf (Liter per flush) to 10 lpf .
- Low flow showerheads are used for all guestrooms.



60/80



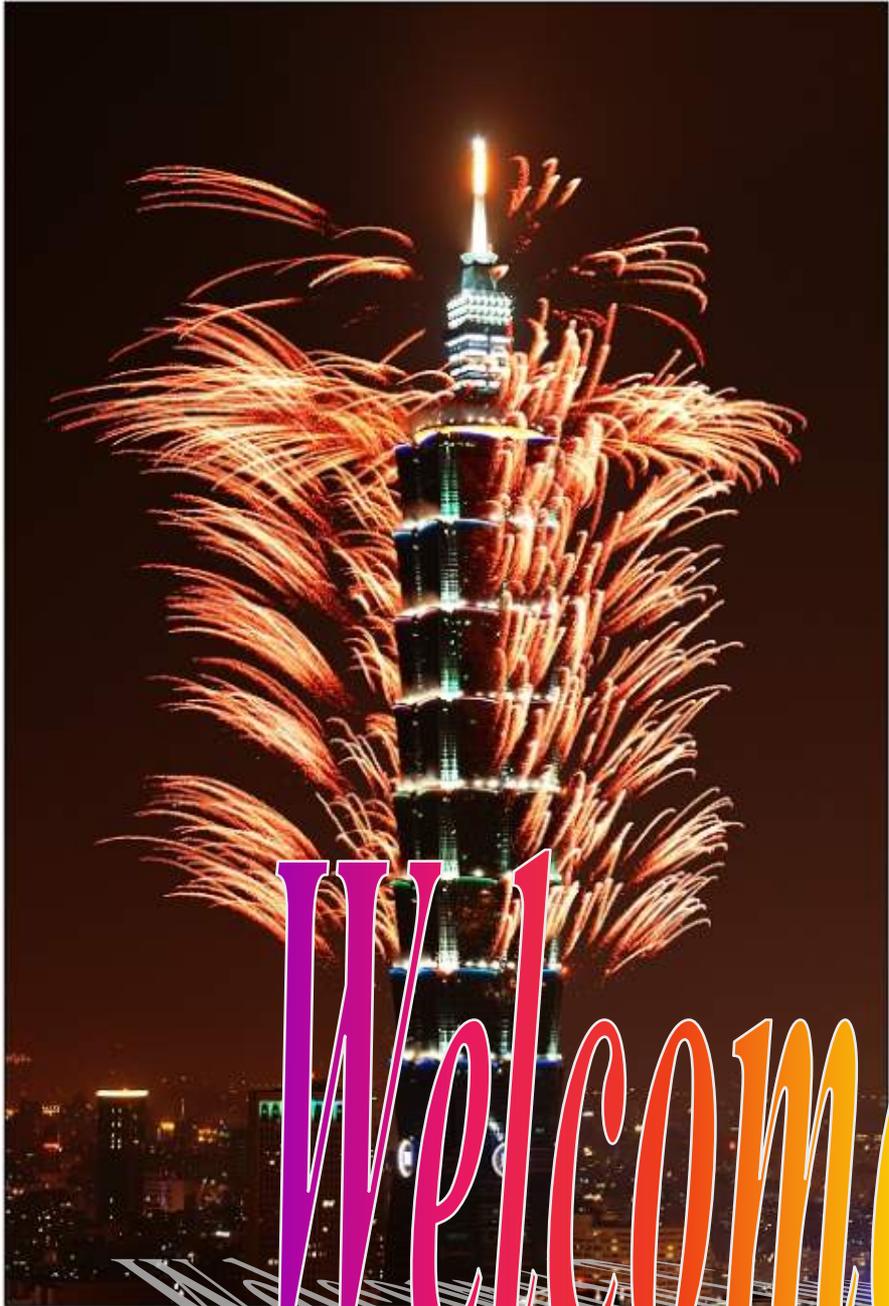
Their Green Features

- **Solid Waste:**

- Garbage classified as newspapers and magazines, glass bottles, aluminum cans, PET bottles, and the rest, collected by contractors.
- Provide the environment-friendly hotel laundry bag and soap. The unused soap will be transferred to the staff toilet for reducing the waste.
- Priority to using recycled paper, and reducing plastic material items.
- Batteries, toner and other pollution potential materials were recovered as possible.
- Does not provide the disposable paper cups or tableware.

Conclusion

- The waste management system has been shifted from end-of-pipe control to source management.
- The Green Hotel measures did not only minimize the waste, but also save the energy, water and money for Resorts, or Hotels.
- It would be considered that source reduction and resource recycling were the major policies in TWEPA.



2009

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Welcome to Taiwan

The Case study for Group 5

- Integrated Waste Management in Hotels-

Salote Boila

Ping Hsin Shih

Weon Joon Lee

Apakuki Tukana Kotoilakeba

Yaowalak Hotrabhavananda

Objective of Study

➤ To prepare appropriate guidelines for

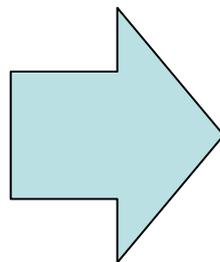
1. Outdoor Activities

2. Fitness & Pools

3. Garden

4. Car Park

5. Sport Facility



Waste Management

Consume, Act, Enjoy in wise way

Outdoor Activities

- What they had been done



Outdoor Activities

- What we can propose
 - There isn't any "No Litter Signage" and no bin on the site, maybe they can setup one.
 - There should be a sign board indicated the opening and closing time for guests in both sports facilities.
 - There should be baskets for guests belongings.



Fitness & Pools

- What they had been done



Fitness & Pools

- What we can propose
 - Save the lights and air conditioning by opening the windows for wind and sun lights.

Fitness & Pools

- What they had been done

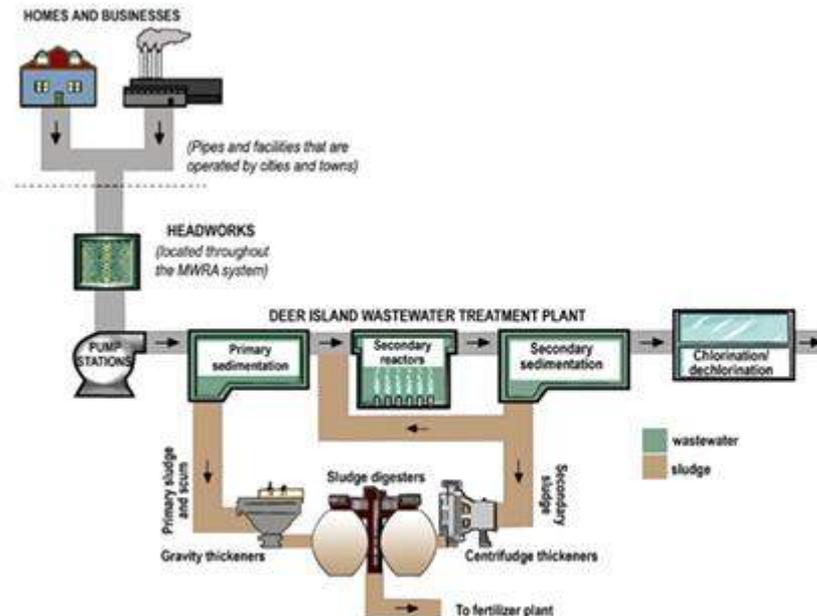


- What we can propose
 - Swimming pool backwashing should not be done more often.
 - Using the salt chlorination to replace chlorine in swimming pools.
 - The chlorine tank should be placed in a safe area where the guests could not be there and the staffs.
 - All these proposals shall be effective on the condition that not violating their standard.

Fitness & Pools

- What we can propose
 - Prepare another tank or pond for retaining the discharge water from the swimming pool for 2 days to remove the hypochloride.

Wastewater Collection and Treatment Process



Gardens

- What they had been done



Gardens

- What we can propose
 - The plastic bags should be avoided for collection litters and garbages.
 - The iron cans could be considered to be replaced by plastic ones for dry waste.



Car Park

- What they had been done



Car Park

- What we can propose
 - Do not leave the engine idle to make air pollution.
 - The fuel storage is too closed to the golf car parking area. There are fire potential danger.
 - There were no proper marks for speed limits and parking.



Recommendation

- Guideline will be propose to minimize the environmental impact in terms of;
 1. Top-down approach.
 2. 3R(Reduce 、 Reuse 、 Recycle)
 3. Priority to purchasing the Green mark machines or goods.
 4. Training for staffs and educating for customer.
 5. Brochures and cards in all guestrooms.

Conclusion

- The hotel's waste management policy mostly revolve around reducing and recycling, reusing materials
- Implementing waste management policies will require stakeholder engagement from all the different levels in society to have green sustainable environment.
- To have the Green committee, you should cooperate with every department of the hotel.
- More green procurement for better environment-friendly hotel.

Vinaka



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Ref.No.: 10-IN-16-GE-TRC-B- 987

13 May 2010

Mr. Shih Ping-Hsin
Senior Specialist
Environmental Protection Administration
Executive Yuan
83 Zhonghua Rd. Sec. 1, Zhongzheng District, Taipei City 100
Republic of China

Letter of Acceptance

APO PROJECT NO.: 10-IN-16-GE-TRC-B : **Training Course on Integrated Waste Management at Resorts, Hotels, and Restaurants**

Upon the recommendation of the concerned Director of the Governing Body of the Asian Productivity Organization (APO), I have the pleasure of accepting you to participate in the above project, in accordance with the following conditions:

Duration of the Project	:	21-25 June 2010
Venue(s)	:	Nadi, Fiji
Implementing Organization(s)	:	Training & Productivity Authority of Fiji (TPAF)
Round Trip Economy Class International Travel Fare	:	To be met by the APO
Hotel Accommodation	:	To be met by the implementing organization for up to 6 days
Per Diem Allowances	:	To be met by the implementing organization for up to 6 days
Participating Country Expenses Payable to the APO	:	Not applicable
Visa Application	:	This Letter of Acceptance shall be presented when applying for a visa
Participant's Arrival Date	:	One day before commencement of the project
Insurance Coverage and Observance of Regulations	:	As specified in the Project Notification

Shigeo Takenaka
Secretary-General