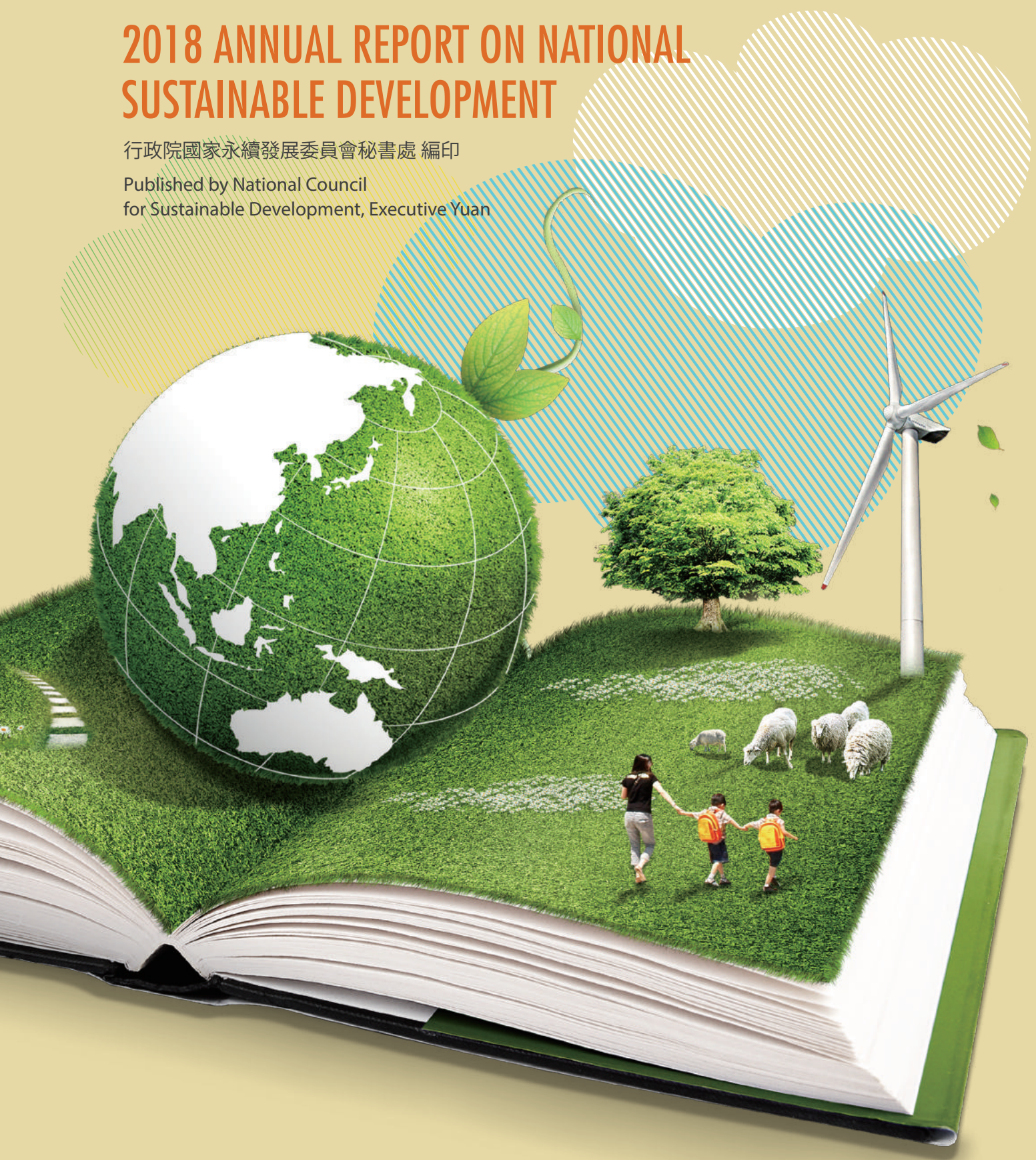


107年 國家永續發展年報

2018 ANNUAL REPORT ON NATIONAL
SUSTAINABLE DEVELOPMENT

行政院國家永續發展委員會秘書處 編印

Published by National Council
for Sustainable Development, Executive Yuan



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前 言

臺灣因地狹人稠、自然資源有限、天然災害頻繁、國際地位特殊等因素，致對永續發展的追求，較其他國家更具需要性與迫切性。為因應全球永續發展趨勢，行政院於民國（下同）86年8月以台八十六環字第33137號函核定成立「行政院國家永續發展委員會（以下簡稱：永續會）」；91年12月總統頒布實施「環境基本法」，該法第29條賦予永續會法定位階。

本年報彙整永續會及民間107年推動永續發展的重要成果，包括107年永續會年度工作進展（第一章）、永續會年度工作重點與成果（第二章）、107年國家永續發展獎辦理情形（第三章）等。永續會組織架構及委員名單，詳列於年報附錄。

永續發展貴在全民共同參與，藉由「國家永續發展年報」之發行，期望國人及國際人士能更了解我國推動永續發展的過程及成果，並希望能藉此提升全民對永續發展的認知，進而共同參與國家永續發展的工作。



PREFACE

Taiwan is an island-nation with high population density, limited natural resources, numerous natural disasters, and a special international position. Under this circumstance, the necessity and urgency of pursuing sustainable development would be more important compared with other countries. In response to the global trend of sustainable development, the Executive Yuan has established the National Council for Sustainable Development (hereinafter referred to as NCSD) in August 1997. In December 2002, the President promulgated the Basic Environment Act, in which the Article 29 authorizes NCSD' s official position.

The 2018 Annual Report compiles the main achievements by both NCSD and civil sectors through their efforts on promotion activities of sustainable development in 2018.

This Annual Report includes Chapter 1: The 2018 Annual Work Progress, Chapter 2: Annual NCSD Key Tasks and Achievements, and Chapter 3: Status of the 2018 National Sustainable Development Awards Campaign.

Sustainable development depends on corporate participation. Through the "2018 Annual Report on National Sustainable Development", we expect the people in Taiwan and the international community to gain a better understanding of the processes and outcomes of sustainable development in Taiwan. We hope to thereby enhance the public' s understanding of sustainable development, and participate in national sustainable development work.



目錄

第一章、107年國家永續發展委員會年度工作進展..... 12

壹、召開永續會第31次委員會議.....	12
一、報告案：本會前（第 30）次委員會議主席裁示事項辦理情形.....	12
二、報告案：我國永續發展目標（草案）.....	12
貳、召開永續會工作會議.....	12
一、第 43 次工作會議.....	12
二、第 44 次工作會議.....	13
三、第 45 次工作會議.....	13
四、第 46 次工作會議.....	14
參、出版永續發展指標報告.....	15

第二章、永續會年度工作重點及成果 16

壹、健康與福祉工作分組.....	16
一、勞動力能力建構.....	16
二、推動社會保險.....	16
三、維護國民身心健康.....	16
貳、生活與教育工作分組.....	18
一、幼兒教育與弱勢教育.....	18
二、職能教育.....	18
三、性別平權與人權教育暨國際合作.....	18
參、綠色經濟工作分組.....	19
一、發展綠能科技，提升能源多元性.....	19
二、推廣廢棄物回收再利用，藉跨產業合作整合能資源有效循環.....	20
三、推動永續觀光發展，打造台灣永續觀光環境與提升產業價值.....	20
四、推動公私部門增加綠色採購.....	20
肆、綠色運輸工作分組.....	21
一、推動公路公共運輸多元推升計畫.....	21
二、持續推動軌道運輸建設及提升服務效能.....	22
三、宣導道路交通安全教育.....	22

伍、國土資源與城鄉發展分組	23
一、國土規劃與管理	23
二、促進都市更新	23
三、減汙減廢	23
四、推動社會住宅	23
五、文化與自然遺產保護	23
陸、永續農業與生物多樣性工作分組	23
一、棲地保育	23
二、生物多樣性資訊整合	24
三、提高環境友善農業	24
四、物種保育與發展生物技術	24
五、推動社區保育工作	24
六、瀕危物種研究保育	24
七、海洋資源保育	24
八、加強外來入侵種防範與監測	25
九、鼓勵民間團體參與生物多樣性宣導及棲地保育工作	25
柒、環境品質工作分組	26
一、改善空氣污染物濃度	26
二、推動塑膠廢棄物源頭減量	26
三、污水下水道發展	26
四、提升公廁環境潔淨品質及舒適度	26
五、積極推動海岸認養	27
六、協助開發中國家推動改善水與衛生相關計畫	27
七、強化管理化學物質，減低不當流入食品的風險	27
八、全國底泥品質定期監測	28
捌、氣候變遷與能源減碳專案小組暨非核家園推動專案小組	28
一、六大部門減碳具體行動出爐	28
二、第一期溫室氣體階段管制目標	29
三、召開非核家園第 3 次會議及第 4 次會議會前會	29
四、臺灣永續發展目標－核心目標 18 之修正	29

第三章、107年國家永續發展獎辦理情形 30

壹、國家永續發展獎簡介	30
貳、106年國家永續發展獎評選結果	30
參、得獎單位永續成果集錦	31
一、教育類	31
二、企業類	35
三、民間團體類	39
四、政府機關類	43

圖 目 錄

圖 1 國家永續發展委員會第 31 次委員會議	12
圖 2 國家永續發展委員會第 43 次工作會議	12
圖 3 國家永續發展委員會第 44 次工作會議	13
圖 4 國家永續發展委員會第 45 次工作會議	13
圖 5 國家永續發展委員會第 46 次工作會議	14
圖 6 國家永續發展指標報告中英文版封面	15
圖 7 赴地方縣市政府拜會推廣微型保險	16
圖 8 桃園市復興區比亞外文健站原住民線條手工藝品製作	17
圖 9 性別平等教育議題輔導群北區策略聯盟交流研討會議	19
圖 10 汽電公司供應中壓蒸汽取代染整業原燃煤之熱媒鍋爐	20
圖 11 107 年度來台旅客達 1,100 萬人次突破新高	20
圖 12 花蓮車站更新夜景	22
圖 13 桃園市青塘園	24
圖 14 太魯閣國家公園清除園區內小花蔓澤蘭	25
圖 15 鳳山溪再生水處理廠 RO 處理單元	26

圖 16 鳳山溪污水處理廠暨再生水處理廠	26
圖 17 新北市八里區挖仔尾沙灘聯合歐盟淨灘	27
圖 18 協助史瓦帝尼王國 (Kingdom of Eswatini) 8 所中學架設太陽能抽水系統	27
圖 19 推動「環保署化學局與新北市衛生局聯合稽查」	28
圖 20 六大部門行動方案減碳策略	28
圖 21 溫室氣體減量目標路徑	29
圖 22 國家永續發展獎評選表揚流程	30
圖 23 長榮衍生企業－方舟美好生活事業	31
圖 24 整合人文教育的模擬醫學教學課程	33
圖 25 畢業生必須完成小三鐵任務	34
圖 26 阿原農場－天生天養自然態度	36
圖 27 太陽光電建置情形	37
圖 28 遠百綠建築企業總部佇立於新北市	38
圖 29 法印青少年管樂團	40
圖 30 國際工作營整理荒地種植藍草	41
圖 31 推動有機廢棄物能資源利用	42
圖 32 用戶接管完成後巷美化	43
圖 33 成龍社區發展協會創作作品－再生	44
圖 34 高橋墩水保區橋梁結構完成情形	45

表 目 錄

表 1 107 年國家永續發展獎得獎單位一覽	30
------------------------------	----

CONTENTS

Chapter I : 2018 Annual NCSD Work Progress 46

A.The 31st NCSD Council Meeting46

I.Draft report: Progress on the rulings given by the Chairman
at the previous meeting (the 30th meeting).....46

II.Draft report: Taiwan's Sustainable Development Goals (Draft).....46

B.Convening the NCSD Working Conference46

I.43rd Working Conference46

II.44th Working Conference.....47

III.45th Working Conference.....48

IV.46th Working Conference49

C.Published Taiwan Sustainable Development Indicator Report.....50

Chapter II : Annual NCSD Key Tasks and Achievements 52

A.Health and Welfare Working Group52

I.Establishment of Labor Force Capability52

II.Promotion of Social Insurance.....52

III.Maintenance of Citizens' Physical and Mental Health.....53

B.Life and Education Working Group54

I.Early Childhood Education and Education for the Underprivileged54

II.Vocational Education.....55

III.Gender Equality & Human Rights Education
and International Cooperation.....56

C.Green Economy Working Group57

I.Development of Green Technology and Enhancing Energy Diversity57

II.Promoting Waste Product Recycling and Coordinating Effective
Resource Recycling through Cross-Industry Cooperation.....58

III.Promoting sustainable tourism development; building sustainable
tourism environment in Taiwan and enhancing industry value58

IV.Promoting Increased Public/Private Green Purchasing.....59

D.Green Transportation Working Group.....60

I.Implementing the Multiple Promotion Project
for Highway Public Transportation60

II.Continued Implementation of Railway Transportation Construction
Projects and Improving Service60

III.Promotion of Road Safety Education.....61

E.National Resources and Urban and Rural Development Working Group	62
I.National Land Planning and Management.....	62
II.Promoting Urban Renewal.....	62
III.Reducing Pollution and Waste	62
IV.Sewage System Development	62
V.Promoting Social Housing	63
VI.Protection of Cultural and Natural Heritage	63
F.Sustainable Agriculture and Biodiversity Working Group	64
I.Habitat Conservation	64
II.Integration of Biodiversity Information.....	64
III.Enhancing Environmentally Friendly Agriculture.....	64
IV.Conservation of Species and Development of Biotechnology.....	64
V.Promoting Conservation Tasks in the Community.....	65
VI.Endangered Species Protection and Research.....	66
VII.Conserving Marine Resources	66
VIII.Enhancing Protection Against and Monitoring of Exotic Invasive Species.....	66
IX.Encouraging Private Organizations to Participate in the Promotion of Biodiversity and Habitat Conservation Work.....	67
G.Environmental Quality Working Group	67
I.Reducing Concentration of Air Pollutants.....	67
II.Promoting Reduction of Plastic Waste at the Source	67
III.Sewage System Development.....	68
IV.Improved Public Bathroom Cleanliness and Comfort.....	68
V.Actively Promoting Coastal Adoption.....	69
VI.Assisting in promoting water and sanitation related improvement programs in developing countries.....	69
VII.Increased Control of Chemical Substances to Reduce the Risk of Improper Use in Food Products.....	69
VIII.Regular Monitoring of Sediment Quality in Taiwan	70
H.Climate Change, Energy Conservation, Carbon Reduction and Nuclear-Free Homeland Promotion Task Force	70
I.Released Specific Actions for Six Major Departments to Reduce Carbon Emissions	70
II.Target for Greenhouse Gas Control Phase 1	70

Chapter III : Status of the 2018 National Sustainable Development Awards Campaign 72

A.Introduction to the National Sustainable Development Awards72

B.Results of the 2017 National Sustainable Development Awards Selection Process.....72

C.About the Award Recipients73

I.Education	73
II.Business	79
III.Civic Organizations	85
IV.Government agencies	90

Table of Figures

Image 1	31st NCSD Council Meeting.....	46
Image 2	43rd NCSD Working Conference	47
Image 3	44th NCSD Working Conference.....	47
Image 4	45th NCSD Working Conference.....	48
Image 5	46th NCSD Working Conference.....	49
Image 6	Covers of Chinese and English versions of the Taiwan Sustainable Development Indicator Report	51
Image 7	Visiting local county and city governments to promote micro-insurance	52
Image 8	Traditional aboriginal line art handicrafts from Piyaway health station in Taoyuan City's Fuxing District.....	53
Image 9	Gender Equality Education Issues Counseling Group - North District Strategic Alliance Seminar	56
Image 10	Taiwan Cogen Corporation supplies medium-pressure steam to replace coal-fired thermal oil boilers in the dyeing and finishing industry.....	58
Image 11	In 2018, total tourist arrivals in Taiwan reached a record high of 11 million people	59
Image 12	Hualien Station's updated nighttime look.....	61
Image 13	Taoyuan City Blue Pond Park.....	65

Image 14	Taroko National Park removing mile-a-minute weed found in the park	66
Image 15	Fengshan River Reclaimed Water Treatment Plant RO (Reverse Osmosis) Processing Unit	68
Image 16	Fengshan River Sewage Treatment Plant and Reclaimed Water Treatment Plant.....	68
Image 17	Coastal Cleanup with the European Union at Waziwei Nature Reserve in Bali District, New Taipei City	69
Image 18	Assisting set up of solar photovoltaic pumping systems in eight middle schools	69
Image 19	Promoting Joint Inspection by the Environmental Protection Administration's Toxic and Chemical Substances Bureau and the New Taipei City Health Bureau	70
Image 20	Six Major Departments' Carbon Reduction Strategies and Action Plans	71
Image 21	Path to Achieving Greenhouse Gas Reduction.....	71
Image 22	Judging and Bestowal Process for the National Sustainable Development Awards.....	72
Image 23	Chang Jung Christian University Spin-off Enterprise — Ark: A Better Life	73
Image 24	Medical science simulation class with integrated humanities education	76
Image 25	Every year, graduating students must complete a mini triathlon	78
Image 26	Yuan Farm - an Attitude that lets nature decide what grows	80
Image 27	Installing a photovoltaic system	81
Image 28	Far Easter headquarters' green building in New Taipei City	84
Image 29	Fa Yin Youth Wind Band.....	86
Image 30	An international work camp cleans up uncultivated land and plants bluegrass.....	88
Image 31	Promoting utilization of organic waste energy and resources	89
Image 32	Residents took over and completed back alley beautification work.....	91
Image 33	Chenglong Community Development Association artwork Rebirth	93
Image 34	High-pier viaduct in a water conservation zone.....	95

List of Tables

Table 1	List of 2018 National Sustainable Development Awards Winners	72
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壹、召開永續會第 31 次委員會議

行政院國家永續發展委員會（以下簡稱：永續會）第 31 次委員會議於 107 年 12 月 14 日在行政院 2 樓第 1 會議室召開，由行政院賴清德院長兼永續會主任委員主持，會議議程計 2 項報告案，本次會議之主席裁示如下：

一、報告案：本會前（第 30）次委員會議主席裁示事項辦理情形

感謝張執行長督導與各位委員協助，本案洽悉。

二、報告案：我國永續發展目標（草案）

永續發展目標總論（草案）原則通過，根據委員意見進一步修訂；如有必要再請張執行長邀集委員，召開工作會議討論，確定後執行。

貳、召開永續會工作會議

一、第 43 次工作會議

永續會第 43 次委員會議於 107 年 5 月 25 日在行政院第一會議室召開，由行政院張景森政務委員兼永續會執行長主持，會議議程計 2 項報告案。本次工作會議各報告案及主席裁示如下：

（一）我國永續發展目標（草案）修正辦理情形

1. 本次所辦理之公民論壇，民衆回饋良多，請各工作分組暨專案小組參考民衆意見，完成我國永續發展目標草案修正。
2. 目標草案總說明應包括背景說明及與聯合國永續發展目標比較之具體分析。
3. 目標草案核心目標已與聯合國接軌，惟部分具體目標過於瑣碎，請各核心目標主政單位，再做全面檢視、衡量內容；另過於瑣碎指標請作為附件之參考指標。
4. 請各工作分組暨專案小組儘速邀請永續會委員召開工作分組暨專案小組目標草案修正會議，



▲圖 1 國家永續發展委員會第 31 次委員會議



▲圖 2 國家永續發展委員會第 43 次工作會議

討論及修正目標草案內容，修正後之目標草案由秘書處彙總提報下次工作會議，所有工作應於 3 個月內完成。

5. 請秘書處依第 29 次委員會議決議之方式，請民間委員選擇參與工作分組暨專案小組之目標修訂工作，並選出各工作分組暨專案小組之目標代言人，於下次工作會議提報。

（二）非核家園推動專案小組辦理情形

電業法第 95 條已明定我國核電廠於 2025 年前全部停止運轉，即核電廠不會延役。其中核一廠 2 部機組分別訂於今年 12 月與明年 7 月開始除役，但很可能屆時會「退而不休」，其原因為建好之

乾式貯存設施至今無法啟用，導致爐心燃料棒無法順利取出安置，除役工作無法真正進行。現階段實難處理核廢料最終處置場選址問題，可先朝中期集中式貯存場規劃。如何探尋出地點，歡迎各委員參與非核家園推動專案小組會議共同研商。

二、第 44 次工作會議

本會第44次委員會議於107年10月23日在行政院第2會議室召開，由行政院張景森政務委員兼永續會執行長主持，會議議程計2項報告案。以下為本次工作會議報告案及主席裁示：

（一）報告案：本會前（第43）次工作會議決議事項辦理情形報告，洽悉。

- 1.我國永續發展目標總論論述內容必須闡明我國發展特性，即「亮點」與「暗點」，如委員所提及之人文生態與環境風險，應予增補修正，使各界了解我國永續發展脈絡。
- 2.保留「6大聚焦領域」，但考量重點為達成永續發展必須進行之6項重要變革及轉型，且各該領域均有廣泛意涵，應斟酌調整用語。
- 3.刪節「12個施政重點」，未來於執行時視我國發展需求再研擬。

（二）我國永續發展目標草案修正辦理情形報告

- 1.刪節「12個施政重點」，未來於執行時視我國發展需求再研擬。
- 2.請秘書處儘速安排下次會議討論再修正後草案，就草案做出結論，以利安排於院長主持之委員會議提報。

三、第 45 次工作會議

永續會第45次委員會議於107年11月12日在行政院第1會議室召開，由張景森政務委員兼永續會執行長



▲圖 3 國家永續發展委員會第 44 次工作會議



▲圖 4 國家永續發展委員會第 45 次工作會議

主持，會議議程計兩項報告案。本次工作會議報告案及主席裁示如下：

（一）報告案：我國永續發展目標草案修正辦理情形

- 1.永續發展目標總論草案，請台灣風險分析學會參考委員意見修正後，請委員再協助檢視架構、論述及編排等。
 - （1）請納入我國歷史處境、人文及生態特殊性、全球架構下之經濟現況等背景，以及所面臨之系統性及能源與物質風險。
 - （2）智慧國土內涵論述，請納入環境、生態、城市、國家發展等面向之智慧化與監測架構。

(3) 政策工具請納入能源稅、融資、綠色金融等經濟工具。

(4) 性別平等內容，請參考聯合國婦女署相關網站內容修正。

2.永續發展目標1、3、5、9、11及目標7、8、18原則通過，請主政機關依委員意見修正，若委員仍有意見可於會後提出，再請主政單位向委員說明報告。其餘目標修正情形，於下（第46）次工作會議討論。

四、第 46 次工作會議

永續會第46次工作會議於107年11月29日在行政院第一會議室召開，由行政院張景森政務委員兼永續會執行長主持，會議議程計1項報告案、1項討論案。本次工作會議報告案及主席裁示如下：

（一）報告案：我國永續發展目標草案修正辦理情形

尊重公民投票有關廢除電業法第95條第1項：
「核能發電設備應於中華民國114年以前，全部

停止運轉」之決議，請非核家園推動專案小組修正我國永續發展核心目標18：

- 1.非核家園目標不變但刪除西元2025年之期程，進行文字修正。
- 2.具體目標請納入節電政策、分散式電網、提高綠電占比及教育宣導等。
- 3.請就提高天然氣發電占比可行性進行評估，並進一步了解核電廠延役相關規範。

（二）討論案：我國永續發展目標總論（草案），提請討論

永續發展目標總論（草案）請台灣風險分析學會再修正：

- 1.請扣合並呼應我國永續發展18項核心目標。
- 2.補充說明我國永續發展目標（草案）制定之脈絡及歷程。
- 3.用作為與民衆溝通我國永續發展目標之說帖，文字使用宜淺顯易懂，避免學術用語。



▲圖 5 國家永續發展委員會第 46 次工作會議



▲圖 6 國家永續發展指標報告中英文版封面

(三) 臨時動議：許委員添本建議基於會中針對公民投票結果之討論意見，重新檢視我國核心目標7及目標18。

保留核心目標18，相關文字修正依上述討論結果。

參、出版永續發展指標報告

為評量及檢視我國永續發展推動成效，永續會於民國91年參考聯合國第1版永續發展指標系統與架構，研擬我國之永續發展指標，並於民國92年發表我國第1版永續發展指標系統，後續每年公布前年度之指標評量結果，並在永續會官方網站建置「臺灣永續發展個別指標資訊管理系統」網站平台，使官產學研及公眾均能取得相關資訊，以茲運用。

我國指標評量作業之執行，係由各指標主政機關在前述指標資訊管理系統平台中，提報前一年度數據，經

平台計算得到初步結果，再由永續會邀集主政機關召開研商會議，確認指標數據、評量結果、及分析內容無誤後，纂集成冊。

本年度指標評量作業之執行，永續會於107年7月19日邀集各指標主政機關召開第一次研商會議，席間簡介我國永續發展指標研革、本年度評量作業進行方式，並討論包括16項指標相關文字之修正，及2項指標名稱修正建議，5項指標定義修正案，7項指標說明分析及相關圖表修正，以及2項指標名稱刪除案。迄於各指標主政機關均在平台系統填報相關數據後，於同年11月28日召開第二次會議，席間綜整本年度指標填報報告內容之初稿，供與會者檢視，並決議通過。依據第二次會議通過之初稿，本會完成「106年永續發展指標評量報告」，置於行政院永續會網站，並發行及寄送紙本報告。此外，本會亦依據「2016年永續發展指標評量報告」中文版內容，翻譯編製「2016年永續發展指標評量報告」英文版紙本報告及光碟，置於永續會英文版網站。

壹、健康與福祉工作分組

一、勞動力能力建構

- (一) 為提供被保險人及其遺屬長期生活照顧，勞工保險於98年1月1日施行失能、老年及遺屬年金給付，目前仍持續宣導及推動勞保年金制度。
- (二) 為保障職災勞工權益，放寬已領勞保老年給付及年逾65歲已領其他社會保險養老給付，再從事工作或於政府登記有案職訓機構受訓者，得單獨參加職業災害保險。
- (三) 107年度協助求職登記1萬9,207人次，推介就業1萬3,814人次，推介就業率達71.92%。

二、推動社會保險

- (一) 106年至107年底累計協助微型企業及創業青年取得保證融資金額66.18億元。

- (二) 微型保險至107年底累計承保人數約62.7萬人（歸戶），累計承保金額約新臺幣（下同）2,042億元，較106年同期之50.2萬人、1,650億元均有所成長。此外，為進一步推動微型保險，金融監督管理委員會已於107年12月25日修正「保險業辦理微型保險業務應注意事項」，將承保範圍擴大至各類對象之家庭成員。
- (三) 為提供被保險人老年基本經濟安全保障，已擬具公教人員保險法修正草案，將公教人員保險年金規定擴及全體被保險人適用，以完善國家社會安全網絡政策；修正草案於函送立法院審議並經決議送交司法及法制委員會審查後，目前尚待後續審議。

三、維護國民身心健康

- (一) 細懸浮微粒（PM_{2.5}）全國測站從104年之22.0 $\mu\text{g}/\text{m}^3$ 改善至107年之17.5 $\mu\text{g}/\text{m}^3$ ，紅色警戒



▲圖 7 赴地方縣市政府拜會推廣微型保險



▲圖 8 桃園市復興區比亞外文健站原住民線條手工藝品製作

（日平均 $\geq 54 \mu\text{g}/\text{m}^3$ ）從104年之997次降低至107年之310次，空氣品質已有明顯改善。

（二）為有效降低國人自殺死亡率，定期分析自殺相關統計與監測區域別流行趨勢，規劃心理健康促進及自殺防治精進作為，包括：提供24小時免費心理諮詢之安心專線、研議致命性自殺工具限制對策、宣導自殺新聞報導原則、宣導自殺防治守門人議題、培訓幸福捕手種子師資、輔導訪查各縣市、維運及增修自殺防治通報系統、補助各縣市提供自殺企圖者關懷訪視、辦理訪視成效評估、辦理統計分析及實證研究等。

（三）107年度1-10月自殺死亡人數初步統計為3,234人，較106年同期減少25人。

（四）鼓勵開設性教育（含愛滋病防治）課程，高級中等以下學校均納入課程綱要，106學年度計100校開設1,004門相關課程、5萬3,412人修課。

（五）107年底全國設有精神科之醫院計201家，其中有146家為指定藥癮戒治機構（占72.6%）。

（六）積極透過政府跨部門、民間組織、業者與民眾攜手推動菸害防制工作，成年人吸菸率從97年21.9%降至107年的13.0%，國中生吸菸率由93年的6.6%降至107年的2.8%，另高中職學生吸菸率由94年的15.2%降至107年的8.0%，已逐步與全球潮流向菸草終局邁進。

（七）補助14個地方政府完成設置248個文化健康站，照顧原住民長者計7,542人，創造就業機會進用894名工作人員（計畫負責人248人、照顧服務員646人），提供原住民族地區及都會聚集落可近性、連續性、文化性之長照資源。

（八）107年9月底低收入戶及中低收入戶統計人數為63萬8,294人，相較於106年12月的66萬7,682人，減少2萬9,388人。

貳、生活與教育工作分組

一、幼兒教育與弱勢教育

- (一) 透由前瞻基礎建設計畫及擴大幼兒教保公共化計畫，持續補助各地方政府增設公共化幼兒園，規劃於106至109年累計增設1,247班。106至107年度增設公共化幼兒園計656班，增加約17,000個公共化幼兒園就學名額。另為加速提升平價教保服務供應量，使年輕父母能兼顧職場與家庭，首次提出與符合補助要件之私立幼兒園合作，自107學年度起於6都以外之15縣（市）先行建置準公共機制，並於108年8月起全國全面施行。截至107年底，完成備查程序之準公共幼兒園計288園，約可增加3萬個就讀準公共幼兒園之就學機會，整體平價教保服務比率平均已逾5成，快速翻轉比率成長15%。
- (二) 107年具有就業潛能應屆畢業學生之就業率為70.53 %。
- (三) 自100學年度起由政府補助全面實施5歲幼兒免學費，至經濟弱勢者再加額補助其他就學費用，二項補助合計，經濟最弱勢者得免費就讀公立幼兒園，就讀私立者每生一學年最高補助6萬元。107學年度受益人數約為22萬餘人，整體5歲經濟弱勢幼兒就學率達96.2%。
- (四) 高級中等以下學校在學學生通過需要評估後取得輔具的比率為80%。
- (五) 公立高級中等以下學校建置校園網路，以能具備高品質、高可用性豐富數位學習資源之環境，且教室資訊設備便利資訊科技融入教學與數位學習者，比率約為43.58%（2018年）。
- (六) 107年8月起配合行政院我國少子女化對策計畫推動公共及準公共托育服務，除持續布建社區公共托育家園外，督導地方政府與符合條件之托居

人員及托嬰中心簽約合作，依據家庭經濟條件補助托育費用每月6,000元至1萬元，截至107年底未滿2歲幼兒送托公共及準公共化托育服務計3萬8,287人，占所有家外送托兒童比率達84.07%。

二、職能教育

- (一) 逐年依據產業發展及就業市場人才需求，透過區域職業訓練供需資訊蒐集及評估，以自辦、委辦或補助等方式，規劃辦理多元類別就業導向之職前訓練，提供失業民衆職業訓練機會，提升就業技能，促進就業，107年計訓練49,446人。
- (二) 勞動部依據產業發展及就業市場人才需求，以自辦、委辦或補助等方式，規劃辦理數位圖文傳播科技、多媒體網頁設計班、數位插畫美術設計班、數位3D繪圖雲端應用實務班、網頁設計與商業數位攝影班等資通訊科技相關類別課程，以提供失業民衆職業訓練機會，提升就業技能，促進就業。107年計訓練5,589人，協助2,817名青年參與資通訊科技（ICT）相關類別職業訓練課程。
- (三) 持續推動多元類別之職前訓練，提供失業民衆職業訓練機會，且為安定參訓期間之生活，凡具特定對象身分者（包括身心障礙、原住民等）可免費參訓，另於參訓期間可依規定申領職業訓練生活津貼。107年計協助28,521名弱勢族群失業者參加職前訓練。

三、性別平權與人權教育暨國際合作

- (一) 107年7月16至20日，舉辦《「消除對婦女一切形式歧視公約（Convention on the Elimination of All Forms of Discrimination Against Women, CEDAW）」第3次國家報告》國外專家審查暨發表會議，安排我國非政府



▲圖 9 性別平等教育議題輔導群北區策略聯盟交流研討會議

組織代表、政府與國家審查專家多方談話，呈現我國推動性別平等成果與實現性別平等之決心，會後共提出73點結論性意見與建議。

(二) 107年5月7至9日、17至18日等共5日舉辦「挺身而進·女力交流-107年公私部門女性人才交流研習」，邀請各領域專家學者、企業代表和高階文官授課，讓現場的女性菁英了解當前我國重要政策與國際趨勢，藉由女性典範分享寶貴經歷，提供公私部門交流與學習平台。本次研習計有公部門簡任級、公私立大專校院副教授、國營事業機構經理級、民間事業機構、團體經理級以上人員及企業負責人等28名學員參與。

(三) 107年10月22至24日，舉辦「2018年APEC智慧科技農業性別化創新計畫：善用性別化創新、掌握包容性機會、擁抱數位化未來論壇」。辦理4場專題演講及3場專題講座，邀請APEC各經濟體之女農、女農企業家、學者專家及政策執行者於會中分享自身經驗及意見交流，藉由探討APEC區域內女性參與智慧科技農業領域所面臨的挑戰及因應方式，讓各經濟體參考推動，且鼓勵APEC區域內女性進入智慧科技農業領域。

參、綠色經濟工作分組

一、發展綠能科技，提升能源多元性

- (一) 107年啟動「配電系統強韌計畫」，全力推動配電線路及二次變電所設備更新汰換、饋線自動化擴建及智慧變電所建置等主要工程，積極強化配電線路系統及減少停電發生，提高供電可靠度，於107年度全國停電時間（SAIDI值）實績值為16.1874（分/戶），較106年平均降低0.7106分鐘。
- (二) 為抑低線路損失，積極執行降低線路損失措施，如：新增或擴建輸配線路及變電設備、加強輸變電設備維護、宣導用戶正確用電常識及推行負載管理等措施，惟因107年負載較106年成長0.95%，損失隨傳輸電流增加而成長，致線損率實績值（3.94%）仍較106年增加0.12%。
- (三) 積極推動再生能源設置，至107年11月止，我國再生能源裝置容量累計達約6,136 MW。
- (四) 推動太陽光電，107年度太陽光電核准裝置容量達1,851 MW，成長卓越，並達成行政院核定「太陽光電2年推動計畫」之1,520 MW推動目標。此外，協助各界掌握土地及併網資訊，建置再生能源併網容量平台，以利評估作業。另推動「綠能屋頂全面參與」、「產業園區擴大設置」等專案並偕同各部會持續盤點土地，逐步達成推動目標。
- (五) 推動風力發電，陸域風電部分，至107年11月已完工商轉349架，累計容量達689 MW；離岸風電部分，至107年11月累計完成2架共8 MW示範機組，並於107年1月18日公告「離岸風力發電規劃場址容量分配作業要點」，採「先遴選、後競價」方式，於同年4月底完成遴選作業，計有7家開發商共10案獲選，核配容量達3,836

MW；續於6月完成競價作業辦理，計有2家開發商共4案獲選，核配容量達1,664 MW，累計共核配5,500 MW，悉於114年前陸續完成設置。

二、推廣廢棄物回收再利用，藉跨產業合作整合能資源有效循環

- (一) 為推動工業廢棄物資源化，並使資源循環利用產業朝更高效益發展，持續透過健全法令制度、辦理許可審查及查核查訪輔導，促進資源循環利用產業發展。107年工業廢棄物再利用率達80%，投入資源再利用之廠商家數1,776家，資源再生產業產值達723.4億元。
- (二) 我國產業生產過程產出之廢熱、廢能及廢棄資源，藉由完善規劃的能資源整合鏈結系統重新拾起再利用，誘發產業升級轉型，以降低產業生產成本及原物料取得風險，創造循環經濟產值。107年度完成能資源鏈結量17.4萬公噸，其中蒸汽整合量15.1萬公噸，預估可減少重油使用1.2萬公秉油當量，溫室氣體減量達3.6萬公噸，有效降低SO_x達162公噸、NO_x約52公噸及粒狀污染物9.8公噸。



▲圖 10 汽電公司供應中壓蒸汽取代染整業原燃煤之熱媒鍋爐

三、推動永續觀光發展，打造台灣永續觀光環境與提升產業價值。

- (一) 積極開拓多元市場，107年來臺旅客再創歷年新高，達1,106.5萬人次，較106年成長3%，尤以新南向18國市場達到260萬人次，成長幅度達14%；日本市場逼近200萬人次、歐美長線市場亦正成長4%，且各主要客源市場比重趨於均衡發展，市場結構已成功轉型。
- (二) 配合「Tourism 2020－臺灣永續觀光發展方案」之「5-1台灣觀光永續年推廣計畫」，推動2018海灣旅遊年，帶動國人深度旅遊，辦理83場淨



▲圖 11 107 年度來台旅客達 1,100 萬人次突破新高

溪、淨山、淨灘活動，32,479人次參與、清理廢棄物90.288噸；40場海灣活動，吸引1,208萬人次參加，創造55.4億元以上產值，完備我國海灣旅遊環境及提升服務品質，整合地方政府與產業資源建構島嶼生態觀光旅遊。

- (三) 推動「臺灣觀光新年曆」，配合大型活動在臺舉辦契機，結合地方加強城市行銷，並推展跨域與跨夜旅遊，如：在澎湖舉辦「2018世界最美麗海灣組織世界年會（第14屆）」，在嘉義舉辦「亞洲賞鳥博覽會（第9屆）」，邀集國際致力於觀光、永續發展及保育人士探討永續觀光發展議題，持續增加國民旅遊及臺灣國際識別度。



四、推動公私部門增加綠色採購

落實「機關綠色採購推動方案」，加強推廣民間企業與團體實施綠色採購，106年採購金額逾347億元；修改工程採購契約範本，載明環保或再生能源產品優先採用，並在政府電子採購網之共同供應契約系統中，建置締約機關應註記環保標章、節能標章、及節省水標章等產品。

肆、綠色運輸工作分組

一、推動公路公共運輸多元推升計畫

- (一) 公路公共運輸計畫執行以來已有具體成效，至107年公路公共運輸載客數約12.45億人次，相較106年度同期成長約0.1億人次（0.8%）。
- (二) 為降低市區公車車齡及強化無障礙運輸服務，107年共計核定補助縣市政府購置低地板公車441輛及通用無障礙大客車21輛，至107年市區低地板公車約6,000輛。
- (三) 自105年起推動「需求反應式公共運輸」專案計畫，針對臺東縣延平鄉等10個縣市，試辦導入多元化運具及因應當地需求發展彈性營運模式，至107年底再擴大推動至屏東縣至義鄉等14個偏鄉提供基本民行運輸服務，補足公共運輸缺口，107年底偏鄉地區公共運輸涵蓋率已達78%。偏鄉地區以外，亦補助高雄市、基隆市、臺中市、臺南市及屏東市陸續推動「小黃公車」提供服務，以改善傳統公車服務之不足。
- (四) 國道3號南港系統、國道5號石碇南下入口、頭城、宜蘭及羅東北上入口實施大客車專用車道措施，並於北上宜蘭至頭城主線實施大客車通行路肩及主線儀控，107年5月30日起再開放國道3號南港聯絡道至南港路肩供大客車行駛。

二、持續推動軌道運輸建設及提升服務效能

- (一) 臺中都會區鐵路高架捷運化計畫：新增設5座通勤車站於107年10月28日完工啟用。
- (二) 花東鐵路電氣化計畫：第二階段東正線於107年6月完成啟用，雙軌化路段已達全線長度之27.1%。
- (三) 花東線鐵路整體服務效能提升計畫：107年完成26座車站改建暨改善工程及花蓮站第一階段新站體啟用。
- (四) 臺鐵整體購置及汰換車輛計畫：規畫購置及汰換城際與通勤電聯車共1,120輛，於108年1月完

成簽約作業，預計於109年起分年交付車輛，至113年完成全數交車投入營運，提供環島鐵路城際及區域間優質與快捷的旅運服務。

三、宣導道路交通安全教育

- (一) 強化各級學校交通安全教育，加強入學新生宣導、持續推動公車入校園與鼓勵學生搭乘大眾運輸，並辦理交通安全教育訪視，鼓勵大專校院開設交通安全相關課程。
- (二) 推動路口安全觀念宣導：推動行人及高齡者路口安全防禦觀念，與民間企業合作製作「路人即家人」影片。



▲圖 12 花蓮車站更新夜景

伍、國土資源與城鄉發展分組

一、國土規劃與管理

為因應氣候變遷，確保國土安全，保育自然環境與人文資產，促進資源與產業合理配置，強化國土整合管理機制，復育環境敏感與國土破壞地區，追求國家永續發展，內政部依據行政院政策指示，推動《國土計畫法》立法作業，經立法院於104年12月18日三讀通過，總統於105年1月6日公布，行政院於105年5月1日起施行。

二、促進都市更新

推動政府主導都市更新案，自94年起勘選258處都市更新示範地區，目前計有31處刻正進行都市更新可行性評估之先期規劃作業、51處辦理招商前置作業、1處公告招商中、24處招商實施中及10處由政府投資自行實施。

三、減汙減廢

持續鼓勵自備餐具、推動一次用外帶飲料杯減量、限制塑膠類免洗餐具使用等源頭減量措施及推動資源回收四合一計畫、垃圾強制分類等資源回收工作，並推動循環經濟國內外「源頭減量」、「全面減塑」、「再生粒料推廣」及「循環產業轉型商機」等宣傳活動，強化一次用產品減量及循環經濟，截至107年10月垃圾回收率達59.3%。

四、推動社會住宅

為達成8年20萬戶社會住宅之政策目標，行政院於106年3月核定「社會住宅興辦計畫」，朝向興建12萬戶、包租代管民間住宅8萬戶之目標推動。直接興建部分，截至107年底止，各直轄市、縣（市）政府提報105至109年計畫推動133案4萬5,519戶，加計105年以前已完工出租之既有戶數7,079戶，合計達5萬2,598戶。

五、文化與自然遺產保護

- （一）為落實原住民保留地之國土保育、自然資源管理，以「原鄉地區傳統遺址及生態資源維護計畫」執行原住民保留地山林守護任務，原生或適栽植物培育及維護面積約達419公頃、部落及傳統山川資源維護面積約3,242公頃，並結合原住民傳統文化生態智慧進行文化遺址維護及古道巡察等任務，計維護部落文化遺址、傳統遷徙路線達24處、2,596公里。
- （二）107年公告評定地方級重要濕地2處，即：永安鹽田重要濕地、草 重要濕地，另至107年底已公告4處國際級重要濕地及7家灣溪國家級重要濕地等，共計30處重要濕地保育利用計畫。
- （三）修復完成新竹北埔姜阿新洋樓，其在新竹北埔（大隘）開發史上具有重要意義，建築物代表北埔地區日治時期茶產業極盛的文化象徵，深具歷史意義及教育意涵，具體展現公私部門協力合作成果，為推行「浪漫臺三線」文化資產修復樹立優良典範。

陸、永續農業與生物多樣性工作分組

一、棲地保育

- （一）我國保護區系統分別為自然保留區22處、自然保護區6處、野生動物保護區20處、野生動物重要棲息環境37處、國家公園9處，及國家自然公園1處，共計95處，總面積為1,133,490公頃（已扣除範圍重複部分），其中陸域面積達694,503公頃、約占臺灣陸域面積19.19%。
- （二）行政院農業委員會、行政院環境保護署、經濟部、文化部、交通部及內政部等6部會主管之「森林法」、「野生動物保育法」、「漁業法」、「飲用水管理條例」、「地質法」、「水

利法」、「礦業法」、「自來水法」、「文化資產保存法」、「水下文化資產保存法」、「溫泉法」、「發展觀光條例」、「國家公園法」、「濕地保育法」等14種法律29種項目確認「符合整體海岸管理計畫基本管理原則」，於107年8月3日公告修正「海岸地區範圍」。

二、生物多樣性資訊整合

建置「臺灣生物多樣性資訊網 (TaiBIF)」、「臺灣物種名錄 (TaiCOL)」、「臺灣生命大百科 (TaiEOL)」、「台灣野生動物遺傳物質冷凍典藏及生命條碼 (TaiBOL)」及「臺灣生物多樣性觀測網 (TaiBON)」，定期增修補充各項資料庫之內容，推動跨部會生物多樣性資料的蒐集與整合，分別配合全球生物多樣性資訊機構 (GBIF)、全球物種名錄 (Catalogue of Life, COL)、生命大百科 (Encyclopedia of Life, EOL)、基因庫 (GenBank)、生命條碼資料庫系統 (BOLDSYSTEMS)、亞太生物多樣性觀測網 (AP-BON) 及地球觀測系統群生物多樣性觀測網 (GEO BON) 進行國際交流與實質合作。

三、提高環境友善農業

為保育野生動物的農田棲地，推動「綠色保育標章」，目前全臺通過認證農友達325戶，申請農地面積共561公頃，通過469公頃；保育物種數達43種，並藉由周六市集、「你的餐桌，我的生活—我們的綠色消費新運動」特展，介紹臺灣各地農友友善耕作與動物保育作為，使民衆瞭解農業生產和野生動物的密切關係，進而以行動支持農友保育農田生態。

四、物種保育與發展生物技術

建構國家生物種原庫，進行農、林、漁、牧、野生動物、微生物遺傳資源之研究、保存、保育及利用，新增林業庫存種子101編號，執行國際種子交換業務，預計於108年2月出版種子目錄2018-2019；水產保種數量



達62種，培育紀錄及環境資料51,000筆，畜產保種並收集病原種原166株、血清13,000支，農業改良場保存作物品種（系）、家蠶種原、及原住民特色作物種原。

五、推動社區保育工作

直轄市及縣（市）積極推動社區營造及村落文化發展計畫，訂定社區與教育學習指標，期許生活環境與學校教育連結，促進社區永續發展，全臺22縣市共有33案由社區與學校結合，另核定40件社區生態保育相關工作計畫。

六、瀕危物種研究保育

訂定黑鳶、臺灣黑熊、黑面琵鷺、山麻雀等保育行動綱領；刻正研擬石虎保育行動綱領草案。

七、海洋資源保育

於107年6月6日輔導臺東縣政府修正公告「臺東縣



▲圖 13 桃園市青塘園

▼圖 14 太魯閣國家公園清除園區內小花蔓澤蘭



富山水產動植物繁殖保育區位置及有關限制事宜」；鼓勵漁民集中在漁業資源密度之高峰期作業，離峰期在港休漁，藉以減少用油量，漁船筏如符合出海90天，在港休息102天之規定，可申領休漁獎勵金。

八、加強外來入侵種防範與監測

- (一) 建置簽審通關共同作業平台，持續調整內建高風險、風險未明、野生動物保育法第4條公告保育類、華盛頓公約物種及較低風險審查名單資料庫，強化對危險性、高入侵性或其他影響本土物種存續物種之管理機制。
- (二) 執行外來入侵種走私查緝，查獲動植物或其產品逾3.4萬案，約36公噸，走私農漁畜產品75案，共計73,686公斤，其中活體動物計1,513隻。

九、鼓勵民間團體參與生物多樣性宣導及棲地保育工作

持續辦理「107年度國家濕地保育計畫」，補助13個縣市、共24個民間團體，推動國家重要濕地生態復育、巡守、監測、經營管理及環境教育等相關工作。各國家公園管理處皆與在地社區、部落合作推動生態保育、巡守、監測、經營管理等相關工作。

柒、環境品質工作分組

一、改善空氣污染物濃度

推動全國空氣污染防治行動方案，106年及107年共計輔導工業鍋爐623座、商業鍋爐共計585座、餐飲油煙裝設防制設備6,054家、紙錢集中焚燒2萬9,725公噸、完成河川汛期後清理共22萬7,784公里、一期及二期柴油車污染改善共2萬1,292輛、三期柴油車改善或加裝防制設備共1,022輛、二行程機車改善72萬3,070輛，持續偕同各部會及地方環保局積極推動，改善秋冬季節空氣品質。

二、推動塑膠廢棄物源頭減量

(一) 訂定「共通性事業廢棄物再利用管理辦法」及公告「應進行流向追蹤之事業廢棄物再利用產品」；維運「資源再利用管理資訊系統」，整合事業廢棄物再利用管理現況，提供一般民衆、事業單位或再利用機構查詢。持續偕同部會研商檢討事業廢棄物再利用資格、用途、產品及管理方式，訂定廢棄物代碼對應再利用產品、用途及國家標準等規範。

(二) 於107年度首次辦理推動廢棄資源循環經濟評鑑，對再利用機構以「核心指標」、「產業特色指標」及「精進指標」3大類進行評鑑，歷經初審、書審及現場評鑑等作業，計9家評定本次最高等級的績優二星級，及15家優良一星級，於107年12月舉辦績優表揚及成果觀摩。

三、污水下水道發展

107年度「污水下水道第五期建設計畫」編列124.59億元持續推動用戶接管建設，截至107年底，公共污水下水道用戶接管普及率為33.72%，用戶接管戶數為294萬5,984戶，整體污水處理率為58.21%；持續推動公共污水處理廠放流水回收再利用，以達下水道永續資源利用，鳳山溪污水處理廠放流水回收再利用示範案於107年8月完工通水，為全國首座污水再生利用廠，每日可提供2.5萬CMD再生水予臨海工業區，後續將持續推動公共污水處理廠放流水回收再利用，以達下水道永續資源利用的目標。

四、提升公廁環境潔淨品質及舒適度

推動公廁特優場所認證制度，結合「衛生紙丟馬



▲圖 15 鳳山溪再生水處理廠 RO 處理單元



▲圖 16 鳳山溪污水處理廠暨再生水處理廠



▲圖 17 新北市八里區挖仔尾沙灘聯合歐盟淨灘

桶」政策，至107年度共有738個公廁管理單位獲得認證；推動公廁認養，計有132間企業認養公部門公廁；辦理9場次優質如廁文化教案推廣種子教師訓練課程；補助19個縣市修繕或新建305座公廁。透過各項措施逐步達到公廁「不髒、不濕、不臭」三不原則目標，至107年底全國「特優級」列管公廁比率達78%。

五、積極推動海岸認養

107年度計有409個認養單位、認養海岸長度553.676公里，認養單位辦理淨灘活動1,258場次，動員4萬8,614人，共計清理631.88公噸垃圾。

六、協助開發中國家推動改善水與衛生相關計畫

協助史瓦帝尼王國（Kingdom of Eswatini）改善Ntfontjeni社區供水與衛生，及在8間偏鄉學校裝設太陽能抽水系統。



▲圖 18 協助史瓦帝尼王國（Kingdom of Eswatini）8所中學架設太陽能抽水系統

七、強化管理化學物質，減低不當流入食品的風險

（一）於106年9月26日首批公告13種化學物質為第四類毒性化學物質，復於107年6月28日公告包含蘇丹色素等14種可能非法添加於飼料或食品中的

色素，運作業業者需特別在容器包裝上標示「禁止用於食品及飼料」字樣，並定期申報紀錄，取得核可文件後始可運作等相關管制措施，以減少流入食品的風險。

(二) 於106年優先以57種食品安全風險疑慮化學物質，推動化工原(材)料販售業輔導訪查，完成3,117家次，於107年持續輔導訪查，完成3,140家次，且擴大輔導範圍至蛋農、飼料業，完成193家次輔導及18場次說明會，提升業者自主管理，防堵非食品添加物化學物質流入食品鏈的風險。

八、全國底泥品質定期監測

涵蓋41個水體管理單位、10個目的事業主管機關於103年至107年底提送507處(含自主申報46條灌溉渠道)水體之底泥採樣計畫書，備查比率分別為河川100%(83條)、水庫100%(91座)及灌溉渠道100%(299條)；完成水體底泥品質資料備查率分別為河川30.7%(27條)、水庫55.4%(51座)及灌溉渠道68.2%(204條)。

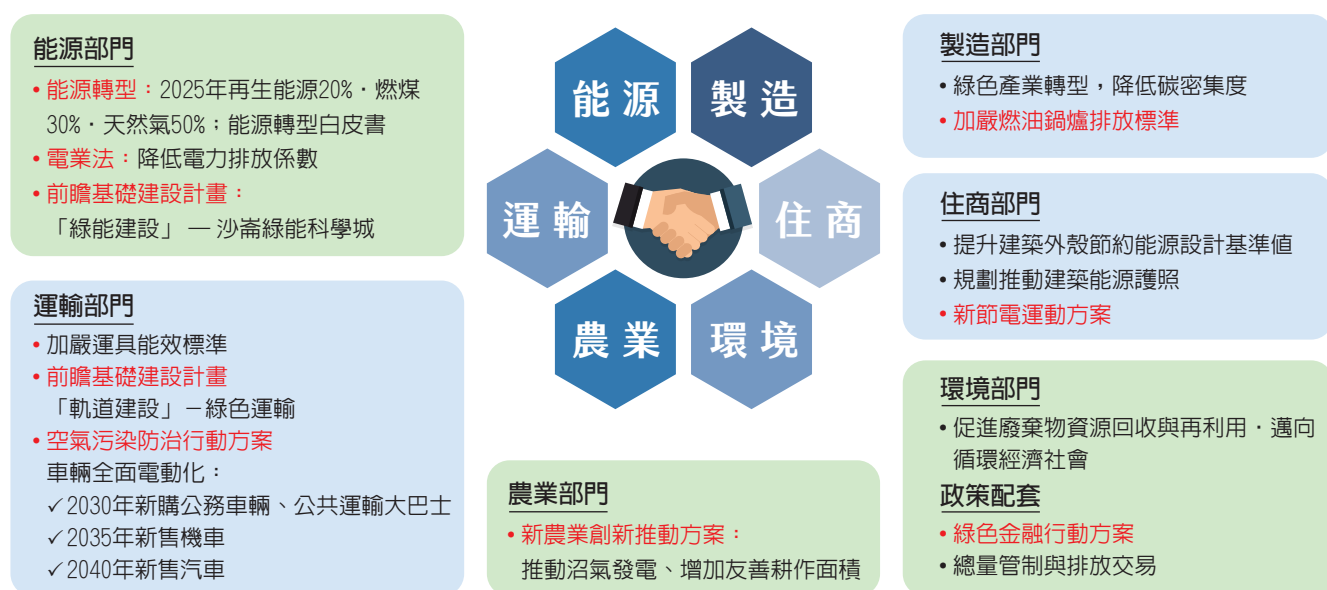


▲圖 19 推動「環保署化學局與新北市衛生局聯合稽查」

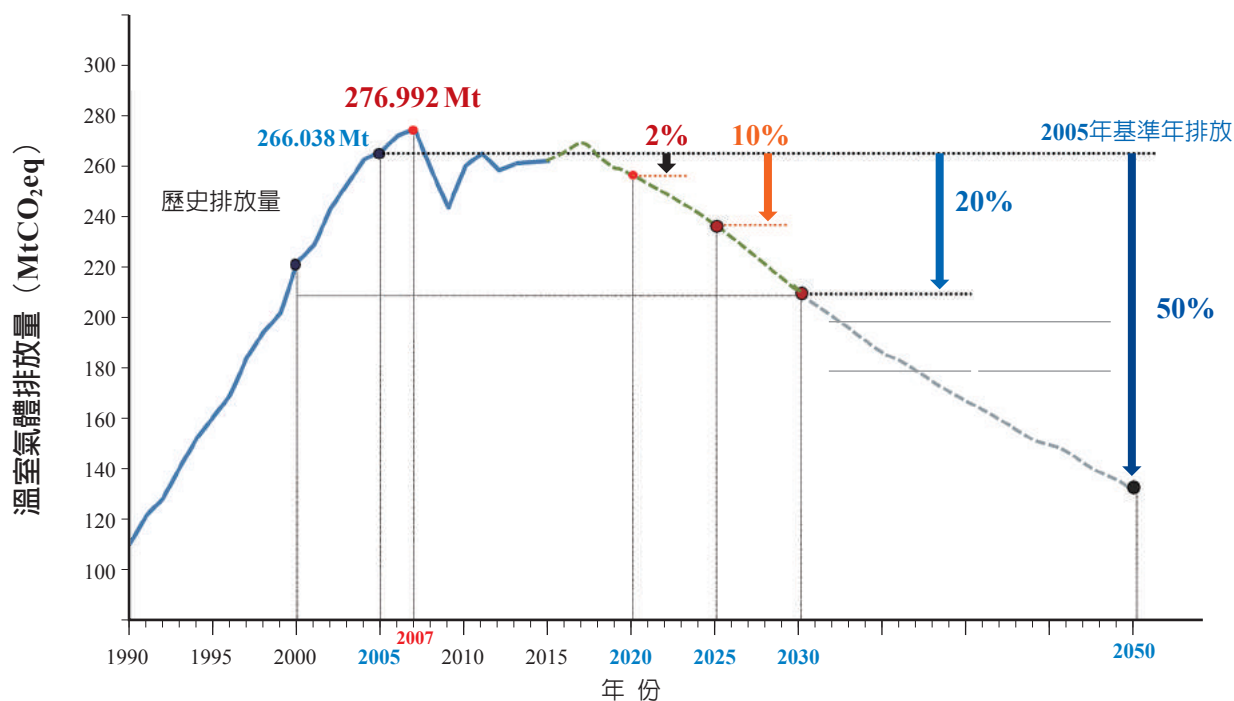
捌、氣候變遷與能源減碳專案小組暨非核家園推動專案小組

一、六大部門減碳具體行動出爐

於107年10月3日核定我國能源、製造、運輸、住商、農業及環境等六大部門「溫室氣體排放管制行動方案」，明訂各部門於107年至109年之減碳具體行動，搭配我國109年(西元2020年)溫室氣體排放量較基



▲圖 20 六大部門行動方案減碳策略



▲圖 21 溫室氣體減量目標路徑

準年94年（西元2005年）減量2%的第一期溫室氣體階段管制目標，共同勾勒國家整體減碳策略藍圖。

二、第一期溫室氣體階段管制目標

107年1月23日核定我國第一期溫室氣體階段管制目標，採先緩後加速之減碳路徑，設定我國溫室氣體排放量至西元2020年較西元2005年（基準年）減量2%，溫室氣體淨排放量降為260.717百萬噸碳當量，至2025年相較基準年再減量10%。

三、召開非核家園第3次會議及第4次會議會前會

為落實我國環境基本法所訂逐步達成「非核家園」目標，非核家園推動專案小組已於107年召開第3次會議及相關會前會議，針對「『低放射性廢棄物最終處置設施場址設置條例』修法芻議」、「『二期乾貯之規劃與推動現況』與『集中式貯存場』構想與初步規劃」、「能源教育及宣導工作辦理情形（含非核家園相

關議題）」、「社會除役議題之概念說明」、「接洽用過核燃料乾式貯存實績廠家來臺及至國外參訪核廢設施之辦理現況」、「蘭嶼貯存場遷場及集中式中期貯存場規劃」、「台灣電力公司除役總顧問案之『招標規範』及如何訂定遴選『採購評選委員』標準」等議題進行討論。

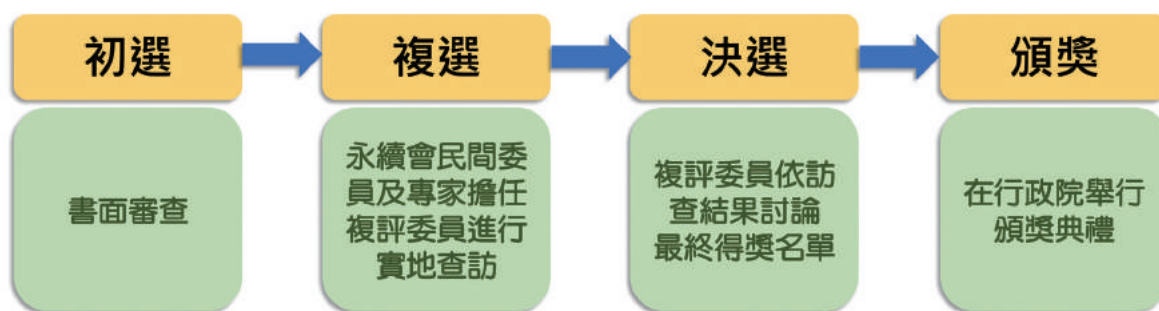
四、臺灣永續發展目標－核心目標18之修正

配合107年11月24日公民投票結果，以行政院永續會第31次委員會議決議修正臺灣永續發展目標之核心目標18，修正為「逐步達成環境基本法所訂非核家園目標」，下設4項具體目標即：具體目標18.1「依法推動核能電廠除役」、具體目標18.2「持續推動『低放射性廢棄物最終處置設施』選址作業，蘭嶼貯存場儘速順利遷場」，具體目標18.3「推動『高放射性廢棄物最終處置設施』法制作業，協助核能電廠完成除役」、及具體目標18.4「加強核能設施安全防護」。

壹、國家永續發展獎簡介

永續會為鼓勵全民參與永續發展推動工作，落實永續發展在地化及生活化目標，實現國家永續發展願景，特訂定《國家永續發展獎選拔表揚計畫》，表揚推動永續發展績效優良、表現卓越之學校、企業、民間團體及政府機關。

評選方式包括初選、複選及決選三階段，參加者報名投件後，經永續會委員及專家組成評審團依評選標準進行書面審查初選，再針對進入複選之參賽者進行實地訪察，以決選當年度得獎單位，並在行政院舉辦頒獎典禮表揚之。



▲圖 22 國家永續發展獎評選表揚流程

貳、106年國家永續發展獎評選結果

「107年國家永續發展獎」共選出12個得獎單位，彙整如下表：

表 1 107年國家永續發展獎得獎單位一覽

類 別	得獎單位	類 別	得獎單位
教育類	長榮大學	民間團體類	社團法人台灣信德蓮池功德會
	慈濟大學		財團法人水源地文教基金會
	新北市米倉國民小學		財團法人環境與發展基金會
企業類	阿原工作室股份有限公司	政府機關類	內政部營建署-內政部公共污水處理廠放流水回收再利用示範推動方案暨前瞻再生水工程 推動計畫
	崑鼎投資控股股份有限公司		行政院農業委員會林務局－桑田變滄海：成龍溼地的里海行動
	遠東百貨股份有限公司		交通部高速鐵路工程局－臺灣桃園國際機場聯外捷運系統建設計畫

參、得獎單位永續成果集錦

一、教育類

(一) 長榮大學



▲圖 23 長榮衍生企業 - 方舟美好生活事業

1. 單位簡介

長榮大學秉持「敬天、愛人、惜物、力行」的核心價值，以「全人牧育、長榮永續」願景出發，採取「全人牧育」、「適性揚才」、「產學精實」、「國際參與」、「校園永續」、「社會責任」、「組織精進」及「智慧校園等」八大策略，建構學生學習優質的環境以及落實校園永續，致力提升卓越教學品質、營造學習環境、推動環境教育、落實社會責任及創新產學研究，並朝向深耕在地、連結國際、成為社會責任 領航大學之目標邁進。

2. 永續發展工作推動現況

長榮大學創設本於基督耶穌救世愛人之精神，以「虔誠、勤奮、榮譽、服務」之校訓，培養具有「敬天、愛人、惜物、力行」之博學宏才，胸懷國家、貢獻社會、服務人群，務期實踐辦學之異象與使命，從教育本身肩負起社會責任，更以聖經「馬太福音第二十章 1-16 節—葡萄園工人」之比喻，作為「社會公義」之立基根源與發想，將持續承擔弱勢生、資源生、原住民生、新住民子女生的關懷照顧與培力，並在課程教學、研究計畫、產學合作、諮詢服務、社區工作等層面進行

積極有效的參與，希冀將社會公義理念及行為透過研究、教學與服務的耕耘散播到社區、生態環境甚至國際上的每一個角落。

長榮大學以公義、責任、關懷辦學，期望成為優質的國際化基督教大學，與多家產業簽訂產學結盟合約書或企業家族合作備忘錄，讓學生可至產業實習，有系統輔導學生考取職業證照及參加雇員考試，協助學生未畢業、先就業。長榮大學校友會全國總會與教育部、勞動部勞動力發展署雲嘉南分署、臺南市政府勞工局等單位協同辦理徵才博覽會，提供畢業生求職機會，也鼓勵大一至大三之學生參加，藉此了解產業趨勢、拓展視野，及早為職涯作準備，減少學用落差，也勉勵同學跨域學習，展現勇氣跟自信，培養挫折忍耐力，努力付出的同時善用政府資源，創造未來。

長榮大學邁向國際綠能大學與永續校園的一大步，大一共同必修課程翻轉教學型態，帶領學生走出教室行動學習，利用廢棄報紙和寶特瓶做成一塊塊紙磚協力造屋，一起建構一座真正蘊含環保精神的生態教育中心，成為全台大學首座紙建築，落實環境教育「學中做、做中學」的精神，讓學生在實踐中學習環境保育是知識與行動的結合，意志與耐力的展現。長榮大學校長李泳龍

表示，長榮大學永續校園的精神與環保教育結合，服務學習除維護環境整潔，更進一步連結教育與實作的功能，紙磚造屋可以教導學生開創思維，實踐對土地的尊重，資源的運用，建立愛護環境的倫理觀與價值觀。

3. 未來發展願景藍圖

中長程校務發展以「深耕在地、連結國際、成為社會責任領航大學」為目標，致力於「長榮永續」的使命願景。首先在環境面向部分，長榮大學鄰近二仁溪，於2002年起參與河川巡守、污染整治與生態復育，巡守志工隊的發展從學校師生擴散至社區居民；在社會面向部分，以社區共好為本，認識社區聚落生活及深入了解社區需求，攜手合作活化社會產業，共同創造「區域價值」，於2017年與尤努斯基金會合作成立「長榮大學尤努斯社會型企業中心」，積極培養社會型企業人才，落實社會公義與社會責任使命。在經濟面向上，配合行政院發展沙崙智慧綠能科學城政策，多次與產、官、學、研專家及社區居民討論，以共同推動在地創生與循環經濟為目標。亦已於2017年成立南臺灣第一家具尤努斯精神之社會型衍生企業「方舟美好生活事業股份有限公司」，落實永續發展目標。

(二) 慈濟大學

1. 單位簡介

鑑於東部地區醫療與相關專業人才缺乏，民衆就醫不便，身處教育資源弱勢，慈濟大學創辦人證嚴法師立願以「提升東部醫學水準，為社會培育優秀醫護人才，增進全民福祉」為宗旨，於西元1994年創設「慈濟醫學院」，迄於2000年8月改名為「慈濟大學」，同時設立附屬中學與實驗國民小學，成為具備幼稚園、小學、中學、大學、碩博士班完整教育體系之完全化教育大學，實踐「慈悲喜捨」辦學理念，培育落實「人本」、

「大愛」、「感恩」、「尊重」、「關懷」等慈濟精神之教育理想。

2. 永續發展工作推動現況

慈濟大學雖屬規模較小及以醫學教育為主之專業性大學，卻同時在促進環境、社會融合、經濟、永續人文關懷、社區參與、永續課程教學及校園等面向有豐碩成果，硬體面有高綠覆蓋率校園環境及豐富的環保設施，包括：大面積連鎖磚、具儲水之筏基建築、中水回收、



▲圖 24 整合人文教育的模擬醫學教學課程

熱泵、太陽能及風力發電、T5與LED省電燈具、省水設備、綠屋頂、環保教育站…等等，並配合國家節能政策二校區設置智慧節能系統，成就安全、友善與智慧的綠色校園；教育面開設與地方及文化相關之全球永續課程、具人文特色之大體解剖模擬醫學課程，及為培養學生具利他人文精神的服務學習課程等，在各方面均有優異表現。

3. 未來發展願景藍圖

在創辦人－釋證嚴法師及董事會明確之理念指導與支持下，慈濟大學自創校以來便將「永續」作為校務發

展之核心，王本榮校長帶領團隊規劃出具有策略性及系統性之永續發展架構，訂出具體與明確的目標及相關實踐計畫，透過建置永續環保設施、系統與管理，建立安全的校園與衛生環境；教育面則規劃具人文及永續特色之課程，積極鼓勵師生投入參與社區、關懷社區及服務學習課程等，以多面豐富性、多層次性及深度性發展為經緯，清楚建構由「多點」成「線」，由「多線」成「面」的永續「立體同心圓」架構，希冀發展成為慈濟人文與學術專業薈萃之永續典範大學，培養出更多具備重視利他人文精神與關懷社會、造福人群等術德兼備的專業人才，對社會、人類及地球之永續做出貢獻。

(三) 米倉國小



▲圖 25 畢業生必須完成小小鐵任務

1. 單位簡介

新北市八里區米倉國小位於觀音山腳、淡水河畔，為一生態環境、歷史人文多元豐富之校園，學校小而精緻，以環境永續、資源永續、世代永續為學校推動永續發展之目標，長期深耕環境教育，並屢獲新北市、教育部等多項獎項。在環境營造部分，積極打造一個節能減碳、永續樂活、生態保育的美感校園；在課程與教學部分，以學生為主體，強調實作體驗，讓學生的學習與其生活相連結，從外來種的移除、海洋教育、防災教育及

食農教育等，共同以行動關懷、保護自己生活的地方；在生活環保與行動部分，喚醒師生環境意識，以實際行動在生活中落實環保；在社區參與部分，建構米倉為社區的學習中心及文化傳承之樞紐，除為八里區樂齡學習中心，規劃多元豐富的課程提供社區長者樂活學習外，更鼓勵學生以行動關懷社區老人，如：至養老院進行陀螺等童玩特色課程表演、至愛維育幼院進行清潔打掃之服務學習、年度淡水河岸淨灘、低碳園遊會等，都是讓米倉學生走出校園共同關懷社區環境的實踐行動。

2. 永續發展工作推動現況

米倉國小著重學校政策與空間管理，推動：

- 建立校園環境政策與管理制度，培養師生正確環保觀念。
- 規劃、設計環保生態校園，推廣環境生態化及環境美學。
- 讓校園營造回歸「以學生為主體」，鼓勵全校式營造。

且積極進行永續發展課程教學：

- 鼓勵教師運用在地環境資源自編教材及學習單融入教學。
- 辦理環保戶外教學、參觀講習、研討、環保競賽等活動。

此外，並促進學生進行人文關懷及社區參與：

- 為八里樂齡學習中心，提供社區樂齡長者上課。

- 辦理養老院、愛唯教養院學習活動，鼓勵學童與長者互動。
- 每年帶領學生、校友會及社區居民辦理至少2次淨灘活動。
- 創意結合社區資源資產，營造學校多元特色。

3. 未來發展願景藍圖

因應全球化與永續發展趨勢，近幾年米倉國小以「World米倉，Keep Going」為願景，持續挹注永續發展努力，關注環境、資源、世代、國際觀等永續面向，深耕永續教育，促進學子成長茁壯的同時，也擴大連結使米倉國小成為社區學習中心。

二、企業類

(一) 阿原工作室股份有限公司

1. 單位簡介

阿原工作室於2005年在萬里區的小漁村創立阿原肥皂品牌，以青草藥手工皂為起點，率先以台灣青草藥為主題跨入市場，融合東方養生哲學思維、秉持愛惜人參與善待環境的理念，致力實踐土地倫理與整合社區總體營造的價值力量，將有溫度與文化的工藝感動延續。

2. 永續發展工作推動現況

阿原成立以來致力於「土地倫理」與「勞動力美學」為企業文化實踐，貫徹「文化再生」、「地方創生」、「經濟共生」的企業目標，以採取高密集手工來達到低耗能、高再生、少材料、無排放、全分解的製

作，提高就業機會並創造勞動力價值，並將植物藥草從一級原料與二級加工升級到三級生技技術應用，使其廣效性徹底發揮，產品達到最友善的療效境界，再從藥草手作皂延伸至油、液、霜、乳、膠等各種型態護膚商品，成為全球首家在粧品類別的企業也產製牙膏和茶飲的文創生活品牌。

阿原秉持CSR精神，持續在供應商合作、製造商管理、創新服務、商品內涵、社會議題、環境保護、社會關懷等方面，締造傳統地方產業的附加價值與社會責任，實踐「共工」、「共創」、「共生」、「共好」的企業格局。2016年復成立「江榮原教育基金會」執行推動多元有利於心靈管理、環境共生、精神美育的人格工程。



▲圖 26 阿原農場 - 天生天養自然態度

阿原於2018年底在世界各地已超過500多處銷售據點，遍及亞洲與歐美，從草地狀元到國際美學的創意整合，在鄉下製造，到一級城市行銷，致力於正面有效地將台灣的植物特色、風土文化，經由產品加值，推廣到全球。

3. 未來發展願景藍圖

阿原期許做為世界最有文化深度的藥草台灣品牌，承續社區總體營造精神，具體從市場營銷產生改善環境和日常生活的實質收益。由於經濟收益改善，青年返鄉

不會淪為痴夢，社區共榮由口號變成產業，永續價值藉由管理進化達成慣性實踐。2017年因此在北臺灣濱海郊區石門購置一塊土地以「北海明珠」為名，起造集藥草研發、品牌發展、就業聚集、慈善公益的手工肥皂創生基地，阿原相信永續共好是轉動現代經濟價值的新解，以永續關鍵四力「共工、共創、共榮、共好」作為目標，用「生產、生態、生活、生意」作為實踐策略，致力將創生經濟精神推廣、複製到世界各地經濟市場，使其效益發揚光大。

（二）崑鼎投資控股股份有限公司

1. 單位簡介

崑鼎投資控股份有限公司於1999年在臺灣臺北市成立，提供資源循環產業相關之專業投資與營運服務，以開發及經營再生能源、再生物質及再生水等循環經濟為發展重心。旗下子公司各具環保綠能相關產業專長，包含：環保與機電設施營運維護、焚化發電廠特許經營（PPP）、廢棄物管理、資源回收及太陽光電等領域，服務對象涵蓋大中華區、東南亞、印度及美國的公部門及私人企業，提供全方位的服務，包含：焚化發電廠特許投資及營運、廢棄物及資源回收管理、寶特瓶再利用及清洗切片整廠供應、太陽光電廠開發及投資等。



▲圖 27 太陽光電建置情形

2. 永續發展工作推動現況

崑鼎公司為全球工程服務領導者CTCI集團旗下成員，民國88年成立，已在台灣、中國、澳門、美國等地成立關係企業，提供資源循環產業相關的專業投資與營運服務，並以再生能源、再生物質、再生水等循環經濟的開發經營為發展重心。崑鼎旗下子公司橫跨環保與機電設施營運維護、焚化發電廠特許經營（PPP）、廢棄物管理、資源回收升級及太陽光電等環保綠能產業。民國106年發表「ECOVE」品牌進軍國際，同時建立內在核心價值，帶給員工認同感及社會價值，提升營運效能、智能化、系統化及社群合作，目的要將服務領域結合自然環保及生態綠能，透過技術整合運用使有限資源成為永續資源。

善盡企業社會責任是崑鼎公司秉持的目標，除長期致力於本業精進外，對社會參與也不遺餘力。鑑於環境保護需要運用環境教育及環境傳播管道促進公眾參與，崑鼎公司旗下多個據點通過環境教育設施場所認證，並結合中鼎教育基金會長期耕耘環境教育，主動至全臺灣各小學教導永續生活方式；崑鼎公司體認到確保員工安

全健康為企業運作重要的一環，提供一切必要資源建構與維護本質安全的工作環境，更以把員工放第一的精神與表現，榮獲國家職業安全衛生獎企業標竿獎肯定。於106年時，崑鼎公司透過第三方查核認證，取得全球首張BS 8001循環經濟標準查核證書，顯示營運具備最佳之回收使用率及循環效能，在資源管理、環境和社會效益等面向獲得最優異等級的評價，永續發展也成為崑鼎公司在聯合國永續發展目標（SDGs）時代的首要經營之道。

3. 未來發展願景藍圖

崑鼎公司之未來發展重點在於實現SDGs，成為「最值得信賴的永續資源循環領導者」。以「精進技術整合運用」及「優化資源循環效能」為使命，並以品牌標語Every Resource Counts（珍惜每一分資源）作為作業模式與思考準則，透過智能系統與數據管理方法提升資源循環效能，同時積極參與環保政策議題及社群合作，承諾將SDGs納入藍圖發展策略，結合事業與志業，持續為地球資源永續及人類生活環境努力。

(二) 遠東百貨股份有限公司



▲圖 28 遠百綠建築企業總部佇立於新北市

1. 單位簡介

遠東百貨在地耕耘超過50年，秉持「取之於社會，用之於社會」的精神，在追求企業經營的同時，也為臺灣經濟、環境、社會的永續發展而努力，打造經

濟、環境、社會三贏的永續成長模式。走過半世紀的經營，遠東百貨不僅是臺灣歷史最久、唯一上市的連鎖百貨公司，也是臺灣營業總額第一的百貨零售集團，旗下事業版圖橫跨百貨公司、量販店、頂級超市、及購物

中心等業態，於兩岸有50個營運據點，成為兩岸最獨特且最完整的大型零售集團。遠東百貨輝煌的成長歷史中，不僅首創超市與百貨合併營業的經營新模式，也是臺灣第一家規劃「年中慶」促銷與舉辦「國際商品展」的百貨，2011年開幕的新世代店（板橋大遠百、臺中大遠百）更成功開創「百貨型購物中心」的商場型態，帶動臺灣百貨業發展的蛻變及提升。未來，遠東百貨將持續求新求變、創新經營，運用數位科技升級消費體驗，引領零售價值升級，與大眾分享美好時光，創造美好生活，成為永續經營的零售領導品牌，與社會共榮共好、共同成長。

2. 永續發展工作推動現況

遠東百貨走在環保最前線，以科技結合時尚與環保，打造綠色商場，實踐環境永續理念。近五年累計節電量達3,300萬度，減碳效果相當於67座大安森林公園一年的吸碳量、認養路樹綠地424坪、每月平均舉辦3

場環保教育活動，送出5.6萬份環保生活禮、購物紙袋皆為通過FSC雨林認證的環保紙袋、推動包裝減量，2017年每一筆交易包裝耗材減少16%。全臺10店發揮公益資源平台力量，舉辦公益活動超過300場，更連續9年舉辦聖誕公益點燈，關懷超過1500位偏鄉兒童，員工也展現遠百人的關懷精神，自發組成志工隊參與掃街淨灘，親身實踐環保、服務社會，用愛串連美好生活。

3. 未來發展願景藍圖

遠東百貨在地耕耘51年，秉持著「創新求變」的精神，追求卓越的公司治理，並以「回饋社會」作為企業永續經營的基本價值，打造「經濟、環境、社會三贏」的永續成長模式。面對新零售浪潮，遠東百貨將善用科技，發展數位零售大未來，同時成為雙E成長型企業，透過營運策略及管理創新，提高EPS獲利能力，並在EGS上善盡社會責任，領航百貨業邁入永續發展新時代。

三、民間團體類

（一）社團法人台灣信徹蓮池功德會

1. 單位簡介

信徹禪寺開山住持徹宗法師於民國68年創立信徹禪寺，於民國72年5月30日成立信徹寺蓮池慈濟會，以發揚傳統慈悲濟世美德，幫助社會貧困民眾，輔導關懷增進身心健康，建立正確人生觀，協助政府辦理各項慈善、公益、文化、教育、就業培力等工作，促進社會安定與和諧，淨化人心為宗旨。

2. 永續發展工作推動現況

（1）社會關懷：

台灣信徹蓮池功德會之宗旨為辦理各項慈善、公

益、文化、教育及就業培力等社會服務性工作，以常住法師帶領專業社工及發心同願同行的志工們，共同深耕民間各地區需要照顧及培力的族群，如：新住民姐妹、新住民第二代、樂齡長輩及台灣弱勢族群；接受政府委辦之兒童照顧關懷據點、新住民家庭服務據點與前鎮區長輩關懷據點等三大據點為主軸的服務。

（2）公益方面：

長期配合公部門辦理兒童青少年、婦女、新住民、長輩等弱勢家庭服務，如：新住民牛角鬆筋培力、法印青少年管樂團培力、長照班就業人員培力與相關社福團體、企業社團、校園等合作，並參與國際性文化藝術交



▲圖 29 法印青少年管樂團

流及非洲兒童救助及就學等等公益事務。

(3) 文化教育：

定期辦理志工佛學研讀班課程，以及辦理臺灣各佛學院、大專院校、高中、國中、國小的獎助學金頒獎活動，肯定其用心學習結果；帶領法印青少年管樂團學員參與暑期兒童生活夏令營小隊輔活動培力；積極促進新住民及新二代多元文化融合，如透過推動各大節慶活動讓臺灣人民也能更了解東南亞各國習俗；以長期所培力的長輩、新住民姐妹及兒少青少年，共同協力完成社會福祉活動。

(4) 志願服務：

台灣信徹蓮池功德會自民國72年成立以來，不斷投入志願服務工作，深耕志工教育培力，目前內政部立

案志工高達358位，其中140為定期個案訪視組志工，其它志工分別以醫療組、兒少組、新住民組，依不同組別培力不同專業的服務。

3. 未來發展願景藍圖

台灣信徹蓮池功德會以發揚傳統慈悲濟世美德，幫助社會貧困民眾，輔導關懷增進身心健康，建立正確人生觀，協助政府辦理各項慈善、公益、文化、教育、就業培力等工作，促進社會安定與和諧，淨化人心為宗旨。以弘法推展個人和群體間身心淨化的落實，使學術性與通俗性相融合；對延續正法的僧團及培育學僧之護持，使得社會淨化的功能得以根源不絕；社會資源的有效運用，與各慈善友會密切結合，以提高服務層面，並擴展心靈輔導和技能方面的培養與服務；開展文化、教育工作，俾使佛法編音廣澤群生。

(二) 水源地文教基金會

1. 單位簡介

水源地文教基金會於87年成立，91年建立臺中太平頭汴坑工作站，從事921重建區社區總體營造及生態復育等工作，努力使頭汴社區經濟復甦、促進當地農業與社區繁榮，及推動環境教育及生態保育之永續發展。水源地文教基金會本著對鄉土人文的關懷，以社區總體營造的理念為出發點，從現在可以做的事開始，繼續守護賴以生存的自然環境，透過挖掘傳統人文與環境寶藏，促進與不同文化團體交流，以及與弱勢相互扶持，推廣具社會教育的文化活動，培育種籽義工，為下一代塑造富活力的文化、歷史及健全的自然環境。

2. 永續發展工作推動現況

水源地文教基金會於93年提出「蝙蝠洞復育計畫」，重新打造、美化周圍環境，十年間努力恢復安靜的蝙蝠棲息環境，蝙蝠群逐漸於103年返回蝙蝠洞，再度成為社區亮點。於此同時水源地文教基金會規劃「蝙蝠生態教育課程」向民衆解說蝙蝠的生態保育與環境教育，提升公民學習意識。

文化傳承與創新亦為亮點，水源地文教基金會長期與在地的東汴國小配合植栽消失的大菁藍草，同時提供社區婦女及弱勢族群穩定的就業環境，研發推廣「太平藍」，多年來在文化部之支持下，不斷向世界各地推廣「太平藍」工藝，包括：參加泰國曼谷國際工藝展，日

本東京家居生活設計展，法國巴黎家具家飾展、杭州文博會、四川旅博會、廈門文博會等商展，並在新加坡國際家具家飾展中獲得最佳裝飾獎之榮譽，為臺灣爭光，太平藍所設計出來一系列最新生活居家用品，不但打破了一般人對藍染產品刻板的印象，更突破了傳統藍染僅能在布面上創作的傳統思維，多年不間斷的努力終於綻放亮麗成績。

3. 未來發展願景藍圖

水源地文教基金會在臺中太平頭汴坑奮鬥將近20年歲月，從蝙蝠復育、社區營造到太平客家藍染社區產業的復甦及努力，每一個階段都備嘗艱辛，藉著客家人的硬頸精神，水源地團隊不斷向前邁進，終於開花結果，全體同仁將不斷向上向善，提昇正面能量展現，提升永續價值。



▲圖 30 國際工作營整理荒地種植藍草

（三）財團法人環境與發展基金會

1. 單位簡介

環境與發展基金會係於86年由工業技術研究院全額捐助，以技術轉移方式設立之環保專業團體，專業技術人員均為具有環工、化工等工程與科學相關背景者，再輔以行政、資訊、財務等人員，多年來持續與國內外許多環保專業機構皆有密切的合作。此外，擁有工業技術研究院龐大之技術專家群作為後盾，亦為基金會之一大特色。

2. 永續發展工作推動現況

環境與發展基金會係以循環經濟為主軸，承接公民營機構委託之各項技術服務，包括：產業製程改善源頭減廢與節能節水、資源再生技術開發、綠色產品驗證、以及綠能低碳城市（社區）之推廣等。

在產業節能節水方面，自102年起持續協助產業界提升用水效率，累計輔導逾500家大用水廠商，年節水量超過4,300萬噸；在資源再利用技術方面，推動各種再生綠建材開發、廚餘與有機廢棄物能資源利用；在綠能與節電技術方面，扮演中央與地方橋樑，協助民衆與企業者尋求節能減碳契機，並推動鄉鎮與村里社區之低碳認證，與7個縣市政府合作打造低碳綠能永續家園；在標章驗證方面，已帶動全國每年約700億元之綠色產品採購商機，並與國際接軌，展現我國綠色競爭力。

3. 未來發展願景藍圖

環境與發展基金會成立初期以促進環境保護與經濟發展之專業技術服務團隊為宗旨，中期擴充至綠能及資源有效利用，長期則以成為政府智庫、產業夥伴及民衆導師為全方位之發展目標。

在政府智庫方面，基金會積極協助相關法規政策研擬、建立綠色標章驗證制度與推動綠色採購等；在產業服務方面，輔導各公民營企業污染改善、節能節水、清潔生產技術以促進產業發展；在民衆教育方面，則持續帶動社區民衆節能減碳，並積極參與公益活動。

基金會之發展願景與國家的永續發展目標完全一致，未來將以維護環境正義、推動經濟發展、開創民生福祉為三大目標，與產官學各界共同努力，打造台灣成為低碳、環保、幸福之永續家園。



▲圖 31 推動有機廢棄物能資源利用

四、政府機關類

(一) 內政部營建署

——公共污水處理廠放流水回收再利用示範推動方案暨前瞻再生水工程推動計畫

1. 計畫簡介

內政部營建署為加值污水下水道建設效益及達到水循環經濟目標，刻正致力推動「公共污水處理廠放流水回收再利用示範推動方案」，其為考量具備放流水回收再利用條件之污水處理廠，再評估鄰近具較高經濟產值的用水端後，將已營運的臺中市福田廠、臺南市安平廠、高雄市鳳山溪廠，與建設中的臺中市豐原廠、臺南市永康廠、高雄市臨海廠共6座處理廠列為示範案例，併同「污水下水道第五期建設計畫（104年-109年）」以152億預算推動執行。



▲圖 32 用戶接管完成後巷美化

2. 永續發展工作推動現況

示範方案完成後預估可回收產出28.0萬噸/日之再生水量（約等同於120萬人的每日用水量），其所需總經費為151.627億元，另為擴大再生水推動效益，亦在前瞻基礎設計畫中挹注水再生經費13億元，辦理臺中市水滴水資源回收中心再生水工程、高雄市臨海再生水取水管線工程，將可增供3.3萬噸/日再生水，使計畫資源對齊加速地方再生水基礎建設及支持區域發展。本計畫目的在推動公共污水處理廠放流水供應工/產業使用，以穩定旱季時用水需求，針對使用端不同水質需求建置再生水廠發展供水科技。目前除供給工業區外也首

創全球供應高科技晶圓產業用水先例，更針對整體污水處理廠及再生水廠做整體環境友善評估，使污水處理廠結合水科技及環境教育等前瞻議題，營造永續水環境。

3. 未來發展願景藍圖

本計畫未來除了持續就現有污水處理廠持續評估再生水供應之可行性外，也透過污泥減量及再利用計畫補助各地方政府，使我國污水廠逐漸邁向新世代，具有多面向跨域加值之可能性，達成轉型翻轉之願景，以符合循環經濟前瞻政策目標。

（二）行政院農業委員會林務局

——桑田變滄海：成龍溼地的里海行動

1. 計畫簡介

農田生態體系因農田開發轉作非農業用途與慣行農法之盛行，使許多原本生活在平原淺山區之動、植物失去繁衍環境。98年底發生臺南官田水雉誤食摻農藥稻穀大量死亡事件，促成農委會林務局（簡稱：林務局）發展出一套兼顧生產和生態之行動方案，即「農田生態保育營造一綠色保育標章認證」計畫，進而輔導農民採取不使用農藥和化學肥料、對環境友善之農法耕作，並設計「綠色保育標章」供消費者辨識，鼓勵消費者購買友善農產品。

2. 永續發展工作推動現況

（1）社會面

雲林縣口湖鄉面臨人口外移、過疏化等情況，為凝聚三代情誼，培養村民自主關懷社區議題、參與公共事務的能力，本計畫執行「少年偵探一國高中生社區服務學習方案」、「社區廚房」、「社區環境解說員培訓」等，以及「蝦董ㄟ 腳厝一成龍溼地說書館」作為沿海低窪地區住宅防洪、高齡友善空間、節能綠建築的展示解說場所，讓當地居民對長期生態休耕及成龍溼地生態園區的觀念產生認同。

（2）環境面

成龍溼地經過多年的棲地復育，鳥類從98年的28科86種，增加至今36科118種，今年1月普查發現有40隻以上的黑面琵鷺選擇在成龍溼地過冬。其他還有17種魚類、6種蝦類、7種蟹類及螺貝類。

（3）經濟面

推動「不抽地下水實驗魚塭」，推廣海水生態養殖文蛤、白蝦等，由不抽地下水養殖戶共同集結而成立「成龍溼地鳥仔區生產班」，致力於以友善環境的方式，孕育出「鹽」選品質的好食材，翻轉劣勢、為地方產業加值，協助共同品牌經營行銷並建立與社區之產銷合作模式。

（4）文化面

- 透過舉辦「成龍溼地國際藝術節」拉近社區民衆與濕地生態的連結，強化社區居民對於生態、及環境的認識與認同。
- 修繕成龍村的老屋，活化作為社區活動的主要聚會討論場所及展示空間，凝聚社區居民共識與向心力。
- 「用影像說故事」紀錄片工作坊，以成龍村的改變為主題，延伸生態、歷史、養殖等議題，培養社區紀錄能力，完成3部社區紀錄片，及成龍溼地國際環境藝術節的成果紀錄影片。



▲圖 33 成龍社區發展協會創作作品一再生

（三）交通部高速鐵路工程局

——臺灣桃園國際機場聯外捷運系統建設計畫



▲圖 34 高橋墩水保區橋梁結構完成情形

1. 計畫簡介

臺灣桃園國際機場聯外捷運系統建設計畫之首要建設目標係將國家門戶（桃園國際機場）與北部地區重要的交通樞紐－臺北車站及高鐵桃園站連結，提供航空旅客快速、停站少的直達車，並提供市區預辦登機及行李託運之加值服務，旅客可以事先於臺北車站託運行李，並取得登機證；另一個建設目標則是配合沿線都市發展，帶動地方繁榮，提供每站停靠的普通車以服務通勤旅客，均衡城鄉發展。

2. 永續發展工作推動現況

機場捷運首創國內捷運之綠建築規劃，取得國內第一座捷運車站綠建築標章，其中除臺北車站（A1）

站及第二航廈（A13）站因基地條件限制不需取得綠建築標章，其餘19座車站均取得綠建築標章，體育大學（A7）站更取得銀級綠建築標章，尤為殊榮。

施工階段，僅計1個施工標6年之減碳成效，即相當於197座大安森林公園1年減碳量，本計畫共有10標故其減碳成效更顯著。營運階段之減碳成效方面，預估至民國123年每年減碳成效更可達相當於83座大安森林公園1年減碳量。本計畫通車營運迄至107年10月底止，累積搭乘旅客達3,620萬人次，平均每日運量達62,033人次，列車準點率達99.5%以上，提供國內外旅客及一般社會大眾一項安全、舒適、便捷的運輸服務，除了滿足進出桃園國際機場國門及沿線重要據點的旅客需求，亦提供旅客更多元的大眾運輸轉乘選擇，對紓解高速公路交通壅塞、減少二氧化碳排放、降低運輸能源消耗，創建永續臺灣綠色生活，均提供具體貢獻。

A. The 31st NCSD Council Meeting

The 31st Council Meeting was held on December 14, 2018 in the 1st Conference Room on the second floor of the Executive Yuan and was presided over by ROC Premier and NCSD Chairman, Lai Ching-te. The agenda included two draft reports. The rulings given by the Chairman at this meeting are as follows:

I. Draft report: Progress on the rulings given by the Chairman at the previous meeting (the 30th meeting)

Thanks to the guidance of CEO Chang and the council members' assistance, these matters were taken under advisement.

II. Draft report: Taiwan's Sustainable Development Goals (Draft)

The Sustainable Development Goal Overview (draft) was passed in principle and further revised in accordance with the opinions of the council members. If necessary, CEO Chang will be asked to convene working conferences for members' discussions. This is to be implemented after confirmation.

B. Convening the NCSD Working Conference

I. 43rd Working Conference

The 43rd Council Meeting was held on May 25, 2018 in the 1st Conference Room of the Executive Yuan and presided over by Minister without Portfolio and NCSD CEO, Chang Jing-sen. The agenda included two draft reports. The discussions in the conference and Conference Chairman's rulings are as follows:



▲ Image 1 / 31st NCSD Council Meeting

(I) Progress on the Amendment and Implementation Status of the Draft for Taiwan's Sustainable Development Goals

1. There was a good deal of public feedback from this public conference. All working groups/task forces will complete the amendment on the Draft for Taiwan's Sustainable Development Goals with reference to public opinion.
2. The target draft general description will include the background and specific analysis of comparisons with the United Nations Sustainable Development Goals.
3. The core goals of the draft are in line with the UN goals, but some of the specific goals are too trivial. The authorities in charge of each core goal will conduct a comprehensive review and examine the content. Other indicators that are too trivial will be used as secondary reference indicators.
4. All working groups/task forces will, as soon as possible, invite the NCSD members to convene a draft amendment meeting to discuss and amend the draft content. The



▲ Image 2 / 43rd NCSD Working Conference

amended draft will be summarized by the Secretariat and reported at the next working conference. All work must be completed within three months.

5. The Secretariat will invite non-governmental members to participate in working groups/task forces' job of amending the goals, in accordance with the rulings of the 29th Council Meeting. They will also select the goal spokespersons of the respective working groups/task forces and submit such selections to the next working conference.

(II) Nuclear-Free Homeland Promotion Task Force Progress

Article 95 of the Electricity Act states that the nuclear power plants in Taiwan will all stop running by 2025. The use of nuclear power plants will not be extended. As part of this, both units of the First Nuclear Power Plant are scheduled to be decommissioned, one in December this year and the other in July next year, but it is unlikely that they will be shut down. The reason for this is that the already-constructed dry storage facility has not been



▲ Image 3 / 44th NCSD Working Conference

able to be activated. As a result, the reactor fuel rods have not been able to be retrieved smoothly and the decommissioning work has not been able to truly begin. At this stage, it is difficult to deal with the selection of the final nuclear waste disposal site. Plans should focus on an interim, centralized storage area. We welcome council members to participate in the Nuclear-Free Homeland Promotion Task Force meeting and jointly discuss how to select a location.

II. 44th Working Conference

The 44th Council Meeting was held on October 23, 2018 in the 1st Conference Room of the Executive Yuan and presided over by Minister without Portfolio and NCSD CEO, Chang Jing-sen. The agenda included two draft reports. The discussions in the conference and rulings given by the Conference Chairman are as follows:

(I) Draft report: The progress report for the previous (43rd) working conference was taken under advisement.

1. The discussion on Taiwan's Sustainable

Development Goal Overview must clarify the characteristics of Taiwan's development, namely "highlights" and "low points". The cultural and environmental risks mentioned by council members must be supplemented and amended, enabling people of all walks of life to understand Taiwan's sustainable development.

2. The Six Focus Areas are retained, but the focus of consideration is on the six important changes and transformations that must be made to achieve sustainable development. There are broad implications for all fields, and consideration must be given to adjusting the terms.
3. The Twelve Policy Focuses are shortened and will be re-developed in the future in line with Taiwan's developmental needs.

(II) Progress Report on the Amendment and Implementation Status of the Draft for Taiwan's Sustainable Development Goals

1. The Twelve Policy Focuses are shortened and will be re-developed in the future in line with Taiwan's developmental needs.
2. The Secretariat will, as soon as possible, arrange the next meeting to discuss the post-amendment draft, and draw up conclusions to be reported at the council meeting presided over by the Premier.

III. 45th Working Conference

The 45th Council Meeting was held on November 12, 2018 in the 1st Conference Room of the Executive Yuan and presided over by Minister without Portfolio and NCSD CEO, Chang Jing-

sen. The agenda included two draft reports. The discussions in the conference and rulings given by the Conference Chairman are as follows:

(I) Draft report: Progress on the Amendment and Implementation Status of the Draft for Taiwan's Sustainable Development Goals

1. The Draft for the Sustainable Development Goal Overview will be amended by the Taiwan Society for Risk Analysis after referring to the opinions of council members. The council members will then assist in reviewing the structure, discussion, and arrangement of the amendments.
 - (1) Taiwan's historical position, cultural and ecological characteristics, and economic status within the global structure will be included, as well as the systematic, energy and material risks that Taiwan is facing.
 - (2) The Smart Homeland discourse will add smart and monitoring frameworks regarding environmental, ecological, urban, and national development aspects.



▲Image 4 / 45th NCSD Working Conference



▲ Image 5 / 46th NCSD Working Conference

(3) Economic tools such as energy taxes and financing, and green finance, will be included within policy tools.

(4) Reference will be made to UN's women-related website content to revise content on gender equality.

2. Sustainable Development Goals 1, 3, 5, 9, 11 and Goals 7, 8, and 18 are approved in principle. Governmental authorities will amend them in accordance with the opinions of the council members. If council members still have other suggestions, they can propose them after the meeting and governmental authorities will then be asked to explain the report to the members. The status of the remaining revisions is to be discussed at the next (46th) working conference.

IV. 46th Working Conference

The 46th Council Meeting was held on November 29, 2018 in the 1st Conference Room of the Executive Yuan and presided over by Minister without Portfolio and NCSD CEO, Chang Jing-sen. The agenda included one draft report and one discussion. The discussions in the conference and rulings given by the Conference Chairman are as follows:

(I) Draft report: Progress on the Amendment and Implementation Status of the Draft for Taiwan's Sustainable Development Goals

With respect to the referendum to repeal Article 95, paragraph 1 of the Electricity Act, "Nuclear-energy-based power generating facilities shall all stop running by 2025", the Nuclear-Free

Homeland Promotion Task Force will amend Goal 18 of Taiwan's Sustainable Development Goals:

1. The goal of a Nuclear-Free Homeland remains unchanged, but the deadline of 2025 is removed. The text is so revised.
2. Power saving policy, the decentralized power grid, increased usage of green power, and educational promotion will be included within the specific goals.
3. Feasibility of increasing the proportion of natural gas power generation will be evaluated, and better understanding of relevant regulations on continuing nuclear power generation will be ascertained.

(II) Discussion: Discussion on the Draft for Taiwan's Sustainable Development Goal Overview

The Taiwan Society for Risk Analysis will revise the Draft for the Sustainable Development Goal Overview:

1. The Society will integrate and respond to Taiwan's 18 core sustainable development goals.
2. Supplementary explanation will be given for the context and process of formulating the Draft for Taiwan's Sustainable Development Goals.
3. As it will be used to communicate Taiwan's Sustainable Development Goals to the public, the wording must be easy to understand and avoid using technical terms.

(III) Extemporaneous Motions: Council Member Hsu Tien-pen suggested the re-examination of

Taiwan's Goals 7 and 18, based on discussion of the referendum results.

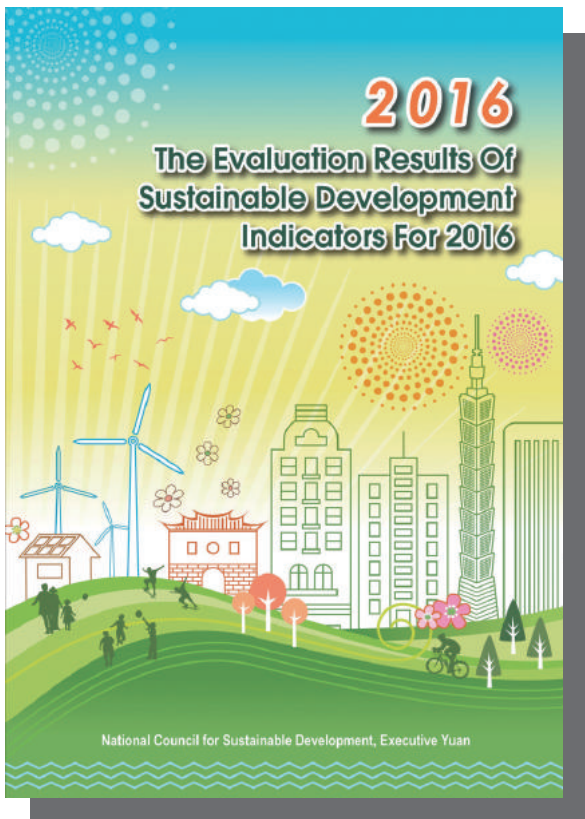
Goal 18 is retained. The relevant text is revised based on the results of the above discussion.

C. Published Taiwan Sustainable Development Indicator Report

To effectively evaluate and review the implementation effectiveness of Taiwan's sustainable development, the NCSD referred to the UN's first set of Indicators of Sustainable Development and began drafting Taiwan's indicators in 2002. The 1st edition of the Sustainable Development Indicator System was released in 2003. Since then, a result report that assesses the previous year's indicators has been released each year. In addition, the Individual Indicator Information System for Sustainable Development in Taiwan platform was established on the NCSD website. This System allows the government, industry, and academia, as well as the general public, to access relevant information.

Every year, Taiwan publishes the results of the indicators for the previous year. This is achieved by requiring relevant authorities to report their annual data for the previous year on the Indicator Information System platform. Once preliminary results are obtained from platform calculations, the NCSD calls on the relevant authorities to hold a discussion meeting. After the data from indicators, evaluation results, and content of the analysis are confirmed to be accurate, the results are then compiled and published as that year's Sustainable Development Indicator Evaluation Result Report. A digital copy is placed on the NCSD website for access by relevant persons.

In the implementation of the 2018 indicators, the NCSD invited the indicator authorities and agencies



▲Image 6 / Covers of Chinese and English versions of the Taiwan Sustainable Development Indicator Report

to take part in the first discussion meeting on July 19, 2018 with nearly 50 participants. The meeting covered an introduction to the history of Taiwan's sustainable development indicators and that year's approach to evaluation, along with discussions on the text revisions for 16 indicators, proposed name revisions for two indicators, definition revisions for five indicators, analysis and chart revisions for seven indicators, and the deletion of the names of two indicators. After respective authorities supplied their data onto the platform, a second discussion meeting was held on November 28 of the same year. During this

meeting, the draft content for the indicator evaluation results was reviewed by nearly 50 participants, and a resolution was passed. Based on the first draft adopted at the second meeting, the NCSD completed the Evaluation Results of Sustainable Development Indicators for 2017, which was placed on the NCSD website and a hard-copy of which was published. Furthermore, the Chinese version of the Evaluation Results of Sustainable Development Indicators for 2016 was translated into English. This was made available on paper and optical disc, and placed on the NCSD website.

A. Health and Welfare Working Group

I. Establishment of Labor Force Capability

- (I) To provide long-term care to insured persons and family members of deceased insured persons, the Labor Insurance implemented disability, elderly and family member benefits starting January 1, 2009. The Labor Insurance pension system is still being promoted.
- (II) To protect the rights of workers suffering from occupational injuries and diseases, workers who choose to rejoin the workforce or who undergo vocational training at a government-registered institution, and who are aged above 65 and have received labor insurance and other social welfare senior benefits, may enroll

separately in occupational accident insurance.

- (III) In 2018, 19,207 people registered for employment referral services, with 13,814 people successfully placed, at a success rate of 71.92%.

II. Promotion of Social Insurance

- (I) From 2017 to the end of 2018, an accumulated total guaranteed funding of NT\$6.618 billion was secured to assist micro-enterprises and young entrepreneurs.
- (II) By the end of 2018, a total of 627,000 people were enrolled in micro-insurance for a total amount of NT\$204.2 billion. This represents growth from the 502,000 people



▲ Image 7 / Visiting local county and city governments to promote micro-insurance

and NT\$165 billion for the same period of 2017. To further promote micro-insurance, the Financial Supervisory Commission revised the Announcements for Insurance Companies Engaging in Microinsurance Business on December 25, 2018, extending coverage to members of insured persons' household.

- (III) To provide basic economic security to the insured when they reach old age, a draft revision to the Civil Servant and Teacher Insurance Act has been proposed which extends insurance annuities to all insured persons to improve national social security network policy. The draft revision was submitted to the Legislative Yuan for review by the Executive Yuan through co-signing by the Examination Yuan on May

11, 2017, and resolution was made at the 14th Meeting of Session 3 of the 9th Legislature. It will be deliberated by the Judiciary and Organic Laws Committee and is currently pending examination at the Legislative Yuan.

III. Maintenance of Citizens' Physical and Mental Health

- (I) Measurements across the country for fine particulate matter (PM_{2.5}) in the air improved from 22.0 $\mu\text{g}/\text{m}^3$ in 2014 to 17.5 $\mu\text{g}/\text{m}^3$ in 2018. The number of red alerts (daily average $\geq 54 \mu\text{g}/\text{m}^3$) was lowered from 997 times in 2015 to 310 times in 2018, showing significant improvement in air quality.
- (II) To effectively reduce the suicide rate in Taiwan, suicide-related statistics are regularly



▲Image 8 / Traditional aboriginal line art handicrafts from Piyaway health station in Taoyuan City's Fuxing District

analyzed and regional trends are monitored. Mental health promotion and suicide prevention are planned. These include: Providing 24-hour free counseling services; researching countermeasures to limit tools that may lead to a fatal suicide; publicizing principles for reporting suicide-related news stories; teaching ways to stop suicides; training Happiness Helper seed teachers; guidance visits to each county and city; maintaining and amending the suicide prevention and notification system; subsidizing the care and attention given to those attempting suicide in all counties and cities; conducting interview evaluations; and conducting statistical analysis and empirical research.

- (III) The preliminary total number of people who committed suicide in the first ten months of 2018 was 3,234, which is 25 fewer than the same period in 2017.
- (IV) Encouraged the establishment of sex education (including AIDS prevention) curricula to be included in syllabi for all schools up to high schools. A total of 1,004 relevant courses were offered in 100 schools during the 2017 school year; 53,412 students took the courses.
- (V) By the end of 2018, there were 201 hospitals with psychiatric departments nationwide; of these, 146 were designated drug addiction treatment institutions (72.6% of hospitals).
- (VI) Tobacco hazard prevention has been actively promoted across governmental departments and through non-governmental organizations, enterprises and the public. The adult smoking rate dropped from 21.9% in 2008 to 13.0% in 2018. The middle school student smoking rate dropped from 6.6% in 2004 to 2.8% in 2018. In addition, the high school student smoking rate

dropped from 15.2% in 2005 to 8.0% in 2018, and is gradually aligning with the final stage of the global tobacco trend.

- (VII) Fourteen local governments were subsidized to set up 248 cultural health stations. These stations take care of 7,542 elderly aboriginal people; provide employment opportunities for 894 staff members (248 in charge of planning, and 646 caregivers); and provide aboriginal areas and gatherings with close, continuous, and cultural long-term care resources.
- (VIII) As of the end of September 2018, there were 638,294 people in low-income households or medium-to-low income households. This was a decrease of 29,388 from the 667,682 people living in such households in December 2017.

B. Life and Education Working Group

I. Early Childhood Education and Education for the Underprivileged

- (I) Local governments are continually subsidized to establish public preschools through the Forward-looking Infrastructure Development Program and the Expanded Public Children's Education and Care Plan. The plan is to add 1,247 classes from 2017 to 2020. From 2017 to 2018, 656 public preschool classes were added, and about 17,000 children were enrolled. For the first time, subsidies are given to private preschools who meet the cooperation requirements, in order to accelerate increasing the supply of affordable education services and help young parents juggle work and family. Since the 2018 school year, 15 counties (cities)

outside the six municipalities have established this mechanism; it will be fully implemented nationwide beginning August 2019. By the end of 2018, 288 public preschools have completed the inspection process, which will increase the number of students enrolled by approximately 30,000. The overall average ratio of affordable education has already surpassed 50%, and the fast turnover ratio has grown by 15%.

- (II) The 2018 employment rate for graduates with employment potential was 70.53%.
- (III) The Ministry of Education has fully implemented free preschool education for 5-year-olds since the 2011 school year. The government subsidizes their tuition fees, and other education fees are also subsidized for financially underprivileged students. With these two subsidies, public schools are tuition-free for the most financially underprivileged students. If they are enrolled in a private school, the maximum subsidy for each student is NT\$60,000 per school year. In the 2018 school year, more than 220,000 people benefited from the program; the overall enrollment rate for financially underprivileged 5-year-olds was 96.2%.
- (IV) The assistive device access rate for students who passed assessments at senior high school level or below was 80%.
- (V) Campus internet at public schools at the senior high school level and below supports high quality, high availability environments rich in digital learning resources. The ratio of IT equipment in classrooms being used to integrate information technology into teaching for digital learners is approximately 43.58% (2018).

- (VI) Since August 2018, public and quasi-public daycare services have been promoted in accordance with the Executive Yuan's response strategies to low fertility rates. In addition to building public daycares in communities, local governments have been supervised in signing cooperation contracts with residents and nurseries that comply. Daycare expenses are subsidized every month according to each family's economic conditions and range from NT\$6,000 to NT\$10,000. By the end of 2018, 38,297 children under two years of age had received public and quasi-public daycare services; this accounts for 84.07% of all daycare services.

II. Vocational Education

- (I) Each year, based on industry development needs and talent required in the employment market, information on supply and demand for regional vocational training is collected and evaluated; employment-oriented pre-employment training is then planned in different categories for the unemployed, whether hosted, commissioned, or subsidized. This improves unemployed persons' employment skills and promotes employment. In 2018, 49,446 people were thus trained.
- (II) Based on industry development needs and employment market talent requirements, information technology-related classes in digital graphics communication, multimedia webpage design, digital illustration design, digital 3D graphic cloud applications, webpage design, and commercial digital photography, whether hosted, commissioned, or subsidized, are planned and managed to provide vocational training opportunities for the unemployed. This

improves their employment skills and promotes employment. In 2018, 5,589 people were thus trained. 2,817 youths were also assisted in participating in information and communication technology (ICT)-related vocational training courses.

- (III) Pre-employment training in different categories continues to be promoted, to provide vocational training opportunities to the unemployed. To stabilize the lives of participants during their training periods, those with certain statuses (including physical and mental disabilities, and aboriginal people) can participate in free training. Vocational training living allowances can also be applied for during the training period, in accordance with the regulations. In 2018, 28,521 unemployed people from underprivileged groups participated in the pre-employment training.

III. Gender Equality & Human Rights Education and International Cooperation

- (I) From July 16 to 20, 2018, the Third National Report on the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) foreign experts' review meeting was held. During the meeting, five foreign review experts were invited to conduct a review of Taiwan's national report. Discussions were also arranged with representatives of Taiwan's NGOs, governmental and national review experts, to display Taiwan's achievements in and determination for gender equality. After the meeting, a total of 73 concluding observations and suggestions were proposed.
- (II) For five days, on May 7 to 9, and May 17 to 18, 2018, the Lean in: Women's Communication

- 2018 Public and Private Sector Women Talent Exchange Workshop was held. Experts, scholars, business representatives, and high-ranking civil servants from various fields were invited to enlighten women elites on Taiwan's important policies and international trends. Valuable experiences were shared by women role-models, providing a platform for communication and learning between the public and private sectors. Twenty-eight people participated in this workshop, including senior executive-level officers from the public sector, associate professors from public and private universities, managerial-level professionals from state-owned and private institutions, managerial or higher professionals from civic groups, and heads of enterprise.

- (III) The APEC GIFTS A+ (Gendered Innovation for Technology and Science): Promoting Gender Inclusion in Smart Agriculture Forum was held from 22 to 24 October, 2018. Four keynote speeches and three seminars were conducted. Women farmers, women entrepreneurs in



▲ Image 9 / Gender Equality Education Issues Counseling Group - North District Strategic Alliance Seminar

agriculture, scholars, experts, and policy implementers from APEC economies were invited to share their experiences and opinions during the meeting. By exploring the challenges and responses to women's participation in smart agriculture in the APEC region, economies are encouraged to reference and promote women in the APEC region entering the field of smart agriculture.

C. Green Economy Working Group

I. Development of Green Technology and Enhancing Energy Diversity

- (I) In 2018, the Plan to Strengthen the Power Distribution System was launched to promote: the upgrading of distribution lines and secondary substation equipment; the expansion of feeder automation; and the construction of smart electrical substations. By actively strengthening the distribution line system, the occurrence of power outages is reduced and the reliability of power supply is improved. The actual National Electricity Interruption Period (SAIDI) was 16.1874 (minutes/household/year) in 2018, which was 0.7106 minutes less than the average in 2017.
- (II) The Taiwan Power Company (Taipower) actively implements measures to reduce line losses, such as building and expanding transmission and distribution lines and substation equipment; strengthening the maintenance of power transmission and transformer facilities; promoting the appropriate use of electricity by users; and implementing load management. In 2018, the load increased by 0.95% as compared to 2017. Losses increased with the

increase in transmission current, leading to the line loss rate of 3.94% in 2018, which is a 0.12% increase compared with 2017's figure of 3.82%.

- (III) Installation of reusable energy devices was actively promoted. By November 2018, Taiwan's total installed reusable capacity reached 6,136 MW.
- (IV) Solar power generation was promoted. In 2018, the total approved device capacity for solar generation reached 1,851 MW, which represents outstanding growth. The Executive Yuan-approved Two-Year Solar Power Generation Promotion Plan goal of reaching 1,520 MW has been achieved. Also, assistance has been given to all residents to master information on land and grid connections, and a renewable energy grid-connected capacity platform for assessments has been established. The Green Energy on Every Rooftop and the Expansion of Industrial Parks programs were promoted. Each department will continue keeping land records in order to work toward achieving the goal.
- (V) Wind power generation was promoted. In terms of onshore wind power, a total of 349 turbines had begun operation by November 2018, reaching a total capacity of 689 MW. In terms of offshore wind power, by November 2018, two offshore demonstration units, with a total of 8 MW, had been completed. On January 18, 2018, the Directions for Allocating Installed Capacity of Offshore Wind Potential Zones were announced. Using the post-bidding method, selections were completed in April of the same year. A total of 3,836 MW of grid connection capacity was approved for ten offshore wind farms proposed by seven developers. The bidding operation was completed in June. A

total 1,664 MW of grid connection capacity was awarded to four offshore wind farms proposed by two developers. A cumulative total of 5,500 MW of connected grid capacity will be completed by 2025.

II. Promoting Waste Product Recycling and Coordinating Effective Resource Recycling through Cross-Industry Cooperation

- (I) To promote the recycling of industrial waste and to make the resource recycling and reuse industries develop toward higher efficiency, the legal system has continued to be improved; license audits and inspection visits have continued to be conducted. In 2018, the industrial waste recycling rate reached 80%. A total of 1,776 manufacturers invested in resource recycling. The output value of the resource recycling industry reached NT\$72.34 billion.
- (II) The waste heat, energy, and resources produced by Taiwan's industrial production process are reused by refining the planned energy resource integration chain system, which induces industrial upgrading and transformation, and reduces industrial production costs and risks in obtaining raw materials, thus creating circular economy output value. In 2018, the complete energy resource chain was 174,000 metric tons, within which the steam integration amount was 151,000 metric tons. It is estimated that this reduces use of heavy oil by 12,000 metric tons of oil equivalent, greenhouse gas reduction will reach 36,000 metric tons, SO_x will be reduced by 162 metric tons, NO_x by 52 metric tons, and particulate matter pollutants by 9.8 metric tons.

III. Promoting sustainable tourism development; building sustainable tourism environment in Taiwan and enhancing industry value

- (I) To actively expand into diverse markets, in 2018, total tourist arrivals in Taiwan reached a record high of 11.065 million people, which is a 3% growth over 2017. In particular, tourists from the 18 New Southbound countries reached 2.6 million people, a growth rate of 14%. Total tourist arrivals from Japan are approaching 2 million people, while the long-term market from Europe and the United States has grown by 4%. The proportion of major tourist source markets are developing towards a balance, showing that the market structure has been successfully transformed.
- (II) The 2018 Year of Bay Tourism was promoted, in accordance with the 5.1 Taiwan Tourism Sustainable Year Promotion Plan within the Tourism 2020: Taiwan Sustainable Tourism Development Program, to boost in-depth domestic tourism. Eighty-three river, mountain, and coastal cleanup events were held, in which 32,479 people participated and 90.288 tons



▲ Image 10 / Taiwan Cogen Corporation supplies medium-pressure steam to replace coal-fired thermal oil boilers in the dyeing and finishing industry



▲Image 11 / In 2018, total tourist arrivals in Taiwan reached a record high of 11 million people

of waste were cleared. Forty bay activities attracted 12.08 million participants and created an output value of more than NT\$5.54 billion. Taiwan's bay tourism environment has been perfected, with improved service quality, integration of local governments and industrial resources, and construction of island ecotourism.

- (III) The Taiwan Sightseeing New Year Calendar was promoted. In accordance with large-scale events in Taiwan, marketing of cities was integrated to promote cross-region and overnight tourism, such as the 2018 (14th) World Congress of The Most Beautiful Bays in the World in Penghu, and the (9th) Asian Bird

Fair in Chiayi. People from around the globe committed to tourism, sustainable development, and conservation were invited to discuss sustainable tourism development issues and to continue improving Taiwan's domestic tourism and international recognition.

IV. Promoting Increased Public/Private Green Purchasing

The Green Purchasing Promotion Project was implemented to reinforce green purchasing in private enterprises and groups. In 2017, the total purchasing amount exceeded NT\$34.7 billion. The project changed the purchasing agreement template for construction projects to

include prioritizing environmentally friendly or renewable energy products. Badges were added to identify contracted organizations that protect the environment, save energy or conserve water in the government e-procurement system's common supplier contract system.

D. Green Transportation Working Group

I. Implementing the Multiple Promotion Project for Highway Public Transportation

- (I) Since the implementation of the highway public transportation plan, there have been concrete results. By 2018, the number of highway public transportation passengers was about 1.245 billion people, which was a growth of about 10 million people (0.8%) compared to the same period for 2017.
- (II) To reduce the age of city buses and strengthen universally accessible transport services, the purchase of 441 low-floor buses and 21 general-purpose universal access buses was approved for county governments. By 2018, there were about 6,000 low-floor buses in urban areas.
- (III) The Ministry of Transportation and Communications has been promoting the Demand Responsive Transit System project since 2016. This project has targeted ten counties and cities, such as Yanping Township in Taitung County, to serve as test sites for introduction of diverse transportation and develop flexible operating models that meet local demand. By the end of 2018, it was expanded to 14 rural areas, such as Laiyi Township in Pingtung County, to provide

basic transport services and fill gaps in public transportation. As of the end of 2018, public transportation coverage in rural areas reached 78%. In places other than rural areas, Kaohsiung City, Keelung City, Taichung City, Tainan City, and Pingtung City have also been promoting "taxi-buses" to improve shortfalls in traditional bus services.

- (IV) Bus-only lanes have been set up in places such as National Freeway 3 to Nangang system, National Freeway 5 Shiding South Entrance, Toucheng, Yilan, and Luodong north entrances. In the northbound direction from Yilan to Toucheng, bus shoulder passing and traffic-light controlled lanes have been implemented. Beginning May 30, 2018, the bus shoulder passing lane was opened for National Freeway 3 Nangang access road to Nangang Road corridor.

II. Continued Implementation of Railway Transportation Construction Projects and Improving Service

- (I) Elevated Rapid Transit Project for Taichung Metro: Five new commuter stations have been completed, and operations commenced on October 28, 2018.
- (II) Hualien-Taitung Line Electrification Project: As part of the second stage of the project, the east main line was completed and started operations in June 2018. The double-track section has reached 27.1% of the entire route.
- (III) Hualien-Taitung Line Overall Service Efficiency Improvement Plan: In 2018, 26 stations were rebuilt (improved). The first stage of the new Hualien station is in operation.
- (IV) Taiwan Railway Administration Train Procurement and Renewal Plan: A total of 1,120



▲Image 12 / Hualien Station's updated nighttime look

inter-city and commuter trains were purchased and renewed. The tendering process was completed in December 2018, and the contract was signed in mid-January 2019. It is estimated that the vehicles will be delivered year by year starting in 2020. A total of 44 vehicles will be delivered in the first phase. By the end of 2024, all vehicles will be put in operation, providing fast, quality inter-city and inter-region travel services.

III. Promotion of Road Safety Education

(I) Traffic safety education was strengthened

in schools of all levels, with strengthened implementation of new students' orientation, continued promotion of on-campus buses, and encouraging students to take public transportation. The Ministry of Education handled traffic safety education visits and encouraged universities to establish traffic safety-related courses.

(II) Intersection safety concepts promoted: The concept of walking defensively was promoted for pedestrians and senior citizens. There was also cooperation with a private enterprise to produce "Pedestrians Are Family" videos.

E. National Resources and Urban and Rural Development Working Group

I. National Land Planning and Management

- (I) To cope with climate change, and based on Executive Yuan policy, the Ministry of the Interior promoted the legislative operations of the Spatial Planning Act to assure land use safety; conserve the natural environment and cultural assets; promote reasonable allocation of resources and industry; strengthen land consolidation and management mechanisms; and restore sensitive areas and damaged land in pursuit of sustainable development. The third reading of the Act was passed by the Legislative Yuan on December 18, 2015. The President announced it on January 6, 2016; the Executive Yuan began implementing it on May 1, 2016.

II. Promoting Urban Renewal

Promoting government-led urban renewal

Since 2005, 258 urban renewal demonstration areas have been selected. There are currently 31 locations undergoing pre-planning operations for urban renewal feasibility assessment, 51 locations undergoing pre-planning operations for business invitation, one location currently promoting business invitation, 24 locations implementing business invitations, and 10 locations under government investment.

III.Reducing Pollution and Waste

- (I) Campaign to encourage carrying one's own tableware, reduce the use of disposable

cups, limit the use of plastic disposable tableware, and promote the four-in-one resource recycling plan continued to be carried out. Waste classification was made compulsory, and activities such as Source Reduction, Comprehensive Plastic Reduction, Expanded Pellet Recycling, and Transformation Opportunities for the Recycling Industry were promoted. Reduction of disposable products and circular economy were both strengthened. By October 2018, the garbage collection rate reached 59.3%.

IV.Sewage System Development

- (I) The Ministry of the Interior implemented the Five Stage Sewage System Construction Plan approved by the Executive Yuan. In 2018, the central government allocated a budget of NT\$12.459 billion to assist the Construction and Planning Agency of the Ministry of the Interior and county and municipal governments in promoting construction of household connection pipes. By the end of 2018, the penetration rate for households with connections to public sewers reached 33.72%, with a total of 2,945,984 households, raising the overall sewage treatment rate to 58.21%. The discharge water recycling and reuse demonstration project at Taiwan's first sewage recycling plant, the Fengshan River Sewage Treatment Plant, was completed on August 22, 2018. It provides Linhai Industrial Park with 25,000 cubic meters of reclaimed water every day. The recycling and reuse of discharge water from public sewage treatment plants to achieve the goal of sustainable sewer resource utilization will continue to be promoted.

V. Promoting Social Housing

- (II) To achieve the policy goal of social housing for 200,000 households within eight years, the Ministry of the Interior's Social Housing Development Plan was approved by the Executive Yuan in March 2017. The goal is to build 120,000 housing units and manage rentals for 80,000 housing units.
- (III) In terms of construction, as of December 31, 2018, municipality and county (city) governments reported that promotion of the 2016-2020 plan had completed 133 projects, or 45,519 housing units. Added to the 7,079 housing units completed (number of existing housing units) before 2016, this totals 52,598 housing units.

VI. Protection of Cultural and Natural Heritage

- (I) The Maintenance Plan for Ancient Sites and Ecological Resources in Indigenous Areas was formulated by the Council of Indigenous Peoples to implement land conservation and natural resource management of land reserved for indigenous people. The mission to protect the mountains and forests of land reserved for indigenous people was executed. The area under cultivation or maintenance for native and suitable plants was about 419 hectares, while the area for tribal villages and traditional mountain resources was about 3,242 hectares. Cultural site maintenance tasks and ancient road inspections were carried out using the traditional cultural and ecological wisdom of indigenous people. There were a total of 24 tribal cultural sites and 2,596 km of traditional migration routes under protection and management. The implementation was effective.

- (II) In 2018, two critical regional wetlands were evaluated and announced: Yong'an Salt Pan Critical Wetland and Caodi Critical Wetland. In 2018, Sicao Internationally Critical Wetland and Qijiawan River National Critical Wetland were also announced, making a total of 30 critical wetland conservation and utilization programs.
- (III) The Chiang A-Hsin Mansion in Beipu, Hsinchu was designed by Zhudong Township architect Peng Yuli in 1949. The house was named a mansion due to its Western style and was designated as a county historic monument in 2001. Other than its significance in the history of the development of Beipu (Da'ai), its architecture is a cultural symbol of the tea industry in the Beipu area during the period of Japanese rule. It has historical significance and educational implications. After several property right transfers, in 2012, Taiwan Cooperative Bank had intentions to sell the building. Wanting to retain their precious memories of the past, descendants of Chiang A-Hsin raised NT\$80 million to buy the building back from Taiwan Cooperative Bank. The Hakka Affairs Council subsidized Hsinchu County Government a total of NT\$29.68 million for repairs and reuse. After restoration was completed in 2018, it received the distinction of an Outstanding Award for Architecture in the 18th Public Construction Golden Quality Awards presented by the Public Construction Commission of the Executive Yuan. This project is a good example of cooperation between the public and private sectors, and the restoration of cultural assets along romantic provincial highway 3 has set a good example for projects to come.

F. Sustainable Agriculture and Biodiversity Working Group

I. Habitat Conservation

- (I) Taiwan's conservation systems consist of 95 areas, including 22 natural reservation areas, 6 natural conservation areas, 20 wildlife conservation areas, 37 critical wildlife habitats, 9 national parks, and 1 national nature park. The total area is 1,133,490 hectares (less overlapping areas); of this, the land area accounts for 694,503 hectares, or about 19.19% of Taiwan's land area. The management plan of each protected area is regularly reviewed in accordance with their respective regulations.
- (II) From the Integrated Coastal Zone Management Plan's first phase coastal protected zones, 29 projects and 14 laws managed by the Council of Agriculture Executive Yuan, Environmental Protection Administration, Ministry of Economic Affairs, Ministry of Culture, Ministry of Transportation and Communications, and Ministry of the Interior (namely, The Forestry Act; Wildlife Conservation Act; Fisheries Act; Drinking Water Management Act; Geology Act; Water Act; Mining Act; Water Supply Act; Cultural Heritage Preservation Act; Underwater Cultural Heritage Preservation Act; Hot Spring Act; Act for the Development of Tourism; National Park Law; and the Wetland Conservation Act) were identified as "complying with the basic management principles of the Integrated Coastal Zone Management Plan". Revision of the Scope of Coastal Areas was announced August 3, 2018.

II. Integration of Biodiversity Information

Several biodiversity information banks were established, including the Taiwan Biodiversity Information Facility (TaiBIF), Catalogue of Life in Taiwan (TaiCOL), Taiwan Encyclopedia of Life (TaiEOL), Taiwan Barcode of Life (TaiBOL), and Taiwan Biodiversity Observation Network (TaiBON). Content of the various databases is regularly added to and revised, to promote the collection and integration of inter-departmental biodiversity information. International exchange and cooperation was conducted with the Global Biodiversity Information Facility (GBIF), Catalogue of Life (COL), Encyclopedia of Life (EOL), GenBank, Barcode of Life Data Systems (BOLD Systems), Asia-Pacific Biodiversity Observation Network (AP-BON), and Global Earth Observation: Biodiversity Observation Network (GEO BON).

III. Enhancing Environmentally Friendly Agriculture

To conserve wild animals' farmland habitats, the Forestry Bureau promoted the Green Conservation Mark. A total of 325 farmers passed certifications in Taiwan. Applications were filed for 561 hectares of farmland, 469 of which passed, with 43 protected species. Stories on farming and animal conservation were introduced every Saturday at the Footprints in the Field Farmers Market at National Taiwan Museum Nanmen Park, and at the Your Table, My Life - Our Green Consumption Movement exhibition at the conservation station which was held from October 10, 2018 to March 25, 2019. Doing so helped the public to understand the close relationship between agricultural production and wildlife, so they can support farmers in conserving farmland ecology.

IV. Conservation of Species and Development of Biotechnology

The National Organism Genetic Library was established to perform research, conservation, protection, and utilization of genetic resources from agriculture, forestry, fishing, husbandry, wildlife, and microorganisms. Seed species Number 101 was added to the forestry seed bank; seeds were traded with the international community; and the 2018-2019 seed catalog was expected to be published in February 2019. The genetic material of 62 aquatic species was preserved, with 51,000 cultivation and environmental data records. The genetic material of farm animals was preserved, including 166 types of pathogens and 13,000 samples of serum. Agricultural improvement

stations preserved genetic materials from crops, silkworms, and aboriginal specialty crops.

V. Promoting Conservation Tasks in the Community

The Ministry of Culture subsidized municipalities, counties, and cities in the promotion of social development and village cultural development plans. Community and educational learning indicators were established, in hopes of linking the living environment with school education, and thereby promoting sustainable community development. There were 33 projects in 22 counties and cities in Taiwan where communities were linked to schools. Forty community ecological conservation work plans were also approved.



▲Image 13 / Taoyuan City Blue Pond Park

VI. Endangered Species Protection and Research

The Forestry Bureau established conservation action plans for the black kite, Formosan black bear, black-faced spoonbill, and russet sparrow. A conservation action plan for the leopard cat was being drafted.

VII. Conserving Marine Resources

On June 6, 2018, the Fisheries Agency advised the Taitung County Government on the revision of the Locations for and Related Restrictions for Aquatic Animal and Plant Breeding in Conservation Areas in Fushan, Taitung County. In 2018, there were 22,092 fishing vessels with a total capacity for 570,426.47 tons. The approved list of acquisitions consisted of 3 ships and 46 rafts, with an estimated reduction of 1,015.336 tons. Fishers were encouraged to concentrate operations during the peak period of fishery resource density and rest during the off-

peak period, to reduce oil usage. Fishing vessels/rafts meeting the provision of fishing at sea for 90 days then staying in port for 102 days were able to apply for a fishing layoff encouragement fee.

VIII. Enhancing Protection Against and Monitoring of Exotic Invasive Species

- (I) A cooperative platform for customs clearance was established. Adjustments continued to be made to the internal database of: protected species with high risk or unidentified risks; protected species as defined in Article 4 of the Wildlife Conservation Act; species listed on the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and species on the low-risk review list. Control mechanisms were strengthened for dangerous, highly invasive, or other species that affect the survival of indigenous species.



▲ Image 14 / Taroko National Park removing mile-a-minute weed found in the park

- (II) Smuggling of invasive species was investigated. 34,000 cases of smuggled animals, plants, and other products were solved, for about 36 metric tons of materials. Smuggled agricultural, fishery and livestock products accounted for 75 cases, totaling 73,686 kg and including 1,513 live animals.

IX. Encouraging Private Organizations to Participate in the Promotion of Biodiversity and Habitat Conservation Work

The Construction and Planning Agency of the Ministry of the Interior continued to handle the 2018 National Wetland Conservation Project, and subsidized 13 counties and cities and a total of 24 private organizations to promote ecological re-cultivation, patrols, monitoring, management, and environmental education for Taiwan's critical wetlands. National park headquarters cooperated with local communities and tribal villages to promote ecological conservation, patrols, monitoring, management, and other relevant work.

G. Environmental Quality Working Group

I. Reducing Concentration of Air Pollutants

The National Air Pollution Prevention Action Plan was promoted. In 2017 and 2018, the Action Plan provided guidance to operators of 623 industrial boilers and 585 commercial boilers; installed kitchen hoods in 6,054 restaurants; assisted with centralized burning of 29,725 metric tons of spirit money; completed clean-up of 227,784 km of post-flood season rivers and streams; ameliorated pollution of 21,292 diesel vehicles in Phase 1 and Phase 2; improved and installed pollution prevention

equipment in 1,022 diesel vehicles in Phase 3; and completed improvements to 723,070 two-stroke motorcycles/motor scooters. The Plan continued to be implemented in partnership with ministries and local environmental protection bureaus, to improve the air quality in autumn and winter.

II. Promoting Reduction of Plastic Waste at the Source

- (I) The Administrative Regulations Governing Reuse of Common Enterprise Waste were established; and, the Required Tracing of Common Enterprise Waste Reuse was announced. The Recycling Management System was upgraded to integrate the current status of enterprise waste reuse in various departments and allow inquiries from the general public, institutions and recycling institutions. Discussion and review was continued regarding the announcements/forms for recycling qualifications, use, products and management methods for regulations on the management of enterprise waste recycling in various ministries and departments. Waste codes were established that correspond to recyclable products, their uses, and national standards.
- (II) Evaluation of the waste resource circular economy was established, and held for the first time on December 26, 2018, to commend high-quality performance and achievements. The subject of the evaluation was recycling institutions. The evaluation was divided into 3 categories: Core Indicators; Industrial Characteristic Indicators; and Advanced Indicators. After preliminary review, documentary review, and on-site evaluations, nine institutions were awarded 2 stars, and 15 institutions were awarded 1 star.

III. Sewage System Development

The Ministry of the Interior implemented the Five Stage Sewage System Construction Plan approved by the Executive Yuan. In 2018, the Central Government assigned a budget of NT\$12.459 billion to assist the Construction and Planning Agency of the Ministry of the Interior (CPAMI) and county and municipal governments in promoting construction of household connection pipes. By the end of 2018, the penetration rate for households with connections to public sewers reached 33.72%, for a total of 2,945,984 households; the overall sewage treatment rate reached 58.21%. The discharge water recycling and reuse demonstration project at Taiwan's first sewage recycling plant, the Fengshan River Sewage Treatment Plant, was completed on August 22, 2018. It provides 25,000 cubic meters of reclaimed water per day to the Linhai Industrial Park, and will continue to promote recycling and reuse of discharge water from public sewage treatment plants to achieve the goal of sustainable sewer resource utilization.

IV. Improved Public Bathroom Cleanliness and Comfort

The Environmental Protection Administration promoted the certification system for public bathrooms and the Flush Used Toilet Paper Policy. By 2018, a total of 738 public bathroom management units were certified. Adoption of public bathrooms was promoted. A total of 132 companies adopted public bathrooms in the public sector. Nine training sessions were held on quality bathroom culture, and seed teacher training courses were promoted. In addition, 19 counties and cities were subsidized to repair or build 305 public bathrooms. The Environmental Protection Administration hopes that through gradual upgrade and improvement and the management and maintenance of local environmental protection institutions, public bathrooms can achieve the goals of being neither dirty, wet nor stinky. By the end of 2018, the ratio of “excellent” public bathrooms in Taiwan reached 78%.



▲ Image 15 / Fengshan River Reclaimed Water Treatment Plant RO (Reverse Osmosis) Processing Unit



▲ Image 16 / Fengshan River Sewage Treatment Plant and Reclaimed Water Treatment Plant



▲ Image 17 / Coastal Cleanup with the European Union at Waziwei Nature Reserve in Bali District, New Taipei City

V. Actively Promoting Coastal Adoption

The Administration and waterfront environmental protection agencies actively promoted coastal adoption. In 2018, 409 adoption groups adopted 553.676 km of coastline. In 2018, adoption groups held 1,258 coastal cleanup events, with 48,614 participants cleaning up 631.88 metric tons of garbage.

VI. Assisting in promoting water and sanitation related improvement programs in developing countries

The Kingdom of Eswatini (Swaziland) was assisted in improving the water supply and sanitation program in the community of Ntfontjeni, and the country was assisted with the installation of solar photovoltaic pumping systems in eight rural schools.



▲ Image 18 / Assisting set up of solar photovoltaic pumping systems in eight middle schools

VII. Increased Control of Chemical Substances to Reduce the Risk of Improper Use in Food Products

- (I) On September 26, 2017, the Environmental Protection Administration's Toxic and Chemical Substances Bureau announced 13 chemical

substances in the fourth class of toxic chemical substance. On June 28, 2018, it was announced that 14 types of pigments, such as Sudan pigments, may have been illegally added to animal feed or food. Businesses became required to mark “Prohibited From Use in Food Products and Animal Feed” on the container packaging and to submit records regularly. Relevant control measure operations may only begin after documents have been approved to reduce the risk of toxic chemicals getting into food products.

- (II) In 2017, the Environmental Protection Administration's Bureau gave priority to 57 chemicals that pose food safety risks and promoted audits and guidance sessions. 3,117 chemical substance companies completed audits. In 2018, audits and guidance sessions were continually conducted. 3,140 chemical material companies completed audits. The scope of audits was expanded to include egg farmers and the feed industry. 193 companies completed guidance sessions, and 18 seminars were held to enhance industry management and to prevent the risk of non-food additive chemicals from getting into the food chain.



▲Image 19 / Promoting Joint Inspection by the Environmental Protection Administration's Toxic and Chemical Substances Bureau and the New Taipei City Health Bureau

VIII. Regular Monitoring of Sediment Quality in Taiwan

From 2014 until the end of 2018, ten targeted competent authorities (including 41 water management units) submitted proposals on sediment samples from 507 water bodies (including 46 self-declared irrigation channels). The ratio of sediment sampling proposals from rivers, reservoirs, and irrigation channels was, respectively, 100% (83 rivers), 100% (91 reservoirs), and 100% (299 irrigation channels). The inspection completion rate for water body sediment quality was, again respectively, 30.7% (27 rivers), 55.4% (51 reservoirs), and 68.2% (204 irrigation channels).

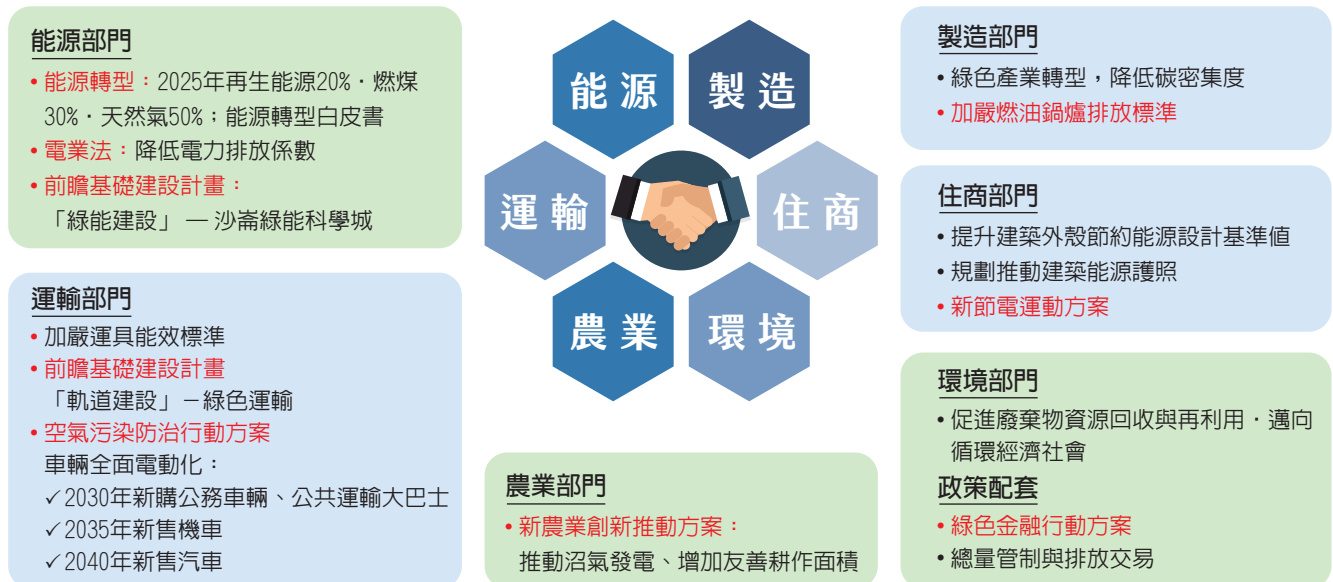
H. Climate Change, Energy Conservation, Carbon Reduction and Nuclear-Free Homeland Promotion Task Force

I. Released Specific Actions for Six Major Departments to Reduce Carbon Emissions

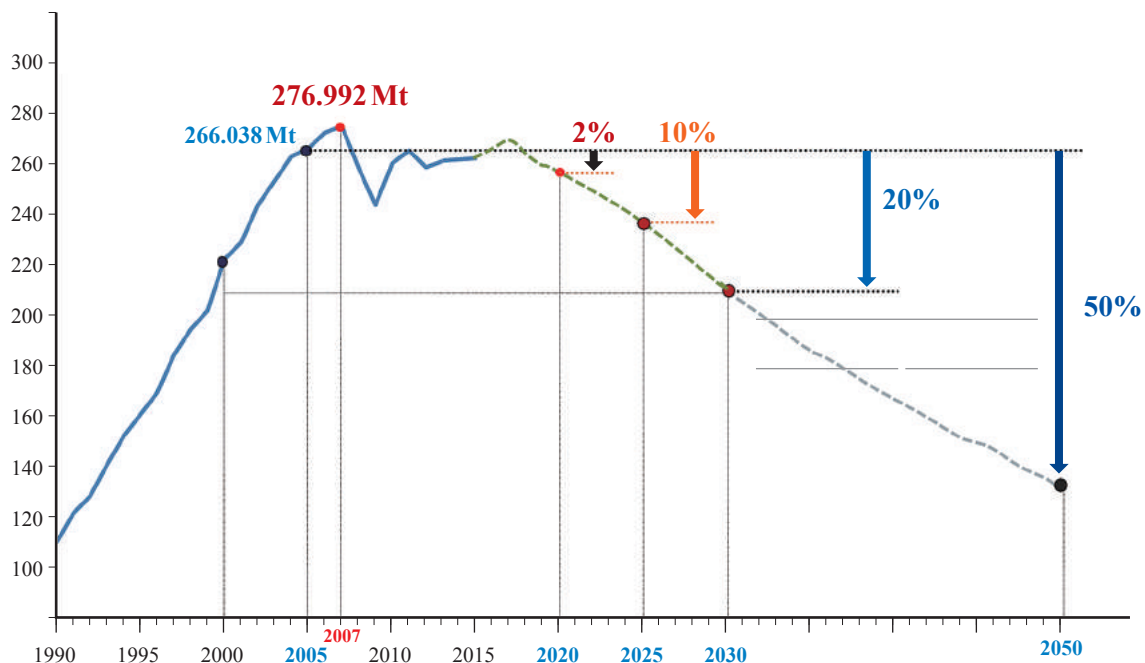
On October 3, 2018, the Executive Yuan approved the Greenhouse Gas Emission Control Action Program for Taiwan's six major departments - Energy, Manufacturing, Transportation, Housing, Agriculture, and Environment. Specific actions were established to reduce carbon footprints in various sectors from 2018 to 2020, matching the goals of a 2% reduction in greenhouse gas emissions in Taiwan by 2020 as compared to 2005 (base year). This created a common blueprint for Taiwan's overall carbon reduction strategy.

II. Target for Greenhouse Gas Control Phase 1

On January 23, 2018, the Executive Yuan approved the Phase 1 targets for Greenhouse Gas Control, adopting a gradual process with an accelerating



▲Image 20 / Low Carbon Strategies by Sectors



▲Image 21 / Path to Achieving Greenhouse Gas Reduction

pace toward carbon reduction. A goal was set for 2% reduction on greenhouse gas emissions in Taiwan (net greenhouse gas emissions reductions of

260.717 million tons of carbon equivalent) by 2020, as compared to 2005 (base year), and a 10% reduction by 2025 as compared to the base year.

Status of the 2018 National Sustainable Development Awards Campaign

A. Introduction to the National Sustainable Development Awards

The Executive Yuan's National Council for Sustainable Development launched the Campaign to Select and Bestow the National Sustainable Development Awards in order to encourage nationwide participation in promoting sustainable development, and to achieve the government's vision for sustainable development by making the concept an integral part of people's daily lives on a local level. The award recognizes schools, businesses, civic organizations and government agencies whose sustainability-related efforts have yielded excellent results.

The judging process comprises three rounds: preliminary selection, intermediate selection, and final selection. After participants have registered and submitted applications, a jury consisting of NCSD

members and experts make a preliminary selection by doing written reviews in accordance with the evaluation guidelines. Then, the jury conducts on-site visits to intermediate selections to choose the final winning entities for the year. The final winners are awarded at a ceremony hosted by the Executive Yuan.

B. Results of the 2017 National Sustainable Development Awards Selection Process

After the three selection rounds of the 2018 National Sustainable Development Awards (written evaluation by NCSD working groups; on-site evaluation by non-governmental NCSD members; and final selection by the entire jury), a total of 12 winners were selected. Following the convention, an award ceremony was held in December at the Executive Yuan.



▲Image 22 / Judging and Bestowal Process for the National Sustainable Development Awards

Table 1 List of 2018 National Sustainable Development Awards Winners

Category	Awarded to
Education	Chang Jung Christian University
	Tzu Chi University
	Micang Elementary School, New Taipei City
Business	Yuan Soap Workshop Co., Ltd.
	ECOVE Environment Corporation
	Far Eastern Department Stores
Civic Organizations	Hsin-che Lien-chih Benevolent Association of Taiwan
	Youngwater Culture and Education Foundation
	Environment and Development Foundation

Category	Awarded to
Government Agencies	Construction and Planning Agency, Minister of the Interior - the Demonstration and Promotion Scheme for Recycling and Reusing Discharged Water from Public Wastewater Treatment Plants and the Implementation Plan of the Forward-looking Water Reclamation Project
	Forestry Bureau, Council of Agriculture, Executive Yuan: - From Farmland to Wetland The Chenglong Wetland Satoumi Operation
	Bureau of High Speed Rail, Ministry of Transportation and Communications - Taiwan Taoyuan International Airport Access MRT Construction Plan

C. About the Award Recipients

I. Education

(I) Chang Jung Christian University



▲ Image 23 / Chang Jung Christian University Spin-off Enterprise — Ark: A Better Life

1. Introduction

Respecting God, having love for the people, being grateful, and hard work are the core values that Chang Jung Christian University (CJCU) adheres to. With a vision of practicing holistic pastoral education as a sustainable university, the university adopts eight strategies: Holistic pastoral education; nurturing talent; industry-academia partnership; international participation; a sustainable campus; social responsibility; organizational advancement; and a smart campus. By following these, CJCU

builds a quality learning environment for students and achieves campus sustainability. The university is dedicated to elevating its teaching quality to excellent standards, strengthening the learning environment, promoting environmental education, fulfilling social responsibilities, and achieving innovation in industry-academia research. CJCU is also progressing toward the goals of establishing a foothold locally, connecting to the world, and becoming an academic leader in fulfilling social responsibility.

2. Current Status of Sustainable Development Promotion

CJCU was founded based on the salvation and universal love of Jesus Christ. Adhering to the school motto of Devotion, Diligence Honor & Service, the university aims to cultivate knowledgeable talent that is devout, diligent, honorable, and has the spirit of service. It has the vision and mission to make contributions to the nation and society, serve the people, and provide practical education. Striving to achieve its vision and mission, the university approaches social responsibility through education. CJCU also regards the message from the Parable of the Vineyard Workers in Matthew 20:1-16 as the foundation and concept of social justice as it continues to empower and give kind attention to disadvantaged students, special education students, indigenous students, and students who are the offspring of immigrants. Through active and effective participation in education, research projects, industry-academia collaboration, consultation services, and community work, the university works to spread social justice concepts and action to communities, the ecosystem, and every corner of the world.

CJCU is run with a sense of social justice, responsibility, and benevolence, and with the intention of becoming a superior international Christian university. It has signed industry-academia alliance contracts and MOUs with several companies, enabling students to access industry internships. A system will also soon be established at the university to advise students on obtaining licenses and taking employment tests so as to help students secure employment before they graduate. CJCU's Alumni Association collaborates with the Ministry of Education, the Yunlin-Chiayi-Tainan Regional Branch of the Ministry of Labor's Workforce Development Agency, and the Labor Affairs Bureau of Tainan City Government in organizing recruitment exhibitions to provide students

with quality opportunities to find employment. First- to third-year students are also encouraged to participate in the exhibitions, to help them gain understanding of industry trends and to broaden their horizons. Early preparation reduces academia-industry gaps. Students are also encouraged to engage in cross-disciplinary learning, develop their courage and confidence, cultivate perseverance through dealing with setbacks, work hard to give back, make good use of government resources and build the future.

CJCU has taken big steps toward becoming an international green energy university and a sustainable campus. First-year compulsory courses defy traditional teaching styles and take students outside of the classroom to learn through action. A building was constructed by students using tiles made from waste newspaper and plastic bottles. They built an eco education center that truly embodies the spirit of environmental protection. The building became the first paper building in a university in Taiwan. This practically incorporates the environmental education spirit of "doing by learning, and learning by doing". In practice, students learn that environmental protection is the fusion of knowledge and action, and an expression of will and perseverance. The President of CJCU, Lee Yung-lung, stated that the university integrates the spirit of campus sustainability into environmental education. Service-learning not only keeps the environment clean, but also strengthens the connection between education and practice. Building with paper bricks teaches students to think creatively, shows respect for the land through actions, makes good use of resources, and establishes ethics and values to protect nature.

3. Vision for Future Development

CJCU's medium- to long-term development aims to establish a local foothold, connect with the world, and become a leading university in fulfilling social

responsibility. CJCUC is committed to the vision of becoming a sustainable university. In terms of the environment, as the Erren River is located close to CJCUC, the university has been participating in river monitoring, pollution remediation, and ecological rehabilitation since 2002. The river monitoring volunteer team has grown from comprising only university teachers and students, to involving community residents. In terms of society, CJCUC learns about communities' lifestyles and gains deeper understandings of community needs as it upholds the principle of common good. The university regularly works with communities to inject new vitality into societal industries and co-create "regional value". In 2017, CJCUC joined hands with Foundation for

Yunus Social Business to establish the CJCUC Yunus Social Business Center, which actively cultivates social enterprise talents to accomplish the mission of achieving social justice and fulfilling social responsibility. In terms of economics, CJCUC acts in accordance with Executive Yuan's plan to develop Shalun Smart Green Energy Science City. CJCUC has implemented many discussions with industry, officials, universities, researchers, and community residents. These are conducted with the aim of promoting placemaking and the circular economy. In 2017, CJCUC also established the first spin-off social enterprise imbued with the spirit of Yunus in Southern Taiwan, Ark Better Life Co., Ltd., to achieve sustainable development goals.

(II) Tzu Chi University

1. Introduction

In Taiwan's eastern region, difficult access to medical care, lack of educational resources, and a shortage of professionals in medical-related fields have been major issues. In light of this, the founder of Tzu Chi University (TCU), Master Cheng Yen, established the university's antecedent, Tzu Chi College of Medicine, in 1994. The goal was to elevate the eastern region's medical standards, cultivate exceptional medical talent for society, and increase the well-being of the people. After years of hard work and strong academic performance, Tzu Chi College of Medicine was renamed Tzu Chi University in August, 2000. At the same time, an affiliated secondary school and experimental elementary school were also established, making TCU a comprehensive educational institution encompassing a kindergarten, primary school, secondary school, university, and masters and doctoral programs. These are practical expressions of the university's operational principles of kindness,

compassion, joy, and unselfish giving; TCU aims to achieve the educational ideals of the Tzu Chi spirit: kindness, compassion, joy and unselfish giving.

2. Current Status of Sustainable Development Promotion

TCU's physical facilities include campuses with high degrees of green cover, an abundance of environmental protection facilities (large areas covered with interlocking block, buildings with raft foundations for water storage, water reclamation systems, heat pumps, solar power and wind energy, T5 & LED energy-saving lighting equipment, water-saving equipment, green roofs, environmental education stations, and more). Smart energy-saving systems are installed on the second campus, in accordance with national energy-saving policies. These installations are designed to create green campuses that are safe, friendly, and smart. In terms of education, TCU has launched global



▲Image 24 / Medical science simulation class with integrated humanities education

sustainability courses relevant to local areas and cultures; internationally renowned gross anatomy simulation classes with unique cultural features; and service-learning courses that cultivate the spirit of altruistic humanism in students. The university has demonstrated exceptional performance in many areas, and has earned awards and recognition from many organizations: the 2017 Ministry of Education Special Schools with Character Education award; a bronze medal in the 2017 Youth Overseas Peace Corps Competition, awarded by the Ministry of Education's Youth Development Administration; NT\$53.75 million for the Ministry of Education's 2018 Higher Education Sprout and University Social Responsibility (USR) Projects; and NT\$10.22 million for the Ministry of Education's New Southbound Academic Export

project. Additionally, TCU was ranked 200th in the UI GreenMetric World University Rankings for 2017 (12th in Taiwan). TCU is regarded as a small-scale university primarily specialized in medical education, but it has attained substantial achievements in many regards. These include enhancing harmony between society and the environment; finances; sustainable & humanist unselfish giving; community engagement; and sustainable curricula and campuses. For a university with a relatively small number of teachers and students, such achievements do not come easily. This is all primarily due to TCU's clear sustainable development framework, long-term and effective strategic planning, and pragmatic praxis and implementation.

3. Vision for Future Development

With the clear conceptual guidance and support from Master Cheng Yen (founder of TCU) and the board of directors, sustainability has been considered as the core of the university's development since it was established. To uphold this spirit and way of thinking, and to create a sustainable university with special features, the team led by President Wang Pen-jung has formulated a strategically and systematically sustainable development framework. They've also formulated effective implementation plans and clear goals. Their plans include construction of sustainable environmental protection facilities, systems, and management, as well as construction of a safe campus and hygienic environment. In terms of education, courses are formulated with unique humanistic and sustainable features. TCU also actively encourages teachers and students to

engage with and show care for the community, and to participate in service-learning classes. The goal is to work toward diversely multi-faceted, multi-layered, and in-depth development. By building a clear, strong framework and attaining project results, TCU works from points to build a line, from lines to build a plane, and from there to build 3D concentric spheres. This is TCU's approach to becoming a sustainable university. TCU hopes to become a university that presents an example of the Tzu Chi Culture: a place where academic talent gathers, and a model of the flourishing university. TCU aims to contribute to sustainability work for society, humanity, and the world as a whole, by cultivating professional talent that embodies the spirit of altruism and humanism, cares for society, does good deeds for people, and has both skills and virtue.

(III) Micang Elementary School

1. Introduction

Micang Elementary School, in Bali District, New Taipei City, is located at the foot of Guanyin Mountain and the banks of the Tamsui River. It is a school with a rich ecological environment, history, and culture. The school is small but refined. Environmental sustainability, resource sustainability, and generational sustainability are the school's goals in promoting sustainable development. Micang School devotes long-term effort to developing environmental education, and has won several awards from the Taipei City Government and the Ministry of Education. In terms of environment construction, the school works hard to create an aesthetically pleasing campus that conserves energy, reduces carbon emissions, maintains lifestyles of health and sustainability (LOHAS), and protects the ecological

environment. Both its curriculum and teaching are student-centered, with an emphasis on practical experience that connects students' learning with their lives. Removing invasive species, marine education, disaster prevention education, and food and agriculture education encourage students to jointly care for and protect their own living environment. In terms of environmentally-friendly living and action, the school works toward raising the environmental awareness of both students and teachers, so that they practice environmentalism in their daily lives. In terms of community engagement, Micang School is constructed as a hub that integrates the transmission of culture to the community learning center. A diverse range of LOHAS classes are organized for seniors of the community at the senior learning center. Students are also encouraged to show care for community

seniors through action. They perform for seniors at nursing homes in special classes featuring children's toys, such as spinning tops; they also go to Aiwei Children's Home to engage in cleaning service-learning. The school holds annual river-cleaning events at the Tamsui River, as well as low-carbon school fairs. These actions are designed to help Micang students get off their campus and jointly care for the community and environment.

2. Current Status of Sustainable Development Promotion

I. School Policies and Space Management:

- (I) Environmental policies and a management system have been established for the school

campus, to foster correct environmental protection attitudes in students' and teachers' minds.

- (II) An eco-friendly campus has been planned and designed; integration of environments and environmental aesthetics with the ecology is promoted.
- (III) Campus construction is allowed to become Student Centered again; holistic campus construction is encouraged.

II. Teaching Sustainable Development Courses:

- (IV) Teachers are encouraged to utilize local environmental resources to prepare self-made teaching materials and worksheets, and to incorporate them into their teaching.



▲Image 25 / Every year, graduating students must complete a mini triathlon

- (V) Events relevant to environmental protection are organized, such as excursions, seminar visits, workshops, and competitions.

III. Humane Care and Community Engagement:

- (I) Classes are provided to senior citizens in the community at Bali District Senior Learning Center.
- (II) Learning activities are organized at nursing homes and Ai-Wei Mercy Home to encourage interaction between young students and seniors.
- (III) Students, the alumni association, and community residents are guided to jointly organize at least 2 beach cleaning events every year.

- (IV) Community resources and assets are creatively integrated to construct many unique campus features.

3. Vision for Future Development

In response to the trend of globalization and sustainable development, in recent years, Micang has adopted the vision of "World Micang, Keep Going". Micang continuously facilitates the sustainable development efforts in aspects of environment, resources, generations, and international perspectives, as well as the sustainable education. Thus, Micang students thrive in years, and also expand the connection to make Micang Elementary School a community learning center.

II. Business

(I) Yuan Soap Workshop Co., Ltd.

1. Introduction

In 2005, Yuan Soap Workshop established the Yuan Soap brand in a small fishing village of Wanli District. The brand started with hand-made medicinal herbal soaps; they pioneeringly entered the market with the theme of Taiwanese medicinal herbs. Yuan Soap integrates Eastern health philosophies and concepts, and upholds the principle of being grateful for life and friendly to the environment. The business is committed to fulfilling its responsibility for the land, and to integrating the value of holistic community development with the aim of maintaining crafts that are infused with warmth and culture.

2. Current Status of Sustainable Development Promotion

Since its establishment, Yuan Workshop has

maintained a commitment to Land Ethics and the Aesthetic of Manual Labor in the enterprise's cultural practices. Yuan Workshop acts to achieve the enterprise goals of Cultural Regeneration, Placemaking, and the Symbiotic Economy. Intensive manual processes are adopted to make products that consume little energy, are highly reusable, use minimal material, have zero emissions, and completely decompose. This also increases employment opportunities and creates value for manual labor. Herbs are upgraded from use as primary raw materials or secondary processing materials, to being integrated into third-level biotechnology applications. This makes full use of broad-spectrum herbs, maximizing effectiveness of products in providing pleasant therapeutic benefits. Building from the hand-made herbal soaps, many skincare products, such as



▲Image 26 / Yuan Farm - an Attitude that lets nature decide what grows

oils, toners, lotions, creams and gels, have also been developed. This has made Yuan Workshop the world's first cosmetic enterprise to be a creative and lifestyle brand that also produces toothpaste and tea.

Upholding CSR principles, Yuan Workshop continues to generate added value for traditional local industries and fulfill its social responsibilities. The company does this through its collaboration with suppliers, manufacturing management, innovative services, product core values, as well as involvement in social issues, environmental protection, and community care. Doing so has allowed Yuan Workshop to build an enterprise structure that entails Working Together, Creating Together, Co-Existence, and Mutual Good. In 2016, the Chiang Jung-yuan Education Foundation was established to implement and promote Personal Engineering that benefits mental health, coexistence

with the environment, and spiritual and aesthetic education. By the end of 2018, Yuan Workshop had more than 500 points of sale across Asia, Europe, and the United States. The business, started by one man from the countryside, has progressed to the creative integration of international aesthetics, placemaking of rural areas, and marketing to first-tier cities. Yuan Workshop is committed to positively and effectively promoting the uniqueness of Taiwanese plants, customs, and culture to the world with value-added products.

3. Vision for Future Development

Yuan Workshop hopes to become a global Taiwanese medicinal herb brand with the deepest cultural depth. Continuing the spirit of holistic community development, the brand generates real earnings that

improve the environment and people's daily lives through marketing. As economic returns improve, it is no longer a daydream for young people to return to their hometowns. Communal Co-prosperity has transformed from a slogan into an industry. Through the evolution of management, sustainability has become a habitual practice. Because of this, in 2017, the enterprise bought a plot of land in Shimen District, in the suburban coastal area of northern Taiwan, and named it Pearl of the Northern Sea. This was to establish a site for crafting hand-made soap that also integrates medicinal herb research and development,

brand development, employment clusters, and charity. Yuan Workshop believes sustainability for the common good is a new solution for transforming today's economics. The four key elements of sustainability — Working Together, Creating Together, Co-Existence, and Mutual Good — are the goals Yuan Workshop aims for. Strategies to achieve those goals are Production, the Ecology, Daily Life, and Business. Yuan Workshop is also committed to promoting this spirit of the Creative Economy and replicating it in markets around the world, to help it produce the best results.

(II) ECOVE Environment Corporation

1. Introduction

ECOVE Environment Corporation (TPEX: 6803) along with its subsidiaries (collectively referred to as ECOVE below), was established in 1999 in Taipei City, Taiwan. ECOVE provides professional investment and operational services for the resource recycling industry, with a focus on developing and managing the circular economy (e.g., energy renewal, material recycling, and water reclamation). ECOVE's subsidiaries have expertise in the environmental protection and green energy industries, including: Operational maintenance of environmental protection electromechanical facilities; waste-to-power plant franchised operation (PPP); waste management; resource recycling; and photovoltaic power. ECOVE's clientele comprise public and private companies in Greater China, Southeast Asia, India, and the United States. The company provides all-round services, covering: Investment and franchised operation of waste-to-power plants; waste and resource recycling management; factory supply for cleaning and cutting plastic bottles for reuse; solar power plant development and investment; and more.



▲Image 27 / Installing a photovoltaic system

2. Current Status of Sustainable Development Promotion

ECOVE is a member of CTCI Group, a leading global engineering service provider. Founded in 1999, ECOVE has established affiliated companies in Taiwan, China, Macao, and the United States. The company provides professional investment and operational services relevant to the resource recycling industry; its growth revolves around the development and management of the circular economy, which

includes energy renewal, material recycling, and water reclamation. ECOVE's subsidiaries are involved in many environmental protection and green energy industries. These include operational maintenance of environmental-protection electromechanical facilities; waste-to-power plant franchised operations (PPP); waste management; resource recycling upgrading; and solar photovoltaics. In 2017, it was announced that ECOVE would be heading into the international arena.

Building a brand isn't about showing off, but it's about building core values within, to give employees a sense of identity, and to create social value. Put simply, building a brand is about enhancing operational efficiency, making things smarter, systematizing, and working together. The purpose is to integrate environmental protection and green energy within the service field, and to turn limited resources into sustainable resources by integrating technology.

ECOVE has always been committed to fulfilling its corporate social responsibility. Therefore, ECOVE not only works long-term to improve itself in its areas of expertise, but also spares no effort in social engagement. Environmental education and communication channels relevant to the environment are necessities for promoting public participation in environmental protection. Therefore, many branches of ECOVE's subsidiaries have been qualified as environmental education facilities. ECOVE also integrates the CTCI Education Foundation into its long-term environmental education development. The enterprise takes the initiative to visit elementary schools in Taiwan to teach sustainable lifestyles to children, who will be our future leaders. ECOVE also recognizes that ensuring the safety and health of employees is the most important task in an enterprise's operations. Therefore, ECOVE provides all the resources necessary to construct and maintain

intrinsically safe work environments. ECOVE sees its employees as the top priority; ECOVE's spirit and conduct have also earned the Enterprise Project Management Benchmarking Award at the National Occupational Safety and Health Awards. As a leading company in Taiwan's environmental industry, ECOVE has long provided professional training to cultivate the core skills of our colleagues. In 2016, ECOVE won the National Standardization Award, a testament to ECOVE's high-quality daily operations.

In 2017, ECOVE underwent third-party inspections and obtained the world's first BS 8001 Circular Economy certification. This is testimony that ECOVE operations yield the greatest recycling rate and circular economy benefits. Evaluations have shown that ECOVE performs at excellent standards in the areas of resource management, environmental benefits, and social benefits. The BS 8001 Circular Economy certification has inspired new ideas, which ECOVE will integrate into its business operation philosophy for this age of Sustainable Development Goals (SDGs).

3. Vision for Future Development

The company's vision is to attain the SDGs, and to become the most trustworthy leader in sustainable resource recycling.

ECOVE's missions are to improve the utilization of technology integration, and to optimize the benefits of resource recycling. The brand's slogan, Every Resource Counts, is also an operation and conceptual principle. The benefits of resource recycling are elevated through smart systems and data management. ECOVE actively takes part in discussions on environmental protection policies and community collaboration. The company is committed to including SDGs within the strategic development plan. Combining careers with vocations, ECOVE continues to work hard for global resource

sustainability and for the living environment of people.

Originally, ECOVE was only involved in incinerator plant operations and maintenance services, before it expanded into electromechanical equipment upgrading and railway depot facility maintenance and management. The company also exports Taiwan's

incineration technologies overseas. ECOVE went from nothing to a success, from having only 3 workers to upholding CSR and BS 8001 Circular Economy practices with 900 employees. Its vision is to become the most trustworthy leader in sustainable resource recycling, as it continues to work toward sustainability.

(III) Far Eastern Department Stores

1. Introduction

The Far Eastern Department Store has been growing locally for over 50 years. The company upholds the spirit of "whatever we take from society, we apply it to society". While the enterprise pursues excellence in business management, it also works hard for the sustainable development of Taiwan's economy, environment, and society. This is to construct a sustainable growth model in which the economy, environment, and society all benefit. With half a century of business operations under its belt, the Far Eastern Department Store is not only the oldest, but also the only listed chain department store in Taiwan. It is also a merchandise retail group with the highest revenue in Taiwan. Its subsidiaries include many operations, including department stores, hypermarkets, high-quality supermarkets, and shopping malls. Having 50 operating sites throughout Mainland China and Taiwan, it is the most unique and most complete large retail group on either side of the Taiwan Strait. In its glorious development history, the Far Eastern Department Store was not only the first to run a new operation model combining supermarket with department store, but also the first department store in Taiwan to organize mid-year sales and international commodity exhibitions. The opening of the New Generation branches (Banqiao Mega City and Taichung Top City) in 2011 were successful launches of the department store-style shopping mall, which

gave momentum to the development, transformation and improvement of the Taiwanese department store industry. In the future, the Far Eastern Department Store will continue to pursue innovation and transformation, and make innovations in its business operations. It will utilize digital technology to upgrade the consumer experience, to share joy with the public, and to create wonderful experiences. It aims to become a leading retail brand with sustainable operations, to prosper and find common good with society, and to grow with the public.

2. Current Status of Sustainable Development Promotion

The Far Eastern Department Store walks at the forefront of environmental protection. It combines technology with fashion and environmental protection, to construct green shopping malls and practice the concept of environmental sustainability. Thirty-three million kWh of electrical energy have been saved in the recent five years. The amount of carbon reduced is equivalent to the amount of carbon consumed by 67 Da'an Forest Parks in a year, and 424 ping (1,402 square meters) of roadside trees and green space have been adopted. On average, three environmental educational events were held every month, at which 56,000 environmentally friendly everyday commodity gifts were distributed. Its shopping bags are environmentally-friendly paper bags with FSC



▲Image 28 / Far Eastern headquarters' green building in New Taipei City

Rainforest certification. Reduction in packaging has been promoted, with total packaging per transaction dropping by 16% in 2017. The ten store branches in Taiwan have held more than 300 charity events by making good use of their platforms for charitable resources. They have also held charity Christmas lights illumination events for nine consecutive years.

The enterprise has cared for more than 1,500 children from rural areas. The employees also showed their Far Eastern spirit of caring by taking the initiative to form volunteer teams that participate in beach cleanups. The enterprise practices environmental protection, serves society, and builds wonderful living with love.

3. Vision for Future Development

The Far Eastern Department Store has been established locally for 51 years. It upholds the spirit of seeking innovation and transformation in its pursuit of exceptional corporate management. Giving back to society is regarded by the company as a fundamental value for sustainable enterprise operation. Through this, Far Eastern constructs a sustainable development model that allows the economy, the environment, and society to all benefit. In the face of

the new wave of retail, the Far Eastern Department Store is making good use of technology to build a bright future of digital retailing. It has also become a growing enterprise in terms of the two E's. The Far Eastern Department Store's EPS has increased through operational strategies and innovations in management; it has also been fulfilling its social corporate responsibility with EGS. The Far Eastern Department Store is leading the department store industry into the age of sustainable development.

III. Civic Organizations

(I) Hsin-che Lien-chih Benevolent Association of Taiwan

1. Introduction

Master Che Tsung, the founder of Hsin-che Chan Temple, established Hsin-che Chan Temple in 1979, and founded the Hsin-che Lien-chih Charitable Association on May 30, 1983. The association's goals are to promote the traditional virtues of compassion and saving others; help the poor in society; provide counseling and care to improve physical and mental health; establish correct outlooks on life; assist the government in handling charitable, public welfare, cultural, educational, employment training and other work; promote social stability and harmony; and purify people's hearts.

2. Current Status of Sustainable Development Promotion

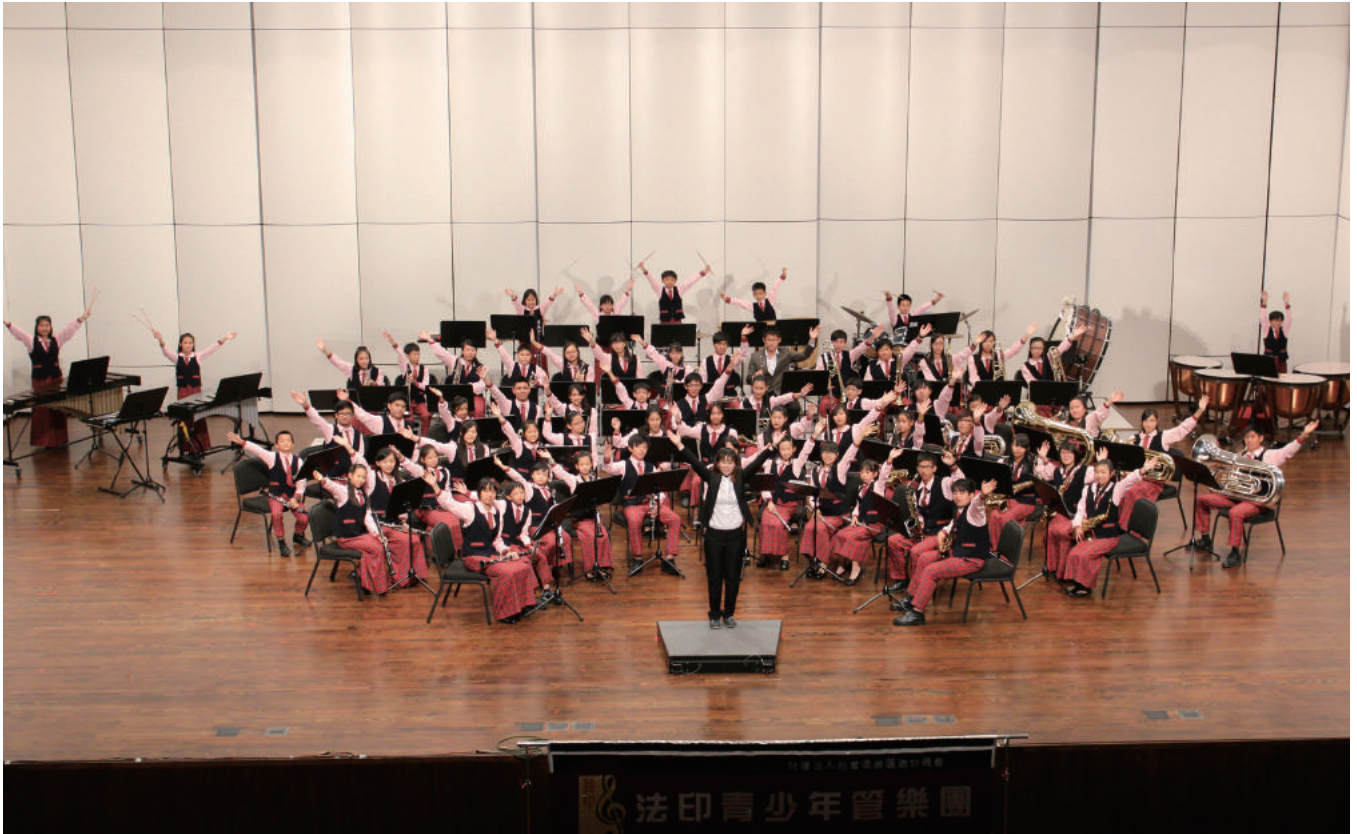
(1) Social care:

Following its mission, the association handles all kinds of social service work, charity, public welfare, culture, education and employment training. Resident masters lead professional social workers and like-minded

volunteers to jointly develop civic groups among people in need of care and empowerment in different regions, such as women new immigrants, second generation new immigrants, seniors and vulnerable groups in Taiwan. Services focus on three major focal points commissioned by the government: child-care, new immigrant family service, care for the elderly in Qianzhen District.

(2) Charity:

The association has had long-term cooperation with relevant government departments to handle services for vulnerable families, such as children, youth, women, new immigrants, and elders. Examples include: training new immigrants to perform ox horn massage; Fa Yin Youth Wind Band training; long-term care class employment training; cooperation with social welfare groups, corporate clubs, campuses, etc.; and participation in public welfare affairs such as international cultural and artistic exchanges, and helping African children.



▲Image 29 / Fa Yin Youth Wind Band

(3) Cultural education:

The association regularly organizes Buddhism study classes; regularly conducts scholarship campaigns for different Buddhist institutes, colleges, high schools, junior high schools, and elementary schools in Taiwan to acknowledge their efforts in learning; leads members of Fa Yin Youth Wind Band to participate in children's summer camps as activity empowerment team captains; and carries out multicultural integration with new immigrants and their children, such as promotion of different major festivals, which enables people in Taiwan to learn more about festivals of Southeast Asia. For long-term empowerment, the association completed social welfare activities with senior citizens, newly-immigrated women, children and youth.

(4) Volunteer service:

Since the association's establishment in 1983, it has continuously invested in volunteer service work and deeply cultivated volunteers' educational empowerment. At present, there are 358 volunteers registered with the Ministry of the Interior; of these, 140 are volunteers in the regular case visit team. The other volunteers form different teams, empowering different professional services, including a medical team, a children and youth team, and a new immigrant team. The association has been honored with an Excellent rating in the National Social Association Performance Evaluation, and as a National Outstanding Social Welfare Volunteer Group. These honors all belong to the association's like-minded directors, supervisors and volunteers teams.

3. Vision for Future Development

The association established the Hsin-che Lian-chih Charitable Association in 1983; then in 2007, it was officially registered with the Ministry of the Interior and renamed the “Hsin-che Lien-chih Benevolent Association of Taiwan”. The association's goals are to promote the traditional virtues of compassion and saving others; help the poor in society; provide counseling and care to improve physical and mental health; establish correct outlooks on life; assist the government in handling charitable, public welfare, cultural, educational, employment training and other work; promote social stability and harmony; and purify

people's hearts. Through the preaching of Buddhism, the association promotes implementation of physical and mental purification of an individual and a group so as to integrate the academic and the popular; to shield and sustain the sangha to preserve the dharma, and cultivate nuns and monks in learning, to create an endless font for social purification; to effectively use social resources, and closely integrate with charitable associations, to improve service levels, and expand cultivation and service for spiritual counseling and skills; to carry out cultural and educational work, and to spread the dharma and Bodhi voice among all living things.

(II) Youngwater Culture and Education Foundation

1. Introduction

The Youngwater Culture and Education Foundation was established in 1998. In 2002, Taichung Taiping Toubiankeng Workstation was established. It engages in comprehensive community development and ecological rehabilitation of the 9/21 Earthquake Reconstruction Area, striving for the economic recovery of the Toubian community, improving local agriculture and community prosperity, and promoting the sustainable development of environmental education and ecological conservation. Based on care of the local people and culture, the foundation takes the concept of comprehensive community development as its starting point. Starting from what the foundation can do now, it continues to protect the living natural environment, unearth treasures of history and tradition, and engage in exchange with different cultural groups. The foundation frequently puts itself in the shoes of the vulnerable. With a mindset of exchange, it cherishes mutually supportive friendships and promotes cultural activities with social education. The foundation cultivates more seed volunteers,

to shape a sound natural environment with vibrant culture and history for the next generation.

2. Current Status of Sustainable Development Promotion

In 2004, the Youngwater Culture and Education Foundation proposed the Bat Cave Rehabilitation Project to re-create and beautify the surrounding environment. Efforts were made over ten years to restore a quiet bat habitat, and the magnificence of the bat cave was restored. Gradually, in 2014, bat colonies returned to their home, the bat cave, which once again became a community highlight. At the same time, the Youngwater Culture and Education Foundation planned the Bat Ecological Education Course to teach members of the public bat ecological conservation and environmental education and to enhance learned civic consciousness.

Chairman Yeh Jin-yu stated that over many years, Taiping Blue has been promoted and found its place in the world, with the support and selection of the

Ministry of Culture's National Taiwan Craft Research and Development Institute (NTCRI). Taiping Blue has been represented at Crafts Bangkok, Interiorlifestyle Tokyo, Maison & Objet Paris, Hangzhou Cultural & Creative Industry Expo, Sichuan International Travel Expo, Cross-strait (Xiamen) Cultural Industries Fair and other trade shows, and won glory for Taiwan by winning the Best Decor Award at the International Furniture Fair Singapore. Youngwater Culture and Education Foundation's years of consistent effort finally paid off and made a brilliant splash for the foundation.

The Youngwater Culture and Education Foundation has been in long-term cooperation with Dongbian Elementary School to plant the lost *Storobilanthes flaccidifolius* Ness. The foundation simultaneously provides a stable employment environment for women in communities and vulnerable groups, while maintaining the indigo dyeing craft and ecological beauty of Taichung's Taiping Blue both at home and abroad. The foundation has won unanimous praise from all people of walks of life and is known as the pride of Taiwan. It could be said that it was a well-deserved award.

Especially rare and commendable was the indigo dyed wall clock designed by Ms. Chiang Chieh-yu, a young Youngwater Culture and Education Foundation designer. The clock was elected as the year's Taiwan Good Craft by the NTCRI as well as the 2018 Golden



▲Image 30 / An international work camp cleans up uncultivated land and plants bluegrass

Pin Design Award. Taiping Blue has designed a series of new daily and household items. These items not only broke stereotypes most people hold about indigo dyed products, but also smashed the traditional thinking that traditional indigo dyeing can only be done on cloth. Taiping Blue astonished Japanese crafters during the Japanese exhibition. They were amazed at the fact that Taiwanese designers were able to create and design such eye-catching new products and showed their vast admiration.

3. Vision for Future Development

The Youngwater Culture and Education Foundation has been working hard for nearly 20 years in Toubiankeng, Taichung, from the reintroduction of bats and community development, to the recovery of the Taiping Hakka indigo dyeing community industry. Every stage was extremely difficult. However, Chairman Yeh Jin-yu led the team to keep moving

forward through the hard-headed spirit of the Hakka people, which finally yielded positive results. Under his lead, the Youngwater Culture and Education Foundation won an Environmental Protection Administration's National Environmental Education Award in 2016, a Ministry of Labor's National Talent

Development Award in 2017, and in 2018, won an Executive Yuan's National Sustainable Development Award. Every stage has represented the positive energy shown by all colleagues at the Youngwater Culture and Education Foundation in constantly striving for improvement and good work.

(III) Environment and Development Foundation

1. Introduction

The Environment and Development Foundation (EDF) was established in 1997, entirely through the support of the Industrial Technology Research Institute (ITRI). The EDF is a professional environmental organization that works in technology transfer. As of 2018, the Chairman of the Foundation was Professor Lo Shang-lien, the President was Dr. Chen Wen-ching, and Professor Chai Sung-lin was appointed the Honorary Chairman, while the former President Dr. Yu Ning served as senior consultant. The EDF's professional technical personnel all have engineering and science backgrounds, such as environmental engineering and chemical engineering. They are supplemented with administrative, information technology and financial personnel. The EDF maintains close cooperation with many professional environmental organizations, both at home and abroad. In addition, having the support of a large group of ITRI technical experts is one of the EDF's major features.

2. Current Status of Sustainable Development Promotion

The focus of the EDF is on the circular economy. The EDF carries out technical services entrusted to it by public and private enterprises, including industrial process improvement; source waste reduction, and energy and water conservation; development of resource regeneration technology; green product

verification; and promotion of green-energy and low-carbon cities (communities).

In terms of industrial energy and water conservation, the EDF has been assisting the industry to improve water consumption efficiency since 2013. The foundation has assisted more than 500 businesses that consume large amounts of water, saving more than 43 million tons of water annually. In terms of resource recycling technology, the EDF has promoted the development of recycled green building materials, and the use of energy and resources from kitchen and organic waste.



▲ Image 31 / Promoting utilization of organic waste energy and resources

In terms of green energy and energy-saving technology, the EDF serves as a bridge between the central and local governments, assisting people and business owners in seeking opportunities for energy conservation and carbon reduction, and promoting low-carbon certifications for townships, villages and communities, while also cooperating with seven county and municipal governments to create sustainable, low-carbon, green-energy homes.

In terms of marks and verifications, the EDF has driven about NT\$70 billion worth of green product procurement opportunities every year, while maintaining international connections to show Taiwan's green competitiveness.

3. Vision for Future Development

The EDF was established in 1997 through the support of ITRI. It was initially established as a professional technical service team to promote environmental protection and economic development. In the mid-stage, the EDF focused on expanding the effective use of green energy and resources. In the long run, the EDF's long-term comprehensive development goal

is to become a government think-tank, an industry partner and a mentor to the public.

As a government think-tank, the EDF will actively assist in the development of relevant laws, regulations and policies, the establishment of green mark verification system, and the promotion of green procurement.

In terms of industrial service, the foundation will promote industrial development by guiding public and private enterprises in pollution rectification, energy saving and water conservation, and cleaner production technologies.

In terms of public education, the foundation will continue to lead communities to save energy and reduce carbon, and actively participate in public welfare activities. The EDF's development vision is completely consistent with the country's sustainable development goals: maintaining environmental justice, promoting economic development, and improving the people's welfare. The foundation will work together with government, industry and academia to allow Taiwan to become a sustainable homeland with low carbon, environmental protection and happiness.

IV. Government agencies

(I) Construction and Planning Agency, Minister of the Interior

-- the Demonstration and Promotion Scheme for Recycling and Reusing Discharged Water from Public Wastewater Treatment Plants and the Implementation Plan of the Forward-looking Water Reclamation Project

1. Introduction

The Construction and Planning Agency of the Ministry of the Interior (CPA) has worked diligently to promote the Demonstration and Promotion Scheme for Recycling and Reusing Discharged Water from Public Wastewater Treatment Plants, in order to add value to

the efficiency of sewage construction and to achieve water circular economy goals. After considering the sewage treatment plants meeting the effluent recycling conditions and evaluating nearby water consumption users with higher economic output value, the CPA listed six treatment plants as demonstration

sites. These were plants already in operation, including Futian Plant in Taichung City, Anping Plant in Tainan City, Fengshan River Plant in Kaohsiung City; and plants under construction, including Fengyuan Plant in Taichung City, Yongkang Plant in Tainan City, and Linhai Plant in Kaohsiung City. This work was promoted and executed in line with the Five-Stage Sewage System Construction Plan (2015-2020), with NT\$15.2 billion in funding provided by the Ministry of the Interior.

After the demonstration program was completed, it was estimated that the recycled output quantity of reclaimed water could reach 280,000 tons/day (equivalent to the daily water consumption of approximately 1.2 million people). The total required funding was NT\$15.1627 billion. In addition, to expand benefits from promoting reclaimed water, the Ministry of the Interior also infused NT\$1.3 billion of water reclamation funding through the Forward-looking Infrastructure Development Program to implement water reclamation construction for Taichung City's Shuinan Water Resource Recycling Center and Kaohsiung City's Linhai reclaimed water drawing pipeline construction, which were set to increase reclaimed water supplies by 33,000 tons/day. Doing so helped align project resources to accelerate local reclaimed water infrastructure and support regional development, while at the same time integrating sewage and reclamation treatment to comply with the goal of zero tap water increase for industrial use. This flipped the traditional mainstream reclaimed water provision strategies, in which cities' small storage reservoirs provide water. Instead, a stable and sustainable water source is provided, and by doing so, the project supported and implemented needs for reclaimed water construction in areas with shortfalls in water, while accelerating local reclaimed water infrastructure and supporting regional development.



▲ Image 32 / Residents took over and completed back alley beautification work

2. Current Status of Sustainable Development Promotion

The Demonstration and Promotion Scheme for Recycling and Reusing Discharged Water from Public Wastewater Treatment Plants (in the 2013-2020 period) was estimated to have a reclaimed water recycled output capacity of 280,000 tons/day (equivalent to the daily water consumption of approximately 1.2 million people) after completion. It is able to replace tap water supplies for industrial use, for a total required funding of NT\$15.1627 billion. In addition, to expand benefits from reclaimed water promotion and to align with Forward-looking Program resources, the Ministry of the Interior also infused NT\$1.3 billion in water reclamation funding through the Implementation Plan of the Forward-looking Water Reclamation Project (in the 2017-2023 period). This funding was used to conduct water reclamation construction of Taichung City's Shuinan Water Resource Recycling Center and Kaohsiung City's Linhai reclaimed water drawing pipeline construction. These two projects were set to increase reclaimed water supplies by 33,000 tons/day for Central Taiwan Science Park -- Taichung Park

and Linhai Industrial Park, and by doing so implement support for reclaimed water construction needs in areas with water supply shortages, and accelerate local reclaimed water infrastructure and support regional development.

3. Vision for Future Development

The purpose of this project is to promote the supply of public sewage treatment plant effluent for industrial use, to stabilize water demand during the dry season, and to develop water supply technology by establishing water reclamation plants based on different users' water quality requirements. At present, in addition to industrial park supply, the project also set a worldwide precedent for supplying water to the high-tech wafer industry. The project also conducted

the assessment of the overall environmental friendliness of whole sewage treatment plants and water reclamation plants, so that the sewage treatment plants can integrate forward-looking interests such as water technology and environmental education to create a sustainable water environment.

In addition to continuing to evaluate the feasibility of reclaimed water supplies with regard to the existing sewage treatment plants, in the future, the project will also subsidize local governments through sludge reduction and reuse projects. This will help Taiwan's sewage plants to gradually move toward the next phase, with the possibility of multi-faceted cross-domain added value, so as to achieve the vision of transformation and conversion, and meeting the forward-looking circular economy goals.

(II) Forestry Bureau, Council of Agriculture, Executive Yuan

-- From Farmland to Wetland: Satoumi Action in Chenglong Wetland

1. Introduction

In farmland ecosystems, the exploitation and transformation of farmlands for non-agricultural uses and the prevalence of conventional farming have destroyed the breeding grounds of many animals and plants that originally lived in the plains and outer mountain areas. At the end of 2009, the mass death of pheasant-tailed jacanas in Guantian, Tainan due to the mistaken ingestion of pesticide-treated grains led the Council of Agriculture's Forestry Bureau to develop a set of action plans that took both production and ecology into consideration. These plans, called the Farmland Ecological Conservation and Construction – Green Conservation Mark Certification project, assist

farmers to adopt environmentally friendly farming methods that do not use pesticides or chemical fertilizers. The Green Conservation Mark was also designed for consumer recognition to encourage consumers to purchase environmentally friendly agricultural products.

2. Current Status of Sustainable Development Promotion

(1) Society

Kouhu Township in Yunlin County faced population emigration and sparse population. In order to tighten



▲ Image 33 / Chenglong Community Development Association artwork Rebirth

relations between the generations, and to cultivate the villagers' ability to take care of community issues autonomously and participate in public affairs, several programs were implemented. These included: Youth Detectives; Junior and Senior High School Student Community Service Learning Program; Community Kitchen; Community Environmental Guide Training; and more. He Tang's Lo-kioh-tshu -- Chenglong Wetland Storytelling Hall was used as a demonstration for residential flood control in coastal and low-lying areas, senior-friendly spaces, and energy-saving green buildings. This has helped local residents

identify with the ideas of long-term ecological land retirement, and with the Chenglong Wetland Ecological Park.

(2) Environment

After many years of habitat restoration in Chenglong Wetland, birds increased from 28 families and 86 species in 2009, to 36 families and 118 species as of 2018. It was discovered in that year's January survey that more than 40 black-faced spoonbills chose to spend the winter in Chenglong Wetland. There were

also 17 species of fish, six species of shrimp, seven species of crabs, snails and shellfish.

(3) Economy

Promoting Non-groundwater Pumping Experimental Fish Farms; popularizing seawater ecological farming of Asian hard clams, whiteleg shrimp, and establishing the Chenglong Wetland Bird Zone Production Group to assist in co-branded marketing, and establishing a production and marketing cooperation model with the community were all carried out. The Chenglong Wetland Bird Zone Production Group is an organization formed by non-groundwater pumping farmers. The group is committed to cultivating quality salt ingredients with environmentally friendly methods to reverse setbacks and add value to local industry.

(4) Culture

- (a) Through implementation of the Chenglong Wetland International Art Project, the community has been brought closer to the wetland ecology, thus enhancing the community's understanding of and identification with ecology and environment.
- (b) Old houses in Chenglong Village were renovated, and primary gathering places and exhibition spaces for community activities were revitalized, so as to build consensus and unite the community's residents.
- (c) The Video Storytelling documentary workshop has cultivated the community's documentary abilities, through the theme of changes in Chenglong Village, extending to issues such as ecology, history and farming. The workshop has completed three community documentaries, as well as an outcome documentary for the Chenglong Wetland International Art Project.

3. Vision for Future Development

In Chenglong Village, Kouhu Township, Yunlin County, due to land subsidence and typhoons, the farmland was submerged under seawater. The fields gradually gave way to the sea and could not be cultivated for a long time. To find a future for this farmland, the Forestry Bureau focused on wetland ecology. Since 2005, the Forestry Bureau has subsidized Yunlin County Government to manage the Kouhu Township, Yunlin County Wetland Ecology Park Management Demonstration Project, using the concept of ecological land retirement subsidies to transform farmland into a wetland ecology park. In 2009, the Kuan-Shu Education Foundation was invited to join in the promotion of Chenglong Wetland Community Learning and Participation Project. This project uses the concept of Chenglong Wetland Three-Generation Classes to allow kids to bring their adults family members so that all can get to know the wetlands together. This has tightened the relationships between the generations, and guided industrial transformation toward environmentally friendly farming methods. The Chenglong Wetland International Environmental Art Project has been held since 2010. It has inspired the creation of art through a rich ecology, helped villagers to re-examine the value of Chenglong Wetland, connected people's feelings with the land, and developed an environmentally friendly living, production and ecological model.

(III) Bureau of High Speed Rail, Ministry of Transportation and Communications

-- Taiwan Taoyuan International Airport Access MRT Construction Plan

1. Introduction

The primary construction goal of the Taiwan Taoyuan International Airport Access MRT Construction Plan is to connect the nation's gateway (Taoyuan International Airport) with the important transportation hubs in northern Taiwan, namely, Taipei Main Station and Taoyuan High Speed Rail Station. Doing so provides passengers with fast express trains with few stops,

and value-added services such as in-town check-in and baggage check-in. Passengers can do pre-check-in and check their luggage at Taipei Main Station, then obtain a boarding pass. Another construction goal is to match urban development along the route and drive local prosperity, providing commuter trains that stop at all stations to serve commuters, thus balancing urban and rural development.



▲ Image 34 / High-pier viaduct in a water conservation zone

2. Current Status of Sustainable Development Promotion

The Airport MRT was a pioneer in green building planning of MRT systems in Taiwan. It obtained the first MRT station green building certification in Taiwan. Except for Taipei Main Station (A1) and Airport Terminal 2 Station (A13), which didn't need to obtain a green building certification due to their restricted base conditions, the other 19 stations all obtained a green building certification. The National Taiwan Sport University Station (A7) has even won the rare honor of certification as a silver-level green building.

During the construction phase, calculated in terms of just one construction target's carbon reduction over six years, this is equivalent to the amount of carbon reduced by 197 Da'an Forest Parks in a year. Considering there are a total of 10 construction items in the project, the carbon reduction is even more remarkable. In terms of carbon reduction during the operational phase, it is estimated that in 2034, the annual carbon reduction effect will be equivalent to one year of carbon reduction from 83 Da'an Forest Parks. From the beginning of the project until the end of October, 2018, there were an accumulated total of 36.2 million passengers, with average daily traffic of 62,033 passengers. The train had an on-time rate of 99.5% or higher, providing domestic and foreign passengers as well as the general public with safe, comfortable and convenient transportation service. In addition to meeting the needs of passengers entering and leaving Taoyuan International Airport and important locations along the route, the project also provides passengers with a greater diversity in mass transit transfer choices, and provides concrete contributions to relieving highway traffic congestion, reducing carbon emissions, reducing transportation energy consumption, and creating sustainable green living in Taiwan.

3. Vision for Future Development

The route of the Taiwan Taoyuan International Airport Access MRT Construction Plan is 51.03 kilometers in length, passing through ten administrative districts in three municipalities: Taipei City, New Taipei City, and Taoyuan City. There are 15 elevated stations and six underground stations, and two maintenance workshops in Luzhu and Qingpu. The project's construction cost was NT\$113.85 billion, and it started operation on March 2, 2017.

The Airport MRT connects the nation's gateway with the important northern transportation hubs of Taipei Main Station and Taoyuan High Speed Rail Station. In addition to providing passengers with fast transportation service, it is itself a form of green energy transport. Ever since the planning and designing stage, the Railway Bureau of the Ministry of Transportation and Communications has upheld the spirit of promoting energy conservation and carbon reduction, and specifically integrated environmentally friendly construction techniques, such as the use of the full-span precast launch method, cut bamboo-style caisson excavation method, double-o-tube shield tunneling method and steel bridging. In the follow-up construction phase, the project implemented environmental protection as well as energy conservation and carbon reduction policies. This was done in hopes of making valuable contributions to domestic environmental protection, and creating an airport access MRT system with that which is both sustainable and people-oriented.

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