

# 108年國家永續發展年報

## 2019 Annual Report on National Sustainable Development

行政院國家永續發展委員會秘書處 編印

National Council for Sustainable Development, Executive Yuan



深耕永續種子 · 延續發展動力



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# 108年國家永續發展年報

2019 ANNUAL REPORT ON NATIONAL  
SUSTAINABLE DEVELOPMENT

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## 目錄

### 第一章、108年國家永續發展委員會年度工作進展 ..... 2

- 壹、召開永續會工作會議 ..... 2
- 貳、出版永續發展指標報告 ..... 4

### 第二章、永續會年度工作重點及成果 ..... 6

- 壹、健康與福祉工作分組 ..... 6
- 貳、生活與教育工作分組 ..... 7
- 參、綠色經濟工作分組 ..... 9
- 肆、綠色運輸工作分組 ..... 11
- 伍、國土資源與城鄉發展分組 ..... 13
- 陸、永續農業與生物多樣性工作分組 ..... 15
- 柒、環境品質工作分組 ..... 18
- 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 ..... 19

### 第三章、108 年國家永續發展獎辦理情形 ..... 22

- 壹、國家永續發展獎簡介 ..... 22
- 貳、108年國家永續發展獎評選結果 ..... 22
- 參、得獎單位集錦 ..... 23
  - 一、教育類 ..... 23
  - 二、企業類 ..... 28
  - 三、民間團體類 ..... 34
  - 四、政府機關類 ..... 38

### 2019 Annual Report On National Sustainable Development..... 44

## 圖目錄

- 圖 1 國家永續發展委員會第 47 次工作會議 ..... 3
- 圖 2 國家永續發展委員會第 48 次工作會議 ..... 3
- 圖 3 國家永續發展指標報告中英文版封面 ..... 5
- 圖 4 推動國民年金制度保障老年人口經濟安全 ..... 6
- 圖 5 總統訪視屏東縣泰武鄉卡比亞安文健站 ..... 6
- 圖 6 108 年世界糖尿病日記者會 ..... 7
- 圖 7 結合學校大型活動進行宣導 ..... 7
- 圖 8 數位圖文職類職業訓練 ..... 8
- 圖 9 縣市勞工局督導為身心障礙學生說明職場現況 ..... 8

|      |  |    |
|------|--|----|
| 圖 10 | 蘇院長與潘部長啟動六都準公共機制 .....   | 8  |
| 圖 11 | 春池玻璃資源再生教育學堂講授玻璃再生歷程 .....   | 9  |
| 圖 12 | 臺灣白色恐怖不義遺址歷史講座暨創作發想工作坊 - 台北場 .....   | 9  |
| 圖 13 | 108 年 1 月 22 日完成彰濱崙尾西太陽光電 100MW 設置 .....   | 9  |
| 圖 14 | 環保集點活動記者會 .....  | 10 |
| 圖 15 | 日月潭國家風景區向山自行車道 .....   | 10 |
| 圖 16 | 青年職涯發展中心人生履歷活動 .....   | 11 |
| 圖 17 | 花蓮縣鳳林鎮幸福巴士 .....   | 11 |
| 圖 18 | 台灣高鐵會員 TGO .....   | 12 |
| 圖 19 | 臺北市政府警察局在自強隧道實施區間測速執法 .....  | 13 |
| 圖 20 | 完成公開全臺土壤液化初級圖資 .....   | 13 |
| 圖 21 | 高雄市茂林區公所進行部落文化遺址、傳統遷徙路線資訊收集及維護工作 .....   | 14 |
| 圖 22 | 台中市豐原安康一期共好住宅 .....  | 14 |
| 圖 23 | 新北市新莊區新豐段青年社會住宅 .....  | 14 |
| 圖 24 | 臺灣在亞太防制洗錢組織 (APG) 評鑑中贏得好成績 .....   | 15 |
| 圖 25 | 農業環境基本給付 .....   | 16 |
| 圖 26 | 全國海洋資料庫雛形系統首頁畫面 .....  | 16 |
| 圖 27 | 馬祖列島燕鷗保護區現地訪查狀況 .....  | 17 |
| 圖 28 | 臺灣森林覆蓋良好 .....   | 17 |
| 圖 29 | 成立全國首座「國家自然公園管理處」 .....  | 17 |
| 圖 30 | 一次用塑膠吸管限制使用政策 .....  | 18 |
| 圖 31 | 104 年至 108 年細懸浮微粒 (PM <sub>2.5</sub> ) 紅色警戒 (日平均 $\geq 54 \mu\text{g}/\text{m}^3$ ) 次數 ..... | 18 |
| 圖 32 | 臺南市永康水資源回收中心暨再生水廠統包工程動土儀式 .....  | 19 |
| 圖 33 | 臺灣氣候行動研討會 .....  | 20 |
| 圖 34 | 部會共同展示防災及永續校園 - 副總統親臨與會 .....  | 20 |
| 圖 35 | 環保署長張子敬說明臺灣能源轉型路徑 .....  | 20 |
| 圖 36 | 2019 年臺歐盟循環經濟研討會 .....   | 21 |
| 圖 37 | 核廢料處理宣導海報 .....  | 21 |
| 圖 38 | 國家永續發展獎評選表揚流程 .....  | 22 |
| 圖 39 | 「智湧塘」天然水資源 .....   | 23 |
| 圖 40 | 廢棄花盆的再運用 .....   | 23 |
| 圖 41 | 中水回收再利用 .....  | 23 |
| 圖 42 | 弱勢學生依興趣參與實驗室專題 .....   | 23 |
| 圖 43 | 老人陪伴服務 .....   | 24 |
| 圖 44 | 河川巡守隊協助社區溝圳垃圾清理 .....  | 24 |
| 圖 45 | 教導學生製作環保減塑魚網杯袋 .....   | 24 |
| 圖 46 | 朝陽科技大學辦學藍圖 .....   | 25 |
| 圖 47 | 銀髮園活動情形 .....  | 26 |
| 圖 48 | 學生幫獨居長輩辦圍爐 .....   | 26 |
| 圖 49 | 境外生至日月潭參訪 .....  | 26 |

|      |                               |    |
|------|-------------------------------|----|
| 圖 50 | 境外生到農家體驗情形.....               | 26 |
| 圖 51 | 蒜膜製作成文創商品.....                | 26 |
| 圖 52 | 志航國小有歷史悠久的永續校園環境.....         | 27 |
| 圖 53 | 第一銀行推動海岸淨灘.....               | 28 |
| 圖 54 | 第一銀行守護濕地、扶助弱勢推動綠光傳愛情形.....    | 29 |
| 圖 55 | 遠傳電信公司永續發展策略藍圖.....           | 30 |
| 圖 56 | 台灣中油智慧綠能加油站.....              | 30 |
| 圖 57 | 環境資訊協會向大眾募集環保綠行動.....         | 30 |
| 圖 58 | 個人隨身定位裝置推廣.....               | 31 |
| 圖 59 | 歐萊德公司核心價值.....                | 32 |
| 圖 60 | 洗髮精商品循環再利用圖.....              | 33 |
| 圖 61 | 2018 年首次推動海岸行腳計畫.....         | 34 |
| 圖 62 | 南非犀望遠征志工隊.....                | 35 |
| 圖 63 | 志工隊與臺灣駐南非代表進行交流.....          | 36 |
| 圖 64 | 《希望之徵》熊鷹生態紀錄片.....            | 36 |
| 圖 65 | 狐濠家族動物生態特性解說導覽活動.....         | 36 |
| 圖 66 | 學童積極參與環境教育課程.....             | 36 |
| 圖 67 | 慈心基金會辦理兒童環境教育.....            | 37 |
| 圖 68 | 以鐵道結合鐵馬道之「鐵道博物館」概念進行創意行銷..... | 38 |
| 圖 69 | 舊草嶺隧道開通.....                  | 39 |
| 圖 70 | 舊草嶺隧道觀光帶動周邊發展效益.....          | 39 |
| 圖 71 | 舊草嶺隧道設有照明裝置與導覽牌.....          | 39 |
| 圖 72 | 平森園區螢火蟲長期監測志工調查情形.....        | 40 |
| 圖 73 | 平森園區已成為賞螢聖地.....              | 40 |
| 圖 74 | 賞螢活動永續制度循環圖.....              | 41 |
| 圖 75 | 豐德路氧化碇鋪面工程榮獲金質獎.....          | 42 |

## 表 目 錄

|     |                         |    |
|-----|-------------------------|----|
| 表 1 | 108 年國家永續發展獎得獎單位一覽..... | 22 |
|-----|-------------------------|----|

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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108年推動永續發展的重要成果，包括108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）、108年國家永續發展獎辦理情形（第三章）等。

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。



## 第一章 108 年國家永續發展委員會年度工作進展

### 壹、召開永續會工作會議

#### 一、第47次工作會議

本會第47次工作會議於108年5月15日在行政院2樓第1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3項報告案及2項討論案，本次會議之主席裁示如下：

#### (一) 報告案：我國永續發展目標對應指標(草案) 確認

1. 我國永續發展目標之核心目標與具體目標於去(107)年已公布在本會官方網站，並請秘書處函送各主政單位依本會第31次委員會議決議積極辦理。請對應指標主政單位參考今日委員所提各項建議修正，以利於今(108)年6月5日之國際研討會上公布我國之永續發展目標與指標。
2. 關於指標 13.2.1 電動車占比部分，請經濟部與交通部重新研擬更具進步性的目標。獎勵補助機制雖有落日，但其背後設計是藉由補助使電動機車產業達到經濟規模，足與傳統機車產業競爭，民衆因此逐漸接受購入電動機車，亦即未來應持續增加新銷售電動機車的占比；倘若獎勵補助機制落日後電動機車產業隨即失去競爭力，此推動政策是否妥適，則有待商榷。
3. 關於施委員提及核心目標 18 之具體目標在教育宣導方面的修正建議，請主政機關參考委員意見研擬相關具體目標。
4. 衛生福利部關於5歲以下兒童之意外事故死亡率高於國際數值，請主政機關參考國

際目標與委員意見，重新研擬更具進步性的目標。

5. 永續發展目標投資相關內容已納入我國永續發展目標總論之政策工具中，不另納入指標。

#### (二) 報告案：「邁向永續臺灣國際研討會—聯合國永續發展目標在地化」辦理情形

感謝本會秘書處協助辦理6月4日及5日之會議，屆時本人亦將出席。熱烈邀請在場所有委員參與會議，並請各工作分組與專案小組全力支持，由高階官員與會，聽取多方意見，凝聚永續發展共識，共同推展我國永續工作，提升我國永續發展推動成效。

#### (三) 報告案：108年「國家永續發展獎」辦理情形

1. 請經濟部、教育部、環保署相關單位負責永續獎初選，並請民間委員協助參與複評評選。
2. 請秘書處追蹤過去15年來得獎單位之現況變化，彙整得獎推動永續發展工作成果與經驗，檢討分析。

#### (四) 討論案：永續發展目標追蹤管考作業準則(草案)

永續發展目標之執行監督管考，鑑於永續發展目標為長程計畫，研提年度及階段性檢討報告即可。階段性報告配合政府任期，於西元2020、2024、2028及2031年發表，年度及階段性檢討報告，配合「世界環境日」，於6月5日發表。



▲圖 1 國家永續發展委員會第 47 次工作會議



▲圖 2 國家永續發展委員會第 48 次工作會議



### (五) 討論案：「永續生活國民曆」推動規劃

1. 感謝委員及與會各位均贊同「永續生活國民曆」提案，認為需要編訂此指引與宣導，引導國民邁向永續且綠色的生活，使國民透過生活落實參與國家永續發展，進而實現我國永續發展目標。
2. 國際性特別活動日若已形成慣例，可納入「永續生活國民曆」，以全球行動提醒實踐永續生活，將更具成效。未來請環保署及各部會共同集思廣益，當草案完成至一定階段後，再召開工作會議討論後續編製。

## 二、第48次工作會議

永續會第48次委員會議於108年10月9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主持，會議議程計兩項討論案。本次工作會議報告案及主席裁示如下：

### (一) 討論案1：「國家環境保護計畫」（草案）

「國家環境保護計畫」（草案）請依照本次會議委員意見回應或修正，送委員審閱後，提第32次委員會議報告。

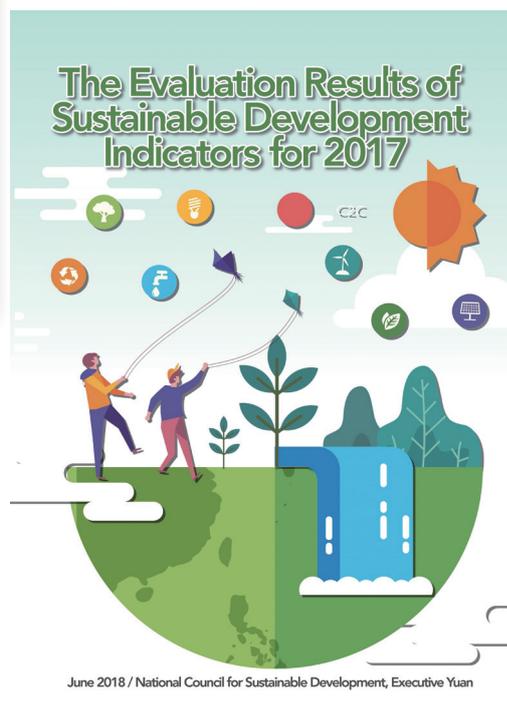
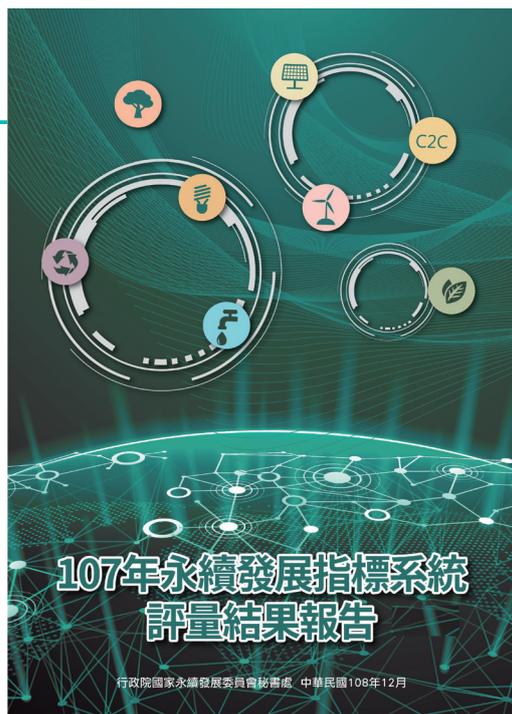
### (二) 討論案2：「永續發展政策綱領」修正規劃

1. 「永續發展政策綱領」，精簡為「前言」「願景」及「政策內涵」3部分，並以「臺灣永續發展目標」為「政策內涵」之架構。
2. 請秘書處及各核心目標主政單位，依據本次會議之分工研擬修正草案，由秘書處彙總後，提本會第49次工作會議報告。

## 貳、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，永續會參考聯合國第一版永續發展指標系統與架構，於92年發表我國第一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，於98年永續會再依聯合國第三版系統修訂為我國第二版系統。

我國指標評量作業之執行，係由各指標主辦機關提報前一年度數據，經平台計算得到初步結果，再由永續會邀集主辦機關召開研商會議，確認指標數據、評量結果及分析內容無誤後，編印成冊。108年度於7月29日召開指標研商會議，邀集各項指標主管機關研商指標調整內容，迄填報作業完成後，再於12月19日召開指標數據討論會議，決議通過本年度指標數據內容，據此完成「107年永續發展指標評量報告」，置於行政院永續會網站。



▲圖 3 國家永續發展指標報告中英文版封面

### 壹、健康與福祉工作分組

- 一、增加經濟弱勢人口自立比率，持續推動辦理社會救助，照顧低收入戶、中低收入戶及救助遭受急難或災受害者，並協助其自立。108年底收入戶及中低收入戶人口自立比率13.41%；推動國民年金制度計畫，提供長者老年基本經濟生活安全保障。國民年金自97年10月開辦，老年給付人數由97年底的90萬2,455人上升至108年12月底的163萬8,572人，給付金額亦由53億9,805萬4,782元提升至725億7,361萬7,192元，反映出我國老年人口受到國民年金保障之人數及金額逐年成長，將持續推動國民年金制度落實保障老人經濟安全的政策目標。
- 二、提升受評對象接受長照2.0服務使用率，截至108年12月31日止，我國長照需求人數為79萬4,050人，經全國長期照顧管理中心評估符合使用長照2.0服務人數（未扣除聘僱外看及住宿機構使用人數）為37萬5,247



▲圖 4 推動國民年金制度保障老年人口經濟安全



▲圖 5 總統訪視屏東縣泰武鄉卡比亞安文健站

人，受評對象接受長照2.0服務使用率達47.26%。

- 三、完善全體國民之社會保險體系保障，並著重弱勢群體，充實長期照顧體系，強化資源佈建與服務提供。設置文健站計314處，培植在地原住民族擔任照服員約889人，服務原住民族長者約1萬1,715人，提供連續性、可近性及具文化性之專業照顧服務。
- 四、提供巡迴醫療至醫療資源不足地區，鼓勵醫療院所至西、中及牙醫醫療資源不足地區以巡迴方式提供醫療服務。108年全民健康保險西、中及牙醫醫療資源不足公告地區總計188個鄉鎮，提供巡迴醫療服務計185個鄉鎮，覆蓋率為98.4%。
- 五、降低30-70歲慢性糖尿病死亡機率，我國糖尿病防治政策執行，從公共衛生三段五級架構著手，除強化民衆之防治識能外，亦透過早期篩檢及轉介追蹤治療達到防治效益，臺灣糖尿病標準化死亡率已由91年每十萬人口37.1人，下降至106年每十萬人口23.5

人，107年降至每十萬人口21.5人，降幅達42%；30-70歲人口糖尿病死亡機率由99年1.16%下降至107年0.88%。

六、增進國人身體活動，108年4月7日辦理「世界衛生日 健康進行式-全民集萬步 走入WHA！」活動號召民衆匯集健走步數2,400萬步（相當於臺灣走到日內瓦9,682公里，所換算成之步數），表達全民支持參與世界衛生組織的決心，並促進全民增進身體活動。另同步響應世界衛生大會於5月19日辦理的「說到做到」活動-Walk the talk!支持臺灣參與世界衛生組織，共募集來自29個國家民衆，逾75個團體及32個駐外代表處逾6萬7,000人共同響應，累計8億6,000萬步，以2,400萬步之目標，達成35.8倍。

七、將性教育（含愛滋病防治）納入大專校院健康促進學校計畫必選議題，辦理大專校院行政人員性教育（含愛滋及其他性傳染病）研習及性教育推廣學校相關研習及活動。108年24所性教育推廣學校辦理性教育及愛滋病防治相關宣導及活動，共計378場次、8萬8,117人次參與。

## 貳、生活與教育工作分組

一、為提升國中小階段學生之閱讀素養，教育部補助辦理「增置圖書館閱讀推動教師計畫」，108年度國小共計增置623位，國中計增置309位；另委請國立清華大學辦理「閱讀師資培訓一區域人才培育研究計



▲圖 6 108 年世界糖尿病日記者會



▲圖 7 結合學校大型活動進行宣導

畫」，108年度參與教師進階（含回流）研習共計525人，另甄選閱讀磐石學校與閱讀推手，表彰閱讀推動典範，108年度表揚之磐石學校共計40校、磐石推手共計59位；此外推廣新生「閱讀起步走」活動，贈予國中小新生人手一本適齡圖書。

二、青年及失業者參與資通訊科技（ICT）相關類別職業訓練課程參訓人數，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。

三、以2年為期持續辦理專校院資源教室輔導人員生涯轉銜知能研習。補助4所大專學校，協助發展合適學校本位之身心障礙學生轉銜輔導服務模式。彙整6所試辦學校之身心障礙學生轉銜輔導服務模式，並提供其他大專學校參考辦理。

四、配合十二年國民基本教育的進程，將性別平等教育、人權教育及全球公民教育等融入國民教育及後期中等教育階段課程，性別平等教育議題、人權教育議題及社會領域輔導群於108年度辦理9場分區研討會及3場年度研討會，並研發14份性別平等教育議題、人權議題及全球公民教育相關之教案示例，上傳至國民中小學課程與教學資源整合平臺（CIRN），俾提供國中小教師實施性別平等教育課程與教學之參考。

五、建立完備專業認證環境教育設施場所，推動多元化環境教育服務，至108年底計有192處整合環境教育專業人力、課程方案及經營管理，以提供環境教育專業服務之具有豐富自然或人文特色之空間、場域、裝置或設備通過環境教育設施場所認證。計有27萬3,791人次前往環境教育設施場所戶外學習，參與環境教育課程學習，其中對象包含國中小、高中及成人。

六、國家人權博物館於108年在白色恐怖景美及綠島紀念園區二處不義遺址辦理相關展示暨



▲圖 8 數位圖文職類職業訓練



▲圖 9 縣市勞工局督導為身心障礙學生說明職場現況



▲圖 10 蘇院長與潘部長啟動六都準公共機制

教育推廣活動，如綠島人權藝術季、山東流亡學生與七一三事件70周年特展、標誌不義—不義遺址視覺標誌與紀念物示範設計巡迴展、請你跟我走一趟—不義遺址空間歷史推廣企劃示範展甄選共學、政治受難者音樂工作坊、繪本工作坊等教育推廣活動外，並



▲圖 11 春池玻璃資源再生教育學堂講授玻璃再生歷程



▲圖 12 臺灣白色恐怖不義遺址歷史講座暨創作發想工作坊—台北場

針對兒童人權及當代人權議題辦理特展、國際人權影展及系列活動。另設置全臺各處不義遺址專屬網站，俾利民眾查詢不義遺址史蹟點簡介，並規劃路線、歷史路徑規劃深度旅遊，促進民眾認識及參訪各地不義遺址。

七、資訊科技融入教學，公立高級中等以下學校校園網路支援教室具備豐富數位學習資源之高品質、高可用性的環境；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77.9%。

八、2019年度全面優化大專輔具線上申請作業系統，編列預算進行系統設計並同步為教育部購置之輔具加購產物保險。教育部輔具

中心108年合計委辦經費為2,628萬2,000元，合計服務學生人次為1,760人次；合計借出輔具件數為1,540件次。當年度評估後需用輔具學生平均取得輔具件數為1件次，取得率達100%。

### 參、綠色經濟工作分組

一、發展綠能科技，提升能源多元性：108年5月1日完成「再生能源發展條例」修法公告，以「優化再生能源發展環境」、「因應電業法修正」及「擴大全民參與」三方向促進全民參與再生能源發展。108年12月27日海洋示範風場開始商轉，完成我國首座離岸風電風場，合計裝置容量達128 MW。截至108年我國再生能源裝置容量累計達約7,795 MW，其中太陽光電核准達2,166 MW及總併聯量4.1495 GW，成長卓越。經濟部持續推動「109年太陽光電6.5 GW達標計畫」，以「產業園區」、「畜、農、漁電共生」及「中央與地方共同推動」等三主軸進行。



▲圖 13 108年1月22日完成彰濱崙尾西太陽光電100MW設置



二、提升廢棄物再利用處理技術，推動跨產業合作，整合能資源有效循環利用，經濟部推動區域能資源整合，辦理能資源整合現地諮詢診斷或鏈結研商會，加強事業廢棄物資源循環利用，108年工業廢棄物再利用率達80.78%，資源再生產業產值達734億元。環保署強化有害事業廢棄物與一般事業廢棄物分類工作，以避免混雜而使得有害事業廢棄物數量增加。

三、推動公私部門增加綠色採購，政府機關綠色採購自91年推動以來，指定項目採購比率目標由30%，滾動提升至95%。108年度機關綠色採購金額逾101.9億元，相較於107年度約增加5億元（約5.1%）。民間企業及團體自96年推動綠色採購以來，採購金額總數及申報家數均有大幅成長，108年執行申報家數為2,326家，綠色採購金額達340.5億元，相較於107年申報家數及金額分別成長233家（約11.1%）及43億元（約14.5%）。



▲圖 14 環保集點活動記者會

四、推動永續觀光發展，打造臺灣永續觀光環境與提升產業價值，108年來臺旅客已連續5年突破千萬，並於108年12月13日突破1,111萬旅客大關，全年整體來台旅客人次突破1,186萬人次，創下歷史新高，陸客達271萬人次較107年成長0.5%；非陸客達915萬人次，成長9%，全球觀光市場穩定成長。

五、鼓勵金融科技創新，提供便捷多元的金融服務，金管會依「金融科技發展與創新實驗條例」受理10件申請實驗件數，達成比率100%，持續推動「獎勵本國銀行辦理新創重點產業放款方案（第三期）」，鼓勵保險業者配合政策需求及社會大眾需要研發創新、多元化保險商品。

六、促進工作環境安全，強化青年就業能力為保障工作者之職場安全與健康，勞動部訂定「全國職場減災精進策略」，108年職業災害千人率已降至2.496之歷史新低，達成既定目標（降幅達22%）。積極促進青年就



▲圖 15 日月潭國家風景區向山自行車道



▲圖 16 青年職涯發展中心人生履歷活動



▲圖 17 花蓮縣鳳林鎮幸福巴士

業，勞動部推動就業與技術傳承合作，整合「職涯輔導」、「職業訓練」及「就業媒合」三大專業體系，建構訓用合一模式，提升青年技能並順利接軌職場，108年計協助16萬4名青年就業。另108年青年職業訓練計培訓3萬656人，扣除繼續升學及服兵役者，訓後就業率為91.16%。

## 肆、綠色運輸工作分組

### 一、推動公路公共運輸發展

- (一) 公路公共運輸計畫執行以來已有具體成效，至108年公路公共運輸載客數約12.39億人次，相較104年(基準年)度12.2億人次，成長約0.19億人次(1.6%)。
- (二) 降低市區公車車齡及強化無障礙運輸服務，108年共計補助各縣市購置低地板公車89輛及通用無障礙大客車11輛，

至108年底市區低地板公車約7,069輛，占比64.69%。

- (三) 為提供基本民行運輸服務，補足公共運輸缺口，至108年底擴大推動「需求反應式公共運輸」至花蓮縣鳳林鎮等26個偏鄉，偏鄉地區公路公共運輸空間服務涵蓋率已達81.63%。除偏鄉地區外，亦補助高雄市、臺中市、臺南市及屏東市陸續推動「幸福小黃」服務，以改善傳統公車服務之不足。
- (四) 高速公路108年持續實施大客車優先通行措施，含大客車免受匝道儀控管制、大客車專用道、機動開放路肩供大客車通行，以鼓勵公共運輸發展。

### 二、持續推動鐵道運輸建設及提升服務效能

- (一) 臺鐵局積極朝向區域捷運化輸運模式，並持續推動票務作業自動化，強化與高鐵和其他大眾運輸系統結合運用，拓



展轉乘運輸機能，提供旅客便利性的服務。108年運量約2億3,615萬人次（每日運量約64.7萬人次）。

- (二) 「臺鐵局電子票證乘車」適用範圍已達臺鐵環島全線及支線各站。108年每日平均使用人數達42.8萬人次，較107年成長4.13%，已占每日平均旅運人次的66.17%。
- (三) 臺鐵月台提高工程，配合車廂無階化改造，提升旅客上下車安全性及便利性。至108年底，完成月台與車廂齊平計40站，同時尚有35站辦理施工中，占總數31.1%。
- (四) 臺鐵車站無障礙電梯建置：為方便長者及行動不便者通勤、就醫或旅遊，於臺鐵車站建置無障礙電梯，至108年底計完成149站，服務對象占整體旅客數約95%。
- (五) 花東線鐵路整體服務效能提升計畫：108年9月已完成沿線全部車站改建（善）工程。
- (六) 環島鐵路電氣化：針對知本至枋寮間進行原線鐵路之電氣化，並改善沿線之鐵路橋涵、隧道、邊坡保護…等。潮州至枋寮路段已提前通車，並於108年12月23日舉辦通車典禮。
- (七) 台灣高鐵公司持續推動票價多元化及不同優惠，並透過異業合作方式、票務經銷商、企業網站…等，強化旅遊市場開發，另亦精進會員管理，提供各類會員



▲圖 18 台灣高鐵會員 TGO

優惠，提高民衆搭乘意願以提高運量。108年運量達6,741萬人次，較107年成長5.39%。

- (八) 因應高鐵無障礙座位旅客之需求，於每列車第7節車廂無障礙座位增設電動輪椅充電插座，已於107年12月前完成全部34組列車之設置；未來新購列車，將納入標準設施。

### 三、道路交通安全

- (一) 交通部於108年院頒「道路交通秩序與交通安全改進方案」，透過中央橫向聯繫及地方垂直整合完成各項道安積極作為，其中108年道路交通事故死亡人數



▲圖 19 臺北市政府警察局在自強隧道實施區間測速執法

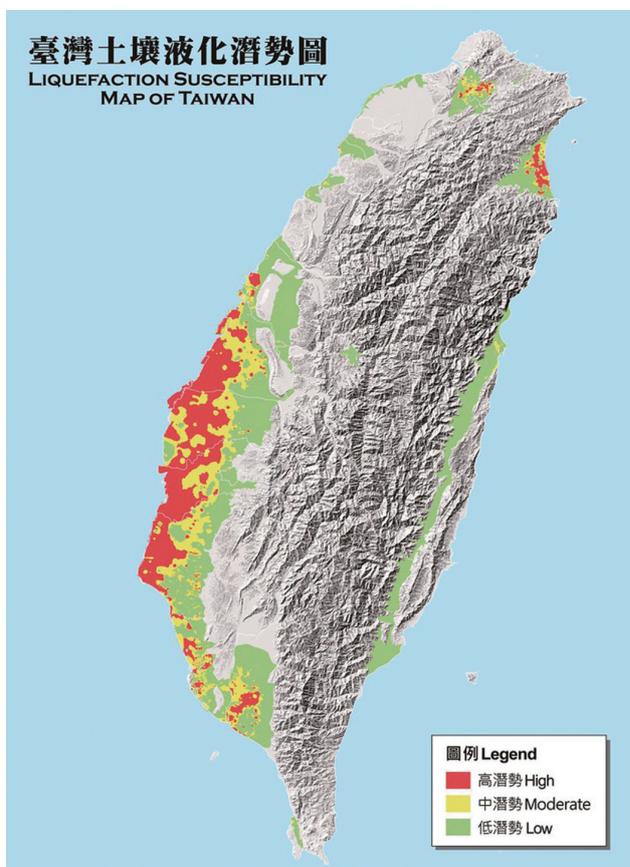
已由103年至104年平均3,047人降為2,865人，另108年騎乘機車年輕族群（18歲至24歲）死亡人數已由103年至104年平均366人降為272人。

(二) 108年8月教育部長親自參加交通部道安委員會議，兩部會首長建立高度共識，期共同努力將交通安全教育列為校訂課程。另持續鼓勵推動公車入校園，整體平均每千人事故數為5.1件，較107年同期5.9件下降。

(三) 各縣市陸續實施區間測速執法，另新北市板橋車站自108年1月啓用違規停車自動取締，108年違規件數較107年減少93%。酒駕持續強力取締，新制修法於108年7月1日實施，依據內政部警政署108年7~12月間統計資料顯示，取締件數由7月的8,546件逐月下降至12月的5,648件，降幅達33.9%；移送法辦件數從7月的4,849件減少至12月的3,790件，降幅達21.8%。

## 伍、國土資源與城鄉發展分組

一、協助全國各級機關、地方政府及人民查詢地質敏感區，在協助地方政府方面，完成推廣地質法之法制作業與推動地質敏感區相關作業實務宣導。另協助各地方政府檢視國土計畫法（草案）相關書件後回覆意見，並視需要參與內政部針對各地方政府辦理之國土計畫審議會專案小組會議。目前已協助之地方政府共計13縣市。在土壤液化潛勢方面，整合及優化現有民衆版及專業版查詢系統，提供使用者更方便與人性化的查詢平台，108年度土壤液化潛勢查詢系統瀏覽人次達28萬7,652人。



▲圖 20 完成公開全臺土壤液化初級圖資



▲圖 21 高雄市茂林區公所進行部落文化遺址、傳統遷徙路線資訊收集及維護工作

二、為落實原住民保留地之國土保育、自然資源管理，原住民族委員會廣續辦理「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，就傳統生態資源永續利用之工作項目，業已完成部落及傳統山川資源維護、原生或適栽植物新植培育、撫育區植物預防性清除、外來入侵植物清除及防治，維護面積達6,410公頃，並結合原住民傳統文化生態智慧，執行傳統有形文化調查及維護工作，業已完成部落文化遺址、傳統遷徙路線資訊收集建檔及整理維護總計122處、4,599公里，執行成效良好。

三、推動社會住宅，為達成8年20萬戶社會住宅之政策目標，內政部「社會住宅興辦計畫」業奉行政院於106年3月核定，將朝興建12萬戶，包租代管民間住宅8萬戶之目標推動。96年迄今已提供53餘萬戶家庭獲得租金補貼。108年度租金補貼戶數達9萬戶。另自94年起已勘選278處都市更新示範地



▲圖 22 台中市豐原安康一期共好住宅



▲圖 23 新北市新莊區新豐段青年社會住宅

區，目前計有21處刻正進行都市更新可行性評估之先期規劃作業、49處辦理招商前置作業、8處公告招商中、26處招商實施中及10處由政府投資自行實施。

四、提升公共場所安全性及綠地公共設施，我國108年公共場所性騷擾申訴案件比率为38.15%。另外，衛生福利部業運用公益彩券回饋金經費補助民間團體推動性騷擾防治宣導，並於108年委託財團法人現代婦女教育基金會於北、中、南區辦理6場次初階、進階培訓課程，課程內容包含講授性騷擾之



▲圖 24 臺灣在亞太防制洗錢組織（APG）評鑑中贏得好成績

辨識、破除迷思、調查處理程序與實務演練等，並就各直轄市、縣（市）政府辦理性騷擾申訴、再申訴、訴願案件之調查注意事項進行討論及檢討精進，最後再由參訓學員分享推動性騷擾防治之創新作為，以學習不同縣市之經驗。

五、強化社會安全網，遏止暴力犯罪，108年全年暴力犯罪發生859件，相較100年至107年暴力犯罪平均發生3,465.57件，發生數下降75.21%。我國於108年接受亞太防制洗錢組織（APG）第三輪相互評鑑，歷經3年的積極準備，於評鑑中在技術遵循方面有36項達標，效能遵循有7項達標，整體成績為最佳之「一般追蹤」成績，獲得全世界各國之高度肯定！為了慶祝臺灣在亞太防制洗錢組織（APG）第三輪相互評鑑中取得好成績，行政院洗錢防制辦公室於108年10月3日舉行「洗錢防制評鑑發表暨表揚大會」。

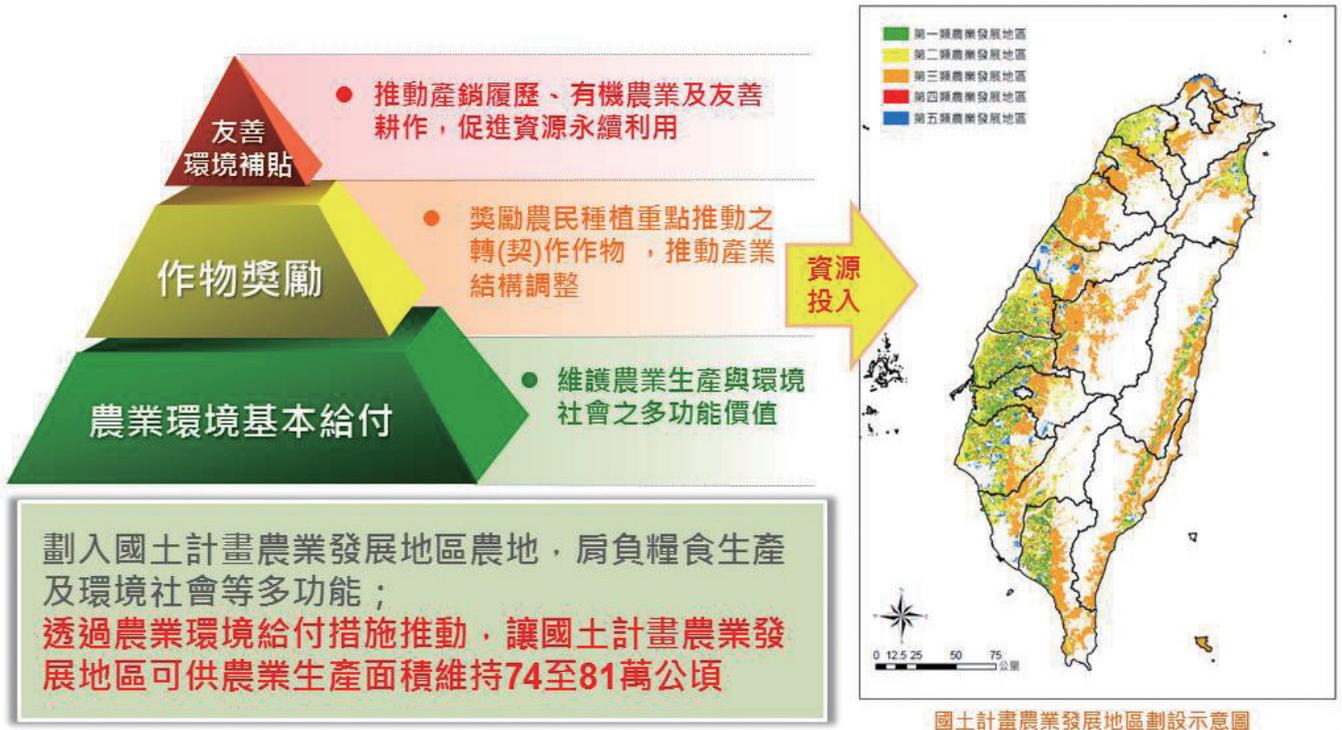
六、完善兒少保護體系，108年起全面推動SDM風險評估工具，以結構化決策模式評估兒少及家庭風險，避免兒少再次受虐，並已辦理全國兒少保護社工人員訓練，計793人參訓。108年持續推動兒少保護區域醫療整合中心計畫，協助傷勢嚴重、複雜個案之身心治療，並強化社政單位與醫療單位之合作，108年計協助244名兒少驗傷診療，辦理92場次教育訓練。

## 陸、永續農業與生物多樣性工作分組

- 一、為確保糧食安全所需農地，掌握農地資源現況，完成108年度全國農地資源盤查更新作業，並作為農業及農地利用決策分析參考。已完成「國土計畫法」農業發展地區及其分類劃設作業機制，劃入國土計畫農業發展地區農地，肩負糧食生產及環境社會等多功能，透過農業環境給付措施推動，讓國土計畫農業發展地區可供農業生產面積維持74至81萬公頃。
- 二、完成全國海洋資料庫雛型規劃與建置，包括對國內具海洋調查、探勘、研究等各資料庫進行調查與資料盤點、資料共享與整合機制之設計、資安控管規範之訂定、後續平台分年建置規劃及全國海洋資料庫雛形系統建置，為未來全國海洋資料庫正式建置奠定良好基礎。
- 三、為保護海洋生態及永續管理海洋資源，海委會目前已主管「野生動物保育法」有關海洋野生動物之保育部分及「海洋污染防治

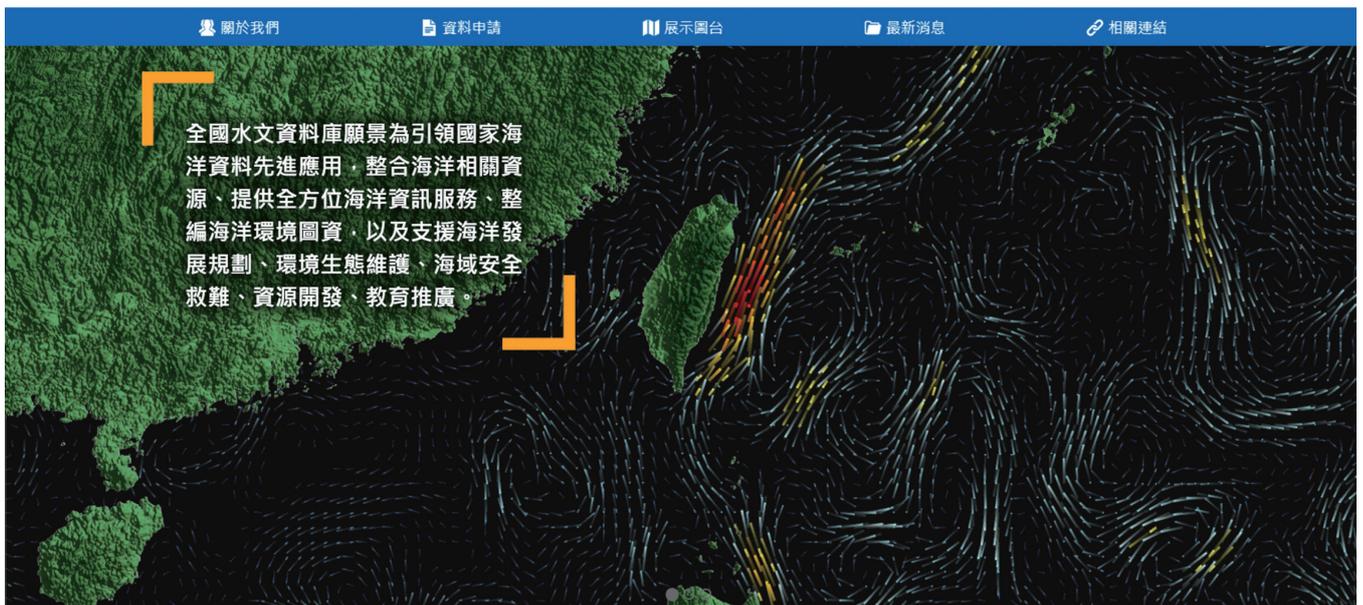
永續發展  
核心目標 2

## 農業環境給付投入農業發展地區



▲圖 25 農業環境基本給付

全國水文資料庫



▲圖 26 全國海洋資料庫雛形系統首頁畫面



▲圖 27 馬祖列島燕鷗保護區現地訪查狀況

法」，並於108年11月20日公布「海洋基本法」，11月29日預告制定「海域管理法（草案）」，12月3日預告制定「海洋保育法（草案）」，並於7月22日、9月23日、12月17日召開3次「國家海洋政策白皮書」編撰委員會議。

四、108年林務局執行國有林造林、海岸離島造林、友善環境造林、山坡地獎勵輔導造林539公頃、海岸及其他老化退化林地營造複層林165公頃、疏伐、修枝等中後期撫育795公頃，每年可吸收6.70千公噸CO<sub>2</sub>當量。另針對具生態敏感區位或生態系統維護區域，執行施工前或完工後之生態資源調查與監測工作44案，依據工程規劃設計階段所擬定之生態保育對策進行後續追蹤與評估生態成效，據以作為後續保育治理工程生態環境友善措施執行之參考資料，並持續檢討各項措施之合理性與可行性。

五、108年11月28日正式揭牌成立全國首座「國家自然公園管理處」，其任務為掌管鄰



▲圖 28 臺灣森林覆蓋良好



▲圖 29 成立全國首座「國家自然公園管理處」

近都會區的淺山型國家自然公園，轄區包含「壽山國家自然公園」，及同屬都會區域的「臺中都會公園」及「高雄都會公園」兩處都會型公園。

六、推動減塑措施，從源頭減少塑膠類廢棄物，降低塑膠類製品之產製、使用、廢棄階段對環境負荷。108年5月公告「一次用塑膠吸管限制使用對象、實施方式及實施日期」，自7月1日起4類限制使用對象內用不得提供一次用塑膠吸管，統計減量1億根/年。108



▲圖 30 一次用塑膠吸管限制使用政策

年8月公告修正「免洗餐具限制使用對象及實施方式」，新增規定百貨公司業、購物中心及量販店業，於其提供餐飲之場所供消費者現場食用時，不得提供各類材質免洗餐具，截至109年3月已有15個縣市提報實施，統計減量1億個/年。

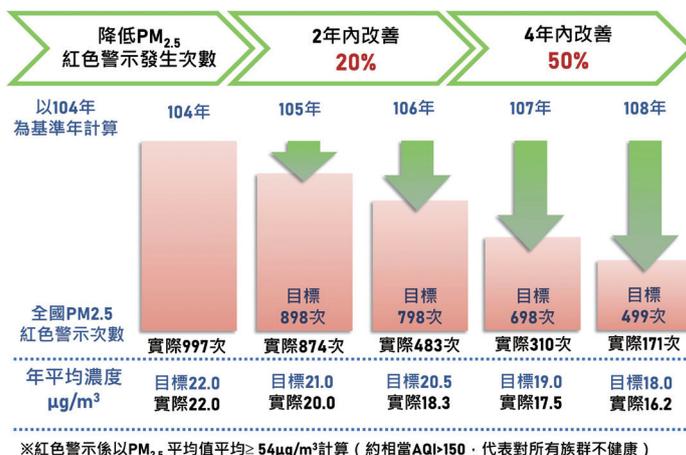
### 柒、環境品質工作分組

一、改善空氣品質，維護國民健康，細懸浮微粒（PM<sub>2.5</sub>）全國測站年平均從104年22.0 μg/m<sup>3</sup>改善至108年16.2 μg/m<sup>3</sup>，紅色警戒（日平均≥54 μg/m<sup>3</sup>）從104年997次降低至108年171次，空氣品質已有明顯改善。除臭氧（O<sub>3</sub>）外，全國108年各空氣污染物濃度較104年呈現改善趨勢：懸浮微粒（PM<sub>10</sub>）年平均改善率約為23.8%；細懸浮微粒（PM<sub>2.5</sub>）年平均改善率約為26%；二氧化硫（SO<sub>2</sub>）年平均改善率約

為26.1%；二氧化氮（NO<sub>2</sub>）年平均改善率約為17.9%；一氧化碳（CO）年平均改善率約為14.5%。

二、提升使用量足質優自來水的人口比率，全國自來水普及率於107年底為94.14%，至108年底提升為94.39%（台灣自來水公司供水轄區108年底為93.34%、臺北自來水事業處供水轄區108年底為99.66%、金門縣自來水廠供水轄區108年底為94.54%、連江縣自來水廠供水轄區108年底為86.29%）。

三、為全面推動省水器材普及率，已於105年5月4日總統公布施行自來水法第95條之1以確立相關法源。考量省水器材種類甚多，直接全面推動恐將影響民生及產業甚鉅，經濟部於106年9月21日公告訂定「應具省水標章之用水設備、衛生設備或其他設備之產品」，其中包括「洗衣機」、「一段式省水馬桶」及「兩段式省水馬桶」等3項納入應



▲圖 31 104年至108年細懸浮微粒（PM<sub>2.5</sub>）紅色警戒（日平均≥54 μg/m<sup>3</sup>）次數

具省水標章產品，並自107年4月1日生效。經查目前有11項省水標章產品項目，截至目前總計約4,700餘件省水標章使用許可，108年使用標章許可數量約302萬件，顯見國內省水標章法規及市場已日趨成熟完備，查108年計有1,517項產品取得「省水標章使用許可」，依據資料顯示，廠商申請省水標章金級產品已逐漸增加較普級產品為多，目前將針對其他產品進行分級制度（金級、普級），後續視執行狀況逐年檢討其他項目納入應具省水標章產品，期許能落實省水標章生活化，共同創造節水型社會。

四、降低自來水漏水率目前分由台灣自來水公司與臺北自來水事業處持續辦理漏水改善工作，台灣自來水公司107年度漏水率為15.03%，至108年度漏水率已改善為14.49%；臺北自來水事業處107年度漏水率為13.52%，至108年漏水率已改善為12.71%。另107年用水壓力比例為淡水取

用量/（天然降雨總量-蒸發量）=167億噸/（872億噸-207億噸）=0.2。

五、完成臺灣各區域水資源經理基本計畫滾動檢討委辦工作，參照國家相關政策、國土規劃及社經發展，配合前瞻基礎建設計畫及行政院推動排除產業投資障礙之開源、節流、調度及備援4大穩定供水策略，並以風險管理概念盤點各地區用水問題、評估水資源設施供給能力、導入多元水源智慧調控精進用水管理及務實評估水資源計畫方案為目標，對各地區水資源供需及調度進行妥適規劃，研提各項水資源經理策略，以滾動檢討納入修正水資源經理基本計畫循序陳報行政院核定。

六、我國100年地層顯著下陷面積534.4平方公里，規劃以109年地層顯著下陷面積不超過235平方公里為目標值，108年地層顯著下陷面積為203.7平方公里，未來仍將持續執行增供地面水、減抽地下水、復育地下水環境、加強管理地下水井及輔導農田轉旱作等措施，以達到減緩地層顯著下陷面積之目標。

## 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、氣候行動成功經驗交流

108年11月19日行政院環境保護署以「減緩、創新與轉型」為題，舉辦「臺灣氣候行動研討會」，並邀集臺北、新北市、桃園、臺中、臺南、高雄等六個直轄市政府，說明地方在因應氣候變



▲圖 32 臺南市永康水資源回收中心暨再生水廠統包工程動土儀式



▲圖 33 臺灣氣候行動研討會

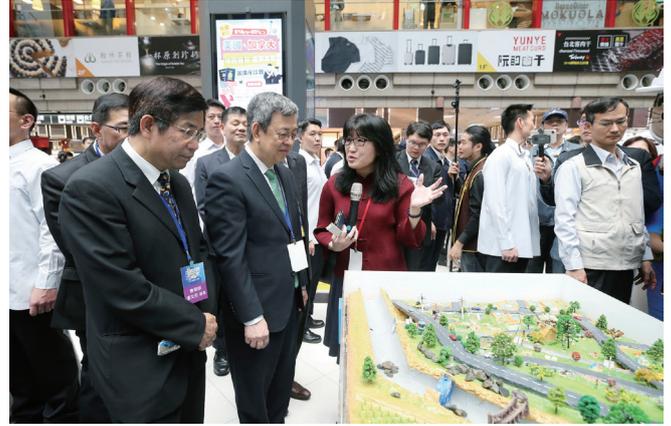
遷具體作為，台積電、中鋼、友達、南極碳、漢寶農畜產等民間企業也提出執行抵換專案成效分享交流。

## 二、推動氣候變遷教育與永續校園

編撰以氣候變遷主題實質內涵之教案內容，提供學校老師環境教育議題融入學習之教學參考，並置於教育部綠色學校夥伴網路平臺，供大眾於環境教育相關領域教學課程中加值運用。建置防災及永續校園，於 108 年起推動建構韌性防災校園與防災科技資源應用計畫，透過政策執行及經費補助，落實校園防災教育，維護校園安全與防災救演練。108 年建置 584 所防災校園，較 107 年增加 193 所，期許將來校園皆為防災校園。

## 三、參與聯合國氣候變化綱要公約相關活動

籌組行政院團出席 108 年 12 月 2 日至 15 日於西班牙馬德里召開之聯合國氣候變化綱要公約 (UNFCCC) 第 25 次締約方大會、京都議定書第 15 次締約方會議暨巴黎協定第 2 次締約方會議 (COP25/CMP15/CMA2)，實地掌握全球氣候談判最新動態與巴黎協定進展。相關部會、地方



▲圖 34 部會共同展示防災及永續校園 - 副總統親臨與會

政府及民間團體代表透過展覽攤位及周邊會議演講及與會等方式，適時宣揚我國在海內外推動因應氣候變遷所做的努力。在會場外，則透過與我國友邦及友好國家的雙邊會談、國際媒體的專訪，以及地鐵與巴士車身的文宣廣告，說明我國雖非 UNFCCC 締約方，但秉持「專業、務實、貢獻」的原則，願意貢獻一己之力，與國際共同對抗氣候變遷。

## 四、臺歐盟循環經濟研討會

108 年 12 月 9 日我國與歐盟在比利時布魯塞爾舉行「2019 年臺歐盟循環經濟研討會 (EU-TW Circular Economy Seminar 2019)」，邀



▲圖 35 環保署長張子敬說明臺灣能源轉型路徑



▲圖 36 2019 年臺歐盟循環經濟研討會

請政府、研究機構、協會及廠商代表共同參與，就臺歐盟塑膠循環、太陽能板設計與回收及循環營建等議題分享經驗與成果。109 年環保署規劃辦理「歐盟創新週」及「循環經濟週」等系列活動，更將邀請歐盟高層代表來臺灣共襄盛舉，並媒合臺歐盟產業合作，朝將臺灣打造成循環經濟島而努力。

### 五、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

台電公司分別於 108 年 2 月 15 日、108 年 10 月 9 日提報「用過核子燃料最終處置計畫－107 年度成果報告」及「用過核子燃料最終處置計畫－109 年度工作計畫」供原能會審查。原能會於 109 年 1 月 14 日同意核備「用過核子燃料最終處置計畫書（2018 年修訂版）」。

### 六、推動核廢料處理社會溝通作業，強化非核家園教育宣導

108 年 3 月 15 日非核家園推動專案小組第 4 次會議決議，優先推動「放射性廢棄物中期暫時貯存設施」作為蘭嶼貯存場遷場之中期貯存設施並展開溝通。台電公司已委託政治大學辦理「核廢社會溝通規劃案」，於 108 年已辦理 5 場利害關係人焦點座談，蒐集利害關係人意見，達成核廢資訊公開透明化。108 年台電公司於金門、臺東辦理電力活動營 2 場，並於台電公司訓練所、核三廠辦理放射性廢棄物知識研習營 3 場。



### 互相聆聽、開始對話！ 核廢社會溝通需要您的參與

世界咖啡館的參與者不是為了喝咖啡而聚集，而是帶動同步對話、分享共同知識，並且有效的在對話中為焦點議題創造新的意義以及各種可能。

世界上已選定核廢處置場址的國家，都是以科學與技術為基礎，透過與公眾及利害關係人的溝通，建立彼此間的互信及信心，逐步推展處置地點的評選作業。我們也利用世界咖啡館的概念，秉持著「公正的組織體、公開的參與、客觀的標準」的理念，積極和民眾進行對話，擴大議題交流，增加合作互信的基礎，解決核廢爭議。

台電電力公司

廣告

▲圖 37 核廢料處理宣導海報

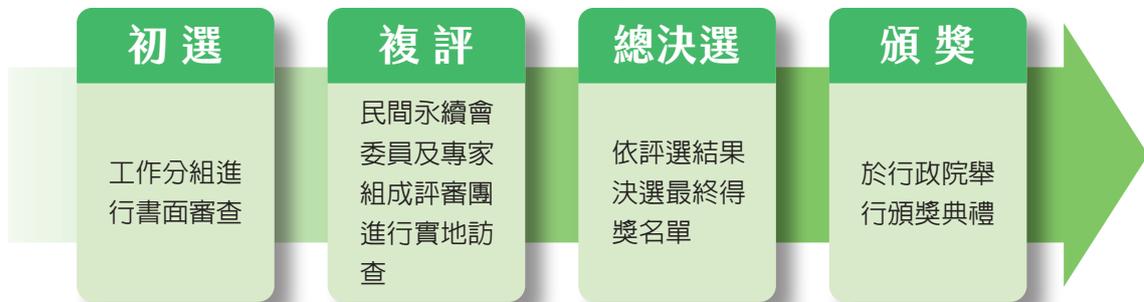


## 第三章 108 年國家永續發展獎辦理情形

### 壹、國家永續發展獎簡介

行政院國家永續發展委員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查訪，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 38 國家永續發展獎評選表揚流程

### 貳、108年國家永續發展獎評選結果

「108年國家永續發展獎」經教育部、經濟部、永續會秘書處的「書面初審」，永續會民間委員與專家的「實地複評」及全體複評委員參與的「決選會議」等3階段評選後，共選出12個得獎單位，並於12月在行政院頒獎。

表 1 108 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   | 大葉大學         | 政府機關類 | 行政院交通部觀光局東北角暨宜蘭海岸國家風景區管理處<br>— 丟丟銅仔 三生三事        |  |
|       | 朝陽科技大學       |       | 行政院農業委員會林務局花蓮林區管理處<br>— 螢漫平森·在地創生~大農大富賞螢生態旅遊之建立 |  |
|       | 志航國民小學       |       | 桃園市政府工務局<br>— 循環經濟 點石成金—廢棄粒料於公共工程重生             |  |
| 企業類   | 第一商業銀行股份有限公司 |       |   |  |
|       | 遠傳電信股份有限公司   |       |   |  |
|       | 歐萊德國際股份有限公司  |       |   |  |
| 民間團體類 | 中華民國荒野保護協會   |       |   |  |
|       | 莊福文化教育基金會    |       |   |  |
|       | 慈心有機農業發展基金會  |       |   |  |

## 參、得獎單位集錦



### 大葉大學

#### 一、永續發展願景

大葉大學以「地球唯一、環境正義、世代福祉、永續發展」等理念，將臺灣環境議題、全球變遷議與永續發展議題導入教材與教學活動中，提升全體師生同仁與在地彰化公民的環境素養，實踐負責任之環境行為，創造跨世代福祉及資源循環利用之永續社會，並以「優化綠色校園規劃與實踐」、「精進校務專業管理績效」、「拓展多元化生源管道」及「創新整合區域學習資源」4個子項計畫為發展主軸，藉由優化綠色校園規



▲圖 39 「智湧塘」天然水資源

劃與實踐，以積極穩健的腳步邁向永續綠色大學之願景。

#### 二、永續發展推動實績

大葉大學結合永續校園探索計畫，梳理學校整體風貌，由生態、健康及心靈層面，建構水與綠、資源與利用、能源與降溫、健康與空污四大循環，營造美與健康的永續校園。校內推動完善弱勢助學計畫，使得扶助項目更趨多元，提供弱勢學生申請勵學金專題研究扶助，透過學習取代



▲圖 40 廢棄花盆的再運用



▲圖 41 中水回收再利用



▲圖 42 弱勢學生依興趣參與實驗室專題



▲圖 43 老人陪伴服務



▲圖 44 河川巡守隊協助社區溝圳垃圾清理



▲圖 45 教導學生製作環保減塑魚網杯袋

打工的機制，安心無慮參與專題研究，彰顯教育翻轉人生動能。另亦成立「環境教育中心」，讓大葉校園成為永續教育示範場域，持續積極對外提供在地各級機關學校與人士，環境教育課程與活動體驗，發展出一系列環境保護、自然生態保育、綠色人文與永續發展之在地課程，建構綠色環境教育共學基地，共同為推動臺灣環境保育與永續發展而努力。

大葉大學為建立學生之軟實力，推動服務學習課程培養學生熱心公益、關懷社會及服務人群之精神，豐富學生學習內容的廣度與深度，建立學生正確之價值觀與全人格素養。本校在100學年度訂定「大葉大學服務學習實施辦法」，規定同學應於在學期間完成累計服務學習認證時數達50小時以上，在正式課程的納入下，引導同學從中參與服務，建立其對擔任志工、服務他人的真實感受，透過實際服務的過程中，讓同學能體認社會上仍有著許多不為人知的環境和故事，在其心中也能了解自己身處之幸福，產生正向能量，以落實終身志工，推動「公益大葉」為最終目標。

大葉大學推動與彰化在地產業進行聯盟，經由實務課程，讓老師與學生參與在地產業輔導，提升產業附加價值。透過在地產學共構課程之師

生訪視諮詢、專案評估、商品化輔導、多元化智財媒合等過程中，創造彰化產學共榮之生態系，以帶動彰化之經濟發展並創造本校學生之在地就業機會。配合政府5+2產業創新，師生共同投入。

提供產業升級協助，具體呼應聯合國所提出2016-2030永續發展目標（SDGs）之中的「就業與經濟成長」，促成具生產力的在地產業，提供就業和永續的經濟成長：

- (一) 整合在地產業實習體驗學習資源，增進學生就業機會。聘請在地廠商之業者為本校產學研發顧問，透過研發顧問的參與，為本校帶來許多研發能量，增進學生實習資源，提升學生就業機會。
- (二) 強化產學合作策略聯盟機制，提供在地產業優質服務。積極成為「在地產業需與求」與「學校具知識轉譯價值之資源庫」之間互通的管道，辦理在地訪視診斷及各類政策諮詢、轉介及推廣活動。
- (三) 建置在地資源數位整合平台，促進在地產業升級。協助在地廠商加入產業鏈結、技術交流、諮詢輔導、行銷通路擴增與布局等。並與彰化縣產官學達成三向合作，協助彰化產業價值的有效升級。

## 朝陽科技大學

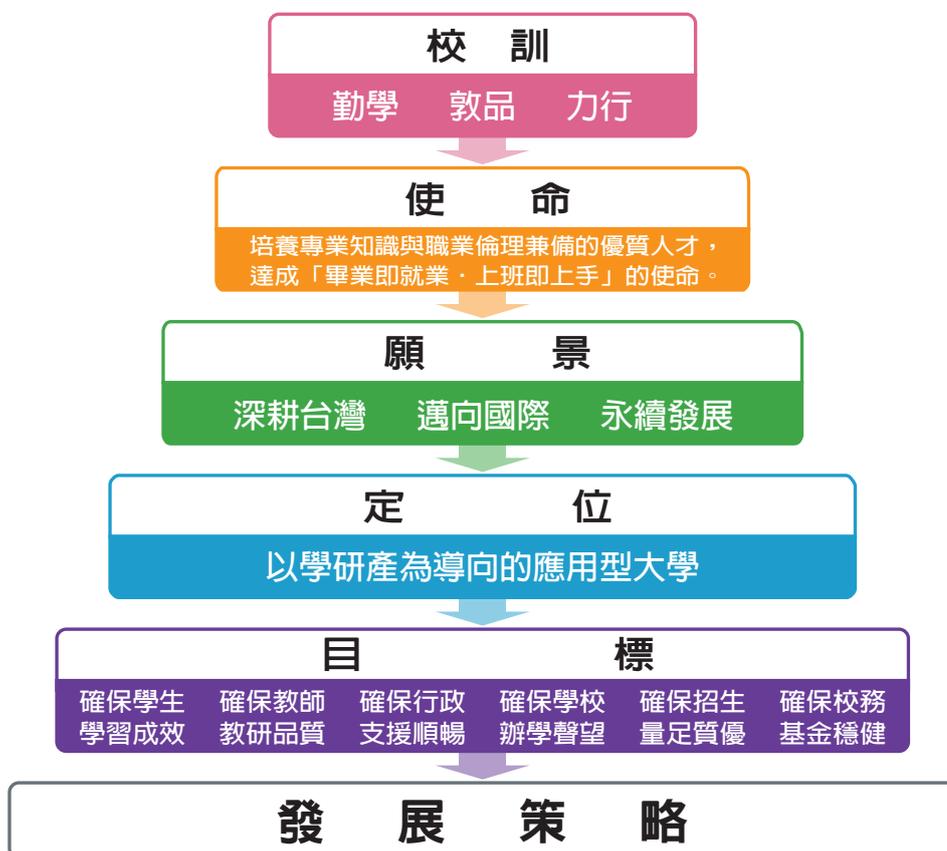
### 一、永續發展願景

朝陽科技大學相當重視學生品德養成及基本環境素養的建立，同時打造一個環境友善又能精深專業的優質學園，讓朝陽人在這裡茁壯、成長為備受業界、社會歡迎的專業人才，是學校責無旁貸的一大要事。為打造永續校園，朝陽科技大學藉由教學研究與日常生活中推展環境教育、生命關懷、社會服務，以及運用行政管理的措施，期使全校教職員工生力行節能減碳與培育社會責任公民，以實現永續發展校園文化並影響鄰近中小學、社區、社會為推動願景，深切期許未來能成為「以學研產為導向的應用型大學」，以科研與產研並行，確實呼應朝陽科技大學之治校理

念，據此革新學校體質，達成「深耕臺灣、邁向國際、永續發展」之發展願景，並以創新務實的態度持續開創技職教育的新藍海。

### 二、永續發展推動實績

因應臺灣已經正式邁入高齡化社會，朝陽科技大學建立0~99歲的社會照顧服務系統，不但提供幼兒教育服務外，還整合銀髮產業管理等系所相關資源建置銀髮者照顧體系，包括校內設立「朝陽銀髮園」、「社區式巷弄長照站」及「樂齡大學」等，藉由提供長者白天擁有另一個安全、溫馨、快樂的「家」而減輕照顧者負荷。建構學校與家庭的互助系統，從「建立導師



▲圖 46 朝陽科技大學辦學藍圖



▲圖 47 銀髮園活動情形

制度」、「建置資源教室」及「設置諮商輔導中心」等三個面向，培養學生健康快樂、感恩惜福、尊重包容、正向積極的生活價值觀。

為宣示推動「綠色大學」的決心，歷年來，朝陽科技大學積極投入大量經費與人力進行綠色永續校園的營造與建置，不但設置環境安全衛生處，監督管理本校職業安全衛生管理、負責校園環境管理、規劃與推動永續環境教育及推動建構永續校園為目標，並統籌環境教育相關業務外，本校校長鍾任琴於98年6月4日獲教育部邀請與其他12所大學校長共同簽署「塔樂禮宣言」，成為首批參與簽署該宣言學校之一。受到綠色思潮的影響，為使學生對此議題能有認知與體會，朝陽科技大學廣泛開設綠色、永續等環境教育相關課程，並藉由戶外教育、食農教育、美感教育等多元教學活動、社區服務學習等，培養師生具備永續發展觀念。

朝陽科技大學為鼓勵師生個人及團體參與社區服務，陸續成立校內志工團體，包括學輔志工、傷病救護志工、圖書館愛書志工、志工家族…等，將服務推展至社區、社會福利機構乃至國際地區，以發揚朝陽人之志願服務精神。另外，



▲圖 48 學生幫獨居長輩辦圍爐



▲圖 49 境外生至日月潭參訪



▲圖 50 境外生到農家體驗



▲圖 51 蒜膜製作成文創商品

因應境外生日益增加，為讓社區民衆與境外生能認識彼此文化，朝陽科技大學辦理包括「國際文化節」、「來去鄉下住一晚」等活動，讓學生、社區居民與境外生能互相學習與認識。除了落實永續發展在地化及生活化目標外，學校更連結政府與民間團體的人力與資源，每年定期前往南向或非洲國家進行志工服務，將對弱勢族群的關懷從國內延伸至國外，為我國服膺聯合國永續發展目標作了強有力的證明。

## 志航國民小學

### 一、永續發展願景

志航國小最初設校時為空軍子弟小學，學校本身及周邊環境有豐富的人文歷史，校園建築以「自由、天空、飛翔」為概念構築，進而延伸出設置「雲想、飛芽」之理念，冀希帶給全校師生未來具有「希望、陽光」並且「熱愛自然」之人生觀。志航國小之永續發展願景有2個主軸，其一為「環境永續」，珍視地球資源，尊重萬物生命，可以讓孩子的生活更健康、學習有效能；其二為「教育永續」，師法大自然運作法則，可以發展孩子和諧的人際、自然及社會關係，對未來有更多選擇的機會。所以，提供優質永續的學習環境，讓孩子能於其中「健康成長、快樂生活、有效學習、和諧關係、學習文化、永續發展」是志航國小團隊共同努力的目標。

### 二、永續發展推動實績

自96學年度起本校「志航時間」特色課程，深獲認同和肯定後，102學年度卓越計畫特色課程「志航能源 源源不絕」，更是持續深化環境與能源相關的課程。自108學年度起，提出「樂活地球村3.0」校訂課程方案，呼應新課綱強調「自發、互動、共好」的核心理念，延伸為「自主行動」、「溝通互動」、「社會參與」等3面9項的核心素養永續經營課程。



▲圖 52 志航國小有歷史悠久的永續校園環境

志航國小的永續發展教育藍圖落實在生活情境中，啟迪孩子敏銳的覺察力，帶孩子覺察生活中用關懷的心及愛地球的行動做到減塑、減廢、減碳及節能，讓美麗的生活與生態環境與我們長久共伴。近年來，學校結合鄰近周圍的「嘉油鐵馬道」、「道江圳」、「北回歸線太陽館」還有以高空盪鞦韆聞名的「玄天上帝廟」等資源，運用於課程教學當中，也帶領孩子走進社區、認識社區、關懷社區。因此，讓孩子「健康成長、快樂生活、關係和諧、永續學習」是我們志航國小團隊持續共同努力的願景目標。

另藉由單車課程的研發，善用「嘉油鐵馬道」硬體資源，透過循序漸進、由淺至深的方式挖掘道將圳豐富歷史文化。讓孩子由「我」出發，進而從學校、社區、嘉義、臺灣、與世界接軌，不僅傳授知識，更重實際體驗，又如騎單車至北回歸線太陽館、搭乘阿里山森林小火車等都是學校日後推動永續校園課程的重要基礎。



## 第一商業銀行股份有限公司

### 一、永續發展願景

第一銀行以打造「綠色金融·第一品牌」為自許，不斷思考如何運用企業的力量，將綠色金融、環境永續的理念推廣到企業員工、客戶、供應商及社會大眾，形成一種綠色環保的DNA，進而讓大眾也能為我們的地球盡一份力，一同邁向我們想要的未來。並以更具前瞻、創新的經營策略，致力開拓新市場、新客群及新模式，持續貫徹「區域型銀行、利基型銀行、幸福型銀行、數位型銀行」之經營願景。

### 二、永續發展推動實績

第一銀行總部大樓啓用於71年，係一棟屋齡逾37年之舊建築物，為減緩辦公大樓對環境造成之熱島效應，於99年組成「綠建築標章取得計畫」團隊，開啓將自有營運據點 74棟舊大樓改造為綠建築之路，截至107年底已改造22棟舊大樓，取得內政部鑽石級 綠建築標章，為全臺擁有最多鑽石級綠建築標章之企業，年減碳量達 2,432公噸。



▲圖 53 第一銀行推動海岸淨灘



▲圖 54 第一銀行守護濕地、扶助弱勢推動綠光傳愛情形

第一銀行自105年起，至今共舉辦15場「植樹送愛」活動，累計種植5,385棵樹，預計每年將可減少53.85公噸碳排放量，共同為增加地球綠覆率而努力；106年響應環保署「422全國揪團認養淨灘」活動，認養林口嘉寶沙灘，舉辦3場「守護海岸淨灘」活動，近百位員工及家眷響應參與，總共清除保特瓶、玻璃等約1,392公斤垃圾，107年及108年連續兩年響應世界地球日，綠色志工於4月前往竹南崎頂海水浴場、基隆外木山沙灘、臺中大安海灘及屏東東港海洋公園參與淨灘活動，撿拾漁業廢棄物、一般廢棄物及海漂木等垃圾共計7,451公斤。

為保護及恢復河流、湖泊等生態系統，第一銀行105年與非營利組織「荒野保護協會」合作濕地活動，前進木柵萃湖守護濕地、赴榮星花園復育螢火蟲基地進行復育工作，在該會棲地守護員們的解說與帶領下，綠色志工不畏懼35度的高溫烈日，身著涉水裝備「青蛙裝」踏入湖中，將湖底淤泥以徒手方式挖掘裝袋，接力傳送並堆

積至岸邊，透過如此底泥清理的過程，用自然的方式打造岸邊環境，延展當地水生植物的棲息場域。

為支持本土藝術文化傳承，第一銀行文教基金會長期深耕本土藝術，每月無償提供國內藝術家創作發表之平台與機會，自100年4月起將總部大樓1、2樓打造成為「第一藝術空間」，為臺灣本土藝術家提供一個展演場所，讓平淡的大樓空間成為優雅的藝文走廊，每年更舉辦水彩、油畫、版畫、木雕、陶瓷等多元化藝文展覽，讓藝術融入銀行大廳普民同樂，更為本土藝術帶來支持與活力。

第一銀行深化耕耘業務核心結合環境永續，106年成立「綠色金融委員會」，就「綠色融資」、「綠色投資」、「綠色審查」及「綠色消費金融」等面向，串聯綠色商品與服務，支持綠色產業發展並致力根留臺灣，避免環境汙染或危害社會公益者融資貸款。

## 遠傳電信股份有限公司

### 一、永續發展願景

遠傳電信公司接軌國際永續趨勢，對應聯合國永續發展目標，確立「2018-2025年永續策略發展藍圖」，串連成長力、創新力、關懷力、包容力、綠實力5大面向，將CSR整合進公司的營運策略，制定明確的中長期目標，在轉型升級的道路上，持續創新加值，善用本業專長，將公益科技化，並攜手供應商、用戶等利害關係人，共同推動企業社會責任，發揮資通訊產業的影響力。

在公司治理面，除設置隸屬董事會的功能性委員會，並將高階經理人之薪酬與CSR績效連結，確保永續經營成效。在環境永續面，遠傳透過雲端技術、大數據分析、IoT等應用，運用在智慧城市、智慧停車、空氣品質監控、大數據人潮解析等應用，協助解決交通、空氣品質等問題。社會共融面，近年來遠傳投入數億元，執行「加山計畫」，強化偏鄉基礎建設，達成離島偏鄉LTE訊號96%涵蓋率。

### 二、永續發展推動實績

106年遠傳電信公司導入社會投資報酬(Social Return on Investment, SROI) 評估方法，預測「寶衛地球」活動每投入新台幣1元將產生新台幣3.17元之社會價值，並根據預測結果及利害關係人議合時得到的回饋與建議進行專案活動調整與優化。107年重新計算結果，106年的SROI比率由原先預測的3.17元提高至3.79元，提升幅度達20%。107年「寶衛地球」活動延續106年響應聯合國SDGs的減碳趨勢，持續以「建立遠傳綠文化、推廣環境綠教育、倡議



▲圖 55 遠傳電信公司永續發展策略藍圖



▲圖 56 台灣中油智慧綠能加油站



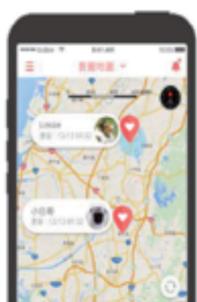
▲圖 57 環境資訊協會向大眾募集環保綠行動

消費綠責任」為三大行動核心，訂定向大眾募集 9,000 個環保綠行動的活動目標，年底共募集 2 萬 6,106 人次參與綠行動。

遠傳電信公司自 106 年起推動「翻轉教育 讓愛遠傳」計畫，跨界攜手臺大教授葉丙成，與其所開發的全球首創線上遊戲學習平台 PaGamO 合作，將「學習」融入「遊戲」，提升偏鄉孩童的學習動機。107 年遠傳共投入 119 人次志工，協助北中南部 26 所偏鄉學校、115 個班、984 位學生透過一「鍵」啟動數位學習，給予偏鄉孩童最溫暖的陪伴。為幫助等家寶寶在過程中獲得妥善照護，遠傳攜手兒福聯盟推動第 12 屆「棄兒不捨 讓愛遠傳」活動，特別和兒盟獨家設計「愛的奇積小屋」積木玩具於遠傳全臺門市進行義賣。此外，遠傳以「家」為概念，推出「堆『積』我的愛· 打造他的家公益募款園遊會」，

透過線上與線下的串聯，翻轉傳統募款模式，打造全台最大愛心網絡。遠傳電信公司至今協助兒盟募得款項累積超過 4,000 萬元，幫助超過 1,400 人次等家寶寶平安長大。

呼應國際聯合國永續發展目標 SDG 11 之永續城市和社區 (Sustainable cities and communities)，藉由無所不在的物聯網、智慧裝置和穿戴式電腦 (wearables)，AloE 和數位人工智慧網格打造智慧城市發展，並協助打造永續社區。遠傳藉由智慧城市的建置，促進經濟、社會與環境等面向具體融合。在經濟面，透過核心技術推動自身新經濟發展外，運用科技帶動智慧城市創造商機；在環境面，導入交通大數據、智慧環境監測、人潮解析等環境面應用；在社會面，Health+ 推動智慧醫療、Bobee 防走失定位，減少失智症、小孩等走失風險。



App 遠端設定、隨時查詢

位置資訊



位置資訊定時回傳

基地台 / GPS 定位



BoBee 守護寶定位裝置



寵物主人



長者的家人或照顧者



年幼兒童的父母

▲圖 58 個人隨身定位裝置推廣

## 歐萊德國際股份有限公司

### 一、永續發展願景

歐萊德公司堅信「改變大環境從小事做起」，致力朝「零環境衝擊的目標」邁進，透過綠色、永續、創新計畫，從經營規劃源頭依循綠色永續結合設計產品，從整體發展到各細節規劃都落實綠色理念，使公司持續改善永續發展，不間斷守護永續循環的綠色家園。

歐萊德公司以「綠色、永續、創新」核心價值奠定品牌競爭力，致力實踐對環境保護的減碳承諾，及全面落實聯合國永續發展目標 (Sustainable Development Goals, SDGs)，更與全球頂尖品牌同步，獲邀加入 RE100，承諾 2025 年達到企業 100% 再生能源使用，成為全球第一家零碳美妝的領導品牌，並持續致力尋找任何讓地球變更美之道，以身作則邀社會大眾一起用最綠的能量守護地球。

### 二、永續發展推動實績

歐萊德公司為推動綠色工作環境及自然之永續，提升員工互相尊重、互助合作及自主管理的精神，特訂定「綠色生活公約」讓全體員工共同提升工作環境品質及維護良好工作氛圍，並落實環保節能減碳的目標。另外提倡三生理念，因為相信美好的未來攸關的不止是人類「生活」，更須以尊重「生命」為基礎，與大自然中的所有生物與「生態」和諧共存，堅持「自然、純淨、環保」的綠色理念，開發對動物友善之產品，希望避免添加動物來源成分。

為了促進社會整體發展，致力根留臺灣，並持續擴大營運範疇；對內提供一系列的福利慰勞



▲圖 59 歐萊德公司核心價值

辛勤的員工；對外不定期舉辦「鄰里日」，邀請附近鄰居來參觀綠建築總部，讓居民了解公司工廠已通過「綠色工廠認證」，所排放廢水經處理過後可養魚蝦，不會有汙染環境的廢棄物產生，同時也將綠色理念傳遞出去，邀請周遭的鄰里一同做環保。

歐萊德公司每年舉辦三大 CSR 活動－關燈、淨灘、種樹，除廣邀代理商、供應商、員工及家屬共同參加，另外參與響應的沙龍客戶甚至多達 4,457 間。此外，並不定期進行環境教育內訓，包括 SDGs 說明、淨灘資訊、電影欣賞…等等，與員工建立環保觀念與深植永續文化。

歐萊德公司於 104 年啟動行動辦公室計畫，將過往於全臺各地為客服人員租賃的實體辦公室



►圖 60 洗髮精商品循環再利用圖

轉換為行動辦公室，讓員工可擁有彈性的時間服務客戶，亦可透過行動辦公室進行內部會議，不但省下閒置的辦公室空間，同時也省去辦公室閒置電力的耗用，而此項計畫不單提高業務人員效率與服務品質，更減少通勤距離、降低交通碳排放。

歐萊德公司不只以綠色美妆品牌自居，更號召各界共同響應減碳行動，向外擴散綠色影響

力，藉由累積的綠色力量，喚起大眾以實際行動守護綠色家園。歐萊德公司不只是髮膚保養品公司，而從各面向落實對人類、對社會、對地球共好，全面性的幫助地球減壓、愛惜大地萬物，解決地球存在的廢棄物衝擊，提出改善環境的永續方案，實現Green Lifestyle全綠生活，持續不間斷守護著永續循環的綠色家園，並致力朝零環境衝擊的目標邁進。



## 中華民國荒野保護協會

### 一、永續發展願景

中華民國荒野保護協會致力於環境守護，透過購買、長期租借、接受委託或捐贈，取得荒地的監護與管理權，將之圈護，盡可能讓大自然經營自己，恢復生機。保存臺灣天然物種、讓野地能自然演替、推廣自然生態保育觀念、提供大眾自然生態教育的環境與機會、協助政府保育水土、維護自然資源、培訓自然生態保育人才。93年至107年間，荒野保護協會遵循宗旨與目標繼續努力，持續守護臺灣自然環境，朝永續山林、生態城市、無塑海洋的方向邁進。

### 二、永續發展推動實績

為達到環境守護的目的，荒野保護協會以「環境教育」為手段進行多方的遊說，佐以相關「專案計畫」與公部門、企業、社區乃至個人進行合作，期許達到生活、生產、生態三生平衡之目的。與機關學校、企業、友會、個人均有連結，在環境面、法規面、產業面一直不斷地形成良性循環。

荒野保護協會推動公園生態化運動，93年11月1日起接受臺北市政府託管「富陽自然生態公園」至今，以「生態保育」為首要考量，以生態工法極低度開發，施工作業均採最小干擾方式進行，展現原始森林面貌的都市公園綠地，為都市公園綠地生態建設的典範之一，藉由志工們的付出與努力，守護期間持續完成了諸多生態調



▲圖 61 2018 年首次推動海岸行腳計畫

查、移除入侵外來種、環境巡守、棲地維護改善等任務。憑藉著富陽公園的操作經驗，目前臺北分會也正積極推展「公園生態化運動」，並推動「自然生態公園管理專章」之立法。

99年起展開弱勢兒童長期陪伴計畫（簡稱長陪），以1年6次的自然體驗，引領來自育幼院、學校或教會等團體的孩子們享受大自然中的每個驚喜。緯創人文基金會及夏日星辰人文藝術基金會給予此計畫更多愛與支持，長陪的核心價值是希望透過長期陪伴孩子們的過程，讓他們漸進體會「愛自己、愛別人、愛生命」，這是一門在大自然裡上的「生命教育」課程，不只要帶孩子認識環境，更要加強關懷生命的感受力。

107年與綠色和平基金會共同開「環臺海廢快篩」計畫，在日韓專家的指導下，完成臺灣版快速監測方法，並培育50位「海廢快篩調查員」執行調查環島121個測站，盤點本島的海洋

廢棄物總量與污染熱區，第一次快篩結果發現，50%的海洋廢棄物密集堆積於10%的海岸線上，估計需要2,000輛垃圾車次方能清運完畢。在淨灘與減塑蔚為全民熱潮時，107年的無塑海洋專案成果顯示荒野保護協會仍能透過公民科學與政策協力在海廢議題上扮演關鍵角色。

於107年落實購地守護的宗旨與目標，完成

了荒野一號地的揭牌儀式，是棲地守護工作重要的歷史里程碑，位於宜蘭武荖坑的山坡地保育區林業用地，面積1,760餘平方公尺，除了是一片景緻優美的山林地，同時也是穿山甲、大冠鷲、無霸勾蜓等多樣生物的棲息地。雖然只是朝著目標跨出了小小的一步，但這一步路卻走了23年，我們期許後續將會有更多的荒野地出現。

## 莊福文化教育基金會

### 一、永續發展願景

莊福基金會於64年成立，以野生動物保育與環境永續為理念，從事保育工作多年，整合國內外資源並與國際接軌，朝對動物最好的立場與福利發展，從非洲野生動物為主到聚焦於犀牛的保育，進而保育臺灣野生動物（臺灣熊鷹、臺灣黑熊、石虎、金門水獺等），以野生動物之美喚起民眾對野生動物的愛護與其生命的尊重。莊福基金會以達成「以環境永續為目標，為孩子守護幸福地球」為願景，致力動物保育推廣工作，關懷國際及本土瀕危保育物種，期能喚起世人對野生動物生存權的重視與保護，並將資源回饋於社會扶持，針對偏鄉、弱勢孩童進行環境教育，傳遞下一代正確保育觀念。一路走來，始終如一，希冀國人能體驗每個生命環節帶來的驚奇與美好，關懷珍惜自然生態的點滴與人文藝術之傳承。

### 二、永續發展推動實績

莊福基金會除了推動保育理念，更付諸行動具體實踐，自104年起前往南非了解犀牛原棲地的保育現況，與國際保育行動接軌；105年，更



▲圖 62 南非犀望遠征志工隊

招募犀牛保育志工隊遠征南非，進行犀牛孤兒關懷照護之域內保育工作；106年為響應922世界犀牛日，於臺灣號召3,000人參與排列巨型犀牛圖陣進行空拍，透過全民的力量，讓國際看見臺灣關懷犀牛瀕危保育的決心。

此外，更關注國內本土瀕危保育物種，自99年起贊助知名生態紀錄片導演劉燕明先生，拍攝《希望之徵》熊鷹紀錄片歷時14年，為臺灣留下第一部完整記錄熊鷹養育雛鳥辛勞過程的生態影像作品。107年，啟動本土瀕危物種保育推廣



▲圖 63 志工隊與臺灣駐南非代表進行交流



▲圖 64 《希望之徵》熊鷹生態紀錄片



▲圖 65 狐濛家族動物生態特性解說導覽活動



▲圖 66 學童積極參與環境教育課程

計畫，針對石虎、黑熊、歐亞水獺等臺灣瀕危、珍稀動物進行系列教育體驗課程及活動。

莊福基金會積極規劃推展動物保育教育課程，傳遞正確的環境生態知識，藉由參與各類生態保育推廣活動，並辦理環境教育體驗活動，特色主題如「犀引注意」、「獠眼看環境」、「環環相扣」及「小小犀望保育員」，自104年起總計開辦超過150堂課程，參與人次達3,500人，讓更多民眾能認識瀕危野生動物保育及物種生態特性。透過這些體驗教學，將動物保育的理念和觀念廣為宣傳，並對各世代的人進行啟發。另辦理生態保育教育展覽，藉以傳達人類、環境與動

物之間相共生共存關係，共同守護環境生態，推廣下一代生態保育正確態度，讓環境永續種子從小扎根。

秉持著豐厚動物物種繁育經驗與保育照護人才資源，推動動物保育、復育及環境教育，並將資源回饋於社會扶持，至107年連續11年邀請偏鄉學校、社福團體參訪企業關係場域六福村。此外，更與社福團體合作推出回饋活動及商品，打造公益愛心平台，作愛心回饋社會，舉辦公益市集募集聖誕禮物贈與弱勢家庭，傳遞一份溫暖，堅持用善的力量實踐美好生活，用愛的力量關懷社會角落，以具體行動落實良善社會之責任。

## 慈心有機農業發展基金會

### 一、永續發展願景

慈心基金會致力於推動慣行農業轉型，將成功經驗帶入原住民族群，在花蓮、臺東、高雄部落等地區推動不同專案，以守護當地文化為前提，協助產業轉型與升級，創造經濟、生態、文化三贏的目標。慈心基金會創辦人日常老和尚曾說：「只要有生命的，我都希望能夠照顧到。」因此基金會所發展的業務範圍從「有機農業」開始，漸漸擴展更多會務，但重點在於要用「慈心」推廣對人與人、人與環境有益的事情。期待號召更多善良的心，一起恢復大地生機、淨化海洋、解決食安問題、建立誠信社會，達成下列3項願景：

- 推廣有機農業及友善耕種，讓臺灣成為有機島
- 推廣種樹減碳、復育山林與海岸林，為地球種一億棵樹
- 推廣減塑理念，減少一次性塑膠，淨化海洋污染

### 二、永續發展推動實績

慈心基金會自105年起，致力於減塑環境教育的推動，積極深入社區、校園與企業為各種不同年齡層的民衆，傳遞減塑理念與實踐方法，致力開發平易近人的減塑教材與體驗活動（如布袋戲、桌遊、闖關活動等），邀請民衆以輕鬆愉快的方式，了解海洋塑膠污染的嚴重性，以及減塑實踐方法，從而願意開始在生活中開始改變一次性拋棄式的消費行為，轉變成支持環保永續的行動；另外，每年針對企業人士、教師、青年等不同對象所舉辦的營隊活動中，也特別安排減塑主題講座與體驗活動，邀請更多人從生活中開始



▲圖 67 慈心基金會辦理兒童環境教育

減少一次性塑膠垃圾的產生，一起加入守護海洋的行列。

98年臺南官田出現農民灑下拌入農藥的稻穀，導致鳥類誤食而亡。死亡鳥類包括保育類動物水雉88隻，遍地死鳥的場景怵目驚心，林務局特邀請慈心基金會進入該地輔導農民轉作有機，但當地受限環境因素，無法通過有機驗證，因此建立一套生態標章—「綠色保育標章」，並與時俱進更改綠色保育標章規範，擴大農田生態保護網絡。

慈心基金會與特有生物研究保育中心，農業試驗所及東海大學合作，以多方專業面向切入，於新北坪林、南投中寮共同建立生態農業示範區。以南投中寮為例，輔導當地中寮社區居民友善農耕知識、集集特生中心宣導石虎保育知識、農業試驗所提供農耕技術支援及土壤監測、東海大學則進行PGS驗證模式的評估及改善。四方觀測友善農耕操作模式下，農田生態的變化並提出改善的措施，呈現農田生態服務系統之新價值。



## 行政院交通部觀光局東北角暨宜蘭海岸國家風景區管理處 — 丟丟銅仔 三生三事

### 一、計畫簡介

舊草嶺隧道為結合歷史、文化、觀光的「鐵馬隧道」，行政院交通部觀光局東北角暨宜蘭海岸國家風景區管理處（簡稱管理處）極力結合臺鐵觀光列車、臺灣好行、臺灣觀巴等客運業者及旅行社業者等，並配合其他政府機關、學校單位、地方團體及私人企業，於此結合東北角漁村風情及海岸地質等景點，辦理各項活動推出綠色

樂活套裝行程，融合環保教育推廣，已有約260萬遊客人次造訪，促使各界重視生態旅遊綠色觀光及環境永續之觀念。期望推展當地社區成為生態、生產、生活之「三生社區」，維持社會-生態-生產地景，管理處完成「三事」—舊火車隧道活化再利用為自行車道，讓地方型景點提升為國際型景點，旅遊型態由過路型轉變為目的型旅遊，並持續透過跨機關合作經營管理，以達成生物多樣性與產業生產永續發展的目標。



### 二、永續發展推動實績

福隆地區原以國內旅客為主要客群，近年來透過舉辦單車逍遙遊活動，推廣自行車旅遊，單以舊草嶺隧道景點統計每年約有30萬人次來騎車，而整個福隆地區每年國內外遊客則可以吸引超過171萬人次。自西元2015年開始，管理處參加有世界觀光界「諾貝爾獎」之稱的世界觀光旅遊委員會（World Travel and Tourism Council, WTTC）「明日旅業大獎」目的地獎參賽，另外西元2016-2018年連續3年榮獲「全球百大綠色旅遊目的地（Top 100 Green Destinations）」，西元2018年獲綠色旅遊（目的）地國際認證銀獎，努力藉著舊草嶺隧道的成功轉型案例，讓舊草嶺隧道之美登上國際舞台，每年吸引更多的國際旅客來台，成功從地方型轉變為國際級景點。



▲圖 68 以鐵道結合鐵馬道之「鐵道博物館」概念進行創意行銷

舊草嶺隧道鐵道的文化保存再利用，除了受到遊客的喜愛，也讓當地居民更關注自己的家



▲圖 69 舊草嶺隧道開通

鄉，增加自己對在地生活的想像，隨著商店、餐飲逐漸設立，帶動青年回流，積極參與配合管理處辦理之各項宣傳活動，提供相關優惠或共同推動套票遊程，由於隧道保留了歷史原貌，展現在地的生活記憶，及歷史發展脈絡，讓遊客能夠更深入地了解地方特色及屬於舊草嶺隧道故事體驗，拓展延續舊草嶺隧道歷史文化價值從，原本的鐵道古蹟保存，提升到生態保育及永續觀光發展。

舊草嶺隧道引領低碳觀光發展，遵循綠色旅遊（目的）地國際認證指標，管理處規劃提供最低碳排放的交通接駁運具及遊程路線規劃，並提

供當地當季的餐飲及實踐綠色消費，讓選擇低碳旅遊旅客有更深入人文在地文化體驗外，參與低碳到落實低碳環境的營造過程中，帶動當地產業朝向低碳產業轉型，讓人口外流減緩，有效再生地方經濟，並已獲得在地民衆之參與感及認同感，以及其他政府機關之信任，共同加入守護當地生態的行列，讓地方社區從一級產業逐漸轉型為文化遺產、環境教育、生態體驗為導向的五級產業，推廣東北角豐富地質景觀、生態環境保育及觀光資源永續觀念，融合社區居民力量共同推廣地方文化及永續理念。



▲圖 70 舊草嶺隧道觀光帶動周邊發展效益



▲圖 71 舊草嶺隧道設有照明裝置與導覽牌



## 行政院農業委員會林務局花蓮林區管理處 — 螢漫平森·在地創生~大農大富賞螢生態旅遊之建立

## 一、計畫簡介

結合「三低」（低碳、低密度、低開發）的經營理念，花蓮林區管理處在轄屬「平森園區」辦理賞螢生態活動，秉持過往「綠色永續」的發展目標，廣續針對「平森園區」地區的生態調查與監測，全面了解、建立物種保育的情況；隨後在104年的螢火蟲資源調查中，發現園區內共有7種螢火蟲（環境指標性物種之一）。有鑒於此，105年花蓮處便積極擔任起「螢漫平森」的籌備整合角色，106年開始辦理「大農大富賞螢季-螢漫平森」的活動，除結合推廣在地農特產品，創造地方生態旅遊產業效益外，更培育在地解說人才與監測志工，讓賞螢導覽活動成為環境教育的一環，引導民衆認識螢火蟲生態，同時也啟動負責任的生態旅遊，積極結合以臺灣永續發展核心目標，與住民共享綠金效益，以期早日達成以「永續生態旅遊帶動地方共榮，創造綠色經濟」的目的，讓螢光永續閃耀於「平森園區」，邁入永續發展的全球治理潮流。

## 二、永續發展推動實績

「大農大富賞螢趣」活動每年皆吸引大量的遊客來到大農大富地區，經過這幾年活動的執行，也從單一步道的賞螢活動，修正與改善成符合多元需求的賞螢行程。在108年的「大農大富賞螢趣活動」便規劃出4種不同的賞螢路線，以符合不同的客群參與，包含年輕族群、親子客群、身心障礙族群，以及中高年齡層的族群。花蓮處除了鼓勵周邊社區進行友善農業外，近年來也積極推動林下經濟、森林為主題的生態旅遊與活動，開發多元的「綠金產業」，讓周邊社區與部落的經濟產業更加健全。於108年便有4位在地青年，返鄉投入賞螢活動與在地事務，因平地森林與賞螢活動所增加就業機會，將吸引許多青年人口返鄉。

「大農大富賞螢趣-螢漫平森」活動，透過在地的「螢火蟲」，來連結、整合周邊社區資源，在生態保育工作與在地產業發展中，取得



▲圖 72 平森園區螢火蟲長期監測志工調查情形

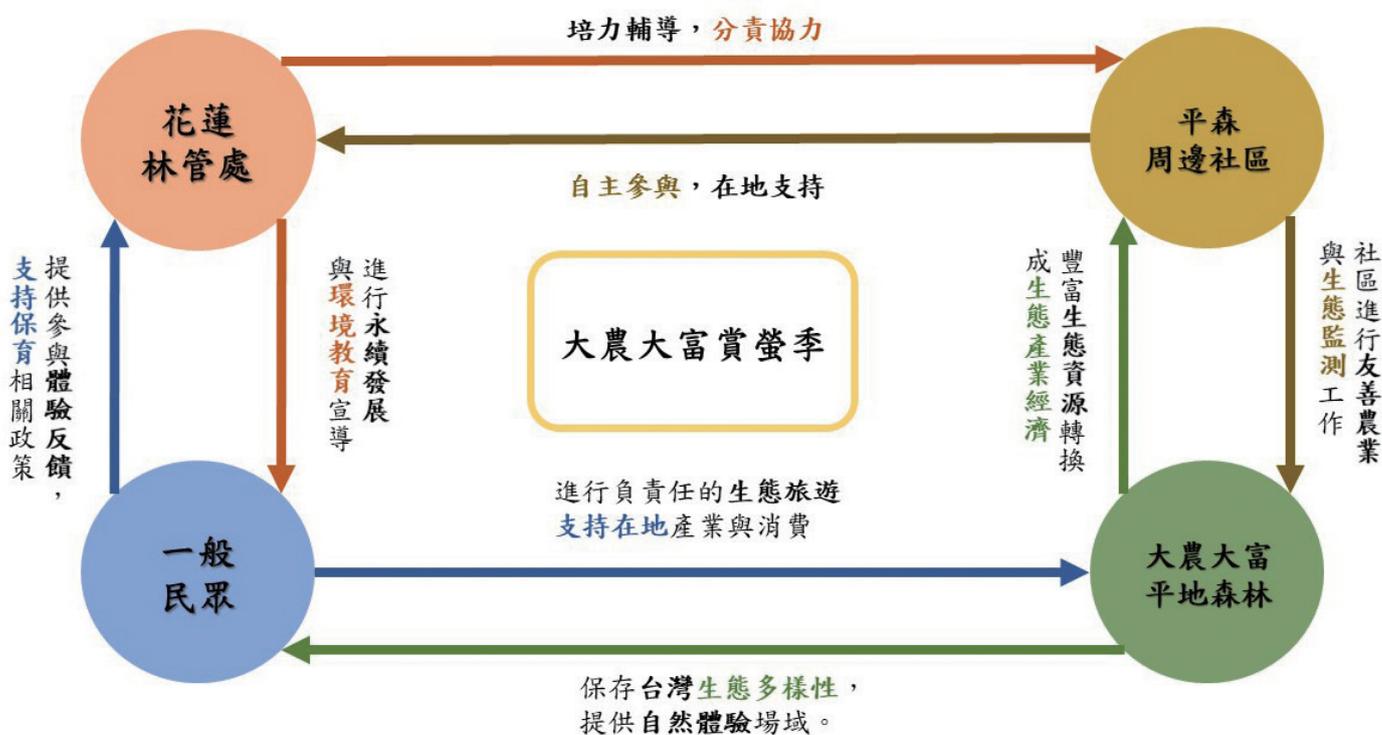


▲圖 73 平森園區已成為賞螢聖地

公、私協力的最適平衡永續發展模式。賞螢活動之外，花蓮處也積極開拓多元的生態產業發展重點：包含春季的花海美景、夏季的在地食農教育、秋季的風箏節以及冬日的楓紅季；同時引導森林療癒、自然藝術裝置、自行車尋幽等豐富的體驗行程，加上完善的相關配套措施，讓平森園區的永續發展腳步更完善穩健。再者，更以輔導周邊社區發展生態產業，吸引更多青年返鄉投入在地事務，也讓社區居民提升在地保育的意識與

認同感，更開啓永續發展的契機。

今後花蓮處將廣續陪伴在地社區與部落，以公平（Equality）、經濟（Economy）和生態（Ecology）三個面向，鼓勵在地居民投入平森園區的生態保育工作，深根在地的環境教育與生態產業發展，穩定建構屬於在地的永續發展模式，達到共榮共好、地方創生之願景，一起許一個永續發展的美好未來。



▲圖 74 賞螢活動永續制度循環圖

## 桃園市政府工務局 — 循環經濟 點石成金-廢棄粒料於公共工程重生

### 一、計畫簡介

配合國家發展計畫6大施政主軸－產業升級及創新經濟，桃園市自106年8月籌組結合產（再利用機構、瀝青廠、工程顧問公司）、官、學各界專家學者計畫團隊，運用被棄置的資源，透過新工法的轉換成為可用資材，共同完成瀝青廠設備驗廠、鋼質粒料（氧化碓）及瀝青混凝土刨除粒料工程試辦作業，桃園市至少有3家瀝青廠取得環境保護局固定污染源操作許可，可全力配合循環經濟推動。以桃園市政府轄管之道路長度3,283公里，面積約4,148.3萬平方公尺（公路2,076.1萬、市區道路2,072.2萬），將長久以來難以處理之廢棄粒料（氧化碓、道路刨除料、焚化底渣等），以建立適當規範，拌合於瀝青混凝土中，用以鋪築於轄管道路之路基、道路面層，或是緊急之道路坑洞修補，將可有效去化廢棄粒料，點石成金，讓廢棄物等資源再生，逐步將運用於公共工程，達成國家發展兼顧循環經濟之政策目標。

### 二、永續發展推動實績

臺灣地區垃圾廢棄物以焚化為主，掩埋為輔，垃圾經焚化處理、高溫燒結後產生數量龐大的焚化爐底渣，據行政院環境保護署統計資料顯示近年來臺灣地區焚化爐底渣總產量約在80~100萬公噸，由於臺灣地區地狹人稠，掩埋場空間不足，加上環保意識抬頭，永續發展概念已儼然成為趨勢，焚化爐底渣再生利用不僅可以使得廢棄物減量，更可達到資源永續循環經濟的目標，解決政府當今需面對的難題。

目前已知使用鋼質粒料（氧化碓）取代天然級配料30%，碳足跡每公噸大約可以節省



▲圖 75 豐德路氧化碓鋪面工程榮獲金質獎

6.24KgCO<sub>2</sub>e。以桃園市政府養護工程處「桃園市八德區豐德路氧化碓瀝青混凝土鋪面試辦工程」為案例，使用1,300噸鋼質粒料（氧化碓），碳足跡減少約8,112KgCO<sub>2</sub>e，相當於740棵樹1年的二氧化碳吸收量。此外，氧化碓瀝青混凝土在價格上較傳統瀝青混凝土便宜25%，本案試辦工程完成後，替市庫節省了360萬餘元。

配合行政院前瞻計畫推動，桃園市亦提出4條道路品質改善計畫，八德區豐德路路幅寬度約40米、雙向六車道，連接台4線的重要道路，也是八德區砂石車行駛路段，因重車往來頻繁導致鋪面損耗率高。而氧化碓係為鋼質粒料，具有耐壓、堅硬、耐磨損等特性，特別適用於車水馬龍、車輛反覆剎停的市區道路，摻混氧化碓的瀝青可大幅提升道路之耐久性，延長道路壽命，降低日後道路維護管理費用。桃園市政府養護工程處提報循環經濟道路-八德區豐德路氧化碓瀝青混凝土鋪面工程，亦獲得107年桃園市公共工程金品獎（107年8月20日頒獎），及行政院公共工程委員會107年第18屆公共工程金質獎（107年12月18日頒獎）榮譽。

# 2019

## Annual Report on National Sustainable Development



# CONTENTS

|  |           |
|--|-----------|
| <b>Chapter I : 2019 Annual NCSD Work Progress .....</b>  | <b>44</b> |
| <b>A. Convening the NCSD Working Conference.....</b>   | <b>44</b> |
| <b>B. Published The Evaluation Results of Sustainable Development Indicator.....</b>   | <b>46</b> |
| <b>Chapter II : Annual NCSD Key Tasks and Achievements.....</b>  | <b>48</b> |
| <b>A. Health and Welfare Working Group.....</b>  | <b>48</b> |
| <b>B. Life and Education Working Group.....</b>  | <b>49</b> |
| <b>C. Green Economy Working Group.....</b>   | <b>51</b> |
| <b>D. Green Transportation Working Group.....</b>  | <b>53</b> |
| <b>E. National Resources and Urban and Rural Development Working Group.....</b>  | <b>55</b> |
| <b>F. Sustainable Agriculture and Biodiversity Working Group.....</b>  | <b>57</b> |
| <b>G. Environmental Quality Working Group.....</b>   | <b>60</b> |
| <b>H. Climate Change, Energy Conservation, Carbon Reduction and<br/>        Nuclear-Free Homeland Promotion Task Force .....</b> | <b>61</b> |
| <b>Chapter III : Status of the 2019 National Sustainable Development Awards .....</b>  | <b>64</b> |
| <b>A. Introduction to the National Sustainable Development Awards.....</b>   | <b>64</b> |
| <b>B. 2019 National Sustainable Development Awards selection results.....</b>  | <b>64</b> |
| <b>C. About the Recipients.....</b>  | <b>65</b> |
| I. Education .....   | 65        |
| II. Companies.....   | 70        |
| III. Civic Organizations.....  | 76        |
| IV. Government agencies .....  | 80        |

## Table of Figures

|   |    |
|---|----|
| Figure 1 : 47 <sup>th</sup> NCSD Working Conference .....   | 45 |
| Figure 2 : 48 <sup>th</sup> NCSD Working Conference .....   | 46 |
| Figure 3 : Covers of the Chinese and English versions<br>of the sustainable development indicator reports .....   | 47 |
| Figure 4 : Launching the National Pension System to protect economic security of seniors.....   | 48 |
| Figure 5 : The President visited the Kaviyangan Culture and Health Station in Taiwu Township<br>of Pingtung County.....   | 48 |
| Figure 6 : 2019 World Diabetes Day press conference .....   | 49 |
| Figure 7 : Campaigns conducted together with schools' major activities.....   | 49 |
| Figure 8 : Digital graphic courses of vocational training .....   | 50 |
| Figure 9 : Labor bureaus of counties and cities counseling students with disabilities<br>on workplace conditions .....  | 50 |
| Figure 10 : Premier Su and Minister of Education Pan launch quasi-public mechanisms in six cities .....   | 50 |
| Figure 11 : The resource renewal class of Spring Pool Glass teaches about glass renewal processes..   | 51 |
| Figure 12 : Lectures and workshops on historical sites of injustice during Taiwan's White Terror<br>- Taipei venue.....   | 51 |
| Figure 13 : On January 22, 2019, it completed a 100MW solar photovoltaic plant in Lunwei West<br>of the Changhua Coastal Industrial Park.....                             | 51 |
| Figure 14 : Environmental protection points reward program press conference.....  | 52 |
| Figure 15 : Sun Moon Lake National Scenic Area's Xiangshang Bikeway.....  | 52 |
| Figure 16 : The "Youth Salon" provided consultancy of career planning .....   | 53 |
| Figure 17 : "Happy Bus" service in Fenglin Township of Hualien County.....  | 53 |
| Figure 18 : Taiwan High Speed Rail TGo membership .....   | 54 |
| Figure 19 : Taipei City Police Department implemented average speed control in the Ziqiang Tunnel...  | 55 |
| Figure 20 : Completed nationwide soil liquefaction preliminary graphic .....  | 55 |
| Figure 21 : Kaohsiung City Maolin District Office conducted information gathering and<br>maintenance work on tribal cultural sites and traditional migration routes ..... | 56 |
| Figure 22 : Taichung City's Fengyuan Ankang Phase 1 Social Housing .....  | 56 |
| Figure 23 : Xinfeng Section Youth Social Housing in Xinzhuang District, New Taipei City .....   | 56 |
| Figure 24 : Taiwan achieved good results in the Asia/Pacific Group<br>on Money Laundering (APG) evaluation .....  | 57 |
| Figure 25 : Agricultural environment basic benefits .....   | 58 |
| Figure 26 : Home page of the prototype Nationwide Marine Database.....  | 58 |

|   |    |
|---|----|
| Figure 27 : On-site survey of Matsu Islands Tern Refuge .....   | 59 |
| Figure 28 : Taiwan forest coverage is excellent and over 60%.....   | 59 |
| Figure 29 : Taiwan's first "National Nature Park Headquarters" was established<br>on November 28, 2019.....                                       | 59 |
| Figure 30 : Policy restricting provision of single-use plastic straws .....   | 60 |
| Figure 31 : The number of unhealthy PM <sub>2.5</sub> alert (red alert) days (Air Quality Index (AQI) for PM <sub>2.5</sub><br>is above 150)..... | 60 |
| Figure 32 : Tainan City Yongkang Water Recycling Center and Water Reclamation Plant<br>Turnkey Project ground-breaking ceremony.....              | 61 |
| Figure 33 : Climate Action conference .....   | 62 |
| Figure 34 : The Vice President visited the exhibition of disaster prevention and sustainable<br>campuses by the ministries.....                   | 62 |
| Figure 35 : Minister Chang Tzi-Chin of Environmental Protection Administration explains<br>Taiwan's energy transition path.....                   | 62 |
| Figure 36 : 2019-TW Circular Economy Seminar.....   | 63 |
| Figure 37 : Nuclear waste treatment campaign poster .....   | 63 |
| Figure 38 : Selection and Commendation Process for the National Sustainable Development Awards ..   | 64 |
| Figure 39 : "Zhi-Yong Pond" natural water resources.....  | 65 |
| Figure 40 : Reuse of abandoned flower pots .....  | 65 |
| Figure 41 : Results of reuse of reclaimed water .....   | 65 |
| Figure 42 : Less privileged students participate in laboratory experiments based on their interests.....  | 65 |
| Figure 43 : Elderly companionship service .....   | 66 |
| Figure 44 : River watch patrol helps the community in cleaning the ditch.....   | 66 |
| Figure 45 : Students learn to make eco-friendly low-plastic fishnet cup holders.....  | 66 |
| Figure 46 : Chaoyang University of Technology's establishment blueprint .....   | 67 |
| Figure 47 : "Silver Hair" group activities.....   | 68 |
| Figure 48 : Students help to organize a feast for elderly people living alone .....   | 68 |
| Figure 49 : Foreign students visit Sun Moon Lake.....   | 68 |
| Figure 50 : Foreign students' farm experience.....  | 68 |
| Figure 51 : Cultural and creative products made from garlic skin .....  | 68 |
| Figure 52 : Chih-Hang Elementary School has a long-standing and sustainable campus environment ..   | 69 |
| Figure 53 : Volunteers from First Bank clear a beach of garbage.....  | 70 |

|  |    |
|--|----|
| Figure 54 : The Bank protects the wetland, helps the less privileged, and promotes green lighting .....  | 71 |
| Figure 55 : FET's roadmap to sustainable development .....   | 72 |
| Figure 56 : China Petroleum Corporation's smart green gas station.....   | 72 |
| Figure 57 : Taiwan Environmental Information Association's One Million Green Actions .....   | 72 |
| Figure 58 : Personal positioning devices promotion for security care .....   | 73 |
| Figure 59 : O'right's core values.....   | 74 |
| Figure 60 : The raw material recycling and reuse process of shampoo .....  | 75 |
| Figure 61 : 2018 was the first year of implementation for the Beach Walk Project .....   | 76 |
| Figure 62 : The rhino volunteer expedition team visited South Africa .....   | 77 |
| Figure 63 : The rhino volunteer team conducted bilateral exchange<br>with the Taiwanese Representative in South Africa.....                              | 78 |
| Figure 64 : "Sign of Hope", a mountain hawk-eagle ecological documentary.....  | 78 |
| Figure 65 : Guided activities on the characteristics of the meerkat family.....  | 78 |
| Figure 66 : Children participated enthusiastically in the environmental education courses.....   | 78 |
| Figure 67 : The foundation organized environmental education courses to children .....   | 79 |
| Figure 68 : Launching the concept of "Railway Museum" concept into innovative promotion<br>of Old Caoling Tunnel combines railway and bicycle track..... | 80 |
| Figure 69 : Opening of Old Caoling Tunnel.....   | 81 |
| Figure 70 : Tourism promotion of Old Caoling Tunnel policies bring benefits<br>to surrounding industries.....  | 81 |
| Figure 71 : Signs and lighting inside the Old Caoling Tunnel .....   | 81 |
| Figure 72 : Monitoring volunteers continue to survey and monitor the ecology<br>of the "flatland forest park".....                                       | 82 |
| Figure 73 : Flatland forest park has become the best place for firefly watching activities .....   | 82 |
| Figure 74 : Sustainable system diagram for firefly watching activities.....  | 83 |
| Figure 75 : Fengde Road oxidizing slag pavement work awarded Gold Award.....   | 84 |

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## List of Tables

|  |    |
|--|----|
| Table 1 2019 National Sustainable Development Awards winners ..... | 64 |
|--|----|



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# 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 2019 Annual Report compiles the main achievements by both NCSD and civil sectors through their efforts on promotion activities of sustainable development in 2019.

This Annual Report includes Chapter 1: The 2019 Annual Work Progress, Chapter 2: Annual NCSD Key Tasks and Achievements, and Chapter 3: Status of the 2019 National Sustainable Development Awards Campaign.

Sustainable development depends on corporate participation. Through the "2019 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.



### A. Convening the NCS D Working Conference

#### I. 47<sup>th</sup> Working Conference

The 47<sup>th</sup> Working Conference was held on May 15, 2019 in the 2F 1st Conference Room of the Executive Yuan, presided over by Minister without Portfolio and NCS D CEO Chang Jing-sen. The agenda included three draft reports and two discussions. The rulings given by the chairman at this meeting were as follows:

##### **1. Draft Report: Confirmation of Corresponding Indicators for Taiwan's Sustainable Development Goals (Draft)**

(1) The goals and targets of Taiwan's Sustainable Development Goals were published on our official website last year (2018) and sent to the various governing units through the Secretariat for implementation based on the 31st Council Meeting Resolutions. The corresponding indicator authorities and agencies are to refer to the recommended amendments provided by the council members today, so as to facilitate the publication of the goals and indicators of National Sustainable Development at the international conference to be held on June 5 this year (2019).

(2) With regard to Indicator 13.2.1 Proportion of Electric Vehicles, the Ministry of Economic Affairs and Ministry of Transportation and Communications are to re-establish more progressive goals. Though the incentive subsidy mechanism will end, the subsidy was designed to help the electric scooter industry achieve an economic scale sufficient to be competitive with the traditional scooter industry. The public has gradually become willing to purchase electric scooters, and the proportion of electric scooters sold should continue to increase in the future. If the electric scooter industry loses its competitiveness with the end of the incentive subsidy mechanism, discussion on whether promoting the policy is appropriate will be conducted.

(3) With regard to the amendment recommendation on the education and publicity of Goal 18 proposed by council member Shi, the governmental authorities are to refer to the council member's suggestions and set the relevant targets.

(4) The Ministry of Health and Welfare, with regard to the accident mortality rate of children below 5-years-old being higher than the international rate, the governmental authority is to refer to the international target and opinions of the council members to re-establish more progressive targets.

(5) Investment-related sustainable development goals have been included in the policy tools of Taiwan's Sustainable Development Goal Overview, and hence will not be included in the indicators.

##### **2. Draft Report: Status of "International Conference on a Sustainable Taiwan: Accelerating the Localization of UN SDGs"**

Thanks to the Secretariat for organizing the conference to be held on June 4 and 5, which I will be attending in person. All council members present are cordially invited to participate in the conference, and the various working groups and task forces are invited to provide their full support. Senior officials will be attending and will hear the opinions of all sides. A consensus on sustainable development will be formed, and, together, we will promote national sustainable work and improve the efficiency of promoting national sustainable development.

##### **3. Draft Report: Status of the 2019 National Sustainable Development Awards**

(1) Relevant units from the Ministry of Economic Affairs, Ministry of Education, and the Environmental Protection Administration are in charge of the preliminary selection for the sustainability awards, and non-governmental



▲Figure 1 : 47<sup>th</sup> NCSD Working Conference



▲Figure 2 : 48<sup>th</sup> NCSD Working Conference



members are invited to assist in a secondary selection evaluation.

- (2) The Secretariat tracks the changes of the award winners over the past 15 years, compiles the results and experience of the winners in promoting sustainable development work, and conducts review and analysis.

#### **4. Discussion: Tracking and Evaluation Guidelines for Sustainable Development Goals (Draft)**

- (1) For supervision and evaluation of the execution of sustainable development goals, considering that sustainable development goals are long-term plans, submission of annual and progress review reports upon research is sufficient. In line with the terms of the government administration, progress reports will be released in 2020, 2024, 2028, and 2031; annual and progress review reports will be released on June 5 to correspond with World Environment Day.
- (2) However, as real-time information for target status is required, the Secretariat is to set up a real-time information platform to obtain real-time changes in data.

#### **5. Discussion: Promotion Plan for National Sustainable Living Calendar**

- (1) We would like to thank the council members and all participants for agreeing to the proposal of the National Sustainable Living Calendar, and for believing in the need to compile this guidance and advocacy to lead the citizens towards sustainable and green living. This will enable them to participate in national sustainable development in their daily lives, and thereby allowing us to attain national sustainable development goals.
- (2) If a special international event becomes a regular event, it may be included in the National Sustainable Living Calendar as a reminder to the public to practice sustainable living through global action. This will lead to better results.

In the future, the Environmental Protection Administration and other agencies are to hold brainstorming sessions, and when drafts have reached a certain stage of completion, convene a working conference to discuss subsequent compilation.

## **II. 48<sup>th</sup> Working Conference**

The 48<sup>th</sup> NCSD Working Conference was convened on October 9, 2019 in the 1st Conference Room of the Executive Yuan, presided over by Minister without Portfolio and NCSD CEO Chang Jing-sen. The agenda included two discussions. The rulings given by the Chairman at this meeting are as follows:

### **1. Discussion 1: National Environmental Protection Plan (Draft)**

Please respond or amend based on the suggestions of the council members with regard to the National Environmental Protection Plan (Draft), and upon review by the council members, submit it in the 32nd Council Meeting Report.

### **2. Discussion 2: Sustainable Development Policy Guidelines amendment plan**

- (1) The Sustainable Development Policy Guidelines consists of three sections, "Preface," "Vision" and "Policy Content"; the framework of "Policy Content" is based on Taiwan's Sustainable Development Goals.
- (2) The Secretariat and governing authorities of the goals are to draft amendments based on the conference's division of work. Upon compilation by the Secretariat, it is to be submitted to the 49th Working Conference.

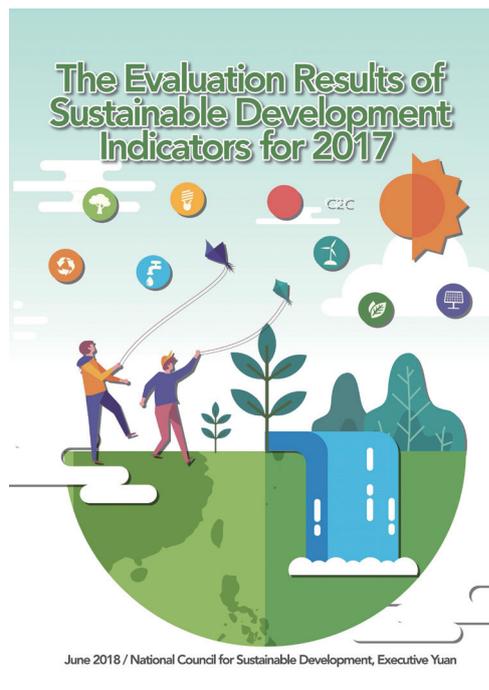
## **B. Publishing the Evaluation Results of Sustainable Development Indicator**

To evaluate and review the effectiveness of implementation of national sustainable development measures, in 2003 the NCSD released the first edition of the Taiwan Sustainable Development Indicators, with

reference to the sustainable development system and framework of the United Nations. In each subsequent year, the previous year's indicator evaluation results were released. The Individual Indicator Information System for Sustainable Development in Taiwan platform was set up on the NCSD website, allowing the government, industry, academia, and the public to access and make use of relevant information. In 2007 the NCSD released the second edition of the Taiwan Sustainable Development Indicators, with reference to the third edition of the United Nations sustainable development indicator system.

Regarding the evaluation of national indicators, the authorities and agencies relevant to each indicator are to report their previous year's data on the above Indicator Information System platform. After preliminary results are calculated by the platform, the NCSD will call relevant governmental authorities together to hold

meetings. After all the indicator's data, analysis and evaluation results are confirmed to be accurate, the information will be compiled into a report. For this year's (2018) evaluation of Taiwan's indicators, the NCSD convened the first discussion meeting on July 29, 2019. The authorities and agencies responsible for each of the indicators were invited to discuss any adjustments to the indicator values. After the authorities and agencies responsible for the indicators had completed their data reports on the system, the second indicator system report meeting was convened on December 19. During this meeting, a draft for the current year's indicator reports was reviewed by the participants, and a resolution was passed. Based on the first draft adopted at the second meeting, the NCSD completed the 2018 Sustainable Development Indicator Evaluation Report, which was published on the NCSD website.



▲Figure 3 : Covers of the Chinese and English versions of the Sustainable Development Indicator Report



## Chapter II : NCSD Annual Key Tasks and Achievements

### A. Health and Welfare Working Group

1. Increased the self-sufficiency ratio of the economically disadvantaged, and continued to promote public assistance, care for low-income and middle-to-low-income households, assist persons in need during emergencies or disasters, and help them to live self-sufficiently. In 2019, the self-sufficiency ratio of low-income households and middle-to-low income households was 13.41%. The national pension program was promoted to ensure basic economic security for the elderly. Since the launch of the national pension system in October 2008, the number of seniors who received payouts increased from 902,455 as of the end of 2008 to 1,638,572 as of the end of December 2019, and the payout amount increased from NT\$5,398,054,782 to NT\$72,573,617,192. This shows that there is a yearly increase in the number of people in the elderly population protected by the national pension as well as in the payout amount. The national pension system will continue to be promoted to achieve the policy goal of ensuring economic security for the elderly.
2. The number of recipients assessed for Long-Term Care 2.0 increased. As of December 31, 2019, 794,050 people required long-term care. Upon assessment by Taiwan's long-term care centers, 375,247 people were eligible for the Long-Term Care 2.0 service (before deducting those who had hired



▲Figure 4 : Launching the National Pension System to protect economic security of seniors



▲Figure 5 : The President visited the Kaviyangan Culture and Health Station in Taiwu Township of Pingtung County

- foreign caregivers and used residential care), and the amount of recipients assessed for Long-Term Care 2.0 service was 47.26%.
3. The social insurance system for the protection of citizens which focuses on vulnerable groups has been established. The long-term care system has been enhanced, and resource deployment and service provision have been strengthened. 314 culture and health stations have been set up, and 889 local indigenous people have been trained as caregivers to serve about 11,715 elderly indigenous people. The caregivers provide continuous, accessible, and culturally appropriate professional care services.
4. Mobile healthcare services for regions with insufficient medical resources are provided, and medical institutions are encouraged to provide mobile healthcare services to regions with insufficient medical resources including Western and Chinese medical and dental care. In 2019, the NHI announced that there were 188 townships with insufficient healthcare resources in Western and Chinese medical and dental care. Mobile healthcare services were provided to 185 townships, attaining a coverage of 98.4%.
5. The mortality rate for people aged 30-70 years with chronic diabetes has been reduced. The execution of Taiwan's diabetes prevention policy begins with the three-level and five-stage public health framework. Besides enhancing public prevention awareness, it also implements early screening and

referral for follow-up treatment to attain prevention results. Taiwan's standardized mortality ratio (SMR) for diabetes has fallen from 37.1 per 100,000 people in 2002, to 23.5 per 100,000 people in 2017, and further down to 21.5 per 100,000 people in 2018, a significant reduction of 42%. The diabetes mortality rate for people aged 30-70 years dropped from 1.16% in 2010 to 0.88% in 2018.

6. The "World Health Day, let's walk into WHA!" event was held on April 7, 2019. The event called upon the public to walk 24 million steps (equivalent to walking the 9,682 km from Taiwan to Geneva) to both express public support for Taiwan joining the World Health Organization and increase the physical activity of citizens. In addition, responding to the activity, "Walk the talk!" organized by the World Health Assembly on May 19 to support Taiwan joining the World Health Organization, 67,000 people from 29 countries, 75 organizations, and 32 representative offices accumulated 860 million steps, which was 35.8 times the original goal of 24 million steps.
7. Incorporated sex education (including HIV prevention) as a required topic in the health-promotion school program for tertiary institutions, and organized sex education (including education on HIV and other sexually transmitted diseases) workshops for administrative staff of tertiary institutions, as well as relevant workshops and activities for sex education promotion at schools. In 2019, 24 schools promoting sex education organized a total of 378 campaigns and activities in sex education and AIDS prevention, in which 88,117 people attended.

## B. Life and Education Working Group

1. To enhance the reading habits of junior high and elementary school students, the Ministry of Education has subsidized the "Teacher Librarian Program." In 2019, 623 individuals from elementary schools and 309 individuals from junior high schools were appointed. National Tsing Hua University was entrusted to conduct the "Teacher Librarian Training — Regional Talent Cultivation Research Project"; 525



▲ Figure 6 : 2019 World Diabetes Day press conference



▲ Figure 7 : Campaigns conducted together with major activities of schools.

individuals participated in the teacher advancement (including returning) workshop in 2019. Also, Reading Rocks Schools and Reading Promoters were selected to commend exemplars in promoting reading. In 2019, 40 Reading Rocks Schools and 59 Reading Promoters were commended. "Bookstart," a program to give age-appropriate books to new elementary and junior high school students was promoted.

2. With regards to the number of youths and the unemployed participating in ICT related job training courses, the Ministry of Labor, based on industrial development and the job market's talent demand, organizes, delegates or subsidizes information and communication technology courses such as digital graphic communication technology, multimedia web design, digital illustration and art design, digital 3D drawing and cloud applications, web design, and commercial digital photography, to provide the unemployed with job training opportunities, improve their employability skills, and promote employability.
3. Conducted as a 2-year renewal program, and continued to organize career transition knowledge

and skills workshops for resource room counselors at tertiary institutions. Subsidized 4 tertiary institutions, and assisted in the development of appropriate school-based transfer counseling service models for students with disabilities. Compiled transfer counseling service models at 6 pilot schools for students with disabilities, and provided it as reference for other tertiary institutions.

4. In line with the progress of 12-Year Basic Education, it incorporated education on gender equity, human rights, and global citizenship into the curriculum of national education and post-secondary education. In 2019, the Administration's counseling groups on the topics of gender equity, human rights, and society organized 9 regional conferences and 3 annual conferences, and developed 14 teaching demonstrations relating to gender equity, human rights, and global citizenship. These were uploaded to the Curriculum & Instruction Resources Network (CIRN) to provide teachers from junior high and elementary schools a reference for curriculum and teaching in implementing gender equity education.
5. Complete professional certification in environmental education facilities and venues, and promoted diverse environmental education services were established. As of the end of 2019, 192 venues or facilities had received certification for environmental education. These places met requirements such as having appropriate equipment or installations; being rich with natural or cultural characteristics suitable for integrating environmental education; or having professional, labor, curriculum or business management services to assist environmental education professionals. 273,791 people visited the environmental education facilities or venues for outdoor learning and participated in environmental education courses. Target participants were students from elementary, junior, and senior high schools, as well as adults.
6. In 2019, the National Human Rights Museum held exhibitions and educational activities at two historical sites of injustice: Jing-Mei White Terror Memorial



▲Figure 8 : Digital graphic courses of vocational training



▲Figure 9 : Labor bureaus of counties and cities counseling students with disabilities on workplace conditions



▲Figure 10 : Premier Su and Minister of Education Pan launch quasi-public mechanisms in six cities

Park and Green Island White Terror Memorial Park. Activities included the Human Rights Art Festival, The Exiled Teachers and Students from Shandong and the 713 Incident Exhibition (70th Anniversary), Signs of Injustice - Touring Exhibition of Visual Signs and Monuments of Injustice Sites, selection and sharing for The Monuments of Injustice—The History of Sites of Injustice Promotion Project Exhibition, political victims' music workshops, and picture book



▲ Figure 11 : The resource renewal class of Spring Pool Glass teaches about glass renewal processes.



▲ Figure 12 : Lectures and workshops on historical sites of injustice during Taiwan's White Terror - Taipei venue

workshops. There were also exhibitions on the human rights of children and contemporary human rights, an international human rights film festival, and a series of activities. Historical sites of injustice websites were also set up in various places in Taiwan to facilitate the public in learning about those sites. The websites also help the public plan tour routes and historical trails for in-depth tours through which the public can learn about and visit these historical sites of injustice.

7. Information technologies are incorporated into teaching, and the campus Internet at public schools of senior secondary level or below supports a high-quality and high-availability environment with rich digital-learning resources. The ratio of IT equipment in classrooms being used to integrate information technology into teaching for digital learners is approximately 77.9%.

8. The online application system for assistive devices at tertiary institutions was fully optimized in 2019. A

budget was set for system design and purchase of asset insurance on assistive devices procured by the Ministry of Education. In 2019, the total entrusted projects fund for the Assistive Devices Center of the Ministry of Education was NTD26,282,000, serving a total of 1,760 students. There were 1,540 loans for assistive devices. During that year, students who required assistive devices upon assessment were able to obtain one on average, which resulted in an obtainment rate of 100%.

## C. Green Economy Working Group

1. Development of Green Technology and Enhancing Energy Diversity: Completed announcement of the amendment to the "Renewable Energy Development Act" on May 1, 2019, and encouraged the public to participate in the development of renewable energy in three aspects, namely, "optimizing development environment for renewable energy," "responding to the amended Electricity Act" and "expanding public participation." On December 27, 2019, the offshore demonstration wind farm started its commercial operation, completing Taiwan's first offshore wind farm with a total installed capacity of 128 MW. As of 2019, the installed capacity of Taiwan's accumulated renewable energy was about 7,795 MW, of which 2,166 MW in solar photovoltaic energy and 4.1495 GW in grid-connection volume were approved, exhibiting significant growth. The Ministry of Economic Affairs



▲ Figure 13 : On January 22, 2019, a 100MW solar photovoltaic plant in Lunwei West of the Changhua Coastal Industrial Park was completed.

continued to promote the "2020 solar photovoltaic 6.5 GW achievement plan," focusing on three aspects, "industrial parks," "livestock, agriculture, fishery and solar power symbiosis" and "joint promotion by the central and local governments."

2. Improved waste recycling treatment technologies, promoted cross-industry cooperation, and integrated energy resources for effective recycling and reuse. The Ministry of Economic Affairs promoted regional energy resource integration, and organized on-site consultation and diagnosis of energy resource integration or made links with research and commercial associations, strengthening industrial waste resource recycling and reuse. In 2019, the industrial waste recycling rate reached 80.78%, and the industrial value of resource recycling reached NTD73.4 billion. The Environmental Protection Administration enhanced the classification of hazardous industrial waste and general industrial waste to avoid mixing which would lead to increase in the volume of hazardous industrial waste.
3. Promoted the increase of green procurement in public and private sectors. Since the launch of Green Procurement from government agencies in 2002, the procurement ratio target for specific items increased from 30% to 95%. In 2019, the amount of Green Procurement from government agencies reached NTD10.19 billion, an increase of NTD500 million (about 5.1%) compared to 2018. Since the promotion of green procurement in private enterprises and

organizations started in 2007, there has been a significant increase in the total procurement amount and number of declarations. In 2019, there were 2,326 declarations with a green procurement amount of NTD34.05 billion, an increase of 233 declarations (about 11.1%) and NTD4.3 billion (about 14.5%), respectively, compared to 2018.

4. Promoted sustainable tourism development, established sustainable tourism environment in Taiwan and increased industrial value. In 2019, the number of foreign visitors surpassed 10 million for the fifth consecutive year, and a new record of 11.11 million visitors was set on December 13, 2019. The overall number of foreign visitors for the year was a historic high of 11.86 million. Tourists from China reached 2.71 million, a 0.5% growth compared to 2018. Tourists from places other than China reached 9.15 million, with a growth of 9%, showing a steady growth in the tourism market.
5. Encouraged FinTech innovation and provided convenient and diverse financial services. The Financial Supervisory Commission, in accordance with the "Financial Technology Development and Innovative Experimentation Act," received 10 experimentation cases, with an achievement rate of 100%. It continued to promote "Incentives for domestic banks making loans to key innovative industries (Phase 3)" and encouraged insurance companies to provide innovative and diverse insurance products to meet policy and public needs.



▲Figure 14 : Environmental protection points reward program press conference



▲Figure 15 : Sun Moon Lake National Scenic Area's Xiangshang Bikeway



▲Figure 16 : The "Youth Salon" provided consultancy of career planning

6. To promote a safe working environment and increase youth employability, so as to ensure workplace safety and health, the Ministry of Labor established "National Workplace Accident Reduction Strategies." In 2019, occupational accidents were reduced to a historic low of 2.496 per 1,000 people, achieving the target goal (reduction of 22%). The Ministry of Labor actively promoted youth employment by driving the coordination of employability and technical skills, integrating three professional systems: "career counseling," "career training," and "job matching" and building a training-cum-application model. It increases young people's technical skills and provides a smooth transition to their careers. In 2019, it has helped 160,004 youths in obtaining employment. In 2019, Youth Employment Training cultivated 30,656 people. After deducting those who continue to pursue studies or were enlisted into the army, the employability rate after training was 91.16%.

## D. Green Transportation Working Group

### 1. Promoted highway public transportation development

(1) Since the implementation of the highway public transportation project, specific targets have been achieved. Up to 2019, the number of highway public transportation passengers was about 1.239



▲Figure 17 : "Happy Bus" service in Fenglin Township of Hualien County

billion, which was a growth of about 19 million passengers (1.6%) compared to 2015 (base year) of 1.22 billion passengers.

- (2) To reduce the age of city buses and strengthen accessible transportation services, subsidies were granted to county and city governments in 2019 for the purchase of 89 low-floor buses and 11 universal barrier-free coaches. As of the end of 2019, there were 7,069 low-floor buses in urban areas, a ratio of 64.69%.
- (3) To provide basic public transportation services and fill the gap in public transportation, as of the end of 2019, "demand-responsive public transportation" has been expanded to 26 rural areas in the Fenglin Township of Hualien Country, attaining 81.63% coverage rate of public transport space services in rural area highways. In addition to rural areas, Kaohsiung City, Taichung City, Tainan City, and Pingtung City have also been subsidized to promote "taxi-buses" to pick up shortfalls in traditional bus services.
- (4) In 2019, bus priority measures continued to be implemented on freeways, which include exemption of buses from ramp meter controls, exclusive bus lane and open road shoulder for emergency use by buses, to encourage the development of public transportation.

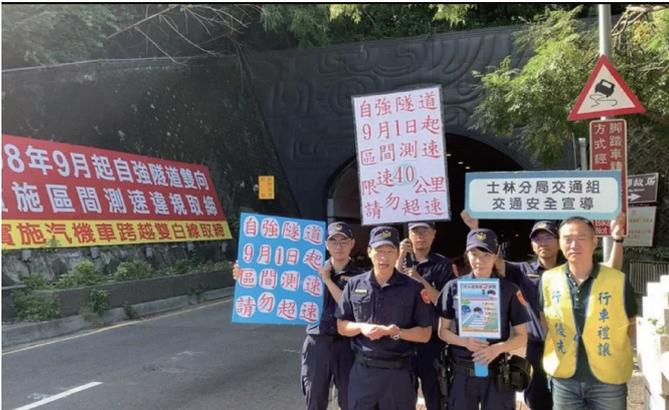
## 2. Continued Implementation of Railway Transportation Construction Projects and Improving Services

- (1) Taiwan Railways Administration actively strives towards a regional rapid transportation model, and continued to promote ticketing automation and strengthen its cooperation with High Speed Rail and other public transportation systems. Transfer functions were expanded, providing passengers with more convenient services. In 2019, transportation volume was about 236,150,000 passengers (about 647,000 per day).
- (2) "Taiwan Railways Administration's Electronic Ticketing" is now applicable for all stations on the Taiwan Railway's round-island lines and branch lines. In 2019, the average number of users per day reached 428,000, a 4.13% growth compared to 2018, and has reached a 66.17% average number of passengers per day.
- (3) Taiwan Railways platform elevation project is in line with the stepless carriage transformation project, ensuring safety and convenience for passengers when boarding and alighting. As of the end of 2019, raising of platforms for level entry/exit of carriages has been completed at 40 stations, while 35 stations are in the construction process, which will result in a total of 31.1% of elevated platforms..
- (4) Construction of barrier-free elevators in Taiwan Railways Stations: Barrier-free elevators are constructed in Taiwan Railways Stations to assist elderly people and people with limited mobility in commuting, seeking medical care, or traveling. As of the end of 2019, construction had been completed for 149 stations, serving about 95% of the total number of passengers.
- (5) Hualien-Taitung Line's overall service efficiency improvement plan: By September 2019, reconstruction (improvement) work for all stations along the line had been completed.
- (6) Round-island railway electrification: Conducted electrification on original railway between Zhiben



▲Figure 18 : Taiwan High Speed Rail TGo membership

- and Fangliao, and improvement of bridge and culvert, tunnels, and slope protection on the railway along the line. The section from Chaozhou to Fangliao was open to traffic before schedule, and the opening ceremony was conducted on December 23, 2019.
- (7) Taiwan High Speed Rail continued to promote diversified fares and various promotions, and strengthen the development of the tourism market through cross-industry cooperation, ticket distributors, and corporate websites, etc. Membership management was also enhanced, providing discounts for different types of members, which increased public willingness to take the train and thus increased passenger volume. In 2019, transport volume reached 67,410,000 passengers, a 5.39% growth compared to 2018.
- (8) In response to the needs of passengers for accessible seats on High Speed Rail, accessible seats of Carriage 7 of every train will be installed with charging stations for electric wheelchairs. As of December 2018, installation for 34 trains had been completed. This will be a standard facility for new trains purchased in the future.



▲ Figure 19 : Taipei City Police Department implemented average speed control in the Ziqiang Tunnel

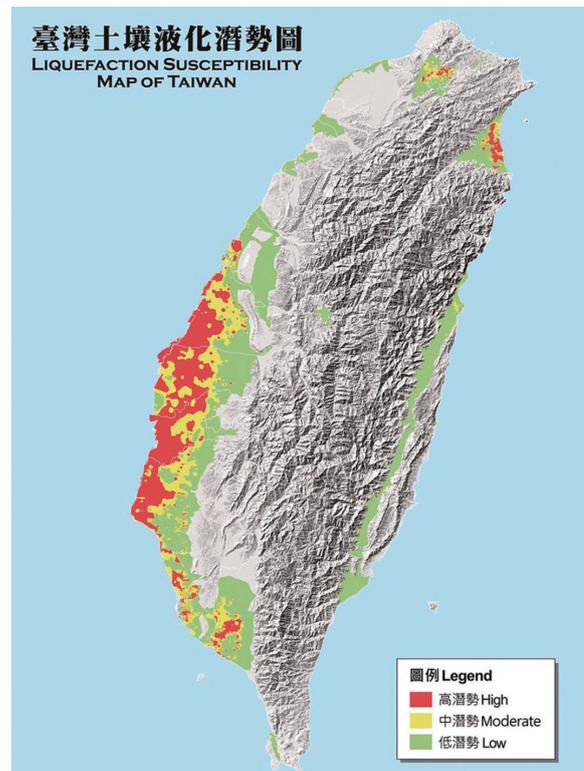
### 3. Road traffic safety

- (1) In 2019, the Ministry of Transportation and Communications gave awards for "Road traffic orderliness and traffic safety improvement plans" at the Executive Yuan. Through the central government's horizontal linkages and vertical integration by local governments, various proactive measures for road safety were implemented. The traffic accident fatality rate fell from an average of 3,047 people between 2014 and 2015, to 2,865 people in 2019, and the fatality rate for young scooter drivers (18 to 24 years old) fell from an average of 366 people between 2014 to 2015, to 272 people in 2019.
- (2) In August 2019, the Minister of Education attended the Traffic Safety Committee meeting held by the Ministry of Transportation and Communications. The two ministers established a strong consensus, and aimed to work together to incorporate traffic safety education into the school curriculum. The promotion of public buses into campuses continued. The overall average rate of accidents was 5.1 per 1,000 people, a reduction from the 5.9 cases per 1,000 people in 2018.
- (3) Counties and cities have successively implemented average speed control. New Taipei City's Banqiao Station has, since January 2019, implemented automated illegal parking enforcement. In 2019, the number of violations fell

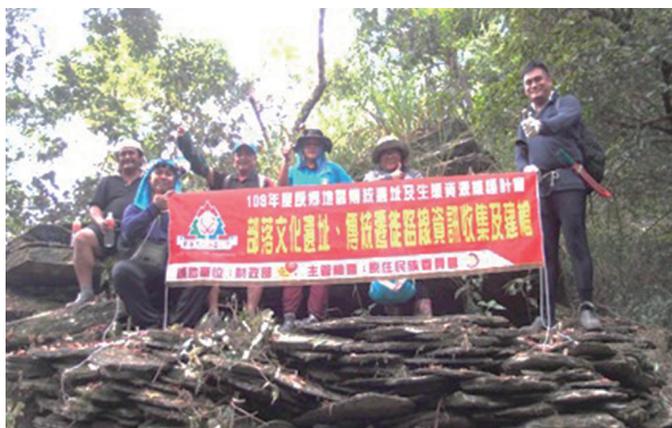
by 93% as compared to 2018. Prohibition of drunk driving continued to be strongly enforced with the new system, and new regulatory amendments were implemented on July 1, 2019. According to statistics from the National Police Agency of the Ministry of the Interior, for the period from July to December 2019, there was a drop of monthly violations, from 8,546 in July to 5,648 in December, a decrease of 33.9%. The number of cases brought to court was reduced by 21.8%, from 4,849 in July to 3,790 in December.

## E. National Resources and Urban and Rural Development Working Group

1. Assistance was provided to all agencies, local governments and the public in investigating geologically sensitivity areas. Local governments have been assisted in completing the legal operations for the promotion of the Geology Act, and the campaigns in promoting the relevant operations for geologically sensitive areas. Also, assistance and feedback



▲ Figure 20 : Completed nationwide soil liquefaction preliminary graphic



▲Figure 21 : Kaohsiung City Maolin District Office conducted information gathering and maintenance work on tribal cultural sites and traditional migration routes

were provided to local governments in reviewing the relevant documents of the Spatial Planning Act (draft). Where necessary, local governments participated in the spatial planning committee's task force meetings organized by the Ministry of the Interior targeting local governments. To date, assistance has been provided to 13 local governments. In terms of soil liquefaction potential, the existing public and professional versions of the inquiry system have been integrated and optimized, providing users with a more convenient and user-friendly inquiry platform. In 2019, the number of visitors of the Soil Liquefaction Potential Inquiry System reached 287,652.

2. To implement land conservation and natural resource management of land reserved for indigenous people, the Council of Indigenous Peoples formulated the "Maintenance Plan for Ancient Sites and Ecological Resources in Indigenous Areas" with the mission of protecting the mountains and forests of land reserved for indigenous people. With regards to the tasks for sustainable use of traditional ecological resources, the maintenance of tribal villages and traditional mountain resources, planting and cultivation of native or suitable plants, preventive removal of plants in cultivation areas, and removal and prevention of invasive alien plants were completed; the maintained area is 6,410 hectares. Traditional cultural and ecological wisdom of the indigenous people were incorporated in the execution of traditional tangible



▲Figure 22 : Taichung City's Fengyuan Ankang Phase 1 Social Housing



▲Figure 23 : Xinfeng Section Youth Social Housing in Xinzhuang District, New Taipei City

culture investigation and maintenance work. Information gathering and setting up of files have been completed for 122 tribal cultural sites and 4,599 km of traditional migration routes, achieving good results.

3. To promote social housing and achieve the policy goal of social housing for 200,000 households within 8 years, the "Social Housing Development Plan" by the Ministry of the Interior 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. Since 2007, more than 530,000 households have received rental subsidies. In 2019, 90,000 households received rental subsidies. Since 2005, 278 urban renewal demonstration areas have been selected. There are currently 21 locations undergoing urban renewal pre-feasibility assessment, 49



▲ Figure 24 : Taiwan achieved good results in the Asia/Pacific Group on Money Laundering (APG) evaluation

undergoing tender preparatory work, 8 in the tender announcement process, 26 in the tendering process, and 10 are implemented through government investment.

4. Public area safety and public green space facilities have been improved. In 2019, the ratio of sexual harassment complaints in public places in Taiwan was 38.15%. The Ministry of Health and Welfare made use of feedback funds from the public welfare lottery to subsidize civic organizations to conduct campaigns to reduce sexual harassment. In 2019, it entrusted the Modern Women's Foundation to organize 6 elementary and advanced training courses in the northern, central, and southern regions. The course content includes identification of sexual harassment, dispelling myths, investigation process, and hands-on practice. Discussions and reviews were also conducted on the investigation notes of sexual harassment complaints, repeat complaints, and appeals handled by the municipality and county (city) governments. Finally, the trainees shared the innovative works on promotion of sexual harassment prevention, and learned from the experiences of other counties and cities.

5. The social safety net has been strengthened to stop violent crime. In 2019, there were 859 violent crimes, a 75.21% drop compared to the average of 3,465.57 violent crimes from 2011 to 2018. Taiwan accepted

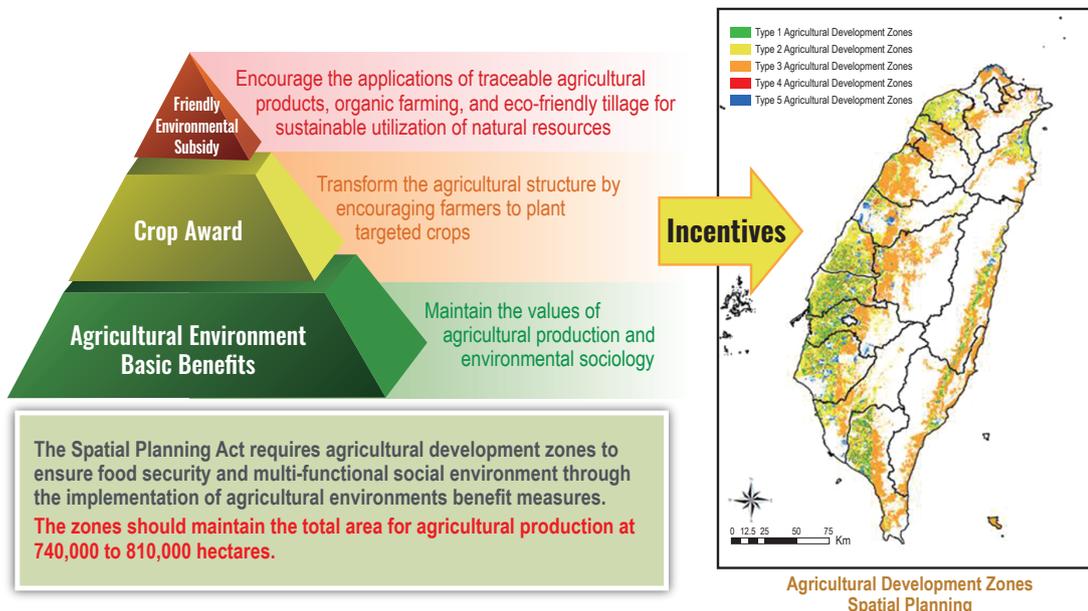
the Asia/Pacific Group on Money Laundering (APG) 3rd Round Mutual Evaluation in 2019. After 3 years of active preparation, it met 36 technical compliance items and 7 effectiveness compliance items in the evaluation, and achieved an overall result of "regular follow-up," the best category, thus gaining high recognition from the world. To celebrate Taiwan's outstanding results in the APG 3rd Round Mutual Evaluation, the Anti-Money Laundering Office of the Executive Yuan held the "Money Laundering Prevention Evaluation and Recognition Conference" on October 3, 2019.

6. To establish a complete protection system for children and adolescents, the use of SDM risk assessment tools has been fully promoted since 2019. The tool uses a structured decision-making model to assess the risk of children, adolescents, and families, and helps to prevent the recurrence of child and adolescent abuse. Training of social workers for child and adolescent protection were conducted, in which 793 people participated. In 2019, the Regional Medical Integration Center for Child and Adolescent Protection Program continued to be promoted to assist those with serious injuries and complex cases in physical and psychological therapies, strengthening the cooperation between social affairs units and healthcare. In 2019, assistance on injury assessment and treatment for 244 children and adolescents were provided, and 92 training courses were conducted.

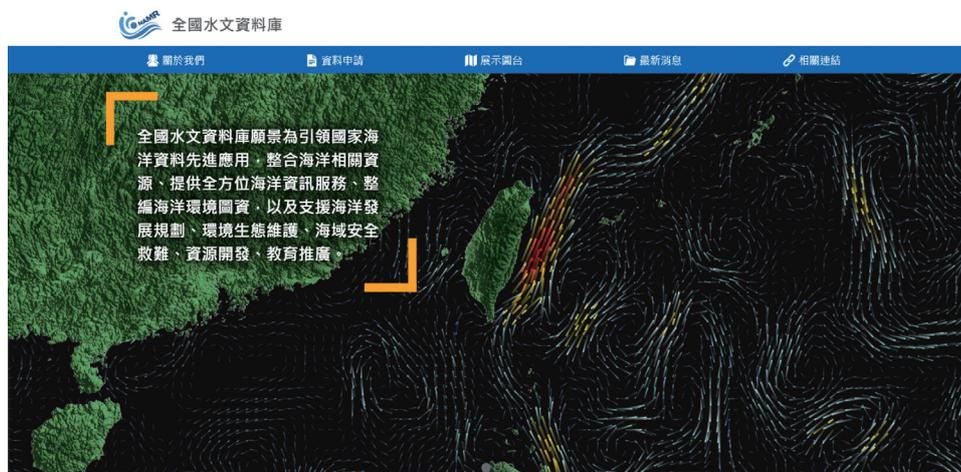
## F. Sustainable Agriculture and Biodiversity Working Group

1. To ensure farmland required for food security and to understand the agricultural resource situation, an update on the nationwide farmland resource inventory was completed in 2019. It will be used as reference for decision making and analysis of the agriculture industry and farmland usage. The demarcation of agricultural development zones and its sub-zones as per the "Spatial Planning Act" has been completed, by including spatial planning agricultural development

## SDG 2 Agricultural Environment Benefits for Agricultural Development Zones



▲Figure 25 : Agricultural environment basic benefits



▲Figure 26 : Home page of the prototype Nationwide Marine Database

zone farmland to take on various functions, such as agricultural production and environmental sociology. The promotion of agricultural environment benefit measures enables spatial planning for agricultural development zones to maintain the total area for agricultural production at 740,000 to 810,000 hectares.

2. Prototype planning and establishment of a nationwide database on the ocean has been completed. It includes conducting investigations and an inventory of domestic databases concerning ocean surveys,

exploration, research, design of information sharing and integration mechanisms, establishment of information security control regulations, planning of future yearly development plans for the platform, and establishment of a nationwide marine database prototype system, so as to lay a good foundation for the official establishment of the nationwide marine database in the future.

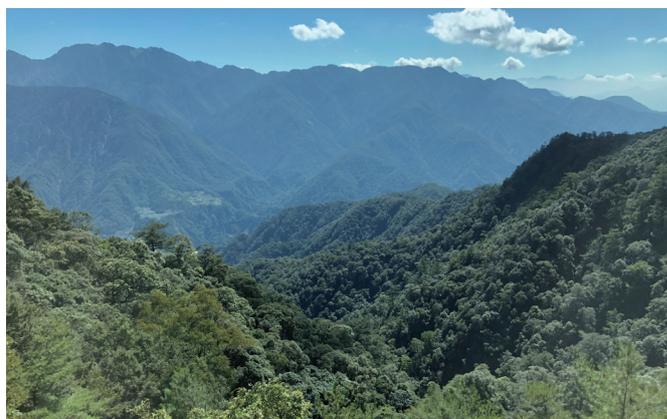
3. To protect marine ecology and sustainable management of marine resources, the Ocean Affairs Council is currently in charge of the conservation



▲ Figure 27 : On-site survey of Matsu Islands Tern Refuge

of marine wildlife in the "Wildlife Conservation Act" and "Marine Pollution Control Act." The "Ocean Basic Act" was published on November 20, 2019; the establishment of the "Coastal Zone Management Act (Draft)" was announced on November 29; and the establishment of the "Ocean Conservation Act (Draft)" was announced on December 3. Three editorial committee meetings on the "National Ocean Policy White Paper" were convened on July 22, September 23, and December 17.

- In 2019, the Forestry Bureau carried out afforestation on state-owned forests, coastal and offshore islands and other friendly environments. The bureau provided counseling or incentives for hillside management and of 539 hectares of land; cultivated multi-layered forests on 165 hectares of coastal and other degraded forest lands; and conducted thinning and pruning on 795 hectares in their middle to later growth phases. These forests can absorb 6.70 kilotons of CO<sub>2</sub> per year. In addition, with regards to ecologically sensitive areas or ecosystem maintenance regions, 44 ecological resources investigation and monitoring tasks were carried out before or after construction. Follow-up and evaluation of ecological effectiveness were conducted on the ecological conservation strategies formulated for the stages according to the project plan, to be used as reference for subsequent execution of eco-friendly measures in conservation management projects. Constant reviews on the reasonableness and feasibility of the various measures are conducted.



▲ Figure 28 : Taiwan forest coverage is excellent and over 60%



▲ Figure 29 : Taiwan's first "National Nature Park Headquarters" was established on November 28, 2019

- Taiwan's first "National Nature Park Headquarters" was established on November 28, 2019, with the mission of managing low-altitude mountainous national parks in neighboring metropolitan areas. The areas under its jurisdiction include Shoushan National Nature Park, and two metropolitan parks, Taichung Metropolitan Park and Kaohsiung Metropolitan Park.
- To promote plastic reduction measures, and reduce plastic waste at the source, "Objects, Means and Date of Restricting the Use of Beverage Plastic Straws" was announced in May 2019. Beginning July 1, single-use plastic straws for dine-in are not provided for 4 types of items, which will cut use of 100 million straws/year. The amendment of "Objects and Means of Restricting the Use of Disposable Tableware" was announced on August 2019, with new regulations stipulating that department stores, shopping malls and supermarkets shall not provide disposable tableware of various materials at places where tableware is provided for



▲Figure 30 : Policy restricting provision of single-use plastic straws

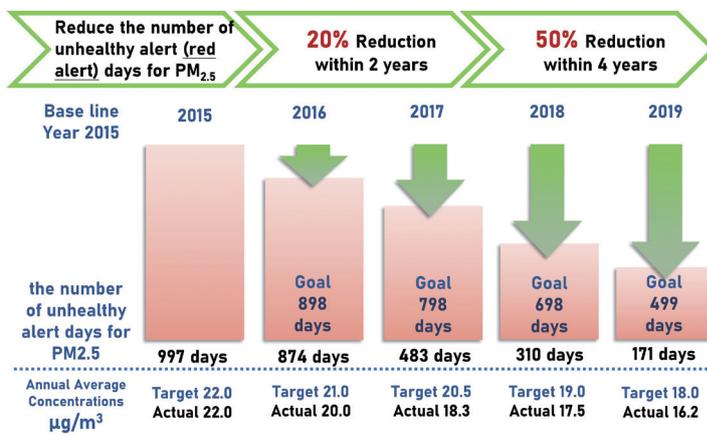
dine-in consumers. As of March 2020, 15 counties and cities have implemented the measure, which will reduce plastic tableware by 100 million pieces/year.

## G.Environmental Quality Working Group

1. This working group aims to improve air quality and safeguard citizen health. Measurements across the country for fine particulate matter (PM<sub>2.5</sub>) in the air improved from 22.0 $\mu\text{g}/\text{m}^3$  in 2015 to 16.2 $\mu\text{g}/\text{m}^3$  in 2019. The number of red alerts (daily average  $\geq 54\mu\text{g}/\text{m}^3$ ) was lowered from 997 cases in 2015 to 171 cases in 2019. Air quality has improved significantly. Besides ozone (O<sub>3</sub>), the country's various air pollutant concentrations in 2019 have shown improvement compared to 2015: particulate matter (PM<sub>10</sub>) with a 23.8% annual improvement rate; fine particulate matter (PM<sub>2.5</sub>) with a 26% annual improvement rate; sulfur dioxide (SO<sub>2</sub>) with a 26.1% annual improvement rate; nitrogen dioxide (NO<sub>2</sub>) with a 17.9% annual improvement rate; and carbon monoxide (CO) with a 14.5% annual improvement rate.
2. The country's population connected to a sufficient supply of high quality tap water increased from 94.14% as of the end of 2018 to 94.39% as of the

end of 2019 (93.34% as of the end of 2019 in Taiwan Water Corporation's water supply area, 99.66% as of the end of 2019 in the Taipei Water Department's water supply area, 94.54% as of the end of 2019 in Kinmen County Waterworks' water supply area, and 86.29% as of the end of 2019 in Lienchiang County Water Supply Plant's water supply area).

3. To fully promote the penetration rate of water-efficient appliances, the President on May 4, 2016, announced the implementation of Article 95-1 of the Water Supply Act, establishing relevant sources for the law. In consideration of the large variety of water-efficient appliances, full implementation may have a great impact on people's livelihood and industry. On September 21, 2017, the Ministry of Economic Affairs announced "Water equipment, sanitary equipment or other equipment that must have water efficiency labels," which stipulates that 3 types of products, including "washing machines," "single-flush water-efficient toilets" and "dual-flush water-efficient toilets" must receive water efficiency labels, effective from April 1, 2018. Upon investigation, there are currently 11 products with water efficiency labels, and more than 4,700 licenses for water efficiency labels. In 2019, there were about 3.02 million items that use the label license, which shows that domestic water efficiency label regulations and the market are becoming more mature and complete. In 2019, 1,517 products obtained "water efficiency label licenses." Data shows that the number of products applying



※An "Unhealthy Alert Day" for PM<sub>2.5</sub> means the Air Quality Index (AQI) for PM<sub>2.5</sub> is above 150.

▲Figure 31 : The number of unhealthy PM<sub>2.5</sub> alert (red alert) days (Air Quality Index (AQI) for PM<sub>2.5</sub> is above 150)

for gold-grade water efficiency labels has gradually increased, and has exceeded that of general grade products. The grading system (gold grade, general grade) will be implemented for other products, and the implementation status will be followed up on. Yearly reviews will be conducted for incorporating other items required to have water efficiency labels, with the aim of integrating water efficiency labels into our daily lives, and together create a water-efficient society.

4. Taiwan Water Corporation and Taipei Water Department continued to carry out water leakage improvement works to reduce the tap water leakage rate. Taiwan Water Corporation's 2018 leakage rate was 15.03%; it has improved to 14.49% in 2019; Taipei Water Department's 2018 leakage rate was 13.52%; it had improved to 12.71% in 2019. In 2018, the water consumption stress ratio was fresh water intake volume/(total natural rainfall – evaporated amount) = 16.7 billion tons/(87.2 billion tons – 20.7 billion tons) = 0.2.
5. Completed the entrusted rolling review on the Master Plan of Water Resources Management for the various regions of Taiwan; referred to the related national policies, land planning and social economic development; cooperated with the Forward-looking Infrastructure Development Program and the 4 major stable water supply strategies by the Executive Yuan (which include source expansion, usage reduction,

adjustment, and backup); to drive the removal of industrial investment barriers. Based on the concept of risk management, took inventory of the various regions' water usage problems; assessed water resource facilities' supply capabilities; implemented smart allocation of multiple resources to improve water management and pragmatic assessment of water resources projects; carried out proper planning on various regions' water resource supply, demand, and allocation; developed various water resource management strategies; and through rolling review, incorporated recommendations into the amendments for the Master Plan of Water Resources Management, before submission to the Executive Yuan for approval.

6. In 2011, Taiwan had a substantial land subsidence area of 534.4 square kilometers. The goal of the plan is to cap the substantial land subsidence area at 235 square kilometers by 2020. In 2019, the substantial land subsidence area was 203.7 square kilometers. In the future, measures such as increasing surface water supply, reducing groundwater pumping, restoring groundwater environments, strengthening management of groundwater wells, and counseling the transitioning of farmland use to dry farming will continue to be implemented to attain the goal of reducing the total area of substantial land subsidence.

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

1. Exchange of successful experience in climate action

On November 19, 2019, the Environmental Protection Administration, Executive Yuan, held the "Climate Action" conference based on the topics of "mitigation, innovation and transition." Six municipal governments, including Taipei City, New Taipei City, Taoyuan, Taichung, Tainan, and Kaohsiung were invited to share their specific actions taken in response to climate change. Private enterprises such as TSMC, China Steel Corporation, AU Optronics, Nanjitan, and Hanbo Livestock & Farming Products also shared their results on the execution of the offset project.



▲ Figure 32 : Tainan City Yongkang Water Recycling Center and Water Reclamation Plant Turnkey Project ground-breaking ceremony



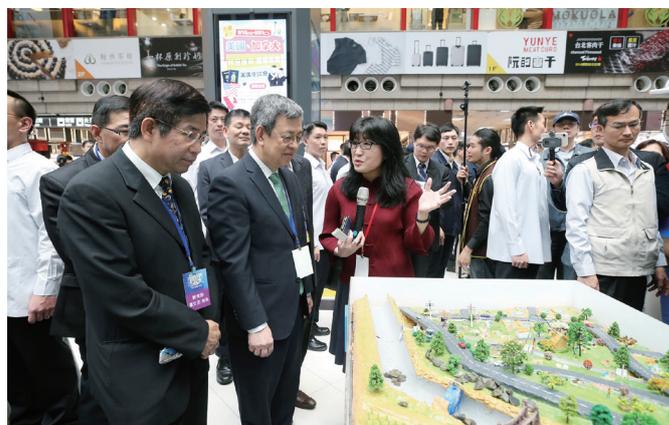
▲Figure 33 : Climate Action conference

### 2. Promote climate change education and sustainable campus

The content of the curriculum was compiled based on the topic of climate change, providing teachers with a teaching reference in incorporating environmental education into learning. It has been incorporated in the Taiwan Greenschool Partnership Program by the Ministry of Education, accessible by the public for environmental education lessons. Campuses were upgraded for disaster resilience and sustainability: Beginning in 2019, the building of disaster-resilient campuses and disaster prevention technology resource application plans were promoted through policy execution and subsidies, implementation of campus resilience measures, maintenance of campus safety, and conducting of disaster prevention drills. In 2019, 584 disaster resilient campuses were built, an increase of 193 compared to 2018, striving towards the goal of transforming all campuses into disaster resilient campuses.

### 3. Participated in UNFCCC activities

From December 2 to 15, 2019, a delegation formed by the Executive Yuan attended the 25th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP25) in Madrid, Spain; the 15th session of the Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol (CMP15), and the 2nd session of the Conference of the Parties serving



▲Figure 34 : The Vice President views an exhibit on disaster resilience and sustainable campuses

as the Meeting of the Parties to the Paris Agreement (CMA2), to understand the latest developments in global climate negotiations and progress of the Paris Agreement. Through exhibition booths, side lectures, and participation in meetings, representatives from Taiwan's central government ministries, local governments and civic organizations disseminated appropriate publicity on Taiwan's efforts, both domestically and overseas, in response to climate change. Outside the conference venue, through bilateral talks with Taiwan's diplomatic allies and friendly nations, interviews by international media, and advertisements on subways and buses, it was shown that although Taiwan is not a party to the UNFCCC, it adheres to the principles of "professionalism, pragmatism, and constructive participation" and is willing to contribute and fight against climate change together with the rest of the world.



▲Figure 35 : Minister Chang Tzi-Chin of Environmental Protection Administration explains Taiwan's energy transition path



▲ Figure 36 : 2019-TW Circular Economy Seminar

4. EU-TW Circular Economy Seminar

On December 9, 2019, Taiwan and the European Union held the "2019 EU-TW Circular Economy Seminar" in Brussels, Belgium, where representatives from governments, research institutions, associations, and the private sector were invited to share their experiences and achievements in areas such as EU-TW plastic recycling, solar panel design, recycling and circular construction. Next year, the Environmental Protection Administration will be organizing a series of events including "European Innovation Week" and "Circular Economy Week." Besides inviting high-level representatives from the European Union to Taiwan for the events, there will be matching of companies for cooperation between Taiwan and the EU, in the effort to build Taiwan into an island with a circular economy.

5. Promoted "high-level radioactive waste final disposal facilities" regulations and assisted nuclear power plants in completing decommissioning. The Taiwan Power Company, on February 15, 2019, and October 9, 2019, submitted the "Final Disposal Plan for Used Nuclear Fuel - 2018 Results Report" and the "Final

Disposal Plan for Used Nuclear Fuel - 2020 Work Plan", respectively, for review by the Atomic Energy Council. On January 14, 2020, the Atomic Energy Council approved the "Final Disposal Plan for Used Nuclear Fuel (2018 revised edition)."

6. Promoted communications on nuclear waste treatment and strengthened nuclear-free homeland education. During the 4th meeting of the Nuclear-Free Homeland Promotion Task Force on March 15, 2019, it was decided that priority will be given to implementing "medium-term temporary storage facilities for radioactive waste" to be used as medium-term storage facilities during the moving of the Lanyu Storage Site; communications will be conducted. The Taiwan Power Company entrusted National Chengchi University in organizing "communications on nuclear waste to society." In 2019, it organized 5 stakeholder forums to gather the opinions of stakeholders, by which it accomplished openness and transparency in nuclear waste information. In 2019, the Taiwan Power Company conducted 2 "power camp" sessions in Kinmen and Taitung, and organized 3 radioactive waste knowledge camps at Taiwan Power Company's Training Institute and Maanshan Nuclear Power Plant.



▲ Figure 37 : Nuclear waste treatment campaign poster



### A. Introduction to the National Sustainable Development Awards

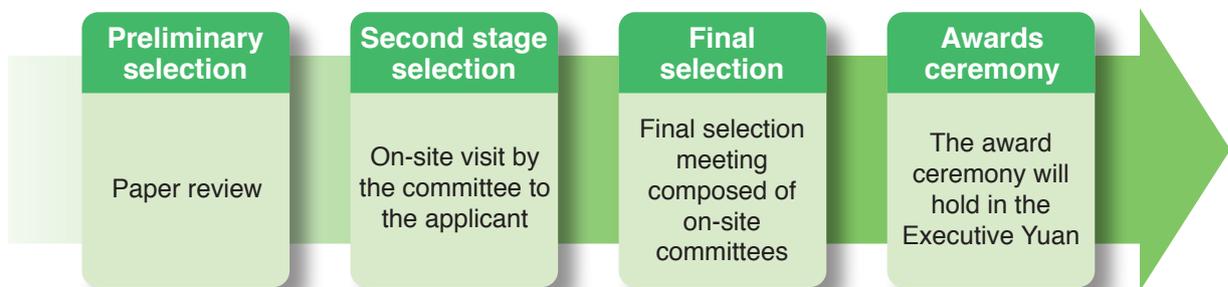
The Executive Yuan's National Council for Sustainable Development established the "Selection and Commendation Plan for National Sustainable Development Awards" to encourage nationwide participation in promoting sustainable development, localizing sustainable development goals, incorporating them into daily life, and achieving the government's sustainable development vision. The award recognizes schools, businesses, civic organizations, and government agencies with outstanding performance in sustainable development.

The judging process comprises three rounds: preliminary selection, intermediate selection, and final selection. After the participants have registered and submitted applications, a jury consisting of NCSO members and experts will make a preliminary selection

by producing written reviews in accordance with the evaluation standards. The jury will then make on-site visits to the participants in the intermediate selection to choose the finalists for the year. The winners will be commended at an award ceremony hosted by the Executive Yuan.

### B. 2019 National Sustainable Development Awards selection results

The selection for the "2019 National Sustainable Development Awards" consists of 3 stages, namely, "Document Evaluation" by NCSO working groups, "Site Visit and Evaluation" by NCSO non-governmental members, and "Final Selection" by all reviewers. Twelve winning units will be selected, and as per past awards, the award ceremony will be held in the Executive Yuan in December.



▲ Figure 38 : Selection and Commendation Process for the National Sustainable Development Awards

**Table 1 2019 National Sustainable Development Awards winners**

| Category            | Awarded to                             |
|---------------------|--|
| Education           | Da-Yeh University                      |
|                     | Chaoyang University of Technology      |
|                     | Chih-Hang Elementary School            |
| Companies           | First Commercial Bank                  |
|                     | Far East Tone                          |
|                     | O'right                                |
| Civic Organizations | The Society of Wilderness              |
|                     | Chuang Foo Foundation                  |
|                     | Tse-Xin Organic Agriculture Foundation |

| Category            | Awarded to   |
|---------------------|--|
| Government agencies | Northeast and Yilan Coast National Scenic Area Administration, Tourism Bureau, Ministry of Transportation and Communications, Executive Yuan-Old Train Song                    |
|                     | Hualien District Office, Forest Bureau, Council of Agriculture, Executive Yuan - Fireflies in flatland forest, local creation - establishment of Danongdafu firefly ecotourism |
|                     | Department of Public Works, Taoyuan-Circular economy, turning stone into gold - rebirth of waste aggregates in public construction   |

## C. About the Recipients



### Da-Yeh University

#### 1. Vision of sustainable development

Based on the philosophies of "only one earth, environmental justice, well-being of generations, and sustainable development," Da-Yeh University incorporates Taiwan's environmental, global change, and sustainable development issues into its teaching materials and activities. It raises the environmental literacy of teachers, students and Changhua residents, practices responsible environmental behavior, and helps create a sustainable society for cross-generational well-being and resource recycling. The development comprises four sub projects, namely, "optimization of green campus planning and practice," "improvement of management performance of school affairs," "expansion of diversified channels for sources of students" and "innovative integration of regional learning resources". Through optimization of green campus planning and practice, it takes active and steady steps towards the vision of a sustainable green university.

#### 2. Sustainable development promotion results

Da-Yeh University integrated a sustainable campus exploration project to improve the school's overall appearance. Through ecological, health and mental aspects, it builds four major cycles, namely water and greenery, resource and usage, energy and temperature reduction, and health and air pollution, creating a beautiful and healthy sustainable campus. The school has complete study aid programs

for less privileged students, comprising various types of assistance such as scholarships and special research grants. Through learning stints in place of a part-time work system, students can participate in special research with peace of mind, showing how education can turn one's life around. Also, an "Environment Education Center" is set up to make Da-Yeh campus a demonstration area for sustainable education. It continues to actively provide environmental education courses and activities for local organizations, schools and the populace, and develops a series of local courses on topics such as environmental protection, ecological conservation, green humanities and sustainable development. It establishes a green environmental co-learning base and works together to promote Taiwan's environmental conservation and sustainable development.



▲Figure 39 : "Zhi-Yong Pond" natural water resources



▲Figure 40 : Reuse of abandoned flower pots



▲Figure 41 : Results of reuse of reclaimed water



▲Figure 42 : Less privileged students participate in laboratory experiments based on their interests



▲Figure 43 : Elderly companionship service



▲Figure 44 : River watch patrol helps the community clean ditches



▲Figure 45 : Students learn to make eco-friendly low-plastic fishnet cup holders

To build the students' soft power, Da-Yeh University promotes service learning courses to cultivate the students' passion for charity, caring for society and serving the public. It widens and deepens the learning content for the students, and establishes in them positive values and better character. The school established the "Da-Yeh University Service Learning Implementation Measures" in 2011, requiring students to complete at least 50 certified hours of service learning within the term. By including it in a formal curriculum, it guides the students in participating in service, building their actual experience as volunteers and serving others. Through the course of actual service, the students become aware that there are still many unfamiliar environments and unknown stories in society, and they also learn how fortunate they are. The positive energy generated drives lifetime volunteering and "Da-Yeh Charity" as ultimate goals.

Da-Yeh University promotes forming alliances with Changhua's local industries. Through practical courses, teachers and students participate in local industry consultation to increase the added value of the industry. Through visits and consultations of teachers and students from local industry-academia collaborative courses, project evaluation, commercialization consulting, diverse intellectual property matching, etc., it creates a Changhua industry-academia co-prosperity ecosystem, driving Changhua's economic development and creating local job opportunities for students. In line with the government's 5+2 Industrial Innovation Plan, teachers and students join forces in providing industrial upgrade assistance. It specifically responds to the

United Nations' 2016-2030 Sustainable Development Goals (SDGs) of "Decent Work and Economic Growth," helping local industries with productivity, providing job opportunities, and promoting sustainable economic growth.

- (1) Integrates local industry's internship learning resources, increases student job opportunities. Recruits operators of local companies as the school's industrial-academia research and development consultants. Through the participation of research and development consultants, it brings more research and development capacities to the school, as well as increases students' learning resources and job opportunities.
- (2) Enhances industrial-academia cooperative strategic alliance, provides local industry optimization service. Actively becoming a bridge between "local industry's needs and demands" and "school's repository that possess knowledge translation value," and organizes local visits and diagnoses, and various policy consultations, referrals and promotion activities.
- (3) Establishes digital integration platform for local resources, promotes local industrial upgrading. Assists local companies in joining the industry chain, technological exchange, counseling, marketing channel expansion and establishment, etc. Establishes three-way cooperation with Changhua County's industry, government, and academia, assists in effective upgrading of Changhua's industrial value.

## Chaoyang University of Technology

### 1. Vision of sustainable development

Chaoyang University of Technology values the development of the character of students and establishing their basic environmental literacy. Building an environmentally friendly and professional campus for the people of Chaoyang to progress, grow, and become professionals well-liked by industry and society, is the key responsibility of the school. To establish a sustainable campus, the school promotes environmental education, caring for life, social service through teaching, research and development, and daily life. By making use of administrative management measures, it aims to encourage the school's teaching and administrative staff and students to practice energy conservation and carbon-reduction. It aims to cultivate socially responsible citizens, so as to establish a campus culture that fosters sustainable development. It also aims to influence neighboring high schools and elementary schools, communities and society in promoting its vision and hopes to become "an application-oriented university based on academia, research and industry." Combining scientific research and industrial research is in line with the school's philosophy of management, which will thereby reform the school system, attaining the development vision of "taking root in Taiwan, moving towards the world, and sustainable development." With an innovative and practical attitude, it will continue to create a new blue ocean for technical education.

### 2. Sustainable development promotion results

As Taiwan has officially become an aging society, Chaoyang University of Technology established a social care service system for individuals aged 0 – 99 years. The system not only provides early childhood education service, but also integrates the resources of the school's

departments, such as the Department of Golden-Ager Industry Management, in establishing an elderly care system. It includes setting up the "Chaoyang Silver Hair Group," "Community Elderly Care Stations," and "University for Seniors" on campus, providing elderly people with a safe, warm, and happy "home" during the day and reducing the burden on caregivers. It built an interactive system between school and family through three aspects, namely, "establishing a mentor system," "setting up a resource classroom," and "setting up a counseling center" to cultivate students' positive, active values, including health and happiness, gratitude and appreciation, and respect and tolerance.

To show its determination in promoting "Green University," the school has, over the years, been actively investing large amounts of funding and manpower in establishing a green and sustainable campus. It has set up the Department of Environmental Safety and Health to supervise and manage the



▲Figure 46 : Chaoyang University of Technology's establishment blueprint



▲Figure 47 : "Silver Hair" group activities

school's occupational safety and health, to take charge of campus environmental management, to plan and promote sustainability in environmental education and promote the establishment of a sustainable campus, as well as to make overall planning for the school's environmental education. Principle Zhong Ren-Qin was invited by the Ministry of Education on June 4, 2009, to sign the "Talloires Declaration" together with the principles from 12 universities, and thus became one of the schools of the first group to participate in signing the declaration. Influenced by green thinking, and in order to raise the students' awareness and real-life experience in this issue, the school has set up a wide range of environmental education related courses. Through diverse teaching activities, such as outdoor education, food and farming education, aesthetic education, etc., along with community service learning, it cultivates in teachers and students the concept of sustainable development.

Chaoyang University of Technology encourages teachers and students to participate in community service as individuals and groups. It successively set up volunteer groups on campus, including student affairs volunteers, first aid volunteers, library book lover volunteers, volunteer families, etc., extending services to the community, social welfare institutions and even to other countries, exhibiting Chaoyang's spirit of volunteer service. In addition, with increasing numbers of foreign students, in order to let the local community and foreign students learn about each other's cultures,



▲Figure 48 : Students help to organize a feast for elderly people living alone



▲Figure 49 : Foreign students visit Sun Moon Lake



▲Figure 50 : Foreign students' farm experience



▲Figure 51 : Cultural and creative products made from garlic skin

the school organizes activities such as international cultural festivals and one-night countryside stays, providing a chance for community residents and foreign students to learn and get to know each other. Besides localizing sustainable development in our daily lives, the school also links up the manpower and resources of governments and civil society, organizes yearly volunteer services to "south-bound" and African countries, and provides opportunities for people from less privileged domestic groups to go overseas. This has created strong evidence of how Taiwan complies with the United Nations' SDGs.

## Chih-Hang Elementary School

### 1. Vision of sustainable development

Chih-Hang Elementary School, when it was first founded, was named the Air Force Elementary School. The school and its surrounding environment possess a rich culture and history. The building is based on the concept of "freedom, sky, and soaring," which result in the philosophies of "thinking clouds, flying buds," the aim of which is instilling the values of "hope, sun" and "love nature" in the teachers and students. "Environmental Sustainability" — cherishing the earth's resources and respecting all life will give children a healthier life and effective learning; "Education of Sustainability" — learning how nature works develops children's harmonious interpersonal, natural, and social relationships, and creates more opportunities for choices in the future. Hence, providing a quality and sustainable learning environment, enabling children to have "healthy growth, happy living, effective learning, harmonious relationships, a learning culture, and sustainable development" is a goal that the team of Chih-Hang Elementary School works towards.

### 2. Sustainable development promotion results

With the recognition and affirmation of the school's featured course, "Chih-Hang's Time," established since academic year 2007, the school's excellent program featured course, "Endless Chih-Hang Energy" in academic year 2013, continues to strengthen environment and resources related courses. In academic year 2019, the school proposed the "Lohas Global Village 3.0" course in response to the new curriculum's emphasis on the core concepts of "initiative, interaction, common good," and extending it to the three categories and nine items of core competency sustainable management courses, namely, "self-directed action," "communicative interaction," and "social participation."

Chih-Hang Elementary School's sustainable development education road map is implemented in real-life situations. We inspire the children's keen awareness, lead them in realizing that having a caring



▲ Figure 52 : Chih-Hang Elementary School has a long-standing and sustainable campus environment

heart and performing actions of love for the earth in our daily lives, we can achieve plastic reduction, waste reduction, carbon reduction and energy conservation, and thus establish a long companionship with a beautiful life and ecosystem. In recent years, the school has incorporated into its teaching resources sites such as the neighboring "Jiayou cycling path," "Daojiang canal," "Tropic of Cancer Solar Exploration Center" and "Xuantian Shangdi Temple," the latter of which is reputed for its sky swing. These resources take the children into the community and allow them to get to know the community and care for society. Hence, giving children "healthy growth, happy living, harmonious relationships, and sustainable learning" is the vision and goal that the people of Chih-Hang Elementary School continuously strive for.

Research and development of bicycle courses and the use of the physical resources of the "Jiayou cycling path" unveil the rich history and culture of the Dajiang canal in a gradual, step-by-step approach. It lets the children start from their own position and make connections, from the school, to the community, to Chiayi, to Taiwan, and to the world. Besides imparting knowledge, it also values actual experience. For example, cycling to the Tropic of Cancer Solar Exploration Center and taking the Alishan forest railway are important foundations for the school in promoting sustainable campus courses in the future.



## First Commercial Bank

### 1. Vision of sustainable development

First Commercial Bank is committed to establishing "The Top Brand in Green Finance" and continuously explores ways to make use of the company's strengths to promote the philosophies of green finance and environmental sustainability to its employees, customers, suppliers and the public. By forming a type of green and environmentally friendly DNA, the public will be able to do their part for the Earth, and together move towards the future we want. With more forward-looking and innovative business strategies, it is committed to opening new markets, new customers, and new models, as it continues to implement the business vision of "regional bank, niche bank, happiness bank, digital bank."

### 2. Sustainable development promotion results

The Bank's headquarters is a building more than 37 years old, which started operation in 1982. To mitigate the building's heat island effect on the environment, the Bank set up the "Obtaining Green Building Label Program" team in 2010, beginning the journey of transforming 74 of its older buildings into green buildings. As of the end of 2018, 22 old buildings were transformed and obtained the Diamond Grade Green Building Label from the Ministry of the Interior, making the Bank the enterprise in Taiwan with the highest number of Diamond Grade Green Building Labels, which reduce a total of 2,432 metric tons of carbon every year.



▲ Figure 53 : Volunteers from First Bank clear a beach of garbage



▲ Figure 54 : The Bank restores wetlands, helps the less privileged, and promotes green lighting

The Bank has, since 2016, organized 15 tree planting activities in which it planted 5,385 trees; this is expected to absorb 53.85 metric tons of carbon emissions every year, playing a part in increasing the Earth's green cover rate; In 2017, responding to the Environmental Protection Administration's "422 National Adopt a Beach Coastal Cleanup" activity, the Bank adopted Linkou's Jiabao Beach, and organized 3 coastal cleanup activities. Nearly a hundred employees and their family members collected about 1,392 kg of garbage, including PET bottles, glass, and other refuse. The Bank has observed Earth Day for two consecutive years, in 2018 and 2019. Green volunteers participated in coastal cleanup in April at Zhunan's Ch'i-ting Beach Resort, Keelung's Waimushan Beach, Taichung's Da'an Beach, and Pingtung's Donggang Ocean Park. They picked up 7,451 kg of fishery waste, general waste, sea driftwood, and other waste.

To protect and revive the ecosystem, such as its rivers and lakes, the Bank cooperated with the non-profit organization The Society of Wilderness in 2016 to protect the wetland in Muzha's Cuihu, and carried out firefly restoration work at Rongxing Garden. With the guidance of the habitat conservation staff, the green volunteers stepped into the lake in chest waders, and under the hot sun and temperature of 35 degrees Celsius, dug out mud from the bottom of the lake with their bare hands, and passed it on to others to be

placed on the shore. The sediment clearing process used natural methods in building up the shore, thus extending the habitat of local aquatic plants.

To support local art and cultural heritage, the Bank's Culture & Education Foundation has been providing local artists, at no charge, a platform and opportunities to display their work over a long period of time. Since April 2011, the first and second floors of the headquarters building has been transformed into a "First Art Space" which provides a performance venue for Taiwan's local artists, transforming the ordinary building space into an elegant art corridor. Every year, it organizes diverse cultural exhibitions on themes such as water color, oil painting, engraving, wood carving, and ceramics. The space incorporates art into the Bank's lobby, shares it with the public, and offers support and vitality to local art.

The Bank is dedicated to integrating its core businesses with environmental sustainability. In 2017, it set up the "Green Finance Committee," linking up green products and services in terms of "green finance," "green investment," "green review," and "green consumer finance." It supports green industry development, is committed to leaving its roots in Taiwan, and avoids providing financing and loans to companies that contribute to environmental pollution or that endanger social welfare.

## Far East Tone (FET)

### 1. Vision of sustainable development

In line with international sustainability trends, and in response to United Nations' sustainable development goals, FET has established its "Blueprint for 2018-2025 Sustainable Development Strategy," linking five main: growth, innovation, care, inclusiveness, and green power. It integrates corporate social responsibility (CSR) into the company's business strategies, and sets specific mid- and long-term goals. During the course of transformation and upgrading, it continues to be innovative and adds value, and makes use of its expertise to promote charity through technologies. Together with stakeholders including suppliers and users, it promotes corporate social responsibility and uses its influence as part of the information and communication industry.

In terms of corporate governance, besides setting up a functional committee under the board of directors, it links senior managers' remuneration with CSR performance to ensure sustainable operational efficacy. In terms of environmental sustainability, FET applies technologies such as cloud technologies, big data analysis, IoT to smart cities, smart parking, air quality monitoring, and big data crowd analysis to help resolve problems such as traffic and air quality. In terms of social inclusion, FET has invested hundreds of millions in recent years in executing the "Mountain Coverage Program" to enhance infrastructure in remote areas, and has attained 96% LTE signal coverage in offshore and remote areas.

### 2. Sustainable development promotion results

In 2017, FET implemented the social return on investment (SROI) assessment method, and forecasted that the Cherish the Earth activity will generate NTD3.17 of social value for every NTD1 invested. Based on the forecasted results and stakeholder feedback and recommendations during negotiation, the programs were adjusted and optimized. In 2018, the results were recalculated, and the SROI for 2017 increased from the original forecasted value of NTD3.17 to NTD3.79,



▲ Figure 55 : FET's roadmap to sustainable development



▲ Figure 56 : China Petroleum Corporation's smart green gas station



▲ Figure 57 : Taiwan Environmental Information Association's One Million Green Actions

an increase of 20%. Extending from 2017, the 2018 Cherish the Earth activity is in line with the carbon reduction goal of the UNSDGs. Similarly, it is based on three major aspects, "establish FET's green culture, promote environmental education, and advocate responsible consumption." It aims to engender 9,000 environmental protection green actions from the public. As of the end of the year, it has recruited 26,106 people to participate in green actions.

FET has, since 2017, promoted the "Flipping education, spreading love" program. Through cross-industry collaboration, it works with Professor Benson Yeh from National Taiwan University, who developed the world's first online gaming platform for education, PaGamO, to integrate "learning" into "gaming," thus raising learning motivation for children in remote areas. In 2018, 119 volunteers from FET helped 984 students from 115 classes in 26 remote area schools in northern, central and southern Taiwan, by launching digital learning through a "key," providing children in remote areas with warm companionship. To help young children obtain proper care during their wait for foster homes, FET cooperates with The Child Welfare League Foundation in promoting the 12th "Fundraising for less privileged children," and together designed "House of Love" wooden blocks, which are available for sale for charity

in all FET branches. In addition, based on the concept of "home," FET launched the "Building a Home with Love Fundraising Fair," changing traditional fundraising methods by linking online with offline and establishing Taiwan's largest charity network. FET has raised more than NTD40 million for The Child Welfare League Foundation, helping more than 1,400 orphans have a healthier childhood.

In response to UNSDG 11: In sustainable cities and communities, with IoT, smart devices and wearables which can be found everywhere, AloE and artificial intelligence networks have influenced the development of smart cities, and help to build sustainable communities. Through the building of smart cities, FET promotes the integration of economic, social and environmental aspects.

- Economic aspect: Through core technologies, promote new economic development, make use of technologies to drive smart cities and create business opportunities
- Environmental aspect: Environmental applications such as traffic big data, smart environmental monitoring, crowd analysis, etc.
- Social aspect: Health+ promotes smart medical treatment, Bobee positioning device reduces the risk of people with dementia or children getting lost



▲Figure 58 : Personal positioning devices promotion for security care

## O'right

### 1. Vision of sustainable development

O'right always believes in "starting from small to change the environment," and is committed to achieving the goal of "zero environmental impact". Through a green, sustainable and innovative plan, it integrates the source of business planning to product design by adhering to green and sustainability concepts. It implements green philosophy from the entire development to every planning detail, attaining sustainable development and continual improvement for the company and continuously protecting the sustainable green home.

O'right established its brand competitiveness based on its core values, namely "green, sustainable and innovation". It is dedicated to fulfilling its carbon reduction commitment for environmental protection, and implements the United Nations' sustainable development goals. Together with other top brands of the world, O'right was invited to join RE100, and made a commitment to attain 100% renewable energy by 2025, becoming the world's first leading zero-carbon brand in beauty products. It continues to find ways to make the Earth more beautiful, and leads by example by inviting the public to protect the Earth with green energy.

### 2. Sustainable development promotion results

To promote a green working environment and sustainability of nature, O'right raises employees' spirit of mutual respect, mutual assistance and cooperation, and self-management. The "Green Living Guidelines" were formulated for all employees to raise working environment quality and maintain a good working environment, as well as implement the environmental goals of energy conservation and carbon reduction. In addition, we advocate the three philosophies of life, as we believe that a wonderful future is not only about "lifestyles" of people but rather the need to be founded on respect for "life," co-existing in harmony with nature's creatures and "ecosystem". We adhere to the green philosophy of "natural, pure, and eco-



▲Figure 59 : O'right's core values

friendly," develop animal-friendly products, and avoid using animal-derived ingredients.

To promote overall development of society, we are committed to putting down roots in Taiwan, and we continue to expand our scope of operation. Internally, we provide a series of benefits in appreciation for the hard work of our employees; externally, we hold "neighborhood day" from time to time, inviting neighbors to visit our green headquarters building. Residents learn that the plant has passed the "Green Factory Certification," and that the wastewater after treatment does not have waste materials that pollute the environment, hence making it suitable for fish and prawn farming. We also convey our green philosophy, and invite our neighbors to practice environmental protection with us.

O'right holds three major CSR activities every year — turning off lights, beach cleanup, and tree planting. In addition to our distributors, suppliers, employees



▲Figure 60 : The raw material recycling and reuse process of shampoo

and family members who joined us, 4,457 green salon customers also participated in the activity. We also conduct internal environmental training from time to time, which includes SDG briefing, beach cleanup information, and movie appreciation; such training builds environmental protection concepts in employees and deepens the culture of sustainability.

O'right started a mobile office program in 2015. It converted physical offices in Taiwan, which had been leased for customer service staff, into mobile offices, so that employees could schedule flexible time to serve customers, as well as conduct internal meetings through the mobile office. This economizes on idle office space as well as the office's idle electricity consumption. This program increases the efficiency and service quality of sales personnel, as well as

reduces carbon emissions by reducing commuting distances and transportation needs.

O'right is not only known for being a green beauty brand—we also call upon people from all walks of life to participate in carbon reduction actions, spreading green influence externally. With the green energy accumulated, we arouse public awareness of protecting our green home with real actions. O'right has never been just a hair and skin care company. We are dedicated to giving care to people, society, and the Earth. We relieve stress to the Earth in all aspects and love all things on Earth by solving waste impacts, proposing sustainable solutions for improving the environment, and implementing green lifestyles. We do not stop protecting our sustainable green home and strive towards the goal of zero environmental impact.



## The Society of Wilderness

### 1. Vision of sustainable development

The Society of Wilderness (SOW) is committed to environmental protection. We obtain custodian and management rights of wildlands through purchase, long-term lease, custody, or donation. We then protect the land, letting nature run by itself as much as possible and bring it back to life, thereby achieving our society's mission. We preserve Taiwan's native species, allow natural succession of the wilderness, promote the concept of ecological and nature conservation, provide the public an environment and opportunities for nature and ecological education, assist the government in conserving water and soil, maintain natural resources, and train ecology and nature conservation talent. From 2004 to 2018, The Society of Wilderness continued to work towards its mission and objective, continuously protecting Taiwan's natural environment and striving towards the goals of sustainable forests, eco-cities, and plastic-free oceans.

### 2. Sustainable development promotion results

To achieve the goal of environmental protection, The Society of Wilderness tries to influence various parties using "environmental education" as a tool, and with related "projects," cooperates with the public sector, enterprises, communities and even individuals, in the aim to strike a balance among life, production and ecology. We have connections with institutions, enterprises, alumni, and individuals, and constantly form a virtuous circle in environmental, legal and industrial aspects.

We have been entrusted by the Taipei City Government since November 1, 2004, to manage the "Fuyang Eco Park," in line with the park ecologicalization movement. With "ecological conservation" as the primary consideration, ecological engineering is adopted for extremely low development, and construction is carried



▲ Figure 61 : 2018 was the first year of implementation for the Beach Walk Project.

out with minimal interference, transforming urban parks and green space into forested areas. This is one of the models of ecological development in urban parks and green spaces. During the period of guardianship, through the effort of volunteers, many ecological surveys have been completed, invasive alien species removed, environmental patrols conducted, and habitat maintenance and improvement administered. With its experience operating Fuyang Eco Park, our Taipei Branch is currently actively promoting the "Park Ecologicalization Movement" and legislation of "Ecology Park Management Special Provisions".

In 2010, we launched a long-term companionship program for less privileged children, in which children from pre-school, grade school, or church are able to experience nature and enjoy its surprises six times per year. Wistron Foundation and Summer Star Foundation for Nature Art and Humanity have given this program more love and support. The core value of long-term companionship is to let children progressively experience "loving yourself, loving others, and loving life" through long-term companionship. This is a course of "life education" in nature. Besides guiding children in learning about the environment, it also emphasizes the sensibility of caring for life.

In 2018, we launched the "Beach Debris Rapid Assessment" program together with Greenpeace. With guidance from Japanese and Korean experts, we completed Taiwan's version of a fast surveying method, and trained 50 "beach debris rapid assessment investigators" who then surveyed 121 stations around the island and calculated the total amount and pollution hot spots of beach debris on the main island. The first rapid assessment results show that 50% of beach debris is densely packed on 10% of coastline, and it is estimated that a garbage truck would need 2,000 trips to complete the cleaning. With beach cleanup and plastic reduction becoming a national trend, results from the 2018 plastic free ocean project show that The Society of Wilderness is still able to play a key role in

beach debris issues through both citizen science and policy.

In 2018, we achieved the mission and target of purchasing land for conservation, and held an opening ceremony for The Wilderness No.1, marking an important historical milestone for habitat conservation. Forestry lands on the hillside conservation zone, located in Yilan's Wu Lao Keng with an area of more than 1,760 square meters, is a beautiful forest as well as the habitat of various creatures such as the manidae, crested serpent-eagle, and golden-ringed dragonfly. Though it is a small step towards the goal, it took 23 years to complete. We hope more wildlands will appear in the future.

## Chuang Foo Foundation

### 1. Vision of sustainable development

The foundation was established in 1975, based on the philosophies of wildlife conservation and environmental sustainability. With years of experience in conservation work, the foundation integrates local and overseas resources and is in line with global trends. It strives for the best position and welfare for animals. Its primary concern is African wildlife conservation, followed by conservation of the rhino, and then Taiwan's wildlife (mountain hawk-eagle, Formosan black bear, leopard cat, Eurasian otter, etc.). The beauty of wildlife arouses people's love for wildlife and respect for life. The vision of the foundation is to "attain environmental sustainability and protect the earth for children." It is committed to the promotion of animal conservation and care for international and local endangered species. It hopes to urge people to value the right to life of wildlife and to protect them, and give resources back to society for support. It conducts environmental education for children from remote areas and less privileged children, and conveys correct conservation concepts to the next generation. The mission has remained unchanged over the years. It hopes that citizens are able to experience the surprises and beauty of every detail of life, and care and cherish natural ecology and heritage in the arts and humanities.



◀Figure 62 : The rhino volunteer expedition team visited South Africa

### 2. Sustainable development promotion results

Besides promoting conservation concepts, the foundation also practices through actions. Since 2015, it has been traveling to South Africa to learn about the conservation status of rhinoceros habitats, in line with international conservation actions. In 2016, it formed a rhino conservation volunteer team to go to South Africa to carry out in-situ conservation work to care for rhino orphans. In 2017, to celebrate World Rhino Day on September 22, 3,000 people gathered in Taiwan to form a huge rhino picture for an aerial shot. The effort of the people has shown the world Taiwan's determination in endangered rhino conservation.



◀ Figure 63 : The rhino volunteer team conducted bilateral exchange with the Taiwanese Representative in South Africa



▲ Figure 64 : "Sign of Hope", a mountain hawk-eagle ecological documentary



▲ Figure 65 : Guided activities on the characteristics of the meerkat family



▲ Figure 66 : Children participated enthusiastically in the environmental education courses

In addition, the foundation is also concerned with conservation of local endangered species. Since 2000, it has been sponsoring well-known ecological documentary director Mr. Liu Yan-Ming in the making of Sign of Hope, a documentary on mountain hawk-eagles. The film took 14 years to complete, and is Taiwan's first ecological film production that completely records in detail the process of how mountain hawk-eagles raise their young. In 2018, it launched a local endangered species conservation program and conducted a series of experimental courses and activities on Taiwan endangered and rare animals, such as the leopard cat, Formosan black bear, and Eurasian otter.

The foundation actively plans for animal conservation courses and conveys correct ecological knowledge. Since 2015, more than 150 classes in ecological conservation and environmental experience, such as "Attention Rhino," "Through the Eyes of the Meerkats," "Everything is Connected" and "Young Rhino Caregivers" have been conducted. 3,500 people have participated in courses to learn about endangered wildlife conservation and the ecological characteristics of species. Through experiential teaching, it spreads

the philosophy and concepts of wildlife conservation, inspiring people of all generations. Ecological conservation exhibitions are also held to teach about the coexistence between humans, environment and wild animals, to work together to protect the environmental ecology, to promote correct next-generation ecological conservation attitudes, and to set the roots for environmental sustainability.

With its extensive experience in species breeding and its conservation talent resources, the foundation promotes animal conservation, restoration, and environmental education, giving back to the society with its resources. 2018 is the 11th consecutive year in which it has invited remote area schools and social welfare groups to its affiliated Leofoo Village. It also cooperates with social welfare groups in launching activities and products. It established a charity platform to give back to society, and holds a charity market to raise funds for Christmas presents for less privileged families. It spreads warmth and is committed to making life better through kindness. With the power of love, it cares for society by taking concrete actions to practice social responsibility.

## Tse-Xin Organic Agriculture Foundation

### 1. Vision of sustainable development

The foundation is committed to promoting transformation of conventional agriculture. It brings its successful experience to indigenous peoples, promoting different programs in Hualien, Taitung and Kaohsiung tribes. With its primary aim being to preserve local culture, it assists in industrial transformation and upgrading, creating a mutually beneficial situation for economy, ecology, and culture. The Venerable Richang (founder of Tse-Xin) once said: "As long as there's life, I'd like to provide care." Hence, the business scope developed by the foundation started from "organic agriculture" and gradually expanded to more services. But most importantly, to spread "kindness" to promote things which are beneficial for people and people, and people and the environment. It hopes to recruit more kindhearted people, and together restore the earth, clean the beaches, solve food safety issues, and build a society with integrity.

- (1) Promote organic agriculture and friendly farming, make Taiwan into an organic island.
- (2) Promote tree planting for carbon reduction, reforestation of mountain and coastal forests, and plant a hundred million trees for the earth.
- (3) Promote the philosophy of plastic reduction, reduce single-use plastic, and clean up marine pollution.

### 2. Sustainable development promotion results

The foundation has, since 2016, been committed to environmental education in promoting plastic reduction, reaching out to communities, campuses, and enterprises, to convey to people of different age groups the concept and methods of plastic reduction. It is committed to developing plastic reduction teaching materials and activities (such as glove puppetry, board games, and obstacle games) that will connect with people. It invites the public to understand the seriousness of plastic pollution in the ocean and plastic reduction methods in a relaxed manner, so that they will be willing to start to change their single-use consumption behavior in daily life into actions that



▲ Figure 67 : The foundation organized environmental education courses to children

support environmental sustainability. In addition, there are yearly camp activities targeting different groups, such as corporate personnel, teachers, and youth. Carbon reduction talks and activities are specially arranged to invite more people to start reducing waste from single-use plastic waste in their daily lives, and together play a part in protecting the ocean.

In 2009, Tainan Guantian farmers sowed pesticide tainted seeds, resulting in the death of birds after consumption. The birds affected included 88 protected water pheasants; the dead birds all over the place was a ghastly scene. The Forestry Bureau invited the foundation to the place to guide the farmers in converting to organic farming. However, restricted by environmental factors, the place was unable to obtain organic certification. The foundation hence established an eco-label, the "Green Conservation Mark," and updated the Green Conservation Mark regulations to keep up with the times, expanding the ecological protection network for farms.

The foundation cooperates with the Endemic Species Research Institute, Taiwan Agricultural Research Institute, and Tunghai University in addressing issues from various professional aspects. An ecological agriculture demonstration area was established together with New Taipei City's Pinglin and Nantou's Zhongliao. In Nantou's Zhongliao, the foundation counseled the residents on friendly farming, the Jiji Endemic Species Research Institute advocates leopard

cat conservation, the Taiwan Agricultural Research Institute provides farming technological support and soil monitoring, while Tunghai University conducts evaluation and improvement using PGS verification

mode. It observes changes in farmland ecology under a friendly farming operation mode and proposes improvement measures, thereby creating new values in the farmland ecological service system.



**The Northeast and Yilan Coast National Scenic Area Administration, Tourism Bureau, Ministry of Transportation and Communications, Executive Yuan**

**1. Introduction**

Old Caoling Tunnel is a "bicycle tunnel" that incorporates history, culture, and tourism. The Administration cooperates with bus operators and tour agencies such as a Taiwan Railway tour train, Taiwan Tourist Shuttle and Taiwan Tour Bus. Working

along with other government agencies, schools, local communities and private enterprises, the Administration promotes attractions such as the charming scenery and coastal geology of northeast fishing villages. The various activities in the green LOHAS package tours incorporate environmental education. About 2.6 million tourists have visited the attractions, which have encouraged people from all walks of life to attach importance to the concepts of ecotourism, green tourism, and environmental sustainability. It aims to encourage the local community to become a community of ecology, production, and life, maintaining the landscape of society, ecology, and production. The Administration completed "three tasks": reviving the old railway tunnel as a bicycle path, upgrading the local attraction into a global attraction, and changing a passing-by travel style to traveling with a purpose. By continuing to operate and manage through inter-agency cooperation, it aims to achieve the goals of biodiversity and sustainable industrial production.



▲▼Figure 68 : Launching the concept of "Railway Museum" concept into innovative promotion of Old Caoling Tunnel combines railway and bicycle track

**2. Sustainable development promotion results**

Fulong used to attract mainly domestic tourists. In recent years, with the launch of cycling tours and with the promotion of cycling travel, the Old Caoling Tunnel alone attracted about 300,000 cyclists every year. The entire Fulong region attracts more than 1.71 million local and overseas tourists per year. Since 2015, the Administration has been participating in the Destination Award of the World Travel and Tourism



▲Figure 69 : Opening of Old Caoling Tunnel

Council's (WTTC) "Tourism for Tomorrow Awards," an award reputed as the "Nobel Prize" of the world's tourism industry. Also, for three consecutive years from 2016 to 2018, it has been awarded "Top 100 Green Destinations," and was awarded Silver in the Green Destinations Awards & Certification Program in 2018. The successful transformation of Old Caoling Tunnel has allowed its beauty to become known to the world. The number of foreign visitors increases every year, successfully transforming a local attraction into a global attraction.

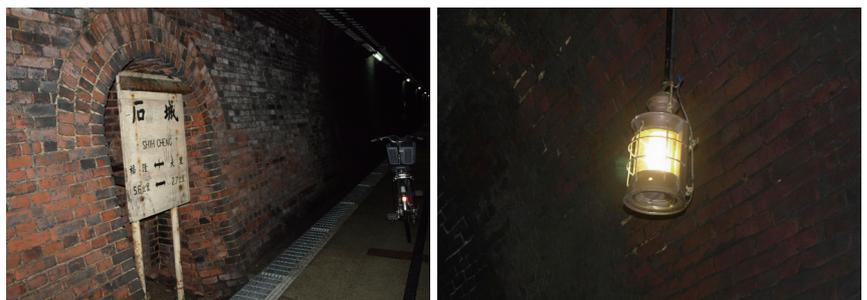
The culturally preserved and reused Old Caoling Tunnel railway is not only popular among tourists, but has also made the locals more concerned for their hometown, and has increased their imagination for the local lifestyle. As more shops and restaurants are gradually set up, it encourages more youths to return to their hometowns to participate in the various promotion activities organized by the Administration, such as

providing discounts and promoting package tickets. The tunnel has retained its historical appearance, and carries memories of local life and historical development. Tourists are able to learn more about local characteristics and stories of the Old Caoling Tunnel. The historical and cultural values of the tunnel extend from the preservation of railway monuments to ecological conservation and sustainable tourism development.

Old Caoling Tunnel leads the development of low-carbon tourism, and follows the index of green tourism (destinations) international certification. The Administration plans transportation and itineraries with minimum carbon emissions, offers local seasonal cuisines and practices green consumption. Besides offering low-carbon tourists with more in-depth experiences of the local culture, it also drives the low-carbon transformation of local industry through participation and implementation in the low-carbon environment. It mitigates population outflow and effectively revives local economies. It has since gained a sense of participation and recognition from locals, and trust from other government agencies. Together, they can preserve local ecology, and the local community's primary industry can gradually transform into a quinary industry which emphasizes cultural heritage and environmental and ecological experience. It promotes the concept of sustainability in the rich geological landscape of the northeast region, ecological environment conservation and tourism resources, and incorporates the strength of local residents in promoting local culture and sustainability.



▲Figure 70 : Tourism promotion of Old Caoling Tunnel policies bring benefits to surrounding industries



▲Figure 71 : Signs and lighting inside the Old Caoling Tunnel

## Hualien District Office, Forestry Bureau, Council of Agriculture, Executive Yuan

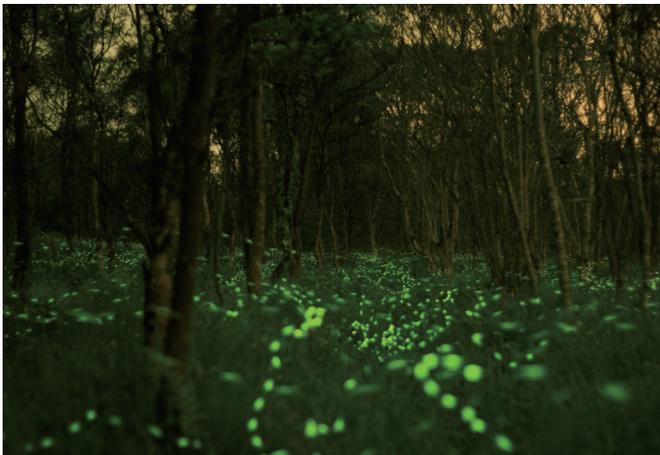
### 1. Introduction

With the business philosophy of "three lows" (low carbon, low density, low development), the Hualien District Office organizes firefly watching activities in its "flatland forest park." Upholding the past development goal of "green sustainability," it continues to survey and monitor the ecology of the "flatland forest park" to fully understand the status of species conservation. A subsequent firefly resource survey in 2015 shows that the park has 7 types of fireflies (one of the environmental indicator species). In view of that, the Hualien Office took on the role in preparation and integration of "Fireflies in the Flatland Forest" in 2016, and began holding the "Danongdafu Firefly Festival - Fireflies in the Flatland Forest" in 2017. Besides promoting local agricultural products and creating local eco-tourism industry benefits, it also trains local guides and monitors volunteers, and makes guided firefly watching activities a part of environmental education. It guides the public in getting to know the firefly ecosystem as well as initiates responsible eco-tours. It actively integrates Taiwan's sustainable development goals, and shares with residents the benefits of a green economy, in the aim of "driving local prosperity and creating a green economy through sustainable eco-tourism". Its aim is to let fireflies shine in the "flatland

forest park" forever, and join the trend of global governance in sustainable development.

### 2. Sustainable development promotion results

"Danongdafu Fireflies Watching" attracts many visitors to Danongdafu every year. After several years of organizing the activities, the single path firefly watching event has been changed and improved into firefly watching itineraries that meet different requirements. In 2019 "Danongdafu Fireflies Watching," there are four different firefly watching routes for different types of visitors: young people, families, disabled groups and the elderly. Besides encouraging surrounding communities in carrying out friendly farming, Hualien Office has in recent years been actively promoting eco-tour and activities with the themes under-forest economy and forest. With the development of diverse "green gold industry," it makes the economy and industry of surrounding communities and tribal villages more complete. In 2019, four local youths returned to their hometown to focus on firefly watching activities and local affairs. The increase in job opportunities arising from flatland forest and firefly watching activities, will attract many young people to return to their hometown.



▲ Figure 72 : Monitoring volunteers continue to survey and monitor the ecology of the "flatland forest park"



▲ Figure 73 : Flatland forest park has become the best place for firefly watching activities

"Danongdafu Firefly Watching in Flatland Forest" links and integrates surrounding community resources through local "fireflies". With the cooperation of the public and private sectors, an optimal balanced sustainable development model has been attained in ecological conservation work and local industrial development. Besides firefly watching activities, the Hualien Office also actively expands into diverse ecological industrial development. This includes a sea of flowers in spring, local food farmer education in summer, a kite festival in autumn, and a maple festival in winter; as well as guidance in activities such as forest healing, natural art installations, scenic cycling, etc. Together with complete supporting measures, the sustainable development of the flatland forest park is more complete and robust. Also, by counseling surrounding

communities in developing ecologically aware industry, it draws more youth back home to engage in local affairs. It also raises community residents' awareness and recognition of local conservation, as well as increases sustainable development opportunities.

In the future, the Hualien Office will continue to accompany local communities and tribal villages, and encourage local residents to engage in ecological conservation work of the flatland forest park in three aspects, namely, equality, economy, and ecology. It will lay the foundation for local environmental education and ecological industry development, establish a stable structure for a local sustainable development model, attain the vision of co-prosperity and local creation, and together aim for a sustainable and beautiful future.



▲ Figure 74 : Sustainable system diagram for firefly watching activities

## Department of Public Works, Taoyuan

### 1. Introduction

In line with the six major policies of the national development plan—industrial upgrade and innovative economy, Taoyuan City in August 2017 formed a project team comprising experts and scholars from industry (reuse organizations, asphalt plants, engineering consulting companies), government, and academia, to convert abandoned resources into usable materials through new construction methods. Together, they have completed asphalt plant inspections, and steel aggregate (oxidizing slag) and asphalt concrete milled aggregate pilot projects. At least three asphalt plants in Taoyuan City have obtained stationary pollution source operating permits from the Department of Environmental Protection, which will be able to provide full support for the promotion of a circular economy. The roads under the administration of the Taoyuan City Government cover a distance of 3,283 km, and an area of approximately 41,483,000 square meters (highway 20,761,000; urban road 20,722,000). For waste aggregates (oxidizing slag, milled road materials, incineration slag, etc.) which have long been difficult to treat, suitable regulations have been established to mix them into asphalt concrete, for use in paving roadbed and surface of roads under its administration, or for emergency pothole repair. It can effectively transform waste aggregates into usable materials, giving new life to waste. It will gradually be phased into use in public construction, attaining the goal of national development and circular economy.

### 2. Sustainable development promotion results

Incineration is the main waste treatment method in Taiwan, followed by landfilling. Burning waste at high temperature generates a huge amount of incinerator bottom ash. Statistics from the Environmental Protection Administration, Executive Yuan, shows that in recent years, Taiwan's incinerator bottom ash amounts to about 800,000 to 1,000,000 metric tons. Due to land scarcity and high population density, Taiwan has insufficient landfill space. Also, with rising environmental



▲ Figure 75 : Fengde Road oxidizing slag pavement work awarded Gold Award

awareness, the concept of sustainable development has become a trend. Recycling and reusing of incinerator bottom ash not only reduces waste, but can also attain the objective of resource sustainability in a circular economy, solving the problems that need to be solved by the government at present.

It is currently known that using steel aggregates (oxidizing slag) to replace 30% of natural ingredients can reduce about 6.24 kg CO<sub>2</sub>e of carbon footprint per metric ton. The "oxidizing slag in asphalt concrete pavement pilot project on Fengde Road, Bade District, Taoyuan City" by the Office of Road and Accessory Maintenance, Taoyuan, used 1,300 metric tons of steel aggregates (oxidizing slag), and reduced about 8,112 kg CO<sub>2</sub>e of carbon footprint, a CO<sub>2</sub> absorption equivalent of 740 trees in a year. In addition, oxidizing slag asphalt concrete is 25% cheaper as compared to traditional asphalt concrete. The completion of the pilot project has saved more than NTD3.6 million for the city treasury.

In line with the Executive Yuan's forward-looking projects, Taoyuan City proposed four road improvement projects. Bade District's Fengde Road is a 6-lane 2-way road with a width of about 40m, and is an important road that connects with Provincial Highway 4 and the section where Bade District dump trucks travel.

The frequent use by heavy vehicles results in a high pavement damage rate. Oxidizing slags are steel aggregates, with characteristics such as pressure-resistance, hardness, wear resistance, and they are especially suitable for urban roads with heavy traffic and vehicles braking repeatedly. Mixing oxidizing slag with asphalt can significantly increase the durability and lifespan of roads, and reduces future road maintenance and management costs. The Circular economy road - Oxidizing slag in asphalt concrete pavement on Bade District's Fengde Road, submitted by the Office of Road and Accessory Maintenance, Taoyuan, was awarded the 2018 Taoyuan City Public Construction Gold Award (awarded on August 20, 2018), and the 18th Public Construction Golden Quality Award (awarded on December 18, 2018) by the Public Construction Commission of the Executive Yuan in 2018.





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