

2019

Annual Report on National Sustainable Development



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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. 47th Working Conference

The 47th 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 : 47th NCSD Working Conference



▲Figure 2 : 48th 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. 48th Working Conference

The 48th 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 NCSO website, allowing the government, industry, academia, and the public to access and make use of relevant information. In 2007 the NCSO 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 NCSO 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 NCSO 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 NCSO completed the 2018 Sustainable Development Indicator Evaluation Report, which was published on the NCSO 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.

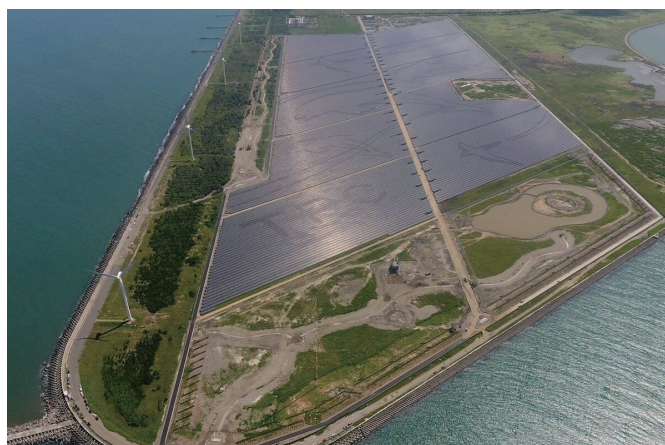
7. Information technologies are incorporated into teaching, and the campus Internet at public schools of senior secondary level or below supports a high-quality and high-availability environment with rich digital-learning resources. The ratio of IT equipment in classrooms being used to integrate information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

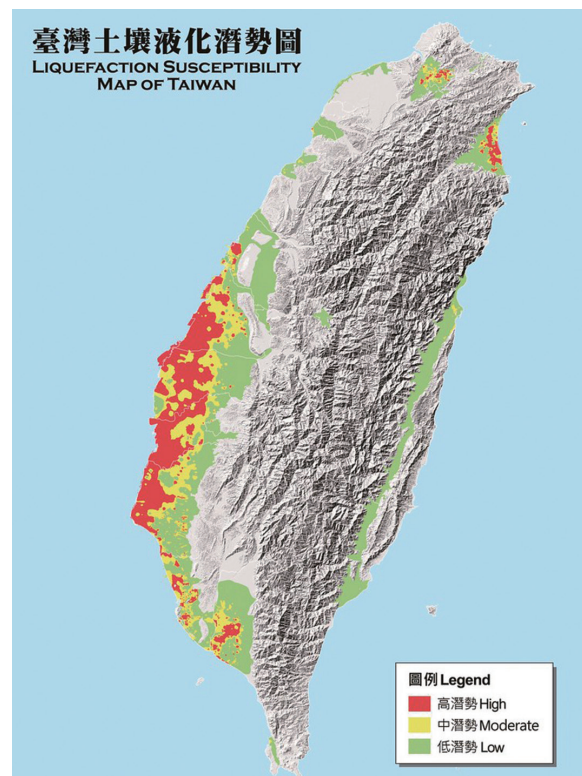
3. Road traffic safety

- (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.

- 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.
- 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.

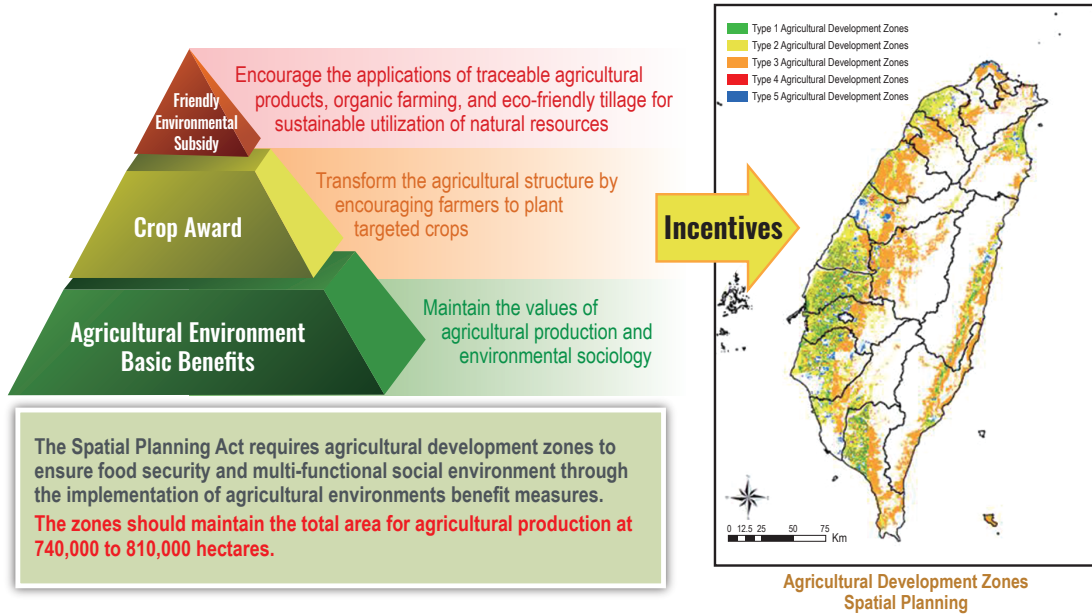
- To establish a complete protection system for children and adolescents, the use of SDM risk assessment tools has been fully promoted since 2019. The tool uses a structured decision-making model to assess the risk of children, adolescents, and families, and helps to prevent the recurrence of child and 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

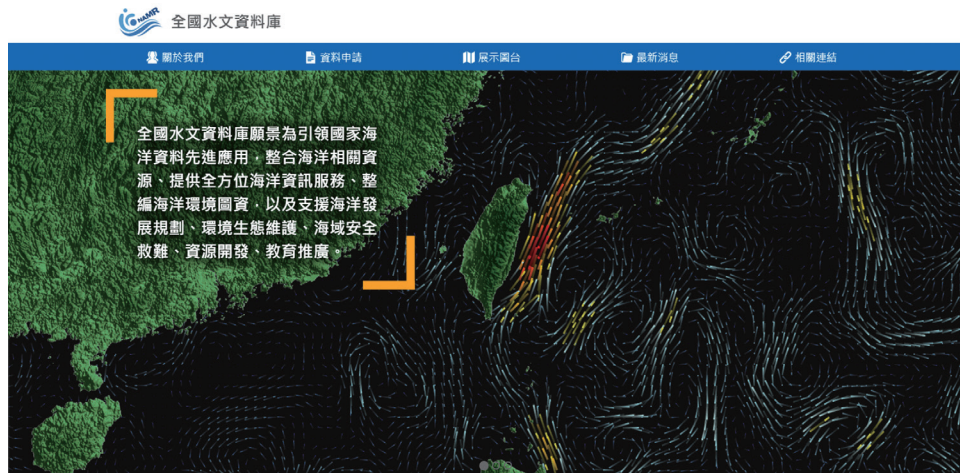
- To ensure farmland required for food security and to understand the agricultural resource situation, an update on the nationwide farmland resource inventory was completed in 2019. It will be used as reference for decision making and analysis of the agriculture industry and farmland usage. The demarcation 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 CO₂ 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

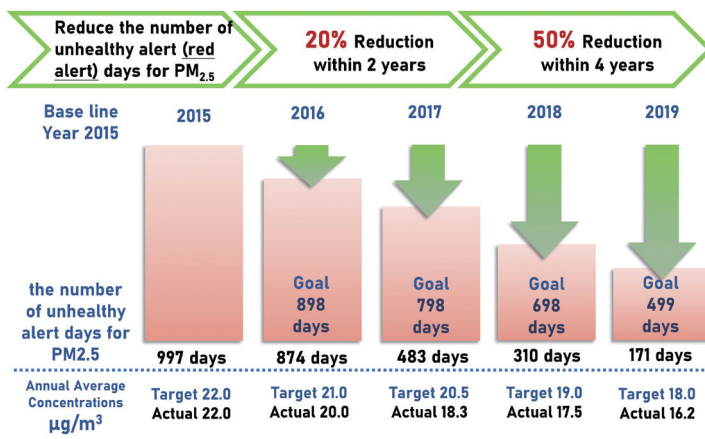
dine-in consumers. As of March 2020, 15 counties and cities have implemented the measure, which will reduce plastic tableware by 100 million pieces/year.

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_{2.5}) 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 (O₃), the country's various air pollutant concentrations in 2019 have shown improvement compared to 2015: particulate matter (PM₁₀) with a 23.8% annual improvement rate; fine particulate matter (PM_{2.5}) with a 26% annual improvement rate; sulfur dioxide (SO₂) with a 26.1% annual improvement rate; nitrogen dioxide (NO₂) 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_{2.5} means the Air Quality Index (AQI) for PM_{2.5} is above 150.

▲Figure 31 : The number of unhealthy PM_{2.5} alert (red alert) days (Air Quality Index (AQI) for PM_{2.5} 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



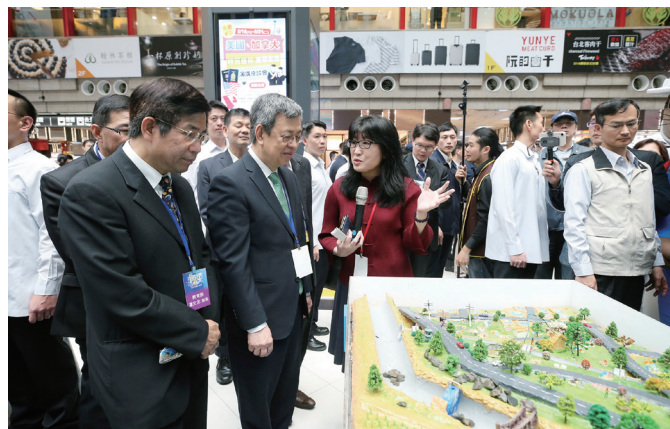
▲Figure 33 : Climate Action conference

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.

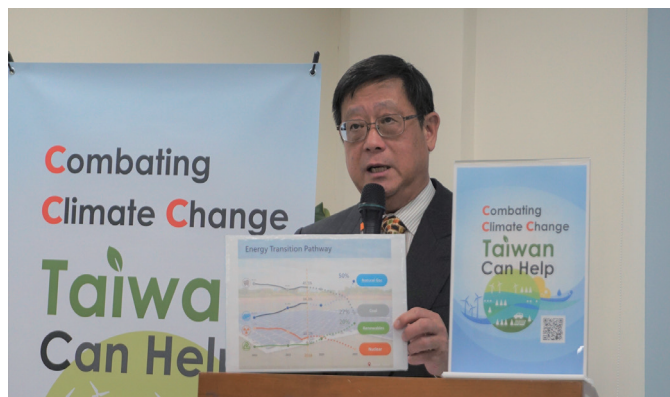
3. Participated in UNFCCC activities

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

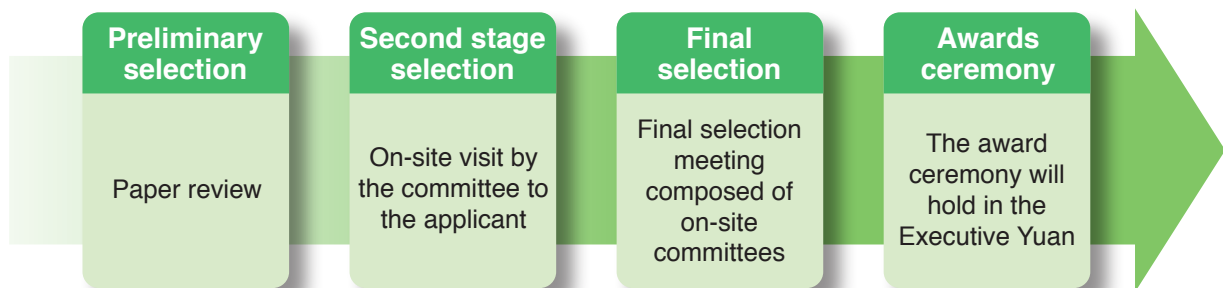
The Executive Yuan's National Council for Sustainable Development established the "Selection and Commendation Plan for National Sustainable Development Awards" to encourage nationwide participation in promoting sustainable development, localizing sustainable development goals, incorporating them into 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.

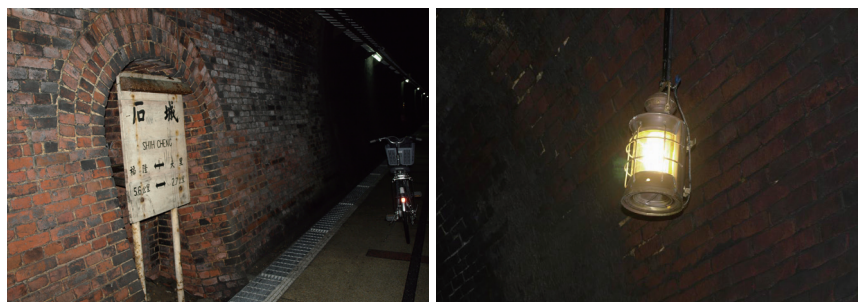
The culturally preserved and reused Old Caoling Tunnel railway is not only popular among tourists, but has also made the locals more concerned for their hometown, and has increased their imagination for the local lifestyle. As more shops and restaurants are gradually set up, it encourages more youths 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 CO₂e 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 CO₂e of carbon footprint, a CO₂ 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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