

2018

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

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

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



A. The 31st NCSD Council Meeting

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

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

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

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

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

B. Convening the NCSD Working Conference

I. 43rd Working Conference

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



▲Image 1 / 31st NCSD Council Meeting

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

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



▲ Image 2 / 43rd NCSD Working Conference

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

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

(II) Nuclear-Free Homeland Promotion Task Force Progress

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



▲ Image 3 / 44th NCSD Working Conference

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

II. 44th Working Conference

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

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

1. The discussion on Taiwan's Sustainable

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

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

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

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

III. 45th Working Conference

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

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

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

1. The Draft for the Sustainable Development Goal Overview will be amended by the Taiwan Society for Risk Analysis after referring to the opinions of council members. The council members will then assist in reviewing the structure, discussion, and arrangement of the amendments.

(1) Taiwan's historical position, cultural and ecological characteristics, and economic status within the global structure will be included, as well as the systematic, energy and material risks that Taiwan is facing.

(2) The Smart Homeland discourse will add smart and monitoring frameworks regarding environmental, ecological, urban, and national development aspects.



▲Image 4 / 45th NCSD Working Conference



▲ Image 5 / 46th NCSD Working Conference

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

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

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

IV. 46th Working Conference

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

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

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

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

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

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

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

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

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

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

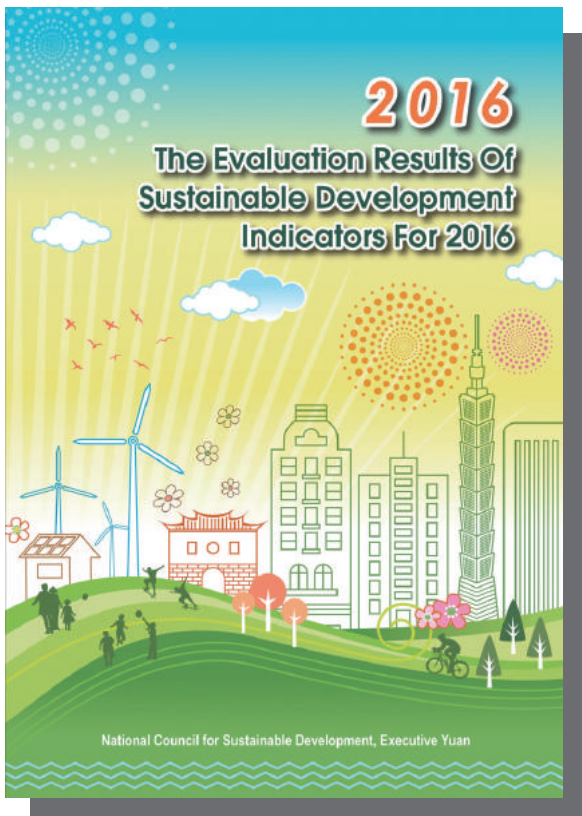
Goal 18 is retained. The relevant text is revised based on the results of the above discussion.

C. Published Taiwan Sustainable Development Indicator Report

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

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

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



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

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

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

A. Health and Welfare Working Group

I. Establishment of Labor Force Capability

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

separately in occupational accident insurance.

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

II. Promotion of Social Insurance

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



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

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

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

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

III.Maintenance of Citizens' Physical and Mental Health

- (I) Measurements across the country for fine particulate matter (PM2.5) in the air improved from $22.0 \mu\text{g}/\text{m}^3$ in 2014 to $17.5 \mu\text{g}/\text{m}^3$ in 2018. The number of red alerts (daily average $\geq 54 \mu\text{g}/\text{m}^3$) was lowered from 997 times in 2015 to 310 times in 2018, showing significant improvement in air quality.
- (II) To effectively reduce the suicide rate in Taiwan, suicide-related statistics are regularly



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

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

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

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

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

B. Life and Education Working Group

I. Early Childhood Education and Education for the Underprivileged

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

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

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

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

II. Vocational Education

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

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

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

III. Gender Equality & Human Rights Education and International Cooperation

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

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

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



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

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

C. Green Economy Working Group

I. Development of Green Technology and Enhancing Energy Diversity

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

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

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

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

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

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

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

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



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



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

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

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

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

IV. Promoting Increased Public/Private Green Purchasing

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

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

D. Green Transportation Working Group

I. Implementing the Multiple Promotion Project for Highway Public Transportation

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

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

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

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

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



▲ Image 12 / Hualien Station's updated nighttime look

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

III. Promotion of Road Safety Education

(I) Traffic safety education was strengthened

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

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

E. National Resources and Urban and Rural Development Working Group

I. National Land Planning and Management

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

II. Promoting Urban Renewal

Promoting government-led urban renewal

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

III.Reducing Pollution and Waste

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

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

IV.Sewage System Development

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

V. Promoting Social Housing

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

VI. Protection of Cultural and Natural Heritage

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

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

F. Sustainable Agriculture and Biodiversity Working Group

I. Habitat Conservation

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

II. Integration of Biodiversity Information

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

III. Enhancing Environmentally Friendly Agriculture

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

IV. Conservation of Species and Development of Biotechnology

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

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

V. Promoting Conservation Tasks in the Community

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



▲ Image 13 / Taoyuan City Blue Pond Park

VI. Endangered Species Protection and Research

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

VII. Conserving Marine Resources

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

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

VIII. Enhancing Protection Against and Monitoring of Exotic Invasive Species

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



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

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

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

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

G. Environmental Quality Working Group

I. Reducing Concentration of Air Pollutants

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

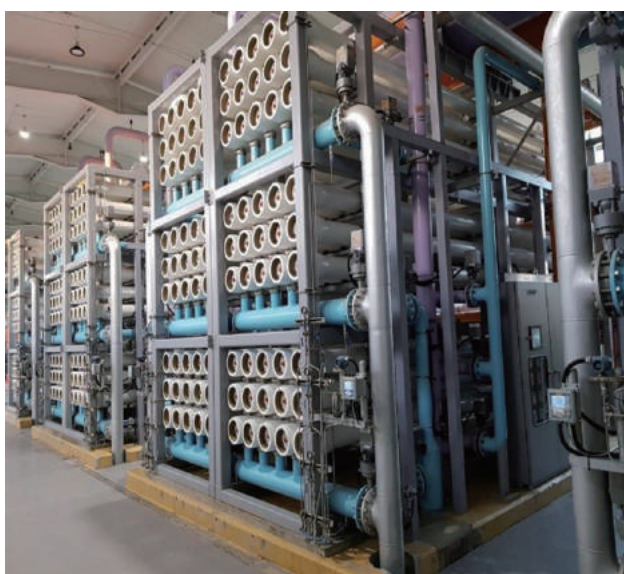
equipment in 1,022 diesel vehicles in Phase 3; and completed improvements to 723,070 two-stroke motorcycles/motor scooters. The Plan continued to be implemented in partnership with ministries and local environmental protection bureaus, to improve the air quality in autumn and winter.

II. Promoting Reduction of Plastic Waste at the Source

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

III. Sewage System Development

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



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

IV. Improved Public Bathroom Cleanliness and Comfort

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



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



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

V. Actively Promoting Coastal Adoption

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

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

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



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

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

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

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

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



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

VIII. Regular Monitoring of Sediment Quality in Taiwan

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

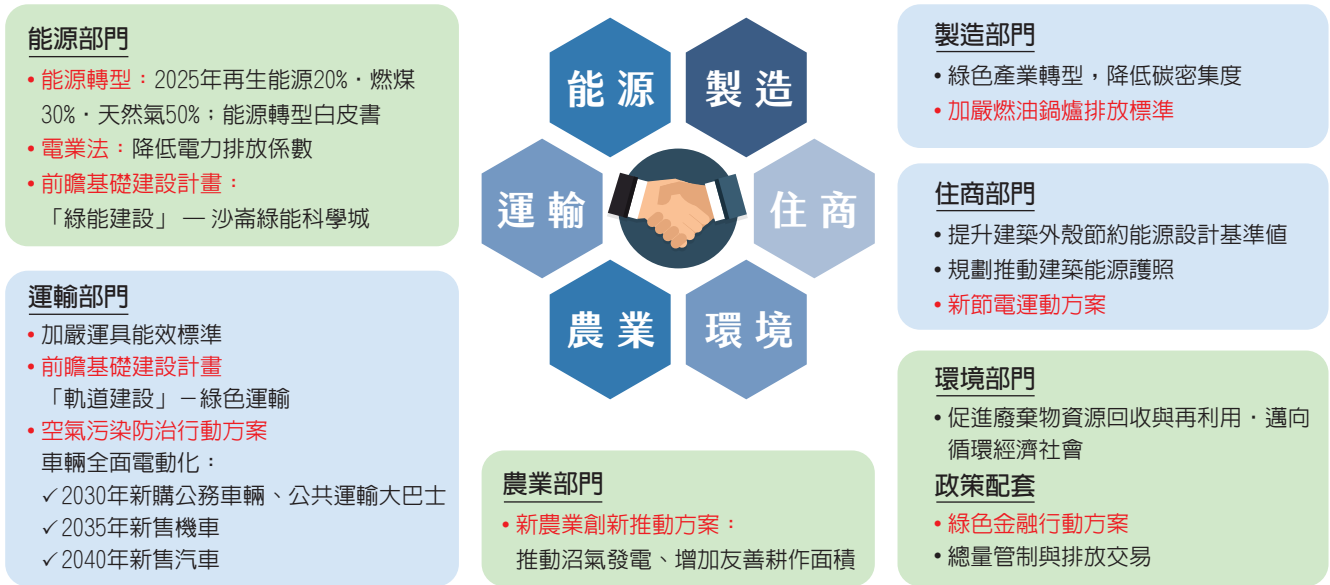
H. Climate Change, Energy Conservation, Carbon Reduction and Nuclear-Free Homeland Promotion Task Force

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

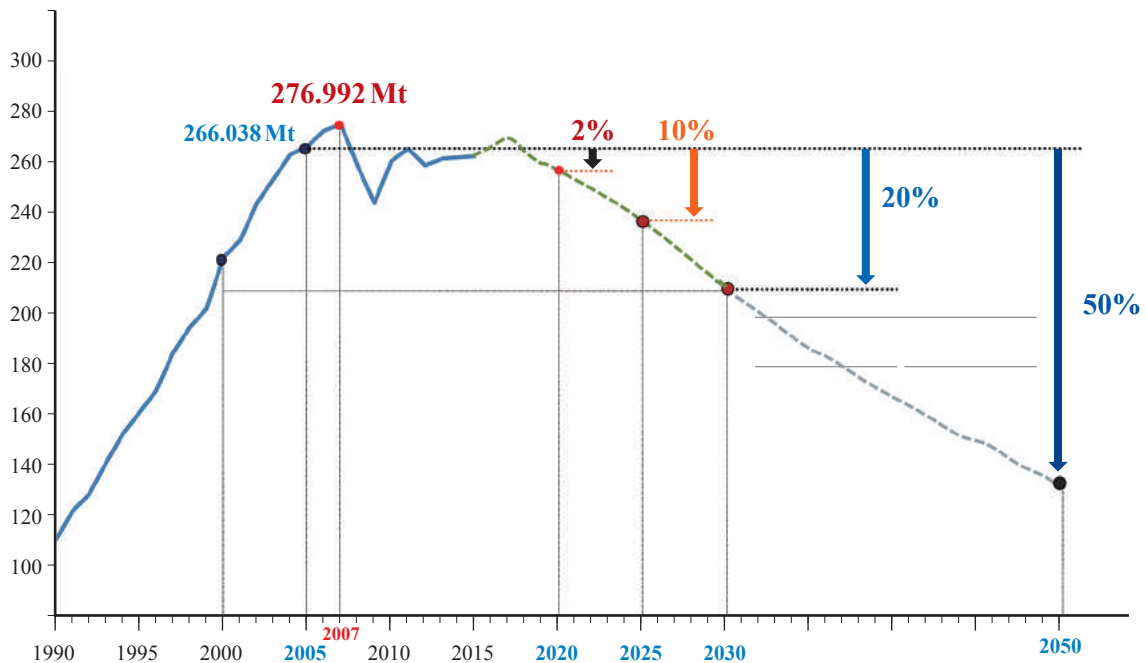
On October 3, 2018, the Executive Yuan approved the Greenhouse Gas Emission Control Action Program for Taiwan's six major departments - Energy, Manufacturing, Transportation, Housing, Agriculture, and Environment. Specific actions were established to reduce carbon footprints in various sectors from 2018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

II. Target for Greenhouse Gas Control Phase 1

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



▲ Image 20 / Low Carbon Strategies by Sectors



▲ Image 21 / Path to Achieving Greenhouse Gas Reduction

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

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

A. Introduction to the National Sustainable Development Awards

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

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

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

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

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



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

Table 1 List of 2018 National Sustainable Development Awards Winners

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

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

C. About the Award Recipients

I. Education

(I) Chang Jung Christian University



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

1. Introduction

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

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

2. Current Status of Sustainable Development Promotion

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

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

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

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

3. Vision for Future Development

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

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

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

(II) Tzu Chi University

1. Introduction

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

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

2. Current Status of Sustainable Development Promotion

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



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

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

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

3. Vision for Future Development

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

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

(III) Micang Elementary School

1. Introduction

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

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

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

2. Current Status of Sustainable Development Promotion

I. School Policies and Space Management:

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

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

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

II. Teaching Sustainable Development Courses:

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



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

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

III. Humane Care and Community Engagement:

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

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

3. Vision for Future Development

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

II. Business

(I) Yuan Soap Workshop Co., Ltd.

1. Introduction

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

2. Current Status of Sustainable Development Promotion

Since its establishment, Yuan Workshop has

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



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

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

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

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

3. Vision for Future Development

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

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

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

(II) ECOVE Environment Corporation

1. Introduction

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



▲Image 27 / Installing a photovoltaic system

2. Current Status of Sustainable Development Promotion

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

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

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

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

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

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

3. Vision for Future Development

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

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

sustainability and for the living environment of people.

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

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

(III) Far Eastern Department Stores

1. Introduction

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

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

2. Current Status of Sustainable Development Promotion

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



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

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

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

3. Vision for Future Development

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

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

III. Civic Organizations

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

1. Introduction

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

2. Current Status of Sustainable Development Promotion

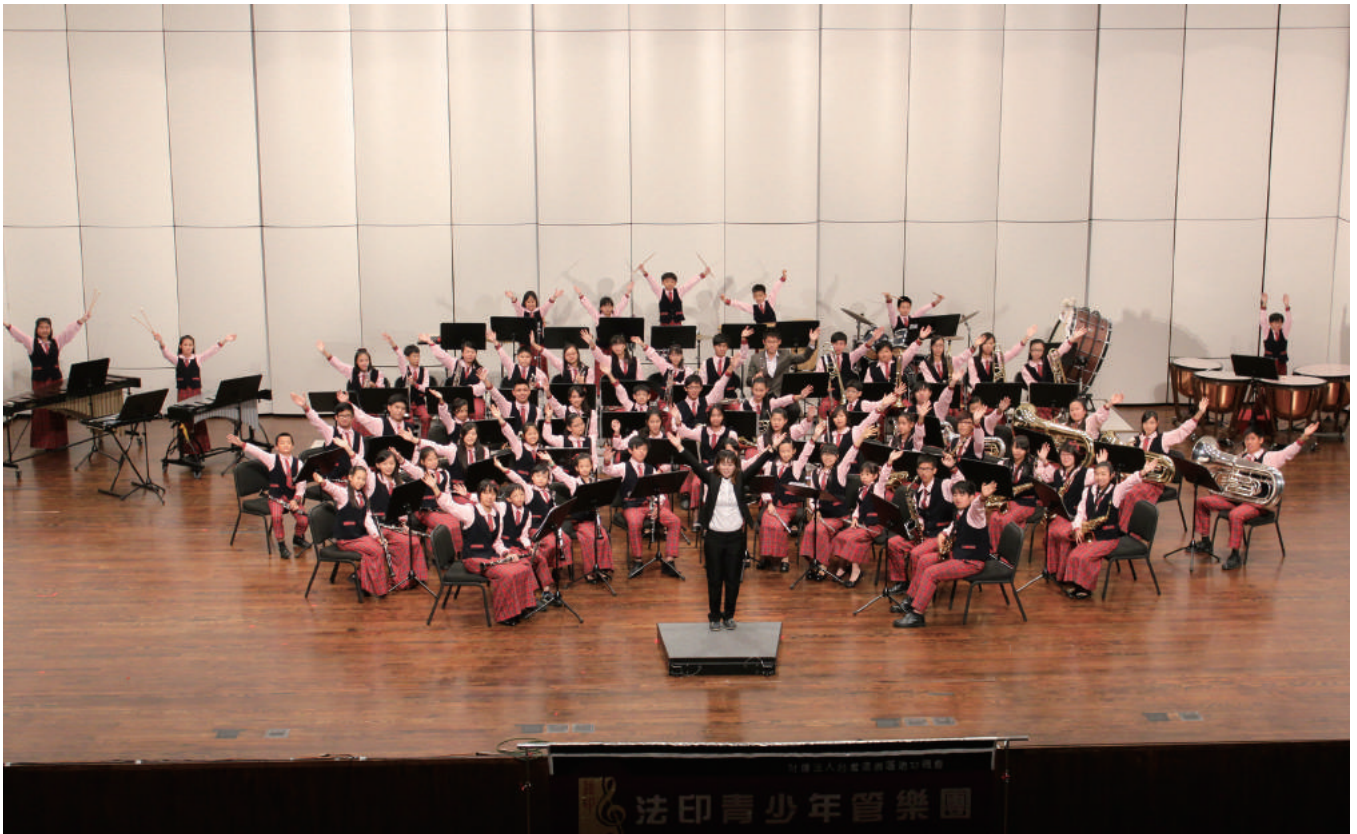
(1) Social care:

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

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

(2) Charity:

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



▲Image 29 / Fa Yin Youth Wind Band

(3) Cultural education:

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

(4) Volunteer service:

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

3. Vision for Future Development

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

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

(II) Youngwater Culture and Education Foundation

1. Introduction

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

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

2. Current Status of Sustainable Development Promotion

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

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

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

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

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



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

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

3. Vision for Future Development

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

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

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

(III) Environment and Development Foundation

1. Introduction

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

2. Current Status of Sustainable Development Promotion

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

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

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



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

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

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

3. Vision for Future Development

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

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

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

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

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

IV. Government agencies

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

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

1. Introduction

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

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

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

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



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

2. Current Status of Sustainable Development Promotion

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

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

3. Vision for Future Development

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

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

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

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

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

1. Introduction

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

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

2. Current Status of Sustainable Development Promotion

(1) Society

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



▲ Image 33 / Chenglong Community Development Association artwork Rebirth

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

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

(2) Environment

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

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

(3) Economy

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

(4) Culture

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

3. Vision for Future Development

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

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

-- Taiwan Taoyuan International Airport Access MRT Construction Plan

1. Introduction

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

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



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

2. Current Status of Sustainable Development Promotion

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

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

3. Vision for Future Development

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

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

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