# Environmental Protection Administration, R.O.C. (Taiwan)

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#### **Feature Article**

# **Taiwan Shares Expertise at COP25**

The 25th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP25) commenced on 2 December 2019 in Madrid, Spain and ended on 15 December with the last piece of the Paris Agreement Rulebook uncompleted. Key issues such as Article 4 (Response Measures), Article 6 (International Carbon Market Mechanisms), and Article 8 (the Warsaw International Mechanism for Loss and Damage) remained unresolved. They will continue to be negotiated at the COP26 in Glasgow, Scotland, UK, in November 2020. With efforts from the Ministry of the Foreign Affairs (MOFA) and the Taipei Economic and Cultural Office (TECO) in Spain, the EPA's 2019 delegation, led by Minister Tzi-Chin Chang, successfully promoted Taiwan's endeavors in climate change and energy transformation. Delegates from relevant departments, regional governments, and civil organizations also actively took part in several side events. Keeping their feet on the ground and doing their part, everyone eagerly participated in the climate change battle and made contributions to the world by offering their expertise.

COP25 was originally set to be hosted by Chile in Santiago, but the organizer made a sudden decision to change the convention location to Madrid, Spain in November 2019. Nonetheless, over 20,000 people from around the globe attended and Taiwan governmental offices were also able to finish their

preparation work on time. The representative Der-Li Liu and fellow colleagues from TECO in Spain launched a creative promotional campaign themed "Combating Climate Change, Taiwan Can Help" displaying trams and minibuses painted with Taiwanrelevant images, such as wind turbines, tung tree

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blossoms, and paper mulberry around the convention venues. The campaign attracted attention and was positively responded to by all.

#### Nations with diplomatic ties offer encouragement and support Taiwan to participate in UNFCCC events

Thirteen nations with diplomatic ties with Taiwan – Belize, Eswatini, Guatemala, Haiti, Honduras, Marshall Islands, Nauru, Palau, Paraguay, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Tuvalu – spoke up or issued statements during the convention, urging that Taiwan should not be excluded from the UNFCCC events. Moreover, legislators of 12 of these diplomatic allies expressed their support for Taiwan's participation by issuing statements to the UNFCCC Secretariat, questioning the UNFCCC administration, or by posting opinions on social media. During the event, Taiwan legislators Yi-Jin Yeh (葉宜 津), Wen-Ju Yu (余宛如), and Man-Li Chen (陳曼 麗) attended relevant diplomatic activities on behalf of Taiwan's Legislative Yuan. The MOFA held more than 40 bilateral meetings with diplomatic allies and countries friendly with with Taiwan, carrying out more intensive interactions with the international community. The Prime Ministers of Tuvalu and of Eswatini, as well as environmental ministers and legislators from many nations all took part as guests in these meetings. Several international media, such as Deutsche Welle and major Spanish newspapers ABC and La Razón, also exclusively interviewed EPA Minister Chang, who spoke about Taiwan's efforts in energy transformation and specific carbon reduction strategies. He expressed that, although not a signatory to UNFCCC agreements, Taiwan is willing to contribute to the battle against climate change. When asked about how to reduce marine waste, Minister Chang gave a detailed response about sharing Taiwan's experiences in global environmental issues with the international community.



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At exhibition booths or side events at the venue, there were also experts in different fields from Taiwan who spoke about Taiwan's climate efforts. These included representatives from the Industrial Technology Research Institute, the Taiwan Research Institute, the Taiwan Institute for Sustainable Energy, the Environmental Quality Protection Foundation, the Foundation of Taiwan Industry Service, the Taiwan Carbon Capture Storage and Utilization Association, Mom Loves Taiwan, the Taiwan Youth Climate Coalition, Delta Electronics Foundation, and the Taiwan Association of Sustainable Ecological Engineering Development. There were also representatives from New Taipei City, Taoyuan City, and Tainan City. All answered the UNFCCC's call and strove together, combining efforts of the central government with those of the private and non-governmental sectors in response to climate change.

# Energy transformation is making Taiwan a green energy country

Joining the global movement towards carbon reduction, Taiwan approved the *Greenhouse Gas Reduction Promotion Program*(溫室氣體減量推動方 案) in 2018, specifying the reduction responsibilities shared by the energy, manufacturing, transportation, commercial and residential, agricultural, and environmental sectors. In September 2019, 22 municipalities, county and city governments submitted plans under the *Greenhouse Gas Control Implementation Plan* (溫室氣體管制執行方案), which were adopted for their own districts. These actions were in line with the UNFCCC's call to make clear and transparent national contributions.

Taiwan's policy on energy transformation is based on the principle of developing green energy, increasing the use of natural gas and reducing reliance on coal. The first commercial-scale offshore wind farm, located off the coast of Miaoli, officially started operation on 12 November 2019 and is able to generate power for 128,000 households annually. It shows that Taiwan has progressed from planning to gradually reaching its goal of increasing the renewable energy share to 20% by 2025. Furthermore, Taiwan has already begun to map out the 10-year-10-gigawatts renewable energy development policy for the decade between 2026 and 2035, to ultimately become a green-energy country.

Passed in 2015, the Greenhouse Gas Reduction and Management Act (溫室氣體減量及管理法), specifies the long-term national carbon reduction goal, which is to reduce emissions to at least 50% of the 2005 emission level by 2050. 2015 was also the year Taiwan declared its Nationally Determined Contribution (NDC), which requires Taiwan to reduce its emission level to 20% below that of 2005 by 2030. In fact, Taiwan is one of very few nations in the world that have legislated long-term reduction goals.

On the same trip, Minister Chang also visited Ms. Joanna Drake, Deputy Director-General of the European Commission's Directorate-General for the Environment. Both exchanged experiences and results regarding plastic recycling (E.g. PV CYCLE in EU).



Looking back at four years of implementing the *Greenhouse Gas Reduction and Management Act*, it is apparent that more control mechanisms and incentive systems are needed. The EPA will therefore initiate reviews and revisions of the Act and focus on strengthening reduction management mechanisms for each sector, improving controls on large emission sources and reporting methods, putting the polluter-pays principle in practice, and reinforcing climate change adaptation actions. In the short term, reduction responsibilities for the second reduction stage (from 2021 to 2025) will be delegated to each sector, and public participation will be ensured throughout the process.

On the same trip, Minister Chang attended the EU-Taiwan Circular Economy Seminar, co-organized by the EPA and the EU, in Brussels, Belgium on 9 December 2019. Besides presiding over the opening with Mr. Timo Pesonen, EU Director-General for Internal Market, Industry, Entrepreneurship and SMEs, Minister Chang also visited Ms. Joanna Drake, Deputy Director-General of the European Commission's Directorate-General for the Environment. Both exchanged experiences and results regarding plastic recycling, design and recycling of solar panels, and circular economy construction.

#### **Future Outlook**

The EPA has planned to hold a series of events in 2020, such as EU Innovation Week and Circular Economy Week, and will invite top EU officials to Taiwan to participate. It will also promote cooperation between industries in Taiwan and the EU and work towards making Taiwan an island with a circular economy.

In the international community, Taiwan is a sincere and responsible friend that is eager to contribute. For years Taiwan has been providing needed assistance to and exchanging experiences with others on public health, medicine and healthcare, agricultural technology, and pollution control. In the future, Taiwan will continue to actively contribute and participate on global issues such as climate change and environmental governance to fulfill its responsibility as a member of the international community. In this way Taiwan will reach out towards the world while letting the world come to Taiwan.

#### Waste

### 2019 Circular Economy Evaluation Results

To encourage businesses that actively support waste utilization and reuse, the EPA focused on plastics in 2019 and did an evaluation of renewable resource utilization, aiming to promote a circular economy. Many excellent examples were used to help other businesses improve technology and enhance reuse of renewable resources. A seminar was held on 31 December 2019 to exchange experiences as well as commend outstanding businesses.

In response to international concern for plastic waste, the EPA carried out an evaluation of plastic waste in 2019. The following were listed as evaluated targets: waste utilization and disposal operators, businesses disposing of regulated recyclable wastes, and reuse operators approved by the EPA. There were seven major areas and 16 detailed indices under three major categories for evaluation, including core, comprehensive, and extra-point indices, while experts and scholars were invited as evaluators who checked submitted data, reviewed documents, and conducted onsite inspections. Three businesses received a twostar (excellent) rating, and two a one-star (very good) rating.

All businesses under evaluation had merits of their own. For instance, the two-star Chung King Enterprise Co., Ltd. is the first in Taiwan to recycle, clean, and reuse wafer carriers instead of manufacturing disposable carriers. Chang Chun Group's artificial resin factory in Hsinchu, which received a one-star rating, turned waste plates used

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for drilling in manufacturing printed circuit boards into raw materials for phenolic molding powder. Other commended businesses were those handling waste plastic for common reuse, such as Horng En Plastics (two-star), Fang Tai Plastics (two-star), and Hong Sheng Environmental Technology (one-star). They were chosen for efforts to improve renewable resource quality by setting their own quality control lab, getting verified by a third party, or becoming certified home and abroad. Their performances on localizing manufacturing, research and development of technology, and opening new channels for renewable products earned high praise from evaluation members. The EPA expressed its hope that businesses will continue to properly collect, utilize and reuse wastes generated from the industrial manufacturing process via systematic planning and design. As circular economy and enhancement of resource utilization efficiency is a global trend, all should aim for sustainable and circular use of resources by gradually elevating circular economy values, collaborating among different industries, and sharing environmental resources.

#### Air

# EPA and MOEA Continue to Reduce Air Pollution of State-run Industries

The EPA and the Ministry of Economic Affairs (MOEA) have been working together to reduce air pollution from state-run industries since 2015. Measures include urging coal-fired power plants to use less coal and more natural gas, installing wet electrostatic precipitators (WESPs) on existing coal-fired generating units, improving coal pulverizers and catalytic reduction equipment, and phasing out flue-gas desulfurization (FGD) facilities. Compared with the total air pollutants emitted by state-run industries in 2016, the emission level in 2018 was 18.2% lower. All programs to ameliorate state-run industries' air pollution are now activated and will be completed between 2020 and 2024, which is estimated to reduce total air pollution by 49.2%.

The EPA said that under its joint efforts with the MOEA, state-run industries have seen reduction of their air pollution. Compared with emissions in 2016, reductions of Taichung Power Plant's emissions reached 24.2% in 2018 and are expected to reach 71.3% when all improvement programs are completed in 2024. As the plant follows steps to decrease the use of coal and increase that of natural gas, the four existing coal-fired generating units will be used only as backup in the future, and the total air pollutant emissions are estimated to go down by 78% once the two units using natural gas begin operation in 2025.

For Hsinta Power Plant, emissions were down by 25.2% and are expected to reach 34% when all improvement programs are completed in 2021. With less use of coal and more of natural gas, and by also assigning coal-fired generating units as backup, air pollutant emissions in 2028 are estimated to see a 90% reduction. After seeing reduction by 14.8% in 2018, China Steel Corp. (CSC) expects to reach

37.9% reduction once their improvement programs are completed in 2020. Afterwards, CSC will go on to modify heating furnaces, construct automated closed buildings for sintering, replace old furnaces in hotrolled steel strip plants with new ones, update ash and dust collecting facilities in its first converter, and add desulfurization equipment for sintering. Moreover, the program to replace old coke furnaces in the first and second stages, as well as early construction to add dry quenching facilities, are both currently underway.

Air pollution control is one of the top missions of the government. Other than revision of the Air Pollution Control Act (空氣污染防制法) on 1 August 2018, the EPA continues to implement the Air Pollution Control Action Plan (空氣污染防制行動方案) passed by the Executive Yuan on 21 December 2017. All programs under the plan, such as air pollution reduction for state-run industries and large-scale corporations and industrial boiler improvements, have already shown early results. Based on the analysis of registration

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of air pollutant emissions from Taiwan's stationary sources, the total emissions went from 323,000 metric tons in 2016 to 271,000 metric tons in 2018, a 16% drop.

Currently, the EPA is drafting the *Air Pollution Control Plan* (空氣污染防制方案) for the period between 2020 and 2023, formulating 26 measures under four

areas to lower emissions of all pollutants. These include stationary source control, mobile source control, fugitive source control, and policy assistance mechanisms. The EPA and all concerned parties will keep working toward air pollution control and air quality improvement, aiming to lower the average national  $PM_{2.5}$  concentration to  $15\mu g/m^3$  by 2023.



#### **Soil & Groundwater**

# World Soil Day Calls for Care and Protection of Taiwan's Treasure

The fifth of December is World Soil Day, a day the world pays tribute to the importance of soil. Soil is the most precious environmental resource on Earth. Taiwan possesses abundant and diverse soil resources, which act as a key player in climate change mitigation. To achieve sustainable soil utilization, the EPA has been improving soil pollution and protecting soil quality while encouraging public engagement on World Soil Day. This is also in line with the UNFCCC's value of building healthy soil, ultimately for sustainable development and its key mitigating functions.

The EPA expressed that despite Taiwan's small area, there are unique and diverse factors that form a multitude of different kinds of soil. In fact, Taiwan can be seen as the world's soil museum for being home to 11 out of the 12 soil orders under the USDA Soil Taxonomy. However, this spectacular world of soil is little known to the public. Rarely do people realize that one centimeter of soil takes thousands of years to form. However, the soil that's 100 centimeters under human feet in areas where major human activities are carried out is easily prone to pollution from human action.

According to the *Soil and Groundwater Pollution Remediation Act* (土壤及地下水污染整治法) passed in 2010, the EPA has investigated potentially risky areas that include farmlands, gas stations, large storage tanks, illegal dumping sites, and abandoned factories. The investigation is followed by remediation work to ensure and maintain soil quality. It all aims to prevent soil and groundwater pollution, achieve sustainable resource utilization, and safeguard public health. In the meantime, the EPA has been working hard to remediate pollution sites. By 31 October 2019, a total of 8,702 sites had been listed, and 68% of that (5,935 sites) had been improved and delisted. It surely is an encouraging result as the EPA continues the work of protecting soil quality.

Soil is closely connected to people's lives, and for years the EPA, through various campaigns, has been reminding the public to care for and protect it.

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The EPA emphasizes that for policy guidance there is the UNFCCC, the ongoing global action against climate change, and also the *Voluntary Guidelines for Sustainable Soil Management* published in 2017 by the UN Food and Agriculture Organization (FAO). Besides listing soil pollution prevention or reduction as one of the nine sustainable soil management indices, the guidelines point out that healthy soil is significant in increasing carbon absorption, lowering greenhouse gas levels, ensuring food production safety, and improving water resource management.

After combining relevant conventions and content discussed among signatories, the EPA is striving

towards promoting soil's function of mitigating climate change and designing sustainable management strategies based on each department's implementation and resources. Moreover, collaboration and research with other countries is underway, with more international experts involved and measures implemented in other countries as references, aiming to intensify soil pollution prevention and promote its environmental functions and utilization. Finally, the EPA is calling on the public to protect this most precious resource and ultimately maintain and foster sustainable and healthy soil.

#### Chemicals

# Illegal Gains from Violating the *Toxic and Concerned Chemical Substances Control Act* Now Collectible

The newly added regulation in the revised *Toxic and Concerned Chemical Substances Control Act* (毒性及關注化學物質管理法), announced on 16 January 2019, sets in place the appropriation of illegal gains obtained from violating the Act, on top of fines. Hence, the EPA accordingly has formulated the *Regulations Concerning Calculation and Estimation of Illegal Gains from Violating the Toxic and Concerned Chemical Substances Control Act* (違反毒性及關注化學物質管理法所得利益核算及推估辦法). It will serve as a calculating and estimating reference for competent authorities, to help uphold justice and confiscate illegal gains.

The EPA explained that fines have been the most commonly applied penalty for past violations of environmental regulations. Fine amounts are based on Article 18 Paragraph 2 of the Administrative Penalty Act (行政罰法). Illegal gains could be considered fines if they exceed the maximum fine. Yet this method lessens or spares penalties for the violators, even though the illegal gains are in fact confiscated. Not only is it in no way environmental justice, but it also does not lead to fair corporate competition. For cases involving long-term or major violations, there may be conspicuous benefits in terms of assets (such as profiting from the use of toxic chemical substances whose use is restricted or banned pursuant to the Act) as well as inconspicuous benefits, or the costs that should have been incurred but were avoided. If these gains are not confiscated, there would be loopholes when penalties are imposed. Enterprises would then calculate the act of violating regulations to be more profitable, further leading to repeated offenses that can not be deterred.

The EPA went on to elaborate on the contents of the Regulations, which include reminding competent authorities of violations for illegal gains are to be confiscated; and the types, calculation, and estimation of conspicuous, inconspicuous, and total profits. Other than data for references, information sources, and confiscation periods, the Regulations also concern the burden of proof, relevant authorities' responsibilities to assist in investigations, experts as assistant auditors, coordination mechanisms, and more. All of the above can serve as bases for competent authorities to confiscate illegal gains and make calculations based on the actual circumstances of individual cases.

#### Chemicals

# **Results of Food Safety Policies Examined to Enhance Control**

On 10 December 2019, the Executive Yuan's Office of Food Safety held a meeting to review the results of five major food safety policies and enhance Taiwan's mechanisms for food safety management. Suggestions from all sides were collected in order to improve relevant policies and maintain food safety for the public.

The meeting was also attended by the Ministry of Health and Welfare, the Council of Agriculture, the EPA, and the Ministry of Education. Other invitees included members of the Executive Yuan Food Safety Committee, experts, scholars, legislators, as well as representatives from civic and industry organizations.

Looking back on the 2018 meeting, policies concerning care and handling of eggs, ingredient control for liquid eggs, use of domestically produced, traceable produce and food for school lunch were all well recognized by the attendees. Many suggestions as well as references for future policies were offered. There were many exchanges in this year's meeting concerning the following: reviewing the five major food safety policies' implementation and results, sanitary control for the breakfast industry, and strengthening source control in agriculture. Other topics included pushing for expedited mass spectrometry, school lunch quality control measures and future improvement, source control and risk communication for chemical substances with potential risks on food safety. All participants showed determination to safeguard Taiwan's food safety.



Director General Yein-Rui Hsieh of the Toxic and Chemical Substances Bureau (TCSB) (second from the left) stated that the source control for chemical substances with potential risks is important for food safety and for preventing them from flowing into the food supply chain.

#### Chemicals

# Toxic Chemical Substances Labeling Regulations Amended

According to the *Toxic and Concerned Chemical Substances Control Act* (毒性及關注化學物質管理法)) amended and promulgated on 16 January 2019, the EPA, after considering the implementation for advanced practices and responding to the newly added concerned chemical substances, amended the *Toxic Chemical Substances Labeling and Materials Safety Data Sheets Regulations* (毒性化學物質標示及安全資料表管理辦法). Furthermore, the name of the Regulations was also changed to the *Toxic Chemical Substances Labeling and Materials Regulations* (毒性及關注化學物質標示與安全資料表管理辦法).

The EPA stated that in case containers and packaging of items are not suitable for labeling due to special factors such as area, shape or material, the alternatives of folding, hanging or labeling on the outer packages were added in the regulations. Relevant labels and safety data sheets of the toxic and concerned chemical substances should be in Chinese to display information that is readable and fully comprehensible by the public to ensure transmission in between the supply chains. Meanwhile, given the *Ministry of Labor's Hazardous Chemicals Labeling* and General Rules (危害性化學品標示及通識規則),



it is now mandatory for handlers to frequently review data sheet contents, update them at least once every three years, and keep previous sheets as record for future reviews.

The EPA stressed that to reduce the administrative work of repeatedly setting up announcement boards or preparing safety data sheets, the announcement boards and contents, if also required by other regulations for these substances, must be set up together accordingly. The same safety data sheets can be used for toxic and concerned chemical substances, whose hazardous ingredients, uses, and hazards are the same even though they have different concentrations. Concerning revisions for mandatory labeling and safety data sheets, a one-year buffer period is given.

CHS labeling example: the figure means "flammable liquid - Liquid with flash point not higher than 93 ℃

#### **Soil & Groundwater**

# Taiwan and Korea Combine Efforts in Soil and Groundwater Protection Expo

A 15-member delegation from South Korea was in Taiwan from 16 to 20 December 2019 for events related to the Taiwan-South Korea Memorandum of Understanding (MOU) on Soil and Groundwater Protection. Events included the MOU's 10th Steering Committee Meeting and technical forums. Led by Young-Hoon Kim, Director of South Korean Ministry of Environment (MOE) Integrated Water Management Bureau, the delegates included Korean experts and scholars of soil and groundwater protection from both the public and private sectors. This bilateral MOU has set a foundation for international cooperation among different markets and regions.

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Members of the MOU Steering Committee from Taiwan and South Korea gather for an annual meeting

The EPA and the South Korean MOE signed the Taiwan-South Korea MOU on Soil and Groundwater Protection on 27 August 2012. It has opened up opportunities for technological exchanges on soil and groundwater protection issues and built a mutually beneficial cooperation mechanism in the international market.

EPA Executive Director Huichen Chien noted that. in regard to Taiwan-South Korea technological cooperation on soil and groundwater protection, the annual steering committee meeting continued to create win-win situations via this platform. Moreover, it further strengthened official relations and facilitated exchanges and sharing of environmental policies and technological innovations on both sides. In the meantime, both the EPA and the MOE have jointly promoted multiple industrial and academic cooperation programs that cover diverse pollution sites' management, gas station pollution remediation, onsite and offsite remediation for petroleum products, and remediation and control of heavy metal pollution of groundwater. Both sides have also gone from learning from each other to progressing together. The ongoing joint research on smart groundwater control is a good example of this.

As of the end of November 2019, there were a total of 8,713 polluted sites in Taiwan, and 5,980 sites, accounting for 69%, have completed remediation and been taken off the control list. The remaining 2,733 sites (31%) are still on the pollution control list. Furthermore, 2,349 sites under control are farmlands. All polluted farmlands are expected to be delisted by the end of 2021. The regional competent authorities are in charge of supervising businesses on their remediation work at industrial pollution sites based on the *Soil and Groundwater Pollution Remediation Act*.

The 2019 exchange activities began in the morning on 17 December with Executive Director Huichen Chien and Director Young-Hoon Kim going through the items on the MOU together. On 18 December, Taiwanese and Korean experts and scholars attended the technological forum and had extensive discussions on academic and industrial cooperation programs, innovative technology of soil and groundwater investigation and remediation. Both countries are able to combine their respective research capacity via the forum. For instance, Taiwan has expertise in onsite remediation technology, while South Korea's strength lies in offsite treatment, and such occasions offered a chance to find ways to cooperate and mutually benefit each other.

Finally, under the MOU structure, Taiwan and South Korea have gained understanding of each other to an extent by exchanging experiences on soil and groundwater protection management, policies and technology. It is hoped that both countries' capacity in pollution remediation will increase, and these long-term bilateral achievements will make a solid foundation for potential regional cooperation in the future.

#### **General Policy**

# New Regulations, Major Policies, and Major Construction to Be Completed or Commenced in 2020

o simplify administration for the public's convenience, the EPA announced a raft of new environmental measures that entered into effect on 1 January 2020. These include (shown in the below table):

Table: New regulations, major policies, and major construction to be completed or commenced in 2020

Items	Contents
1. Onsite collection will be fully implement- ed by the Recycling Care Program in 2020	<ul> <li>To lessen individual businesses' burdens and expedite cleaning speed, the EPA has asked all county and city environmental bureaus to provide onsite collection at individual businesses' storage sites that need assistance.</li> </ul>
	• The measure above will take effect starting 1 Jan- uary 2020.
2. The Subsidization Method for Replacing Old Motorcycles With New Ones ( 機車汰 舊換新補助辦法 ) will be implemented.	• Subsidies will be expanded for replacing old mo- torcycles (manufactured before 30 June 2007) with electric motorcycles or fuel-burning motorcy- cles that comply with the seventh emission stan- dards.
	<ul> <li>NT\$1 billion is expected to be set aside to reduce air pollution generated by old vehicles. Purchase of large heavy electric motorcycles or fuel-burning motorcycles that comply with the seventh emission standards to phase out old motorcycles will be subsidized with NT\$5,000 in 2020 and NT\$3,000 in 2021. Purchase of electric motorcycles or electric-power auxiliary bicycles, except for large heavy types, is subsidized with NT\$3,000 in 2020 and NT\$1,000 in 2021</li> </ul>
	• Subsidization will be available between 1 January 2020 and 31 December 2021.
3. Sales of toxic and concerned chemical substances are banned from online stores	<ul> <li>It is prohibited to sell or transfer announced toxic or concerned chemical substances via online shopping or trading platforms that do not show client identification. Liabilities are added for platform businesses that violate the rules.</li> <li>The ban will take effect on 16 January 2020.</li> </ul>

Items	Contents
4. Gravel-contact treatment project in Jing- tong, Yunlin	<ul> <li>By using natural purification, the project aims to cut down water pollution in Shinhuwei Stream in order to provide residents with leisure areas. Treated water can be used for irrigation. The project is expected to be completed by February 2020.</li> </ul>
5. Based on the revised <i>Targets and</i> <i>Implementation Methods for Single-use</i> <i>Utensil Ban</i> (免洗餐具限制使用對象及實 施方式) announced on 8 August 2019, de- partment stores, shopping malls, and retail stores (not including chain convenience stores and chain fast food restaurants) are not to provide any single-use utensils made of any materials (including cups, bowls, plates, saucers, meal boxes, plates placed inside meal boxes to contain food, chopsticks, spoons, knives, forks, and stir- rers) when consumers eat at the provided food venues.	<ul> <li>Effective starting 1 January 2020 in department stores and shopping malls in Taipei City, New Tai- pei City, Taoyuan City, Taichung City, Tainan City, Penghu County, Yilan County, and Hualien Coun- ty.</li> <li>Effective starting 1 February 2020 in the retail in- dustry, department stores and shopping malls in Taitung County.</li> <li>Effective starting 1 March 2020 in department stores and shopping malls in Kaohsiung City.</li> <li>Effective starting 1 May 2020 in department stores and shopping malls in Hsinchu City.</li> </ul>
Food is not to be placed on plates that have plastic bags over them. Regional competent authorities will first submit pro- bosed implementation dates. The mea- sures above will take effect after the dates are approved by the central government.	<ul> <li>Effective starting 1 July 2020 in department stores and shopping malls in Keelung City.</li> <li>Effective starting 1 January 2020 in the retail in- dustry in Yilan County and Hualien County.</li> <li>Effective starting 1 May 2020 in the retail industry in Taipei City, New Taipei City, Kaohsiung City, Taoyuan City, and Hsinchu City</li> <li>Effective starting 1 July 2020 in the retail industry in Changhua and Keelung City.</li> </ul>

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