

Major Environmental Policies

April 2023

1. Feature Article : EPA to Become Ministry of Environment with Passage of Organic Act

Taiwan's environmental authority reached a new milestone on 9 May 2023 as the Legislative Yuan passed the third reading of various legislations regarding the organization of the Ministry of Environment and its third-level agencies (institutes). The regulations were promulgated by President Tsai Ing-wen on 24 May. Now the EPA is to transform into the Ministry of Environment in conjunction with the establishment of four third-level agencies, the Climate Change Administration, Resource Circulation Administration, Environmental Management Administration, and Chemicals Administration. The National Environmental Research Academy will be established as well. The Democratic Progressive Party (DPP) Caucus has also raised a resolution, proposing to establish a Natural Resources Integrated Governance Task Force under the jurisdiction of the Executive Yuan in the future.

EPA Minister Tzi-Chin Chang: Striving to launch operation of the Ministry of Environment by the end of the year

In 2022, the Executive Yuan made the decision to change the EPA into the Ministry of Environment, aiming to achieve the policy goals such as net-zero emissions by 2050, resource circulation, and toxic waste controls. On 9 May, the Legislative Yuan passed the third reading of the *Ministry of Environment Organic Act* (環境部組織法) as well as the draft legislation concerning the organization of four administrations and one institute. The regulations were promulgated by President Tsai on 24 May.

Minister Tzi-Chin Chang expressed his excitement about witnessing the establishment of the Ministry of Environment and is determined to officially launch the ministry and its four administrations and one institute by the end of this year. He further explained that when the EPA was first founded in 1987, he was transferred from Taipei City Environmental Protection Bureau to the EPA, and for him the formation the Ministry of Environment is a moment of great excitement. Due to the restructuring of existing units to form the Ministry of Environment, it is essential that all ongoing programs

continue onward seamlessly. Therefore, efforts will be made to officially launch operations of the Ministry of Environment and its four administrations and one institute before the end of this year.

In response to future increase in workload and personnel, the most urgent task at hand is to expand the office space. As for the personnel increase, the EPA currently has 743 official staff members and will be adding another 264 after the establishment of the ministry, bringing the total to 1,007. Among them, the official staff of the Climate Change Administration will go from 26 to 98.

Five third-level agencies will be set up under the ministry. The Climate Change Administration will be responsible for greenhouse gas reduction and climate change adaptation. The Resource Circulation Administration will handle at-source waste reduction, recycling, clearance, and disposal. The Chemicals Administration will be in charge of prevention and response to toxic and chemical substance disasters, as well as chemical substance control. The Environmental Management Administration will focus on environmental law enforcement and remediation of soil and groundwater pollution. The National Environmental Research Academy will oversee environmental research, testing, and management and personnel training regarding certification organizations.

After the establishment of the ministry, the existing Environmental Analysis Laboratory and Environmental Professionals Training Institute will be combined to become the National Environmental Research Academy. In the initial stage, it will join forces with other research institutions such as the Academia Sinica, the Central Weather Bureau, the National Science and Technology Center for Disaster Reduction, and various universities and institutes according to their respective expertise in different fields. This collaboration aims to expand the research scopes and ensure that their research reports align with national regulatory reports.

Five prospects of the Ministry of Environment

Facing the international trend of net-zero emissions and global environmental changes, the government has shifted its focus from "natural resources management to "actively responding to the global environmental situation and creating transformation opportunities for Taiwan." The efforts mainly concern integrating responsibilities and authorities, expanding its operations, and systematically

addressing the five major environmental issues of climate change, resource circulation, chemical substances control, environmental quality management, and strengthening of environmental research. In the future, the Ministry of Environment envisions achieving the goals listed below.

1. The Ministry of Environment will actively respond to climate change by: strengthening the formulation, promotion, and implementation of national policies; implementing the supervision and evaluation of phased control targets; responding to international carbon border taxes and the decarbonization trend of supply chains; accelerating carbon pricing, strengthening the carbon inventory system and seeking decarbonization technologies and strategies, and; mitigating international pressure by assisting domestic industrial transformation.

2. The Ministry of Environment will implement circular economy policies, waste reduction, and reuse by coordinating management powers and responsibilities of all ministries, levying funds for resource circulation, recovering energy from waste, and inventorying and analyzing resources in waste. It will promote new measures such as circular procurement, sustainable consumption, and environment-friendly design of products to achieve the reduced use of primary raw materials and improve resource use efficiencies so as to reduce environmental loading and gradually advance towards the goals of sustainable resource circulation and zero waste.

3. The Ministry of Environment will expand the scope of chemical substance management to cover all chemical substances handled in Taiwan to achieve the goals of “extending source management to borders and reducing breakpoints to deter violations,” “integrating disaster prevention resources and strengthening responses to reduce disaster losses,” “fully convey hazard information to reduce exposure to health risks,” and “transform to sustainable and non-toxic use of resources to align management with international conventions.”

4. The Ministry of Environment will strengthen environmental law enforcement using digital technologies; use smart technologies and the internet to handle general waste in diverse ways, and; improve environmental cleanliness and sanitation management. It will sustainably manage soil and groundwater resources through improving the certification system for surveying and remediation technologies and increase soil and groundwater regeneration and carbon sink capacities. It will strengthen pollution

source control to build low-risk living environments and develop healthy and sustainable communities.

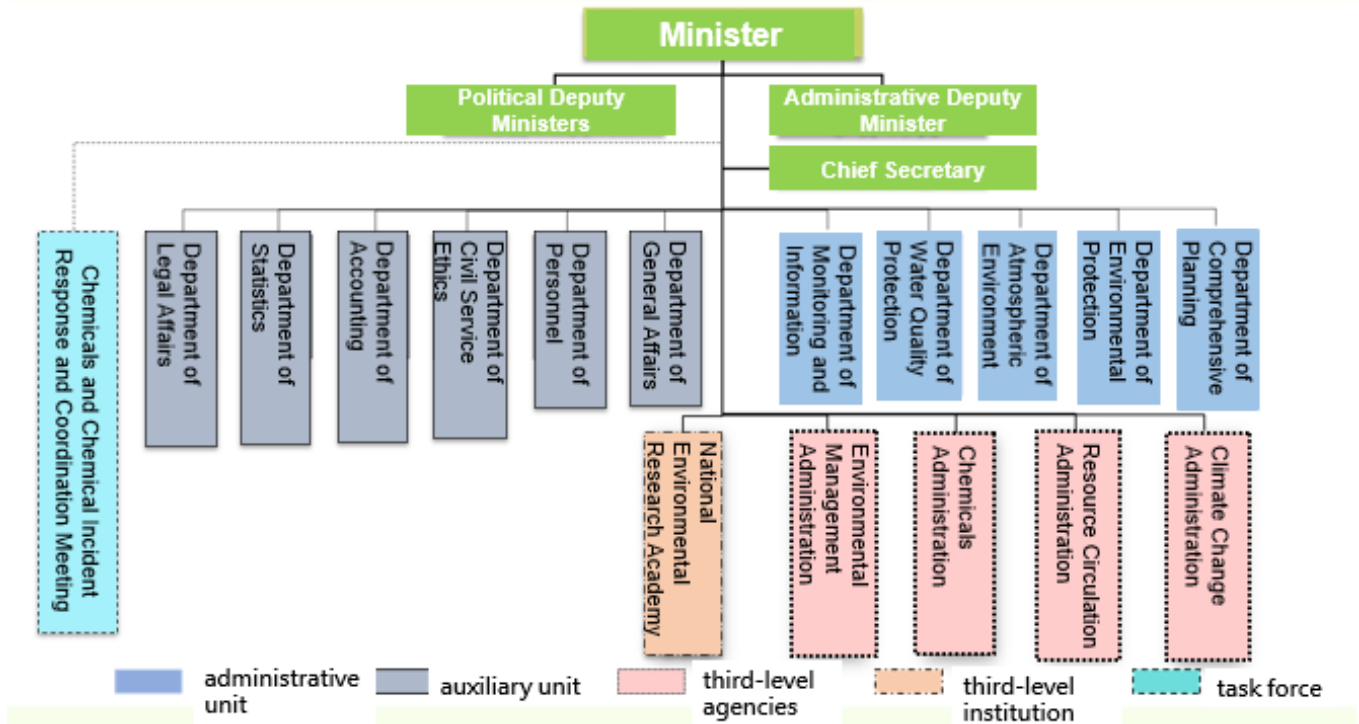
5. The Ministry of Environment will promote research on climate change and resource circulation, improve environmental risk assessment and management technologies, facilitate net zero transformation and cultivate professional talent, and work with research resources nationwide to establish an environmental think tank to provide long-term and stable support for overall national environmental policies.

Natural Resource Integration and Governance Task Force to be set up under the Executive Yuan

While the *Organic Act of the Ministry of Environment* (環境部組織法) was passed on its third reading, the DPP Caucus proposed the establishment of a Natural Resource Integration and Governance Task Force under the Executive Yuan to address controversies surrounding natural resource management raised by civic organizations and the public. The task force will include relevant competent authorities to formulate overarching governance directions. Ministers without Portfolio will be assigned to run the task force and convene meetings, and appropriate staff units will assist in planning and implementation. The task force will hold regular meetings to strengthen interdepartmental coordination, facilitating the integrated and sustainable management of natural resources.

The EPA stated that after its restructuring into the Ministry of Environment, it will be able to align with international carbon reduction efforts, coordinate responsibilities of various ministries for resource recycling, and establish disposal facilities for industrial waste. Policies related to green economy and sustainable development will be carried out more effectively. Also, through continuous environmental education and advocacy, the EPA aims to raise public awareness about the importance of environmental protection, so that all of society can jointly work towards net-zero emissions by 2050 and preserve beautiful living environments for future generations.

Ministry of Environment (MOENV)



2. Regulations to Be Revised as Responsibility of Managing Automobile Exhaust Inspections Returns to EPA

The EPA preannounced revisions to six regulations: the *Air Emission Standards for Mobile Sources* (移動污染源空氣污染物放標準), the *Inspection and Handling Measures for Motor Vehicle Emissions* (交通工具排放空氣污染物檢驗及處理辦法), the *Identification and Inspection Implementation Method for In-Use Automobiles* (使用中汽車之認定及檢驗實施方式), the *Regulations for Setting Up and Managing Inspection Stations for Emissions of Gasoline and Alternative Clean Fuel Vehicles* (汽油及其替代清潔燃料引擎汽車排放空氣污染物檢驗站設置及管理辦法), the *Targets, Regions, Frequencies, and Deadlines for Regular Inspection of Emissions of Gasoline and Alternative Clean Fuel Vehicles* (汽車實施排放空氣污染物定期檢驗之對象、區域、頻率及期限) and the *Targets, Regions, Frequencies, and Deadlines for Regular Inspection of Emissions of Diesel and Alternative Clean Fuel Vehicles* (柴油及其替代清潔燃料引擎汽車實施排放空氣污染物定期檢驗之對象、區域、頻率及期限).

The preannounced revisions to the six regulations and announcements regarding automobile exhaust inspections will require gasoline-fueled automobiles to undergo

an exhaust inspection every two years beginning from the time when a vehicle is eight years old. If a vehicle fails an inspection, it must undergo yearly inspections for two consecutive years. Only when the vehicle passes all inspections during this two-year period can the vehicle return to a biennial inspection cycle. If a diesel-fueled automobile failed an inspection during regular inspections, non-periodic inspections or any inspections competent authorities notify the vehicle owners to undergo, in addition to addressing the issue of non-compliance, the vehicle must undergo regular yearly inspections for two consecutive years starting from the following year. If the vehicle passes the emissions inspections for two years in a row, it will be exempt from regular yearly inspections starting from the third year.

To be in line with the plan of the Ministry of Transportation and Communications to remove the requirement to undergo exhaust testing during car license applications and regular inspections in the *Road Traffic Safety Rules* (道路交通安全規則) and to return the responsibility for managing automotive emission inspections to the EPA, the *Targets, Regions, Frequencies, and Deadlines for Regular Inspection of Emissions of Gasoline and Alternative Clean Fuel Vehicles*, the *Targets, Regions, Frequencies, and Deadlines for Regular Inspection of Emissions of Diesel and Alternative Clean Fuel Vehicles* and the *Regulations for Setting Up and Managing Inspection Stations for Emissions of Gasoline and Alternative Clean Fuel Vehicles* are to be formulated. In addition, corresponding amendments will be made to the *Air Emission Standards for Mobile Sources*, the *Inspection and Handling Measures for Motor Vehicle Emissions*, and the *Identification and Inspection Implementation Method for In-Use Automobiles*.

To facilitate vehicle inspections for the public, the EPA plans to commission highway supervisory authorities and authorized vehicle inspection stations to carry out the inspections for gasoline-powered automobiles. Diesel-powered vehicles, on the other hand, will be inspected at diesel vehicle chassis dynamometer smoke testing stations. The inspection locations and methods for gasoline and diesel vehicles remain the same as the current ones with the hope that the inspection procedures can be adjusted without altering the public's existing habits.

3. Revised VOC Standards for Polyurethane Coating Industry Promulgated

On 25 April 2023, the EPA promulgated the amendment to the *Volatile Organic Compound Air Pollution Controls and Emission Standards for the Polyurethane Coating Industry* (聚氨基甲酸酯塗布業揮發性有機物空氣污染管制及排放標準), (hereinafter referred to as the "Standards"). The amendment added emission pipeline volatile organic compound (VOC) standards, emission reduction rates, and installation requirements for gas collection facilities, and granted existing operators a two-year grace period to make improvements.

VOCs are precursors to ozone and fine particulate matter, as well as one of the main causes of odor pollution. Some VOCs are also hazardous air pollutants that can have long-term health effects on humans. To encourage the polyurethane coating industry to adopt water-based processes and strengthen overall VOC control, relevant revisions have been made in this amendment. It is estimated that the improvements following the promulgation will reduce annual VOC emissions by 775 metric tons, an equivalent of 90% of the average VOC emissions of an oil refinery (821 metric tons).

The amendment to the Standards focuses on four key points: promoting source reduction, effective exhaust gas collection, stricter emission standards, and enhanced odor control. The details are as follows:

1. Promoting source reduction: Operators are encouraged to develop water-based processes, and polyurethane coating processes are regulated. However, operators using water-based or solvent-free processes (and not using dimethylformamide) can be excluded from the regulation if they submit supporting documents that are approved by local competent authorities.
2. Effective exhaust gas collection: Installation specifications for gas collection equipment were added, requiring the installation of enclosed gas collection equipment and enclosing hoods to enhance the collection of exhaust gases and channel the gases to pollution-control equipment for treatment to reduce the emission of pollutants.

3. Strengthening emission standards: Emission standards for VOCs from exhaust pipes and the treatment efficiency of pollution control equipment were added, aiming to improve end-of-pipe treatment and strengthen the control of VOCs.

4. Strengthening Odor Control: Control measures were enhanced to reduce odor complaints from nearby residents; the control limits for odor-causing pollutant emissions from exhaust pipes were added; and regulation was enhanced for newly established businesses.

Due to the multitude and complexity of air pollution sources, the EPA has been actively promoting air pollution prevention programs in recent years (from 2020 to 2023). Through multiple measures, efforts to improve air quality have shown positive results, with the annual average concentration of PM_{2.5} gradually decreasing nationwide, meeting the targets. In response to the next control phase, which will focus on controlling O₃ (ozone), this amendment aims to strengthen the reduction of ozone precursors, particularly VOCs, to continue improving air quality.

The EPA emphasizes that this amendment not only specifies the regulated targets and directly exempts water-based and solvent-free processes from the regulation, but also provides appropriate grace period for operators to make improvements in the existing processes so as to respond to stricter gas collection equipment and emission standards. The aim is to strengthen the control of VOCs and achieve a balance and mutually beneficial situation between the environment and the development of the industry.



Enclosed negative pressure containment for the coating area of a polyurethane synthetic leather plant



Gas collection equipment in the coating area of a polyurethane synthetic leather plant

4. Preparatory Office of Climate Change Administration Established on Earth Day

The unveiling ceremony for the Preparatory Office of Climate Change Administration (POCCA) was held at 10:00 a.m., 22 April, Earth Day. Distinguished guests including Premier Chen Chien-jen, Secretary-General Li Meng-yen, and Minister without Portfolio Lo Ping-cheng were present to witness this significant milestone that marked the initiation of Taiwan's efforts in addressing climate change.

The EPA Minister Chang Tzi-Chin stated that due to the rapid growth of tasks following the promulgation of the *Climate Change Response Act* (氣候變遷因應法) on 15 February 2023, a one-step approach was taken to establish the POCCA. This was done to promptly address the manpower needs for urgent tasks and align with the preparations for the establishment of the Climate Change Administration.

Premier Chen Chien-jen stated that the establishment of the POCCA is crucial for Taiwan's climate change action. It not only signifies the nation's determination to achieve net-zero emissions but also represents a milestone in industrial transformation and national sustainable development. Premier Chen cited the example of proactive government measures taken previously that had mitigated the impact of drought in central and southern Taiwan, highlighting "the heaven helps those that help themselves" and the importance of early adaptation and preparedness. The work of the POCCA will enhance Taiwan's resilience in responding to climate change.

In his speech, Minister Chang expressed his gratitude to Premier Chen for his guidance, as well as the assistance of Secretary-General Li Meng-yen and Minister without Portfolio Lo Ping-cheng of the Executive Yuan. He also acknowledged the coordination and communication efforts of relevant agencies such as the Directorate-General of Personnel Administration and the Directorate-General of Budget, Accounting and Statistics, which facilitated the establishment of the POCCA.

Minister Chang emphasized that climate change is a stringent global challenge faced by all. In 2021, President Tsai declared unequivocally that Taiwan is aligned with the global community in aiming for net-zero transition by 2050. Over the past two years, Taiwan has drawn a roadmap for achieving net-zero emissions and has formulated the *Climate Change Response Act*. This act not only provides the legal foundation for the goal of net-zero emissions by 2050, but also offers clear directives for climate governance, climate change adaptation, carbon pricing promotion strategies, and promoting public participation.

Regarding the concern of various sectors about when details such as follow-up inventories and carbon pricing mechanisms will be finalized, Minister Chang mentioned that the global response to climate change is moving rapidly. For example, the European Union's Carbon Border Adjustment Mechanism (CBAM) is set to be implemented in October this year, and there is an increasing demand for decarbonization in supply chains. Therefore, prior to the establishment of the Ministry of Environment, it was necessary to establish the POCCA to increase manpower and ensure the timely implementation of various subsidiary laws under the *Climate Change Response Act*, as well as tasks such as carbon inventory, carbon pricing, and climate change adaptation.

"Carbon pricing is an economic instrument rather than a fiscal tool," explained Minister Chang. As people are most concerned about the issue of carbon pricing, he said that the purpose of its implementation is to promote substantial emission reduction rather than focusing on the carbon tax collected or causing cost shifting. The EPA is currently planning the carbon emission inventory and collection mechanism, and the draft proposal is expected to be released for public discussion in the second half of this year. The specific amounts of carbon taxes will be discussed by the review committee in the first half of next year, with collection scheduled to begin in the second half of the year.

This timeline will align with the schedule of the Carbon Border Adjustment Mechanism (CBAM).

To facilitate the preparation and transition of the "Climate Change Administration" under the Ministry of Environment, the Preparatory Office has established four divisions with a total of 15 sections: Comprehensive Planning Division, Emissions Management Division, Emissions Reduction Promotion Division, and Adaptation and Resilience Division. In addition to the existing 48 personnel from the Office of Climate Change of the EPA, the manpower will continue to be increased to a total of 84 personnel.



Unveiling ceremony for the Preparatory Office of Climate Change Administration

5. Climate Change Response Act Briefings Reap Feedback on GHG Inventory and Verification Enhancement

In response to the amendment to the *Greenhouse Gas Reduction and Management Act* (溫室氣體減量及管理法), which has passed its third reading, and renamed as the *Climate Change Response Act* (氣候變遷因應法) and promulgated by President Tsai Ing-wen, the EPA has organized three sessions of the "Climate Change Response Act and Enhanced Industrial Greenhouse Gas Inventory Management Approach" briefing, with the first session held on 26 April. In addition to explaining the follow-up implementation plans, the session also provided updates on the progress of

inventory verification operations for the current year. Feedback from various sectors was gathered to gain an understanding on practical implementation challenges and to assess potential adjustments for future legislative amendments.

The EPA stated that a tiered management approach is taken in the *Climate Change Response Act* (hereinafter referred to as the Climate Act) for inventory and verification of emissions from emission sources. Since the implementation of the *Greenhouse Gas Reduction and Management Act* (hereinafter referred to as the GHG Act), inventory and verification adjustments and enhancements are needed. Therefore, the EPA will undertake the revision of the *Management Regulations Governing Greenhouse Gas Emission Inventories and Registration* (溫室氣體排放量盤查登錄管理辦法). The key points of the revision are as follows:

- 1) The inventory and verification of greenhouse gas emissions are to be completed in stages to ensure appropriate allocation of verification capacity.

Current regulations require enterprises to complete the inventory and registration of greenhouse gas emissions for the previous year by 31 August each year. They are required to upload the greenhouse gas emissions inventory, inventory report, verification statement, and verification summary report to the designated information platform. The greenhouse gas emissions inventory and inventory report are submitted by the enterprises after completing the inventory, while the verification statement and verification summary report need to be submitted by verification organizations after conducting the verification. Currently, verification operations concentrate in the first half of the year, and as a result, enterprises cannot upload their emissions inventories and inventory reports if the verification processes are not yet completed. In response to the tiered management approach for inventory and verification under the Climate Act, the completion timeframe for inventory and verification operations will be adjusted to provide sufficient time for industries to comply.

- 2) The greenhouse gas emissions information platform is to be enhanced by adding a digital generation function for inventory reports, improving the efficiency of enterprises in conducting inventories.

The content of the inventory report mainly includes the purpose of the inventory, an introduction to the enterprise, inventory boundary setting, emission source identification, emission quantification, and data quality management. The completion

of inventory reports by enterprises is not only required by the inventory registration and management regulations, the reports can also be provided to customers upon request. In the future, a feature to digitally generate inventory reports will be developed based on the required content of the report, to assist enterprises in completing the inventory report more efficiently.

- 3) A different version of Global Warming Potential (GWP) is to be adopted and the emissions calculated with different versions of GWP will be presented in a reference table according to the needed greenhouse gas emissions in the supply chains provided by enterprises.

When the United Nations Framework Convention on Climate Change (UNFCCC) requested countries to submit their national inventories, it mandated the adoption of IPCC AR5 GWP by 31 December 2024. Therefore, this amendment requires enterprises to adopt the IPCC AR5 version of GWP in calculating their greenhouse gas emissions in accordance with the convention's mandate. However, enterprises conducting greenhouse gas inventories may also adopt the IPCC AR6 version of GWP in accordance with the requirements of other international organizations. As a result, there are plans to provide a reference table showing greenhouse gas emissions calculated using different versions of GWP to flexibly assist industries in adapting to these variations.



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Briefing on Climate Change Response Act and enhanced industrial greenhouse gas inventory management approach

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指引)。This guide provides the public with practices for leading a net-zero green lifestyle, encouraging investment in our planet and collective action. Through changes in the daily life, small actions can accumulate into significant changes, leading to a reduction in carbon emissions and the transformation of industries.

Currently, there are various international guides promoting green living, including the United Nations' *The Lazy Person's Guide to Saving the World*, the United States' *Green Living Handbook*, and Japan's *Zero Carbon Action 30*. These guides list actions individuals can take in different contexts and situations to reduce carbon emissions. The EPA has studied international practices as reference and collaborated with various agencies to develop the *Net-Zero Green Living Action Guide*. This guide offers the public simple and easy to understand practices that enable them to embrace net-zero green living and reduce carbon emissions in their daily lives.

In response to the theme of this year's Earth Day, which was "Invest In Our Planet," Earth Day Network proposed action guidelines in six areas: climate literacy, ending plastic pollution, reforestation and tree planting, voting Earth, global cleanups, and sustainable fashion. To align with the theme and action guidelines, the EPA responded with "net-zero green living promotion," the release of *Net-Zero Green Living Action Guide*, and "public environmental literacy enhancement," aiming to invest in the planet with the public.

"Net-zero Green Living" is one of the 12 key strategies promoted by Taiwan to achieve net-zero emissions by 2050. *Net-Zero Green Living Action Guide* released this time focuses on six areas of life: "Zero Waste Low Carbon Diet (Food)," "Environmentally Friendly Green Fashion (Clothing)," "Improved Living Quality (Housing)," "Low Carbon Transportation Network (Transportation)," "Sustainable Tourism and Leisure (Recreation)," and "Use Instead of Own (Purchasing)." Under each area of life, specific practices are presented. For example, "Zero Waste Low Carbon Diet (Food)" includes practices such as "eat local, eat seasonal, low carbon cooking," "zero waste of food materials," "bring your own eco-friendly tableware," "reduce food waste," and "choose green restaurants." For each theme, the guide provides concrete explanations for "Why?" "What to do?" "What materials and tools are needed?" and "What resources are saved?" to help people live green and reduce carbon.

In response to the theme of this year's Earth Day, the EPA held a press conference at the The Red House in Ximending titled "Investing in the Earth, Practicing Net-zero Green Living Together." The purpose of the event was to promote public awareness and encourage individuals to make changes related to food, clothing, housing, transportation, recreation, and purchasing in their daily lives, driving transformation in industries.

Three sessions of Net Zero Green Living Dialogue Forums were held. Experts, scholars, representatives from businesses, communities, and environmental protection bureaus were invited to share and exchange ideas on the six major aspects mentioned earlier. Through direct dialogue, the content of *Net-Zero Green Living Action Guide* was explained, enabling the public to gain a better understanding of the spirit and content of net-zero green living.

Net-Zero Green Living Action Guide can be downloaded at <https://greenlife.epa.gov.tw/about>.

The website of the 2023 World Earth Day: <https://www.earthday.org/earth-day-2023/>



Press conference for the release of *Net-Zero Green Living Action Guide*

7. Earth Day Fair Offers Green Points for Participants Learning about Net-zero Green Living

The theme of this year's Earth Day continued from 2022's "Invest in Our Planet," emphasizing the urgent need for "protecting the earth" as not only everyone's responsibility but also a pressing matter. The EPA invited the public to participate in winning "green points" at the Taipei Zoo on 22 April, calling on individuals to invest in the environment through lifestyle changes and collectively practice "net-zero green living."

To promote collective practice of net-zero green living among the public, on Earth Day, 22 April, the EPA conducted face-to-face interactions with people at the "World Earth Day Fair" held at the Taipei Zoo. Starting from the question of "Why?" the EPA staff guided individuals on how to practice net-zero green living. They focused on various aspects of life, such as "a zero-waste low-carbon diet," to guide the public to implement net-zero green living and carbon reduction concepts in simple ways.

The EPA further enhanced the festivities at the fair by offering limited-time "green points" as a bonus. Anyone who visited the EPA's "Net-zero Green Living" booth and participated in the interactive quizzes on net-zero green living actions was eligible to receive an additional 10,000 green points (equivalent to NT\$100 in eco-shopping credits) as an on-the-spot reward. Many people chose to take various forms of low-carbon transportation such as the metro or buses to reach the event venue.

The "green points" have diverse and extensive uses. They can be exchanged or used as discounts for eco-friendly products that bear the Green Mark, carbon footprint labels, and various environment-friendly certifications. They can also be used for discounts on services provided by green industries such as eco-friendly hotels, eco-travel agencies, ecological recreational and environmental education facilities, and green restaurants. By collecting green points, people found it easy to practice net-zero green living. For more information on the use of green points, visit the Green Point website at <https://lihi1.com/rRYz7/epa>.

In 2021, Taiwan officially declared the goal of "net-zero emissions by 2050." According to research by the International Energy Agency (IEA), behavioral changes in daily life and improvements in material efficiency can reduce carbon emissions by 8%.

Environment-friendly actions stemming from "net-zero green living" are crucial in achieving the 2050 net zero goal. For more information on net-zero green living, follow

the EPA's Facebook page or visit the EPA's National Green Life Movement website at <https://greenlife.epa.gov.tw>.



Promoting net-zero green living on 22 April 2023 to echo the Earth Day theme "Invest in Our Planet" and the 2050 vision of living in harmony with nature

8. Meetings Held to Urge Enterprises to Practice Voluntary Pollution Prevention and Control

To effectively prevent environmental crimes and illegal activities, the Environmental Protection Administration (EPA) of Taiwan continuously improves its environmental law enforcement strategies and methods. Through cross-sector collaboration among environmental, police, prosecution, investigation, and taxation agencies, the EPA has successfully uncovered multiple cases of organized environmental crimes spanning across different counties and cities. In recent years, the EPA has been actively promoting industry self-management, guiding businesses to proactively comply with the law and instilling the concept that pollution prevention is also profitable. This concerted effort aims to enhance the overall environmental quality.

The EPA stated that based on past enforcement experience, violations by businesses can be divided into two categories: those who knowingly break the law but hope to escape punishment, and those who unintentionally violate environmental regulations due to a lack of familiarity with them. In order to guide businesses in self-examination and emphasize the importance of compliance, in October of 2022 the EPA invited organic solvent processing industry operators from Central Taiwan to participate in the "Industry Self-Management and Pollution Prevention Promotion Seminar." During the

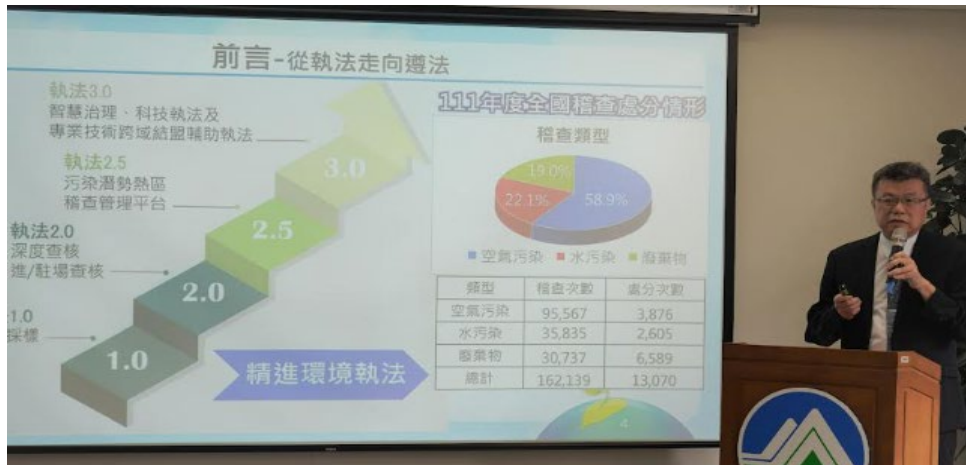
event, to reinforce the understanding of business operators the EPA discussed common illegal practices discovered during inspections in recent years and the corresponding penalties.

The EPA also invited businesses that had previously received significant penalties for violations, but have successfully made improvements, to share their experiences in enhancing air pollution prevention measures and transforming mindsets. These businesses have stated that they have reduced the volatile organic compound content in their raw materials at source and upgraded their air pollution prevention equipment. As a result, they have significantly reduced air pollutant emissions, saving over 90% of their annual air pollution fees. Through active pollution improvement measures, these businesses have gained customer confidence, enhanced their reputations, achieved tangible benefits, and received unanimous recognition from industry representatives present at the event.

To promote the ongoing importance of pollution prevention and self-management, the Environmental Protection Administration (EPA) of Taiwan expanded its invitations in March of this year to waste generators in industries such as plastics, solvents, wood, and sludge. Four regulatory awareness seminars were conducted in the northern, central, and southern regions. The seminar topics included common patterns of illegal industrial waste disposal, the reasons for such occurrences, and relevant regulations in recent years. Also invited were representatives from leading domestic semiconductor companies and publicly listed waste transportation and treatment companies to share their management experiences in tracking the flow of waste as it is transported and treated. The goal was to encourage more businesses to implement self-management at source and reduce instances of illegal waste disposal.

Enhancing corporate social responsibility is currently a societal trend, and the EPA urges businesses to change their mindset and dispel the misconception that investing in pollution prevention equipment is a loss-making endeavor. Instead, businesses should focus on implementing self-management, improving pollution prevention equipment, and enhancing awareness and compliance. Once the concept of voluntary improvements regarding environmental pollution takes root in industries, frequent inspections by environmental authorities should no longer be necessary. Businesses will be able to operate with peace of mind, and environmental quality will see a

significant improvement. The EPA hopes that companies will integrate pollution prevention into their corporate governance systems and work together for environmental protection and sustainable development in Taiwan.



Press conference on industry self-management and environmental law enforcement



Upgrading pollution prevention equipment to reduce pollution



Upgrading the manufacturing process and reducing the use of VOC-containing raw materials

9. Discounted Recycling Fees Available for Electronics Containing Recycled Plastics Starting July 2023

From 1 July 2023 the EPA will grant a discount of 15% on recycling fees for certain products, in order to encourage enterprises responsible for manufacturing electronics and electronic products to incorporate material recycling and reuse into their product designs. These products include televisions, air conditioners, heaters, washing machines, refrigerators and electric fans, as well as electronics such as portable computers, desktop computers, monitors, printers and keyboards. Under this policy, responsible enterprises that incorporate at least 25% recycled plastic materials in their products, as verified through a review process by the EPA, will be eligible for a 15% discount on the recycling fee.

In response to the key strategic action plan Resource Circulation with Zero Waste, which is part of the transition toward net-zero emissions, the EPA has set its initial plan targeting plastic recycling. Enterprises whose electronic and electric products contain 25% or more recycled plastics will enjoy the discounted green rate of recycling and disposal fees. This initiative aims to encourage manufacture or importation of electronic products with recycled materials, promote resource circulation and ensure the benefits of a secondary material economy. After implementing the policy for two years, the EPA will assess its progress and propose subsequent measures accordingly. Furthermore, existing products certified with the Green Mark will continue to enjoy a 5% discount on the recycling fees.

The EPA reminds responsible enterprises that, starting from 1 July 2023, they are eligible to report and pay the discounted recycling, clearance, and disposal fees for manufacture and importation of electronic and electric appliances and other articles of responsibility that meet the above-mentioned qualifications. Should there be any inquiries or issues regarding fee declaration and payment, it is advised to visit the Resource Recycling website (<http://recycle.epa.gov.tw>).

10. Seminar Held on Soil and Water Sustainability and Climate Adaptation

In view of escalating climate change and global warming, which are connected to the quality of soil and groundwater, on 26 April 2023 the EPA held the second Sustainable Soil and Water Resources and Climate Adaptation Partnership Seminar at the National Taiwan University Convention Center. With 16 experts invited, the seminar allowed those working in environmental protection to share and gain knowledge regarding climate adaptation, which in turn has enhanced communication channels and future collaboration across different fields. Over 100 participants signed up for the event, indicating increased attention regarding soil and water issues.

In his speech, EPA Minister Tzi-Chin Chang stated that, since President Tsai Ing-wen's announcement of the goals to transition toward net-zero emissions by 2050, the EPA has actively completed revisions of regulations and established related systems. Other efforts include promoting carbon reduction and adaptation actions through Taiwan's Pathway to Net-Zero Emissions in 2050 and the 12 Key Strategies. In terms of soil and water resource management, improvement of contaminated sites is to be accelerated. From the perspective of at-source prevention of soil and water pollution, the focus will further extend to more active post-remediation protection of soil and groundwater, following continuous research on and discussion of impacts of climate change and adaptation measures.

To deliver interdisciplinary keynote speeches and lead discussions at the seminar, the EPA especially invited experts in environmental engineering, agriculture, assessment of climate change-related disasters, soil science, and soil and groundwater pollution remediation. The goals were to better implement current practices in soil and water source remediation, facilitate climate adaptation and achieve the goal of net-zero emissions. A variety of topics were on the agenda, ranging from international trends in climate change issues, to searching for solutions in actual practices. Topics included: climate adaptation; disaster risk management at contaminated sites; remediation and restoration towards net-zero emissions, and; solutions of net-zero emissions in soil carbon sinks. The discussions received enthusiastic responses from participants.

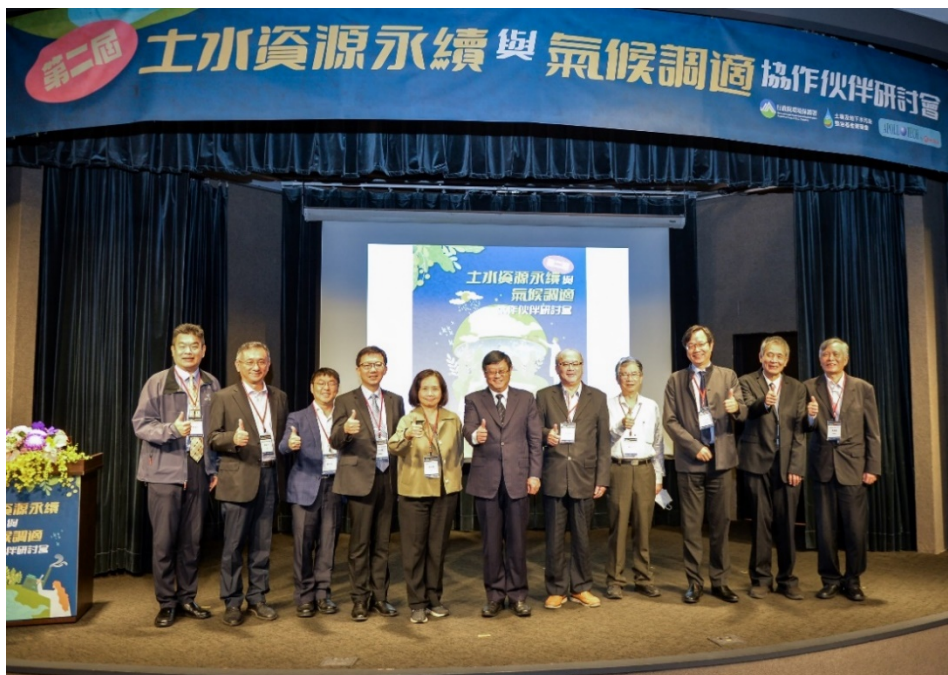
The EPA emphasizes that, by first analyzing the substantive disaster risks posed by climate change to Taiwan's overall environment, integrated management strategies for soil and groundwater pollution sites can be proactively deployed to adapt to climate

change. This approach aims to reduce remediation risks and prevent the secondary spread of pollution. Furthermore, as the world moves towards the goal of achieving net-zero carbon emissions, the soil and water pollution remediation industry needs to further collaborate with the government to establish carbon inventories, carbon sequestration technologies, and carbon sink management capabilities. Together, they can pave the way for the future transformation of the soil and water pollution remediation industry.

Communication and collaboration through interdisciplinary governance are essential in the process of climate adaptation and net-zero transition. Through the guidance of experts and scholars and exchanges of ideas in discussions, the seminar enabled experts in different fields to develop future soil resource management and remediation techniques. Various stakeholders were able to form a tight-knit partnership, thus opening up a new phase of Taiwan's environmental governance of soil and water in response to climate change.



EPA Minister Chang speaks at the seminar



Minister Chang (middle) and participating experts

11. Regulation Revisions Preannounced for Certification and Management of Environmental Education Personnel

The *Regulations Governing the Certification and Management of Environmental Education Personnel* (環境教育人員認證及管理辦法) were first announced 12 years ago. In order to enhance operational efficiency and adapt to current circumstances, the EPA has preannounced amendments of certain articles. Besides streamlining the certification review process, the revisions change the required accumulated hours of extended environmental education training to a minimum of 15 hours, including at least three hours of training on relevant laws and policies.

First announced on 22 June 2021, the *Regulations Governing the Certification and Management of Environmental Education Personnel* were later revised on 17 October 2013 and 14 April 2022. The current revisions have been drafted by the EPA to encourage continuous public participation in environmental education and also to simplify administrative procedures for personnel certification and management.

The EPA welcomes comments and suggestions from all fields. Below are the key points of the revisions:

1. Amendment to Article 13: Simplifies the certification review process and expedites verification procedures
2. Amendment to Article 15: Amends the accumulated hours for extended training on environmental education to be at least 15 hours, including a minimum of 3 hours of training on relevant laws or policies
3. Amendment to Article 15-1 and Article 17: Adds and revises requirements concerning environmental education personnel assigned to environmental education institutes and facilities in accordance with the law, as well as designated personnel in schools under Article 18, paragraph 1 of the *Environmental Education Act* (環境教育法); Adds and revises reasons for the cessation of certification for those who have neither attended training nor applied to postpone training

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