



# Major Environmental Policies

October 2024

## 1. MOENV Publishes Guide for Enterprise Declaration of Carbon Neutrality

Many enterprises have declared on their own that their products, services or organizations achieve carbon neutrality, showing their actions of greenhouse gas reduction. However, it remains questionable whether the reductions are as substantial as declared, or it is simply greenwashing under the guise of carbon neutrality. The MOENV has published the Guide for Enterprise Declaration of Carbon Neutrality (企業宣告碳中和指引) on 25 September 2024 to demonstrate to enterprise how to declare carbon neutrality while keeping the public from being misled by false declarations or failure to fully disclose information. It is also an effort to educate the consumers ways to examine the authenticity of enterprises' reduction actions in order to decide whether to support the declaring enterprises.

The MOENV points out that the Guide for Enterprise Declaration of Carbon Neutrality is developed to help enterprises set GHG reduction goals and ensure that they put in actual efforts to achieve these goals and become fully transparent by disclosing all relevant information. The guide is summarized as follows:

Drafts of the three sub-laws was preannounced on 29 April 2024. Regarding this, industries and civil organizations were invited to nine meetings and a public hearing for communications. Discussed topics included deduction of collection threshold, identification of industries with high carbon leakage risks, adjustment coefficients and schedules for emissions, offsets by domestic reduction credits, base year for designated targets and establishment of benchmarks, and information disclosure of voluntary reduction plans". The MOENV made adjustments under the three sub-laws based on public opinions and suggestions. Key points of the sub-laws are as follows:

### I. Applicable to carbon neutrality declarations for an organization, product or service

Carbon neutrality refers to balance between emissions and removals of GHG generated by human activities, which can be achieved by approach including offsetting emissions with carbon credits. The Guide for Enterprise Declaration of Carbon Neutrality applies to carbon neutrality declaration made by enterprises for an organization, product or service after they acquire substantial results through GHG inventory, reductions and offsets.

### II. Three core principles to be followed: Emission inventory, reduction and offset

**1.Inventory:** An enterprise shall perform a complete GHG emission inventory, select an appropriate target for carbon neutrality and ensure that it represents the enterprise itself or strive to have all products, as practically as possible, achieve neutrality instead of a single product. It means that the enterprise should not claim neutrality with just a handful of "symbolic actions" out of its many emission activities, one of greenwashing brought up by the World Economic Forum (WEF).

**2.Reduction:** Enterprises are to determine short-term to long-term reduction pathways and

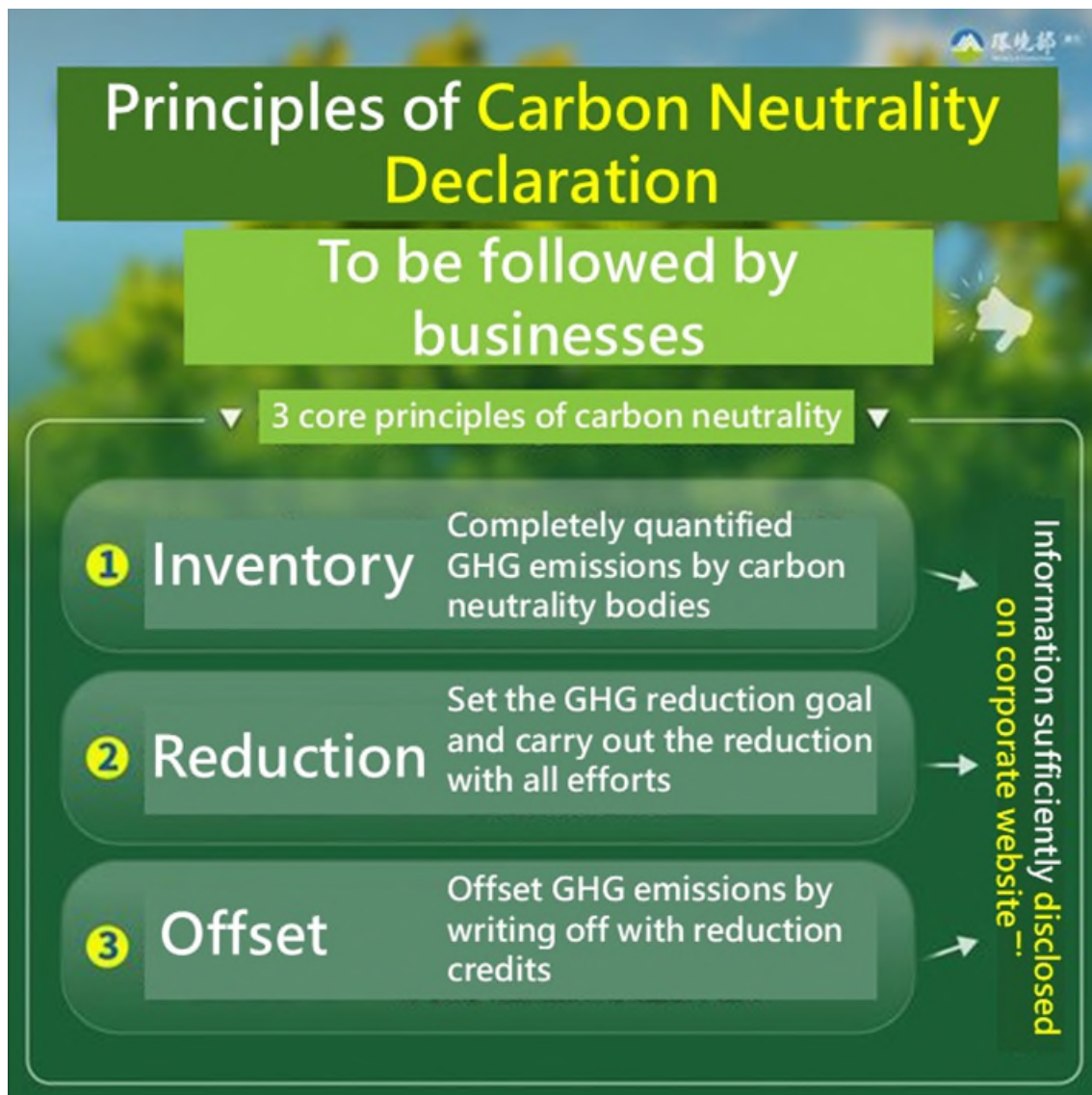
targets based on widely recognized and science-based carbon reduction approaches, such as Science Based Targets Initiative (SBTi), and lower emissions of the neutrality target accordingly by taking concrete initiatives to cut down emissions or remove increments. Also, there is to be evidence showing that it has done what it can for reduction, including disclosing implementations of reduction measures, adopting the best feasible technology currently available, or any proof of having achieved the goals set for the current stage along the long-term net-zero pathway.

**3. Offset:** If in need of achieving neutrality by offsetting the remaining emissions with reduction credits, an enterprise shall prove that it has done what it can to reduce the neutrality target's emissions, and that the reduction credits used are to come from one or more reduction projects that are authentic and comply with international standards. Before using reduction credits for offsets, enterprises shall investigate the source with due diligence to ensure that the credits are unique, authentic, permanent and not calculated repeatedly, as required by the standards under the guide. Furthermore, the time of the credits used for neutrality occur shall precede the carbon neutrality period by no less than five years.

III. Support required with complete, specific and correct open information

The MOENV indicates that another common greenwashing mentioned by the WEF is "selective disclosure". An enterprise shall ensure that its information disclosed is thorough, precise, and correct when pursuing carbon neutrality. The information, including boundaries of carbon neutrality targets, calculation processes, reduction results and offset sources, are to be disclosed over its corporate website in a manner that is easily accessible to stakeholders and the general public.

The MOENV also states that it takes all sectors to cope with climate change. Enterprises are to ensure the authenticity and validity of their own carbon neutrality through scientifically reasonable calculations and third-party verification. Enterprises' ultimate purpose of their substantial efforts for climate change is to achieve the final net zero through reduction and carbon sink increase, rather than the carbon neutrality during the process. An open statement of measures that they will keep adopting and goals in the future when enterprises declare carbon-neutral at the current stage.



Principles of carbon enutrality declaration to be followed by businesses



**Deputy Minister Shih Wen-Chen explains the MOENV's promulgation of the Guide for Enterprise Declaration of Carbon Neutrality"**

## **2. MOENV Drafts SRF Regulations and Assists Enterprises in Compliance**

**The results of checkup on 66 solid recovered fuel (SRF) manufacturers across Taiwan just came out. This checkup aimed at helping manufacturers with management of wastes, raw material arrival, equipment, and products. The results indicate that 52~70% of the manufacturers comply with relevant regulations and 30~48% need improvement. On the other hand, more than 90% of users comply with relevant regulations, and only 6% need improvement.**

"To check up is to understand," said the MOENV Minister Peng Chih-Ming, further adding that the regulations in place are thorough after five years of SRF development in Taiwan, but yet to be perfect. Hence, this checkup is actually the first step toward of perfection. With intensive field visits and communications for three consecutive months, the MOENV is set to tighten standards for SRF manufacture and associated air pollution emissions, and plans to propose a policy white book to build a good environment for SRF development. This checkup helps enterprises understand more about government policies, but also allows the government to gain better knowledge of the industry's current development. Approximately 14, or 20%, of SRF manufacturers decided to step out of the SRF market after the communications. The remaining ones are expected to pour more efforts and investments, "but this is not to increase business costs, but to increase assets for Taiwan".

### **I. Applicable to carbon neutrality declarations for an organization, product or service**

Minister Peng pointed out that countries around the world are striving for proper SRF utilization in order to facilitate resource circulation and lower use of coal. Particularly, right now there are 1.8 million metric tons of industrial wastes every year heading for incinerators across Taiwan, meaning poor resource circulation as well as compromised the capacity of household waste disposal.

## **II. The checkup examined operations and also sought solutions for problems**

The MOENV's statistics show that the number of SRF enterprises has grown from eight to 66 in five years and the annual production from 55,000 metric tons to approximately 300,000. In other words, 300,000 metric tons of WRFs are replacing coal fuel every year.

The MOENV Deputy Minister Shen Chih-Hsiu, also in charge of the full-scale checkup, mentioned that experts and scholars in waste treatment technology, waste operation and management, air pollution prevention and control, and environmental testing were brought in to participate the checkup on 66 enterprises, including 48 manufacturers and 18 users. This was an inspection on the enterprises' onsite operations and also a two-way communication with them face to face. The checkup group would discuss with the SRF enterprises after onsite inspections, providing solutions to their problems to help them improve and upgrade. More than 90% of the SRF users are enterprises with a capital size of over NT\$100 million that are in paper or cement industries and mix in SRFs when burning coal. They all promised to install control equipment in order to comply with relevant standards. By the end of 2024, the MOENV is planning to tighten the air pollution standards related to SRFs, making the emission standards for heavy metals such as lead, cadmium and mercury as strict as those applicable to large incinerators. Emission standards for dioxin, the most concerned by the public, will be tightened up to 0.1ng-TEQ/NM<sup>3</sup>.

## **III. Four firms withdrew voluntarily and ten accept assistance for transformation**

Lai Yingying, Director General of the MOENV's Resource Circulation Administration, pointed out that 14 enterprises chose to withdraw from the market. Four did it voluntarily, including two manufacturers that have cancelled the production plans since SRF is not their primary products and two users that have terminated the use of SRFs because of switch to other fuels. The rest of the 10 enterprises are all SRF manufacturers (three processing waste wood, three processing waste rubber, and four processing pulverized residues from waste vehicles) chose to accept guidance for transformation since their waste reuse technology is mature and, therefore, the waste can be reused to as other products or supplemental fuels. For those that remain in operation of SRFs, the MOENV will keep monitoring them and help with improvement.

Director Lai stressed that when 18 manufacturers did not fully disclose information regarding where their products are sold to. This is the focus of the future tightened management. These measures aim to enhance monitoring and requiring manufacturers to establish criteria for receiving wastes to use as SRF raw materials, set up inspection mechanism, and install CCTV at the material receiving area.

Most of the SRF manufacturers are capable of producing high-quality SRFs, and MOENV is

considering the possibility of tightening the quality standards to encourage the manufacturers to raise product quality.

#### **IV. Product classification for manufacturers and emissions standards same as those of large incinerators for users**

Minister Peng said that existing firms and those interested in SRFs are leaning toward accepting the MOENV adopting the tightest standards in the world and willing to cooperate. In their opinion, standards are a set of clear approaches they can follow and are positive for the wellbeing of Taiwan despite the increased burdens.

The MOENV explained that a set of SRF management regulations are scheduled for proposal at the end of 2024 with elevated level within the legal system based on the checkup results. The plan includes adding new items in online registrations, establishing a third-party verification system, and installing CCTV and surveillance. The strictest standards for large incinerators will be in place for the heavy metals and dioxin in the air pollution emitted by SRF users. There will be additional testing for dioxin precursors, such as carbon monoxide (CO) and hydrochloric acid (HCl) with specified testing frequency, hoping to further improve the SRF industry's level. The regulations are expected for promulgation at the end of 2024. Also, the MOENV will propose the policy white book at the end of 2024 to build a good environment for SRF production and conversion of waste into energy.



**The MOENV Minister Peng explains in person that SRF aims to “turn waste into energy”. Wastes needs purification with impurities removed and then homogenization to become good SRFs**



### **3. MOENV Visit the EU to Connect Carbon Pricing and Help Enterprises Cope with CBAM**

The MOENV Minister Peng Chih-Ming, accompanied by Ambassador Roy Chum Lee of Taipei Representative Office in the EU and Belgium, led a delegation of MOENV staff to visit EU agencies on 16 September 2024. Besides discussing on environmental issues such as climate change, carbon trading, air quality management, chemical substance management, the Global Plastics Treaty and circular economy, Minister Peng mentioned that Taiwan has promulgated the three sub-laws regarding carbon fees at the end of August. The pilot program of carbon fee registration will commence later this year and the official fee collection is scheduled in 2025. A plan is in place to initiate total quantity control and emission trading within four years. This visit demonstrated to the world Taiwan's efforts and practices in carbon reduction, which were highly recognized.

The Emission Trading System (ETS), established by EU in 2005, is the most mature and largest carbon emissions trading market in the world. Its rich experience in trading is a perfect example for Taiwan. Through this visit and interactions with senior officials the delegates found that the ETS' practices focus on emission monitoring program, emission inventory, verification, establishment of total quantity, allocation and auctions of emission quota, trading market establishment and collection of emission quota. The system and its supplemental regulations involve multiple professional fields and many stakeholders and have already become "carbon pricing diplomacy strategy", a trend which deserves Taiwan's attention.

The MOENV is planning to put together a delegation again in 2025, consisting enterprises in relevant industries, environmental groups, experts and scholars, to visit Europe to have correct understanding of and build professional foundations for carbon pricing via exchanges. This will facilitate full discussions in future development of emission trading and help successfully complete and implement relevant laws and regulations.

The EU, on the other hand, gradually tightens the upper limit of total quantity and decreases the percentage of free allocation and therefore has launched the carbon border adjustment mechanism (CBAM) on imported products. For Taiwan this has mainly affected the industries of metal fasteners (screws and bolts), steel and aluminum. The EU's CBAM is still in the transition, and enterprises in Taiwan have all successfully completed registration with help from the government. However, there are still concerns about how Taiwan's carbon pricing aligns with the EU ETS after its CBAM officially come into effect. Regarding the concern, the MOENV explained that, in addition to contents of the CBAM regulations in this visit it confirmed through face-to-face communication the number of CBAM certificates required to be collected that can be deducted with carbon fees already paid in Taiwan. Still, the details will not be specified until regulations regarding "deduction with the carbon prices paid in a third country" and "allocation free quotas and harmonization with the CBAM system under the EU ETS" are published in 2025.

Considering the complex and highly professional nature, the MOENV will have professional and full-time personnel stationed in the EU early next year to keep track of the latest developments in CBAM and participate in negotiations to assist in the response of Taiwan's industries.

Minister Peng expressed that the MOENV has gained confidence in the future development of Taiwan's pilot system of carbon pricing and carbon fees from the in-depth exchanges with high-level experts in relevant fields in this visit. The conversations with experts also shed some light on the

details of CBAM, which is of significant concern of Taiwan's enterprises, and the MOENV will continue to stay updated with the CBAM development. This visit has helped establish a complete communication platform and mutual trust, and allowed the EU to understand more about the endeavors of Taiwan, which is an essential part of global high-tech supply chain, for climate change. There will be bilateral interactions on a regular basis to continue conversations between the EU and Taiwan. In recent years many political leaders, industries, think tanks, media and environmental groups in the EU have made significant in-depth progresses with issues of climate change and carbon pricing and have developed into net-zero communities with different styles. Their approaches of coaching and training are very important and worth learning for Taiwan.

Efforts will be made to keep working tirelessly with Europe to ensure a smooth transition for Taiwan's enterprises and assist them to stay competitive in the international market. The MOENV is ready and will continue to be a strong support for all enterprises.



**The MOENV Minister Peng Chih-Ming (left) and Ambassador Roy Chum Lee of Taipei Representative Office in the EU and Belgium (right)**





**The MOENV Minister led the delegation of MOENV staff to visit the EU on environmental issues, including Ambassador Roy Chum Lee of Taipei Representative Office in the EU and Belgium (fourth from the left), Luis Neves, coordinator of the European Green Digital Coalition and CEO of the Global Enabling Sustainability Initiative (fifth from the left), and the MOENV Minister Peng Chih-Ming (sixth from the left)**

#### **4. MOENE Resource Circulation Administration Preannounces Revision of Fee Rates for Container Recycling, Clearance and Disposal**

**Preferential rates are used as an economic tool for containers in response to the international trends of sustainable development and circular economy, as well as Taiwan's re-source circulation policies. For containers which is required to have a fee collected as recycling fund, a 50% discount is provided for glass containers that can be used repeatedly, a 15% discount for plastic containers made of recycled materials, and an extra 15-30% discount added for the above incorporating green design. That means a preferential rate as high as a 45% discount in order to encourage manufacturers and importers of recyclable containers to introduce green concepts and facilitate sustainable consumption and production.**

The MOENV's Resource Circulation Administration indicates that the fee rates for container recycling, clearance, and disposal, developed in 29 June 2006, underwent five amendments with the latest one on 20 July 2018. In order to maximize resource circulation, minimize waste processing, and create a new recycling operation (business) model, the MOENV has revised the table of the Item 1 under the announcement of the fee rates, adding the green rates for re-cycling, clearance, and disposal of glass and plastic containers. This is to answer the global idea of resource circulation and green design , using economic incentives to encourage enterprises to adopt a recycling and reuse

mechanism for glass containers and, for plastic containers, incorporate the green design of pure raw materials, original colors, less labels and tethered bottle caps and use recycled raw materials. This will help reduce use of raw materials and unrecyclable resources, And therefore make the transition from linear economic model of production and consumption to a sustainable one.

## 5. MOENV Preannounces Revisions of Penalties for Violations of Stationary Sources in Public and Private Venues

**Per-and polyfluoroalkyl substances (PFAS) are persistent organic pollutants that are carcinogenic and, therefore, hazardous to human health once they find the way into the drinking water supply system.**

The MOENV takes consideration of the seasonal characteristics of air quality in recent years (2016 to 2022) and strives to achieve the goals of the Air Pollution Prevention and Control Plan (2024-2027) approved by the Executive Yuan, including the annual average concentration of particulate matters (PM<sub>2.5</sub>) below 13μg/m<sup>3</sup> by 2027 and reduction of red alarms by 80% for the number of station-days of 8-hour ozone (O<sub>3</sub>) concentration compared to that of 2019. In order to achieve the goal of improving air quality, penalties are to be tightened for those whose violations of the *Air Pollution Control Act* (空氣汙染防制法) involve emissions of air pollutants, such as PM<sub>2.5</sub> and precursors of O<sub>3</sub>. Moreover, the MOENV will examine overly harsh penalties due to tightened standards concerning leakage that have to do with spare parts of equipment as well as review the draft in accordance with revisions in the *Air Pollution Control Act* and other relevant regulations under the principle of proportionality, flexibility, and display of warning effects. This will help make penalties for administrative remedies fair and reasonable with fewer disputes of law enforcement.

The MOENV stressed that poor air quality, namely high concentrations of PM<sub>2.5</sub> and O<sub>3</sub>, occurs frequently from late fall to early spring next year and in spring and fall. In order to urge enterprises to adopt appropriate control measures, penalties shall be harsher for stationary pollution sources that illegally emit PM<sub>2.5</sub> and precursors of O<sub>3</sub>, such as nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds (VOCs). Furthermore, Penalties are to be much harsher as well if such emissions occur during the period of poor air quality between September and May next year or in a level-3 control zones.

The MOENV explained that the control values for leakage due to spare parts of equipment were tightened by ten times in the amendment announced in December 2023. It is clearly too strict and out of proportion based on the calculation for penalties and, therefore, deserves a thorough review. In addition, illegal use of (supplementary) fuels, such as solid recovered fuel (SRFs), that fails to comply with standards regarding compositions or comes from unknown sources is banned. Violations will be penalized directly upon detection. This will help the competent authorities in law enforcement and enhance air pollution prevention and control.

The MOENV further pointed out that this amendment provides more flexibilities on penalty calculations and also more room in law enforcement for competent authorities regarding the first and second batches of permitted stationary sources, which have relatively large emissions. The amendment includes the third batch of stationary sources less of a pollution concern, and set relatively mild penalties as to achieve proportionality. In addition, for a stationary sources that operate without air pollution permits or those with major violations, the reduced penalties are no

longer applicable. Instead, they will be punished more harshly and face penalties up to NT\$2 million, the upper penalty limit, so all public and private venues are advised to refrain from challenging the law.

## Penalty adjustment for stationary pollution sources violating the Air Pollution Control Act

Key points: **principle of proportionality, flexibility** and **warning effects**



### Penalty adjustment for stationary sources violating the Air Pollution Control Act

## 6. 2024 international Cooperation and Training Framework (GCTF) workshop was held in Taiwan as partner countries worked together to head for a net-zero future

Facing climate change, pursuing net-zero emissions what Taiwan and the international community are working hard together for. In order to share net-zero emissions policies and practical promotion measures among countries, the GCTF Joint Committee, composed of the American Institute in Taiwan, the Japan-Taiwan Exchange Association, the Australia Of-fice, the Canadian Trade Office in Taipei and the Ministry of Foreign Affairs, worked with the Ministry of Environment (MOENV) on the 2024 GCTF "International Workshop on Setting an Ambitious Path towards a Net-Zero Future" held from September 4th to 6th at the Grand Hyatt Hotel in Taipei.

The MOENV indicated that 177 participants were invited from 25 countries around the world, including 52 international speakers. The participants were government officials from the world and Taiwan, scholars and experts in green energy and circular economy, and professionals specialized in promoting net-zero transition. Leaders from all over the world gathered under one roof, observing and encouraging each other, and working together to achieve the global goal of net zero by 2050.

Dr. Peng Chih-Ming, Minister of Environment; Dr. Lin Chia-Lung, Minister of Foreign Affairs; MR. Robert Fergusson, Australian Representative in Taiwan; Mr. Raymond Greene, Director of American Institute in Taiwan (AIT); Mr. Hiroyuki Okajima, Deputy Representative of Japan-Taiwan Exchange

Association; and Mr. Jim Nickel, Executive Director of the Canadian Trade Office in Taipei gave their speeches in the opening ceremony. The new GCTF logo was unveiled at the workshop, and Canada was welcomed as the fifth partner of the GCTF.

Minister Peng of Environment said in his speech that the inclusion of 2050 net-zero emissions in the *"Climate Change Response Act"* (氣候變遷因應法) is the demonstration of how much Taiwan is committed to CO<sub>2</sub> reduction. Taiwan has entered the era of paying for your CO<sub>2</sub> emissions, as soon as the "3 sub-laws of carbon fee" were promulgated on 29 Aug 2024 and the carbon fee system was launched. There will be further plans for Taiwan's total quality control and emission trading, and governmental and private funds will be pooled together as the new driving force for the green growth of Taiwan. The Office of the President has formed the National Climate Change Committee to introduce public energy and develop strategies for Taiwan, while all ministries take an inventory from top to bottom on CO<sub>2</sub> reduction plans and come up with the control targets for 2030. The net-zero transition is not just a slogan. It is an urgent action that take all of us to get it done.

The MOENV expressed that the workshop was focused on the future of net-zero emissions. Officials and experts from Taiwan and all over the world gathered together to share their experience on topics like "the future trends of renewable energy", "green financial strategies", "promotion of circular economy", "promotion of sustainable growth with green technology" and "climate change adaptation and future of net-zero emissions", and had a visit to several businesses engaged in circular economy and banking groups committed to green finance, demonstrating to international guests and participants how much Taiwan has done for net-zero transition and the results produced.

This workshop allowed the world to see how professional Taiwan is. They saw Taiwan is capable of doing something positive for the world. We will work together with the world to overcome the global climate crisis. Taiwan will be an important solution to the threat of climate change for the world, as well as the safest, most reliable and trustworthy partner. The MOENV hopes that this workshop promotes two-way exchanges of knowledge and experience between Taiwan and rest of the world, laying a solid foundation for future cooperation.





**Minister Peng of Environment and honored guests of the GCTF International Workshop on Setting an Ambitious Path towards a Net-Zero Future**



**Minister Peng of Environment giving speech at the GCTF International Workshop on Setting an Ambitious Path towards a Net-Zero Future**



Deputy Minister Shih Wen-Chen of MOENV, the host of Building Green Economy Session, and esteemed speakers

## 7. MOENV and NASA cooperate to invite Southeast Asian countries to come to Taiwan, a giant leap for cross-border cooperation for air pollution control

As a cooperative effort to improve the air quality in Taiwan and Southeast Asia, the Ministry of Environment (MOENV) worked with NASA for the South & Southeast Asia–Air Improvements in the Region (SSEA-AIR). 9 government officials and experts from Mongolia, the Philippines, Thailand and Vietnam were invited for exchanges of air pollution control strategies. The workshop started with the speeches of Minister Peng Chih-Ming of Environment and Mr. Justin Spenillo, U.S. EPA Environmental Protection Specialist, on 9 Sep. The MOENV will share Taiwan's air quality control experience on issues of interest to the participating countries, arrange field visits, and have substantive technical exchanges with these countries for better international interactions.

The MOENV expressed that this was a 5-day event of international interactions where the experts shared the experience of their respective countries on strategies for air pollution control. The US Environmental Protection Agency shared their US EPA fire smoke maps, national air quality standard technology program training and establishment of air quality standards with the MOENV and local environmental protection bureaus in person and through online tele-conferencing, which is valuable for the implementation of air pollution control, as the information provided is helpful for setting a foundation for strategy formation, combining technical tools and their applications, and improve the control performance.

The MOENV has produced fruitful results in air pollution improvement and control effective-ness in recent year, as a series of control strategies, legislations and regulations were rolled out. This time, the MOENV shared the experience with the participating countries on topics of their interests; for example, how to fund the works to be done for air pollution improvement, Phase II air pollution



control program targets, real-time monitoring of stationary pollution sources, emission management of mobile pollution source, technical control of construction activities, and indoor air quality mark and legislation. A field visit to several places was arranged to demonstrate intelligent jobsite for construction control, roadside inspection on mobile pollution source and how surprise inspections are performed. The participating experts were impressed by the efforts Taiwan has done for air pollution control and the results produced.

The MOENV indicated that Taiwan is unique geographically. In spring, the monitoring efforts are focused on pollutants migrated over a long distance from Indo-China and in winter, the northeastern winds bring pollutants from China. The air pollutants migrate cross border from one country to another. The participating countries learned from one another in this technical workshop and hoped to deepen the international cooperative efforts, as a workshop like this create a win-win pattern of cooperation for the air pollution control in Asia and accelerate the improvement of air quality.



**Guests of the workshop**



**Minister Peng of Environment giving his speech**



**Mr. Justin Spenillo of US EPA giving his speech**



**Participating guests and the staff of Departments of Atmospheric Environment and Monitoring and Information**



**All participants after the US EPA speech**





**Visit to monitoring station at Fuguijiao**

## **8. National Environmental Research Academy reached a memorandum of understanding with National Science and Technology Center for Disaster Reduction, focusing on climate change adaptation**

Seeing the increasingly harsh challenges brought by climate change, the National Environmental Research Academy (NERA) signed a memorandum of understanding (MOU) with the National Science and Technology Center for Disaster Reduction (NCDR) on 9 Sep 2024. ° This cooperation aims to integrate the scientific, technological and research resources of both parties, focus on the research, development and application of climate change adaptation, and enhance Taiwan's resilience facing extreme weathers and disaster risks brought about by climate change.

The NERA indicated that Taiwan is on high demand for climate change adaptability as the global climate changes intensify, temperature increases, sea level rises and extreme weather events become more frequent and powerful. For this, the NERA was established on 22 Aug 2023 with the Ministry of Environment (MOENV) upgrade, and considered “becoming an important think tank for MOENV” as one of the most important missions. With this in mind, the NERA chose to expand research capacity and, therefore, work with the NCDR for studies on the applications of climate change adaptation and risk assessments. Mr. Tsung-Yung Liu, President of NERA, stressed in his speech that Minister Peng Chin-Ming of Environment mentioned the “trinity of disaster prevention, net-zero emissions and adaptation for climate change” in the Climate Change Committee meeting on 8 Aug 2024 at the Office of the President. Therefore, the MOU reached between NERA and NCDR was very meaningful as an indicator.

The NCDR is highly experienced and professional in terms of disaster risk assessment, disaster response system development and building resilient communities, and capable of providing accurate climatic data and forecasts to support Taiwan's adaptation efforts. For NERA, the professional knowledge of the NCDR is valuable for the development of innovative technologies for climate change adaptation and promotion of these technologies for the applications in national policies, thus ensuring that Taiwan has the effective means in dealing with possibly imminent climate risks.

The NERA and NCDR work together this time to not only take on the challenges from climate change, but also look at the future and dedicate themselves to building a more resilient and adaptive community system for Taiwan. This MOU signifies the in-depth cooperation between NERA and NCDR for climate change adaptation, sets a solid foundation for Taiwan in upcoming climate change adaptation and creates a win-win cooperation model.



**Mr. Tsung-Yung Liu, President of NERA (left) and Mr. Chen Hung-Yu, Director of NCDR (right) presenting the signed MOU between NERA and NCDR**



**Heads and high-ranking officials of NERA and NCDR at the MOU signing ceremony; Mr. Tsung-Yung Liu, President of NERA (8th from the left) and Mr. Chen Hung-Yu, Director of NCDR (7th from the right)**

## 9. 13<sup>th</sup> Annual APMMN Partners Meeting solidifies the technical co-operation in

## Asia Pacific

The “13<sup>th</sup> Annual Asia-Pacific Mercury Monitoring Network (APMMN) Partners Meeting” was held on 3 Sep with Miss Jane Nishida, Assistant Administrator for EPA's Office of International and Tribal Affairs, and Dr. Peng Chih-Ming, Minister of Environment co-hosting the opening ceremony. More than 50 government officials and experts from 16 countries, including Australia, Fiji, India, Indonesia, Japan, Maldives, Mongolia, Nepal, Korea, Palau, Singapore, South Africa, Sri Lanka, Thailand and the US, participated in this meeting, discussing and sharing what they have done for mercury monitoring and management.

The MOENV indicated that this meeting has been held in Taiwan for 2 years straight, suggesting Taiwan's efforts are highly regarded in Asia Pacific region in terms of mercury monitoring technology and management capacity. The MOENV worked with the US EPA to set up the Annual Asia-Pacific Mercury Monitoring Network (APMMN) in 2012 and help partner countries improve their mercury monitoring capabilities, which contributes to the gradual decrease of mercury level in the atmosphere year by year. So far, assistance has been provided in establishing 14 mercury wet deposition samplers in several partner countries and collecting and analyzing more than 1,700 rainwater samples for mercury. The MOENV will continue to expand regional cooperation for environmental monitoring, and strengthen international monitoring mechanisms, monitoring technology interactions and data sharing.

The meeting was broadcast online through teleconferencing. The activities included the briefing of David Schmeltz, senior analyst at the U.S. EPA's Office of Atmospheric Programs, and David Gay of the U.S. National Atmospheric Deposition Program, on APMMN's current progress and future prospects; report of Japan's National Institute for Minamata Disease on mercury levels in the East China Sea and northwestern Pacific Ocean; MOENV's report on best practices and achievements in response to the United Nations Environment Program's Minamata Convention on Mercury; and the current development of partner countries' mercury monitoring. Mercury wet deposition sampling and analysis technology training was also provided to improve partner countries' mercury monitoring technology and data quality, deepen Taiwan's cooperation with Asia-Pacific countries in mercury monitoring, and increase Taiwan's international monitoring visibility.

The MOENV pointed out that the cross-departmental “*Plan to Promote the Implementation of UN's Minamata Convention*” (執行聯合國汞水俣公約推動計畫) was launched in response to the global trends of mercury management and as the basis of mercury management promotion in Taiwan. The joint efforts of all departments involved have paid off as all 9 categories of mercury-containing products in the Minamata Convention were successfully placed in the monitoring list as scheduled. The flow and use of mercury are controlled from the source, and the environment, commodities and food are sampled and monitored. The management of mercury-containing waste is strengthened and education and publicity are carried out, and the efforts to improve management measures continue to ensure a healthy living environment for the people. As a member of the global village, Taiwan hopes to establish a close partnership through this workshop to jointly promote the Minamata Convention on Mercury and create a sustainable future for generations to come.





**Minister Peng giving his speech at the opening ceremony**



**Miss Jane Nishida, Assistant Administrator for EPA's Office of International and Tribal Affairs, giving her speech**



**13<sup>th</sup> Annual Asia-Pacific Mercury Monitoring Network (APMMN) Partners Meeting**

## **10. Ministry of Environment and Deutsche Emissionshandelsstelle share knowledge of carbon pricing and agree on Stage II of cooperation**

International collaboration is an important key to dealing with climate change. Germany and Taiwan signed the letter of intent on cooperation of carbon trading in 2018, and started ex-change of knowledge and experience in carbon pricing issues over the years. On 11 and 12 Sep 2024, the “Germany-Taiwan Carbon Pricing Workshop” was held and participated by a group of Ministry of Environment (MOENV) staff led by Minister Peng Chih-Ming. Once the carbon pricing system is officially launched, it is expected to deepen the interactions between Germany and Taiwan on the carbon pricing mechanism and increase the efforts for CO<sub>2</sub> reduction.

The MOENV indicated that the Deutsche Emissionshandelsstelle (DEHSt) is the department un-der Umweltbundesamt (UBA) in charge of EU’s Emission Trading System (ETS) and Germany’s own Nationales Emissionshandelssystem (nEHS), and serves as the window to communicate with ETS businesses, verification bodies and the general public. The MOENV, formerly Environmental Protection Administration, has had friendly interactions with the DEHSt ever since the signing of the letter of intent. Every year, workshop or training program is provided on topics of carbon pricing or carbon market, one year in Taiwan and the next in Germany. Teleconferencing was adopted during the COVID-19 pandemics. This year, it is Germany’s term for the workshop in Berlin.

Taiwan promulgated the 3 sub-laws of carbon fee in Late Aug; the carbon pricing system is officially launched and the carbon fees will be collected starting next year (2025). On the other hand, EU’s CBAM is expected in its official implementation in 2026, and EU is planning to initiate ETS 2 in 2023/7 to cover residential/commercial buildings, transportation and fuel supply. The MOENV indicated that the carbon pricing is an important measure to promote CO<sub>2</sub> reduction. The promotion and development such a system in the world is accelerating, suggesting Taiwan’s importance in carbon

pricing and international exchanges. The workshop was chaired by Dr. Jürgen Landgrebe, Director of DEHSt, who started by introducing the latest development of climate policies in EU and Germany, followed by DEHSt experts presenting the important elements of EU's ETS (including the establishment of total emission quantity and benchmark, carbon leakage risks, permissible emission quota, emission declaration, registration and verification), EU's Carbon Border Adjustment Mechanism (CBAM), Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and EU's ETS 2, while the MOENV shared Taiwan's carbon fee system and implementation schedule. An in-depth discussion occurred between both parties on various topics. Finally, the workshop ended with the conclusions of Minister Peng, Ambassador Jhy-wei Shieh of Taipei Vertretung in der Bundesrepublik and Dr. Landgrebe.

Minister Peng appreciated what DEHSt has done over the years for the interactions and cooperation with Taiwan for carbon pricing issues in his closing speech. Taiwan ranks the top in the world in semiconductors and many technologies, and it is the MOENV's hope that Taiwan will keep up with EU and Germany in the response to climate change. Minister Peng said that the official launch of Taiwan's carbon pricing system signifies that the interactions between both countries will enter Stage II for carbon pricing. He expected that era of carbon pricing starts in Taiwan as soon as carbon fee collection starts next year (2025), and a series of tests will be performed for the carbon trading system. He hoped that the total quantity control and emission trading will be online within the next 4 years. In addition, The MOENV is currently examining and increasing carbon reduction targets through a bottom-up and top-down process across departments.



**All participants in the carbon market workshop**





**Minister Peng Chih-Ming of Environment giving his speech at the closing ceremony of the carbon market workshop**



**Dr. Jürgen Landgrebe, Director of DEHSt, Germany**



**Lecture in progress in the carbon market workshop**

# **11. The Ministry of Environment hosted the APEC Capacity Building for Chemical Emergency Preparedness Program for the first time, and countries came to Taiwan for the event**

The “Asia-Pacific Economic Cooperation” (APEC) is the most important cooperation fo-rum in the Asia-Pacific region. Its 21 member countries account nearly half of the world’s total trade volume, indicating its influence in the Pacific rim or even the world. This year (2024), the “Capacity Building for Chemical Emergency Preparedness” program proposed by the Ministry of Environment (MOENV) in the APEC Chemical Dialogue (CD) was support-ed by all members in the APEC CD and, therefore, scheduled from 23 to 28 Sep 2024 at the Southern Taiwan Toxic Substance Emergency Response Training Center at Kaohsiung University of Science and Technology. 25 people from 8 member countries received the training.

The “Capacity Building for Chemical Emergency Preparedness” program organized by the MOENV this time is aimed at the risks that are bought to the safety of environment, life and properties by chemical substances, as the demands for chemical substances rise significantly in high-tech industries during their production activities for their rapid development. This training program helps APEC members pay attention to and improve their professional capabilities in responding to hazardous chemical accidents. APEC members such as Peru, South Korea, Vietnam, Malaysia, and Thailand, as well as non-APEC members such as France and Poland, had their personnel participate in the training program to jointly carry out in-depth ex-changes and technical training. The. The trainees participating in the training and experts, scholars and professionals in the field of chemical response attended the opening ceremony held on 23 Sep at Southern Taiwan Toxic Substance Emergency Response Training Center at the Kaohsiung University of Science and Technology, showing their commitment to chemical accident response and achieving the effect of expanding communication.

Minister Peng Chih-Ming of MOENV said in his speech that the use and transportation of chemicals

continue to increase with the rapid development of global economy and trade, and the risk of cross-border chemical accidents increases with it. Seeing this trend, APEC members need to not only improve their own response capability, but also strengthen cooperation to deal with these complex challenges together. This event is an excellent platform for cooperation. It is hoped that Taiwan's expertise and experience in responding to hazardous chemicals will help the Asia-Pacific region and even the world build a more robust chemical disaster response system.

Director General Yein-Rui Hsieh of Chemicals Administration, MOENV said that the "Southern Taiwan Toxic Substance Emergency Response Training Center" established by the Ministry of Education and the MOENV at Kaohsiung University of Science and Technology is an internationally certified professional training site. The training center provides governments at all levels and chemical operators with professional training on response and command of toxic disasters, and is capable of customizing exclusive training courses as needed, which contributes to enhancing the response capabilities to toxic disasters and protecting the safety of responders. It is hoped that our professional training facilities/equipment and high-quality training instructors and systems will contribute to interacting and cooperating with member countries on the prevention and reduction of toxic disasters.

It is our hope that this training program provides a communication platform for toxic disaster response, maintain and deepen exchanges between member countries, and achieve the purpose of promoting and exporting our toxic disaster response and training capabilities, demonstrating our hard work and advanced technology in disaster prevention, and increasing our international visibility.



**Guests and trainees; Director General Yein-Rui Hsieh of Chemicals Administration (6th from the left) and Mr. Nutchyawach Sanguanchaiyakrit of Thailand Trade and Economic Office (Taipei) (5th from the left)**





Opening ceremony; Director General Yein-Rui Hsieh of Chemicals Administration (4<sup>th</sup> from the left); Mr. Shu-Cheng Liu, deputy director of Ministry of Foreign Affairs, and Mr. Nutchyawach Sanguanchaiyakrit of Thailand Trade and Economic Office (Taipei) (4<sup>th</sup> from the right)



Director General Yein-Rui Hsieh giving his speech



**Guided tour at the Southern Training Center**