

Meeting Minutes of the 7th Meeting of the Presidential Office National Climate Change Committee

Date: Thursday, April 30, 2026, 4:00 PM

Location: 3rd Floor, Reception Hall, Office of the President

Chair: Convener Lai Ching-te

Recorder: Ministry of Environment (MOENV)

Attendees: Deputy Convener Cheng Li-chiun (鄭麗君), Deputy Convener James C. Liao (廖俊智) (on leave), Deputy Convener Tung Tzu-hsien (童子賢), Advisor Lee Yuan-tseh (李遠哲) (on leave), Advisor Eugene Chien (簡又新)

Committee Members: Yeh Chun-Hsien (葉俊顯) (on leave), Wu Cheng-wen (吳誠文), Liu Shyh-fang (劉世芳), Chuang Tsui-yun (莊翠雲) (on leave), Kung Ming-hsin (龔明鑫) (on leave), Chen Shih-kai (陳世凱), Chen Junne-jih (陳駿季), Peng Jin-lung (彭金隆), Paul Peng (彭双浪) (on leave), Lai Po-szu (賴博司), Terry Tsao (曹世綸), Tseng Wen-sheng (曾文生), Sophia Cheng (程淑芬), Lydia Hsiao-mei Lin (林筱玫) (on leave), Shih Shin-min (施信民), Lee Ken-cheng (李根政), Ho Tsung-hsun (何宗勳), Chao Chia-wei (趙家緯), Chen Hui-ping (陳惠萍) (on leave), Huang Pin-han (黃品涵), Lin Tze-luen (林子倫) (on leave), Tseng Chung-jen (曾重仁), Lin Tzu-ping (林子平), Lei Ya-chi (雷雅淇)

Non-voting Participants: Secretary-General to the President Pan Men-an (潘孟安), Executive Secretary Chang Tun-han (張惇涵) (on leave), Executive Secretary Peng Chi-ming (彭啟明), Deputy Executive Secretary Cheng Chun-sheng (鄭俊昇), Presidential Office Spokesperson Karen Kuo (郭雅慧), Vice Minister of Economic Affairs Lai Chien-hsin (賴建信)

I. Chair's Remarks

Today is the seventh meeting of the National Climate Change Committee and the last day of April. Have you noticed how April, traditionally a spring month, now already feels like summer? This is a clear indication of ongoing global climate change.

According to a report by the World Meteorological Organization in March of this year, 2015-2025 are the hottest 11 years on record. Extreme heat, heavy rainfall, and tropical cyclones will continue to impact social and economic systems worldwide. This is a grave reminder that Earth's energy imbalance is spiraling out of control and our climate situation is reaching a tipping point. Facing these changes is vital to the safety and quality of our lives.

Over the past six meetings, we have established a solid foundation for our government to advance carbon reduction and energy transition efforts. If climate governance were a baseball game, carbon reduction would be our long-term defensive play. But in the face of increasingly hot summers, we cannot simply defend. We must also go on the offensive and proactively engage in climate adaptation.

Carbon reduction is for a better future. Adaptation is for a better present.

We cannot passively endure heat waves, droughts, and floods. Last month on Arbor Day, I announced the promotion of "urban forests" as a national-level adaptation plan. On the eve of Earth Day last week, I met with environmental group representatives and mentioned that the MOENV will present a national tree-planting initiative during today's meeting.

These efforts will help form the most solid foundation for Taiwan's sustainable development. We must elevate green cover to the same level of priority as power and water supplies, treating it as national-level resilience infrastructure. I also ask all

committee members to consider how we can progressively structure and implement this through professional expertise, dedicated agencies, and specialized legislation.

Next, we must actively implement strategies to multiply our green cover. Such strategies will consist of three core elements:

First, we must precisely select suitable sites through scientific evaluation. Building upon our previous tree-planting efforts, we must further utilize advanced monitoring technologies to analyze the distribution of heat islands and shade gaps across Taiwan. In addition to identifying high-temperature areas, we must use scientific analysis to ensure that trees are planted in the most effective locations, maximizing their cooling effect.

Second, we will create a systematic resilience network. I have already asked the administrative team to integrate ministerial resources and coordinate with local governments to systematically link urban forests, community forest belts, and natural forests. We must break from a fragmented governing approach and build a comprehensive, resilient green network across our land, allowing green resources to link up across regions and enhancing our national defense capabilities in all aspects.

Third, we must mobilize all of society to get involved. Climate adaptation requires collective effort. We must continue to expand public-private partnerships, mobilizing society and integrating resources to involve businesses and communities in environmental restoration. We must make protecting our green canopy a localized initiative across our whole society, working together to build a cooler, more comfortable home for the next generation.

Another lifeline of climate adaptation is water. Our government has already launched a cross-ministerial, systematic watershed

management program. From upstream catchment area conservation to comprehensive urban flood control, we are creating self-restoring, resilient corridors across Taiwan to protect every drop of our nation's precious water resources.

These strategic guidelines have already been translated into concrete action plans. The administrative team will report on the specific details of these plans during today's meeting:

First, the MOENV will report on the plan to multiply green cover for climate adaptation, aimed at building a resilient green network for the public. The Ministry of Economic Affairs (MOEA) will then discuss the action plan for the sustainable development of water resources and watersheds through systematic, cross-ministerial management.

We often say, "One generation plants trees; the next enjoys the shade." Although it takes time for trees to grow into forests, every tree we plant and every river we manage is about more than just landscaping. As long as we protect them well and manage them with precision, every effort we make today will become Taiwan's most economical and direct form of climate defense tomorrow.

As Senior Advisor Wu Sheng (吳晟), the "tree-planting poet," has said (in Taiwanese), "Where there are trees, there is wind, and the wind brings coolness; where there are trees, there is shade, and the shade brings coolness." Let us take action together to leave a lasting legacy that safeguards sustainability and preserves hope.

II. Confirmation of the Meeting Agenda

Decision: Meeting agenda confirmed.

III. Confirmation of the Minutes of the 6th Committee Meeting

Decision: Minutes of the 6th Committee Meeting confirmed.

IV. Report Items

1. **Status report on items listed in the 6th committee meeting (omitted)**
(Presented by Executive Secretary Peng Chi-ming)
2. **Greener Living for All: Green Cover Multiplication Plan for Climate Adaptation and a Resilient Green Network (omitted)**
(Presented by Minister of Environment Peng Chi-ming)
3. **Systematic Cross-ministerial Watershed Management: Action Plan for the Sustainable Development of Water Resources and Watersheds (omitted)**
(Presented by Vice Minister of Economic Affairs Lai Chien-hsin)

V. Discussion Items (in speaking order)

Committee members are invited to comment on report items 2 and 3; written opinions will be included in the meeting minutes. (Appendix not included in the English meeting minutes)

(1) Committee Member Remarks (Non-government)

1. Committee Member, Shih Shin-min

- (1) For the follow-up promotion of urban forests, coordination between competent authorities and local governments should be strengthened to establish a more robust administrative system. Tree planting can provide shade and reduce energy use. However, consideration should also be given to the selection of tree species to avoid pollen allergies and mosquito breeding as well as to prevent tree falls during typhoons.
- (2) It is suggested that the laws and regulations in force for the registration and protection of old trees be extended to newly planted trees, and that issues such as undersized tree pits and the lack of dead leaf removal in urban forests be improved.
- (3) In planning urban forests or urban parks, land use competition should be taken into consideration to avoid contradictions where urban forests are increased while existing green spaces are destroyed or tree-planting spaces are reduced due to

facilities such as buildings, parking spaces, and transformer boxes. Such contradictions would lead to the negative perception that the government is squandering public funds.

- (4) Water resource maintenance data is currently presented based on socially defined “living spheres.” It is therefore recommended to supplement watershed management spatial data. The problem of land subsidence caused by groundwater extraction should be addressed while dealing with water supply, particularly in the coastal areas of central Taiwan, and the designated locations of future desalination plants should be marked.
- (5) In addition to domestic sewage and agricultural wastewater, industrial wastewater and its reclamation and reuse are also important issues in wastewater treatment.

2. Committee Member, Lee Ken-cheng

- (1) To plant trees effectively, the primary focus should be on the foundation – the tree pits and soil. Backfilling green spaces and parks with construction waste should be avoided, as it adversely affects plant growth. Furthermore, suitable land must be identified for tree planting to ensure that trees are not removed in the future due to changes to urban planning or other projects, which would prevent them from maturing into century-old trees. Additionally, tree planting should be prioritized on designated but undeveloped park land in urban planning zones.
- (2) It is suggested that a comprehensive inventory and planning of Taiwan Sugar Corporation afforestation land be conducted. In particular, areas adjacent to communities may be converted into permanently preserved forest parks after assessment to enhance the quality of urban and rural life through increased biodiversity and multi-layered planting. Please review the necessity of developing the Qiaotou New Town Phase 3 Project, and respond to the appeals of NGOs to preserve the flatland afforestation areas as parks.
- (3) The distribution of green spaces reflects disparities in quality of life. Urban forests should be classified as critical infrastructure, and the improvement of the green divide should

be included as a goal in implementation. Priority should be given to constructing green spaces in underserved communities, particularly in residential areas and schools near industrial zones that are impacted by pollution.

- (4) Past surveys have indicated that non-native tree species account for up to 70% of trees on primary and secondary school campuses, and non-native species can also be seen in airport landscaping. It is recommended that government agencies lead by example, showcasing Taiwan's biodiversity, unique beauty, and culture through vegetation. Furthermore, as experts, scholars, NGOs, and neighborhood chiefs often hold conflicting positions on vegetation, it is suggested that a mechanism for social dialogue be established.
- (5) Watershed management involves multiple central and local agencies covering upstream to downstream areas. Therefore, a regular platform for integrated communication (such as the Kaoping River Basin Management Committee) should be established. At present, most budgets for soil, water, and forest conservation are allocated to manage landslide areas and debris flow disasters. It is suggested that upstream land use and agricultural activities be guided toward environmentally friendly management. Furthermore, the payments for ecosystem services and land-based subsidies of the Ministry of Agriculture (MOA) should be referenced and extended to slope management to encourage land operators to improve their management practices, thus reducing downstream flood volumes.
- (6) The Fata'an Creek barrier lake overflow incident demonstrates the limitations of conventional engineering management. The Water Resources Agency of the MOEA has proposed a "room for the river" strategy and sediment guidance methods. It is suggested that the action plan for the sustainable development of water resources and watersheds incorporate climate governance and shift from flood control to flood risk management.

3. Committee Member, Ho Tsung-hsun

- (1) Reference should be made to the "3-30-300" rule proposed by

international forestry experts and to the standard of 9 square meters of green space per person recommended by the World Health Organization to achieve the “one person, one tree” vision for urban forests. In Taiwan, Article 45 of the Urban Planning Act is the only regulation currently in force that sets forth a specific requirement for green space area, yet the standard still remains low. It is recommended that the competent authorities formulate phased targets, inventory green space area per capita and actual tree canopy coverage in each county and city, and use data as a benchmark for precise tree planting, so as to bridge the climate adaptation gap.

- (2) While tree planting projects provide the framework, aesthetic education serves as the soul. It is suggested that the government enhance urban spatial aesthetics through informal activities, such as photography, sketching, or voting for the most beautiful old tree, and add “tree aesthetic education” as a benefit of tree planting. Furthermore, it is recommended that the scope of the 100 Taiwan green spots digital passport initiative be expanded to over 300 townships and offshore islands nationwide to ensure that people can experience the beauty of trees in every township.
- (3) To help people identify more closely with their communities, it is suggested that the upcoming urban forest app include digital adoption logs, and that collaborating with the Ministry of Culture (MOC)’s Taiwan Culture Base program can help promote the “one tree, one story” campaign, allowing old trees to become carriers of people’s identity with the land. Additionally, education should be leveraged to break existing perceptions. Take the case of Tallow Tree Alley in Tainan City as an example – even a small alley can be planted with trees.
- (4) The effectiveness of river management should be translated into tangible public well-being. It is suggested that the government propose targets for the next five years regarding the mileage of waterfront green corridors, swimmable areas, and rafting spaces that can be added through systemic waterway management. Furthermore, it is recommended to present year-by-year target data on ecological detention ponds and natural riverbed soil restoration.

- (5) It is recommended that watershed aesthetics be incorporated into the action plan for the sustainable development of water resources and watersheds to help the public rediscover local waterways. Taiwan's community development and history should be integrated into the initiative to closely connect people, culture, land, landscape, industry, and ecology. It is further suggested that the MOC promote a "one river, one story" campaign, inventorying historical waterways across regions to allow old rivers to serve as witnesses to local identity.

4. Committee Member, Chao Chia-wei

- (1) A just transition is one of the main themes of discussion for this committee. The National Just Transition Action Plan promoted by the National Development Council (NDC) has recently entered the public comment period. However, the level of representation from various ministries at the sessions has been relatively low. It is suggested that heads of ministries pay closer attention and stay informed regarding progress toward a just transition.
- (2) The development of green-collar talent in Taiwan should not be limited to corporate ESG or carbon inventory, but should also include ecological conservation efforts. The MOENV is to be commended for incorporating green-collar talent cultivation into its resilient green network initiative. It is suggested that the MOENV and the MOA conduct detailed designs to fully integrate the resilient green network with the Taiwan Ecological Network.
- (3) Regarding heat adaptation for roads, it is recommended that guidelines for heat-resilient streets be established as soon as possible to set out a diverse range of standards for such things as shading and materials specifications. Some local governments have followed Seoul's example by setting up large umbrellas on streets, but urban forests can better demonstrate effectiveness and adaptation functions.
- (4) In promoting the resilient green network, aside from increasing urban forests in parks, it is necessary to prevent urban development from disrupting the formation of wind

corridors; such development weakens the heat adaptation function of urban forests. Reviews of regulatory barriers should be conducted. For instance, regulations to avoid the practice of cutting down large trees and planting small ones should be in place for public works.

- (5) Concerning water and watershed management, the sustainable development goal of reducing daily water consumption per capita to 250 liters should be adopted. Furthermore, water pricing rationalization is an important policy tool, and the government should address this issue.
- (6) Water and watershed management should be combined with the next phase of the National Climate Change Adaptation Action Plan. It is suggested that the MOEA shift from the traditional focus on governance rates and instead adopt a climate change adaptation perspective. Global Goal on Adaptation (GGA) indicators could be referenced to include the proportion of watersheds implementing climate adaptation plans under different scenarios, and corresponding targets could be proposed.
- (7) Resilient green networks and water and watershed management are all closely related to spatial planning. Due to the postponed implementation of spatial planning, administrative departments should seek the understanding of the public and explain that the government remains active in promoting urban forest construction and watershed management.

5. Committee Member, Huang Pin-han

- (1) An inventory of national-level policies over a period of six years, including the National Climate Change Adaptation Action Plan, the comprehensive improvement plan for city/county-managed river channels and drainage systems in response to climate change, the comprehensive improvement and adaptation plan for central government-managed watersheds, and the Spatial Planning Act, reveals that their implementation timelines significantly overlap. The government should have access to science-based data on natural resources, climate change risk analysis, and their

impacts on natural resources as the basis for effective management. The GGA indicators and indicators from international conventions related to rivers and river ecology should be referenced and integrated into the aforementioned plans for review.

- (2) It is recommended that the Executive Yuan's Water and Watershed Sustainability Task Force invite experts, scholars, and NGO partners concerned with watershed management and climate change adaptation issues to jointly participate in formulating and promoting the framework and indicators.
- (3) When local governments promote plans for spatial planning, climate change adaptation, and watershed management, limited personnel means that they have to interface with different government agencies, like the MOA's Forestry and Nature Conservation Agency and the MOEA's Water Resources Agency, as upstream and downstream watershed management falls under different jurisdictions. It is suggested that when the central government allocates public construction resources, it should simultaneously provide related guidance and study mechanisms for local government participation to strengthen local personnel capacity and efficiency.
- (4) Taiwan possesses strong capabilities in policy planning and governance. It is suggested that the Ministry of Foreign Affairs extend the scope of international aid to governance and policy design, and jointly work with friends and allies that prioritize adaptation issues to translate GGA indicators into national metrics, sharing experiences and contributing to global climate change governance.

6. Committee Member, Lai Po-szu

- (1) The MOENV plans to establish a national center for climate change adaptation and resilience, which will facilitate the integration of the work of various government agencies and connect scattered adaptation response measures. This is a welcome development.
- (2) Regarding the urban forest plan, it is recommended that full communication with industry be carried out and incentives

provided, so as to allow businesses to respond by adopting tree-planting initiatives. Nevertheless, as urban adaptation involves complex issues, projects still need to be integrated with urban planning and infrastructure as a long-term strategy in response to extreme weather. It is suggested that the MOENV collaborate with local governments. Cities with a high concentration of manufacturing and service industries and the willingness to promote such projects should be prioritized for simulating scenarios of short-duration intense rainfall or high temperatures to obtain data through sandbox experiments, before gradual expansion and promotion tailored to local conditions.

- (3) It is heartening to see the Water and Watershed Task Force emphasize sustainable resilience results in addition to traditional river and watershed management. In the future, on-site detention ponds, permeable pavements, and recycling and treatment technologies will become important considerations in operations for industries. Since small- and medium-sized enterprises have limited resources and talent, it is suggested that the government, beyond policy campaigns, also arrange for experts to conduct on-site diagnoses and provide recommendations to assist businesses in complying with policies.

7. Committee Member, Tseng Chung-jen

- (1) In addition to the number of river remediations or embankments constructed, it is suggested that the government propose management indicators that the public can see and appreciate, such as the reduction of flooded areas or quicker drainage of floodwaters following frequent heavy rains. Furthermore, data regarding improvements in the cleanliness or hygiene of water supply quality may also be made available.
- (2) While connecting existing waterfront parks can yield rapid results, it is recommended that the resilient green network plant trees and increase greenery as a demonstration in areas around commercial districts and department stores where foot traffic is high and people stay for longer periods, so that the public can tangibly feel the benefits.

- (3) Waste branches generated by tree pruning can be applied to industry and provided to manufacturers with biomass energy needs as a zero-carbon energy source, thus achieving effective resource utilization.

8. Committee Member, Lin Tzu-ping

- (1) For urban forests, we can supplement greening regulations that have previously focused on individual building sites. Existing government regulations already address greening within building sites, such as green building indicators, the Building Technical Regulations, and local livable building regulations. However, sidewalks, plazas, and vacant lots outside these sites often lack overall nationwide goals and shared guiding principles. It is suggested that the plan to multiply green cover for climate adaptation integrate landscape, ecology, human-centric transportation, health, livability, and digital management to introduce long-term systems that enhance resilience in spatial planning.
- (2) Considering that some sidewalks are constrained by insufficient width for tree planting, it is recommended to start greening at campus boundaries. The interfaces between campuses and cities can be leveraged to create a pedestrian environment with water, shade, and air circulation (such as the area around Taipei Tech), increasing safety and comfort in commuting to school.
- (3) It is suggested that shade from trees be expanded to both public and private lands. Green and blue spaces can be created around government buildings by setting perimeter walls farther back from the street. Furthermore, for vacant lots and undeveloped parks, public-private partnership models like corporate adoption or landowners providing land use rights should be leveraged to broaden public participation.
- (4) It is recommended that the promotion of urban forests be institutionalized and integrated with digital applications. While the 3D National Base Map from the Ministry of the Interior (MOI) already includes building data, vegetation information has only been established individually by

certain cities. This project could be used to establish a national digital geospatial database for vegetation. Additionally, referencing the LiDAR technology of the Netherlands, information on tree species and canopies can be established for long-term monitoring, serving as a reference for future urban greening, urban planning, and national spatial planning.

- (5) Regarding water and watershed management, it is suggested that cooling functions be incorporated and be linked with urban forest and green networks, forming a national-level resilience network encompassing water networks, green networks, cooling, and biodiversity.

9. Committee Member, Lei Ya-chi

- (1) Climate change adaptation requires participation by all of society. Whether for adaptation or enhancement of energy resilience, full social communication and broader civic and youth participation are key. It is suggested that these be listed as key project indicators. Through systematic knowledge dissemination, climate action can become a norm for active public participation.
- (2) Although the Water and Watershed Development Plan has its foundation in scientific management, if it lacks knowledge dissemination and social communication, professional analysis will remain a “black box” to the public, turning unknown risks into fear and generating resistance to policy promotion. It is suggested that a communication platform be established to convert map data and statistics into understandable materials. Furthermore, reference can be made to the landmark case of the Room for the River Programme in the Netherlands to see how the public can turn from opposition into partners.
- (3) In addition to planting new trees, the green cover multiplication plan should also emphasize existing urban forests and prioritize planning for vulnerable areas and Taiwanese tree species. Furthermore, besides corporate participation, it is recommended that citizens, youth, and community organizations be involved in co-creation to

strengthen the public's emotional connection to urban forests, making these forests an important piece of social infrastructure maintained by society as a whole via a bottom-up approach.

10. Committee Member, Tseng Wen-sheng

- (1) It is suggested that the green cover multiplication plan incorporate state-owned enterprises under the MOEA for joint participation. As urban underground areas are already configured with sewers, storm drains and water supply pipes, as well as utility lines for electricity, oil, gas, and telecommunications, future planning for tree pits should first involve underground pipeline data cross-referencing to strengthen engineering integration with 3D conversion of geospatial data.
- (2) In the past, trees falling during typhoons have pulled on cables and caused utility poles to fall or break. Therefore, evaluating planting locations and tree species is vital. It is recommended that when promoting tree planting near overhead cables, Taipower be involved in discussions to refine planning and management.

11. Committee Member, Sophia Cheng

- (1) Climate change concerns are not limited to just carbon emissions. In recent years, the international community has been focusing more on the impacts on people and communities while considering the inclusion of ecosystems and stakeholders. Issues have gradually extended from diverse carbon reduction alternatives, regeneration, and circularity to innovation, entrepreneurship, and sustainable investment.
- (2) Climate and nature investment present development potential. The key lies in assisting enterprises with establishing bankable and investment-viable business models, starting in Taiwan and then expanding to the broader Asian market. Reference can be made to Cathay Financial Holdings' work in supporting social enterprises, green-collar talent, citizen power plants, and climate resilience, as well as biodiversity credit methodology for ecological restoration and

afforestation of low-elevation mountain areas, observing future trends through learning across borders.

- (3) The promotion of urban forests represents a nation's cultural literacy. In consideration of the lack of shade from trees around industrial zones and factories, which can lead to heat injuries of employees, enterprises should be willing to donate and contribute to tree planting in industrial zones if constraints such as underground pipelines are overcome. It is recommended that priority be given to high-temperature regions, such as central and southern Taiwan.
- (4) It is advised that community tree-planting be organized according to street blocks, with participants identified through district offices, community development associations, or local revitalization associations. The government could adopt a "pay for success" model, offering monetary rewards after the trees have substantively grown so as to encourage healthy regional competition. In addition, it is suggested that public voting be combined with the government's professional evaluations so as to leverage local momentum, form micro-local governance models, establish model communities, accelerate widespread adoption, and drive local revitalization.
- (5) Climate adaptation and resource allocation require strengthened social communication. It is suggested that analyses of the flows and use distribution of water resources be conducted to help the public recognize that water resource instability is a critical issue. Beyond encouraging enterprises to recycle water and raising water consumption charges, low-water and low-labor crops, as well as water-saving irrigation practices, should be promoted to enhance Taiwan's agricultural resilience and prevent competition for resources from evolving into a social problem.

12. Committee Member, Terry Tsao

- (1) The semiconductor industry, as a beneficiary of water resources and the green cover multiplication plan, will fully support and comply with policy promotion efforts. The green cover multiplication plan offers the industry clear objectives for tree-planting investment. It is suggested that trade

associations and the industrial community subsequently conduct an inventory of existing tree-planting projects, such as the SEMI Forest project already being promoted by the Semiconductor Climate Consortium, and align them with the government initiative to achieve comprehensive shade coverage in Taiwan.

- (2) In terms of water management, the semiconductor industry will make a concerted effort to improve water circulation and sewage treatment and utilization, deploying industrial water reclamation technologies and improving process water efficiency. In the future, the industry will coordinate with government policies concerning water rates, water pollution prevention and remediation, as well as the water circular economy, aiming to serve as a model and demonstrate the sector's contributions to water management and the broader society.

(2) Government Representative Remarks

1. Minister of Environment, Peng Chi-ming

- (1) The green cover multiplication plan is positioned as a social mobilization initiative to cool Taiwan down. The MOENV, in collaboration with the MOA and MOI, among others, acting in line with the president's instructions, works toward professionalism, dedicated responsibility, and dedicated legislation, treating tree planting and maintenance as professional endeavors. The Executive Yuan will convene a central-level meeting in May, and ministries and agencies are expected to complete a nationwide infrastructure inventory in six months. A national plan is scheduled to be submitted to the Executive Yuan in October, with the goal of planting the right trees, planting them well, and ensuring long-term growth at the core.
- (2) In implementing the plan, priority will be given to conducting a science-based inventory of local needs. We will employ map-overlaying to examine above-ground and underground spaces to redefine the most critical areas and identify suitable

tree species for planting. Furthermore, as it takes approximately 10 years for trees to provide shade, science-based methods will be adopted to visualize the post-planting landscape, building a public vision for urban forests to promote participation by members of the public.

- (3) To mobilize society, a platform for open participation will be created to connect central government agencies (state-owned enterprises included), local governments, villages and communities, private enterprises, and tree conservation groups for collective involvement. Members of this committee will also be arranged to share their views with locals to determine the most suitable planting methods together.
- (4) In the future, society's resources will be integrated via online platforms to introduce smart management, ensuring sustainable tree growth. Local system interfacing should be promoted step by step. Anyone interested is welcome to sign up and participate, in order to put the initiative into social action on the ground.

2. Vice Minister of Economic Affairs, Lai Chien-hsin

- (1) Based on watershed governance principles, the six-year action plan for water resources and watersheds integrates 26 watersheds and overlays data from nearly 284 maps to carry out planning. Regarding groundwater management, map data from NSTC and MOEA monitoring activities indicates that by 2025, the area of significant land subsidence in Changhua and Yunlin was reduced to zero, effectively ensuring the safety of the Taiwan High Speed Rail and protecting the environment and landscape. In addition, groundwater levels have been rising following drought mitigation efforts.
- (2) Regarding the effectiveness of cross-regional water supplies, the MOEA, through the String of Pearls Project, has ensured a stable water supply in Hsinchu via the Taoyuan-Hsinchu trunk pipeline project. The storage capacity of the Nanhua

Reservoir has also been increased through the Zengwen/Nanhua Reservoir Interconnecting Pipeline Project, which has helped stabilize water resources for the production base along the S-corridor in Southern Taiwan. In addition, in coordination with the MOA and the Council of Indigenous Peoples, tree planting and forest protection are being promoted. The plan involves gradually transitioning economic forests in upstream areas into natural forests by changing behaviors coupled with government subsidies, putting wise land use into practice.

- (3) Water environment improvements have already developed into a kind of environmental education that resonates with the public. For example, water management in Tainan's Zhuxi Creek and Yuejin Harbor has increased local waterfront space, while the Yunlin County Huwei Project utilized an international design competition that also incorporated the historical narrative of the sugar refinery for educational purposes.

In addition, the MOEA is using a 2°C warming scenario to predict flood risks in various urban watersheds. The ministry is promoting runoff allocation so that urban green spaces and parks can provide flood detention during heavy rains. It is encouraging the installation of rainwater harvesting modules on campuses so that students can observe water storage status and develop urban and rural education. It is also supporting on-site flood detention on farmland and the provision of subsidies to enhance environmental resilience.

- (4) Local governments should implement dredging and adaptation work before the rainy season. Under the local subsidy transfer framework, the Executive Yuan will guide the vertical division of labor between the central and local governments, facilitating connections through platforms while providing adaptation indicators. In the future, local government investment in water management will be

disclosed, and these results will be incorporated into performance evaluations and made public. By integrating forces from all sectors, water management will be transformed into a concrete, participatory initiative.

3. Minister of Agriculture, Chen Junne-jih

- (1) Planting trees that can grow for a century requires professional methods, as the growth of the root system and canopy expansion depend on suitable soil. The MOA's Taiwan Forestry Research Institute (TFRI) has adjusted the US Department of Agriculture's i-Tree model to incorporate parameters for domestic tree species, which will serve as a professional tool for urban forest landscape planning as well as benefit simulations. In addition, the TFRI has established a nationwide campus tree species database that is estimated to include over 900 tree species suitable for planting in Taiwan.
- (2) Currently, native tree species make up approximately 31% to 36% of trees on campuses and roadsides. Although some non-native species grow rapidly, they are relatively frail and brittle. Through the MOI, the MOA has identified approximately 60,000 hectares of land and established the National Tree Planting Consultation Center to assist local governments with tree species selection, planting methods, pruning management, soil testing, and the preservation of old trees.
- (3) The MOA has utilized Taiwan Ecological Network map data to discuss with the MOENV ways to effectively integrate urban resilience green networks. Local revitalization and rural regeneration efforts will also be integrated. In addition to rural areas, resources will also be allocated to communities on the periphery of urban areas to extend resilient green networks.
- (4) Regarding water resource and watershed management, in addition to focusing on healthy governance of upstream catchments and the prevention of debris flows, large-scale landslides, and unstable sediment in mid-stream areas, the MOA is actively promoting land-use guidance policies to

encourage eco-friendly farming on slopes to reduce disaster risk. In addition, the MOA has secured a Payment for Ecosystem Services Demonstration Project to introduce Nature-based Solutions (NbS) around watersheds, such as using earthen embankments to replace concrete for waterway remediation to turn the surrounding spaces into habitats while ensuring environmental sustainability.

4. Minister of the Interior, Liu Shyh-fang

- (1) The MOI serves as the competent authority for land use. Statistics show that in 2024, urban planning zones nationwide contained 37,000 hectares of roads and sidewalks, 12,900 hectares of parks, 1,129 hectares of school campuses, and 2,334 hectares of green spaces. These figures can serve as reference points for subsequent greening and tree planting efforts. In conjunction with the ten-year tree planting project, when making quality improvements to parks, green spaces, waterfronts, and public spaces, a minimum of 10% of the budget should be allocated to planting, and subsidies to local governments for connecting urban green corridors should be expanded.
- (2) Under the sustainable pedestrian safety enhancement program, methods such as setting back campus walls, reconfiguring spaces, adding sidewalks, creating strip planting beds, and planting green tree belts will be employed to create green corridor commuting routes to schools that also provide traffic safety and cooling benefits. In addition, the MOI amended the Design Specifications for Urban Roads and Accessory Works in 2024 to appropriately ease restrictions regarding the net width of sidewalks that have green belts in their centers.
- (3) To encourage enterprise participation, the National Park Service and the private sector are working together to carry out afforestation in national parks; it is expected that 127 hectares of trees will be planted by the end of 2029. In addition, a five-

year plan is being promoted to plant 10,000 native-species trees in each of the Taichung and Kaohsiung metropolitan parks.

- (4) Regarding water resource utilization, the MOI is promoting a water reclamation project for public wastewater treatment plants that will reclaim 285,000 tons of water per day by 2026. The target for the next phase of the six-year plan is to reach 500,000 tons per day.
- (5) Regarding efforts to improve water quality, the budget for the sixth stage of the sewer construction plan is NT\$106.8 billion, with a target of connecting 80,000 households to the public sewage system. Stage seven of that construction plan will maintain this connection target and increase its budget.
- (6) Phase 3 of the Kaohsiung New Town Development Program is currently under review in accordance with urban planning procedures. In that project, 6.28 hectares of the Qiaotou Sugar Refinery have been designated as a tourism development zone. Other elements involving industrial cultural tourism, transportation, and natural ecological landscapes are still under review.

5. Minister, National Science and Technology Council, Wu Cheng-wen

- (1) The construction of Digital Twin models must begin with data governance, which is a long-term and challenging undertaking. Both tree planting and greening efforts, as well as water and watershed governance, must be data-based. Through systemic governance and model analyses, precise resource allocation and enhanced execution efficiency can be achieved.
- (2) The National Science and Technology Center for Disaster Reduction (NCDR) has been collecting data from monitoring devices and sensors of various central government ministries and agencies. It has established data links with the Central Weather Administration (CWA) of the Ministry of

Transportation and Communications (MOTC), the National Fire Agency (NFA) of the Ministry of the Interior (MOI), the Coast Guard Administration (CGA) of the Ocean Affairs Council (OAC), the Agency of Rural Development and Soil and Water Conservation (ARDWC) and the Forestry and Nature Conservation Agency (FANCA) of the Ministry of Agriculture (MOA), the Centers for Disease Control (CDC) of the Ministry of Health and Welfare (MOHW), and local governments. Through systemic organization and model analyses, the NCDR provides the information and intelligence necessary for real-time decision-making to respond to disasters and for application to sustainable adaptation governance.

- (3) The NSTC will leverage existing mechanisms to assist in establishing cross-ministerial data integration and analysis functions, and support the promotion of tree planting and greening as well as water resource and watershed efforts.

6. Minister of Transportation and Communications, Chen Shih-kai

- (1) In 2025, the MOTC conducted an inventory of land utilized for transportation that could be used for afforestation or greening, and found that the land is already nearly saturated. Follow-up efforts will focus on improving the maintenance of green belts and the greening of side slopes along provincial and national highways.
- (2) Regarding national highways, provincial highways, and railways, the Highway Bureau, Freeway Bureau, and the Railway Bureau have signed a cooperation agreement with the FANCA regarding the Taiwan Ecological Network enabling roadside planting that contributes to Taiwan's ecology and the preservation of native tree species. For provincial highways, the MOTC is promoting a provincial highway improvement plan from 2025 to 2029, implementing full life-cycle management for roadside trees to ensure suitable species selection and healthy growth while giving equal consideration

to traffic safety.

- (3) The MOTC is cooperating with the MOA to establish design guidelines for roadside trees as a reference for future roadside tree configurations, designs, and species selection. Risk assessments regarding the impact of roadside trees on road user safety will also be strengthened, and a digital tree registry management system will be established to achieve the goal of “planted well, growing safely.”

7. Chairperson, Financial Supervisory Commission, Peng Jin-lung

- (1) In coordination with the green cover expansion plan, the Financial Supervisory Commission (FSC) has incorporated financial institution encouragement for clients to prioritize biodiversity or disclose nature-related financial information in accordance with the Task Force on Nature-related Financial Disclosures (TNFD) framework. In addition, the promotion of biodiversity and natural carbon sinks by TWSE/TPEX-listed companies has also been incorporated into ESG evaluations. In the future, these indicators will be reviewed on a rolling basis to increase incentives for private sector participation.
- (2) To guide financial sector resources toward adaptation activities, the FSC, together with the MOEA and the MOENV, will continue to promote the Taiwan Sustainable Taxonomy, while incorporating climate adaptation issues into sustainable finance certification courses to promote the relevant concepts. In the future, to coordinate with the MOENV’s plans, the FSC will increase incentives aimed to support the financial sector and TWSE/TPEX-listed companies, and encourage the financial sector to develop financial services and products related to heat adaptation.

(3) Deputy Convener Remarks

1. Deputy Convener, Tung Tzu-hsien

- (1) Taiwan has many high mountains, so when water is abundant, if it cannot be retained it will drain into the sea as runoff. In addition, as large reservoir development has reached saturation and faces silting issues, it is suggested to follow the example of Pingtung's artificial lake engineering project, which recharges the aquifer and underflow. During the water shortage in 2021, these initiatives benefited the Pingtung and Kaohsiung regions, establishing a foundation for local, long-term social stability.
- (2) Although exports from Taiwan's high-tech sector are booming, agriculture has significance for livelihood, life, and ecology, and should not be overlooked. For instance, although rice paddy irrigation utilizes agricultural water, it also functions to recharge the aquifer. If land remains fallow or rice paddy cultivation decreases, the ecological function of recharging the aquifer will be lost. It is suggested that these factors be taken into overall planning considerations.
- (3) The selection of tree species should balance economic, ecological, and safety factors, as well as follow-up management. In the past, acacia trees, which could be made into charcoal or mine shaft supports, possessed economic value, whereas the extensive planting of shallow-rooted betel palm trees on slopes tended to lead to landslides during floods. While it was comparatively difficult for Taiwan to balance ecological and economic factors in the past during its early stages of development, since the public has achieved a higher standard of living, a greater emphasis should be placed on environmental sustainability, taking the ecology's long-term interests into consideration.
- (4) For urban forest planning, professional entities such as the MOENV and MOA should be trusted. Local governments

should be requested to increase their use of the guidelines for Taiwan's native tree species, noting the risks associated with different species such as the toxicity of oleander, chinaberry, and rhododendron trees, as well as safety concerns like decaying fallen cotton tree flowers and the hard fruits from the Indian Almond tree causing vehicles to skid, thereby ensuring that trees align with a city's characteristics and needs. It is suggested that the planning for urban green belt functions be strengthened to prevent population concentrations and heat island effects from impacting the public's quality of life.

2. Deputy Convener, Cheng Li-chiun

- (1) Previous recommendations by committee members regarding comprehensive adaptation tasks cover issues such as environmental ecology, national spatial planning, industry, health, and society, as well as the establishment of guidelines to align with the international community, all of which have been incorporated into planning by the administrative team. Today's report topics all address climate adaptation actions, with the core focus on seeking innovative governance, specifically the use of map data and data technology to create a systematic governance model that serves as a feasible pathway for inter-ministerial integration and comprehensive responses.
- (2) Post-disaster reconstruction experiences from the past show instances where only road repairs were carried out without simultaneously addressing slope remediation, indicating a lack of integrated governance. To implement Premier Cho's instructions regarding a systemic water management philosophy and the goals of "minimal flooding, fastest flood recession," the National Science and Technology Center for

Disaster Reduction (NCDR) has linked water, soil, and forest data for landslide forecasting to enable early evacuation efforts and allow for the export of technologies such as disaster prevention monitoring and analysis to Southeast Asia to assist them in establishing disaster prevention systems.

- (3) Water resource and watershed development initiatives will integrate climate information, water, soil, and forest data, flood potential maps, disaster hotspots, flood detention capacity of urban spaces, and industrial and commercial registration data. Through map data overlays and AI technology, entire watersheds will be analyzed to identify priority governance items, serving as high-level guiding principles for planning and budgeting. In addition to traditional concrete engineering, governance methods may include runoff sharing and urban flood detention, or raising the embankments between paddy fields to enable those fields to serve a flood detention function during fallow periods. In addition, issues such as water recycling utilization and groundwater can also be included for deliberation.
- (4) In the past, Wu Sheng long advocated that heads of central and local governments should learn how to plant trees, and reminded them that tree species selection and maintenance require systematic management. The project proposed by the MOENV utilizes map data to integrate data on Taiwan's tree species, species selection tailored to location, maintenance methods, climate information, and smart tree management, serving as the foundation for establishing a governance platform.
- (5) Looking ahead, information regarding underground pipelines, urban land inventories, green spaces, health, and biodiversity proposed by committee members can be incorporated and

integrated into a data platform accessed by the public and private sectors as well as collectively across departments. Adopting an open data approach to promote public participation will help foster collaboration, demonstrating the feasibility of new governance models and embodying related ideals.

(4) Advisor, Eugene Chien

- (一) The green cover expansion plan comes with a complete vision and integrated planning, with benefits such as helping with urban cooling, health and disaster prevention, air quality, and biodiversity, while raising the level of policy thinking and promotional momentum. However, as tree planting is a long-term undertaking, it is suggested that the ten-year budget and central and local government funding arrangements be supplemented. Institutionalized or legislated long-term financial resources should be established to avoid over-reliance on unstable enterprise donations.
- (二) Tree planting and species selection are highly professional tasks that require dedicated specialists to facilitate long-term investments and maintenance. In addition, although the plan clearly lists the MOENV as the central governance hub, local governments are the actual executing entities. The corresponding dedicated units at the local level should be clearly defined to facilitate administrative coordination and cooperation. It is suggested that budgets, dedicated agencies, and specialist personnel deployments be codified in law to ensure the long-term continuity of policy promotions.
- (三) The water resource and watershed development plan has already incorporated cross-ministerial integration and

watershed governance concepts, and has allocated considerable funding. It is suggested that water resource governance be elevated to a national water resilience policy. In addition to hydraulic engineering, such governance should further be linked to livelihood security, water security, industrial stability, and climate adaptation to form a comprehensive national water resilience strategy. At the same time, a long-term financial path should be planned, specifying annual funding requirements.

- (四) A public participation mechanism should be established, and incentives for public involvement should be deliberated to increase people's willingness to take part. In addition, it is suggested that climate risks, population exposure, industrial importance, cost-benefit, and ecological impact be incorporated into a comprehensive analysis to establish governance priorities that are linked to ecological conservation to enhance the long-term effectiveness of watershed governance.

(5) Convener, Lai Ching-te

Once again, I would like to thank the MOENV and MOEA for proposing these two cross-ministerial collaborative initiatives. I also want to thank the two deputy conveners, Advisor Eugene Chien, and the committee members for your valuable input. Regarding the two report items put forward today, I hereby issue directives respectively as follows:

For report item one, regarding the Climate Adaptation Green Cover Expansion Plan, we will consider urban forests and green cover as resilience infrastructure that safeguards the health of our citizens, and we must construct a governance system that is professional, long-term, and participatory for all.

First, to ensure the long-term stability of the plan's

implementation, the MOENV, MOA, MOI, and other relevant ministries and agencies are requested to complete a national green cover system. In addition to reviewing and amending the relevant laws and regulations, the feasibility of enacting dedicated laws should also be deliberated to ensure the smooth implementation and sustainable promotion of programs. We should also draw on international experience, incorporating future climate scenarios into long-term planning and resource allocations to steadily advance this cross-ministerial, intergenerational national undertaking.

Second, urban forestry is a professional and extensive national adaptation project. Deputy Convener and Vice Premier Cheng Li-chiun is requested to supervise this project, with the MOENV coordinating and cooperating with the relevant ministries and agencies to establish a dedicated organization, allocate professional personnel, and secure stable financial resources. It is also necessary to integrate with local governments to jointly include Green Cover Expansion as a vital item in local governance, gradually investing the corresponding resources and maintenance manpower.

Third, based on a foundation of professional governance, we must continue to bring together deep humanistic and social energies. The MOENV is requested to continue inviting a broad range of experts, scholars, and private enterprise groups to draw on their valuable experiences. In addition, the MOENV should discuss the relevant incentive mechanisms with the FSC, MOF, MOEA, MOC, and NDC, and guide private enterprises to systematically allocate ESG resources to green public welfare. This concept should be deeply rooted in villages and communities to establish a diverse and stable network that fosters sustainable and scalable models of social collaboration and business operations.

For report item two, I would like to thank the Executive Yuan's Water and Watershed Sustainability Task Force for completing an action plan after multiple cross-ministerial consultations. In the future, we must further implement systematic governance to create resilience corridors that have a symbiotic relationship with water and natural regulatory capabilities.

First, the MOEA is requested to take the lead in coordinating the relevant ministries and agencies to precisely allocate resources for systemic resilience construction in watersheds in accordance with evidence-based governance principles. At the same time, the MOEA should guide local governments to strengthen local management responsibilities and invest in maintenance and operations capabilities, ensuring that every project delivers maximum overall governance benefits.

Second, watershed governance should be built on the foundation of existing hard engineering and further integrate nature-based solutions as a core policy. The MOEA, MOA, MOI, and MOENV are requested to jointly implement catchment conservation work, riverbank ecological restoration, and the integrated construction of hydrological systems, bringing together river blue belts and forest green belts to enhance overall ecological resilience. Governance outcomes should also be linked to people's lives. Through urban flood detention and the transformation of public spaces, composite resilient spaces providing shelter, recreation, and cooling functions should be created based on local conditions.

Third, the MOEA and MOI are requested to inventory disaster hotspots, slope failure potential, and monitoring and regulatory data, incorporating them into national spatial planning and land use management applications. They are also requested to gradually promote information transparency, and take an early warning and protection approach to strengthen social

communication and outreach to further safeguard the lives and property of the public, consolidating society's confidence in national adaptation policies.

Finally, the administrative team is requested to integrate the valuable suggestions from today's meeting to build concrete and feasible policies, and report on the implementation results on a regular basis. Let's work together to make Taiwan more resilient amidst change, and move toward a cool and comfortable, prosperous and sustainable future. Thank you.

VI. Extempore Motions

Proposal: Emergency Action Plan to Safeguard Energy Transition 2.0 (Proposed by Committee Member Lee Ken-cheng and four other committee members)

1. Description of Committee Member Chao Chia-wei's proposal (Appendix not included in the English meeting minutes)
2. Supplementary remarks by Committee Member Lee Ken-cheng (Appendix not included in the English meeting minutes)
3. Response by Vice Minister of Economic Affairs Lai Chien-hsin
 - (1) Regarding the development of green energy, in addition to eliminating regulatory barriers, emphasis must also be placed on society's level of acceptance. Take the Jinlun Geothermal Project Site in Taitung County as an example. The area often experiences power outages due to typhoons. If geothermal and other forms of green energy are integrated into local microgrids, communicating through means such as maintaining power supply even after a typhoon would resonate with the local public.
 - (2) In response to disasters, the government is promoting a

mechanism in which the main power grid protects microgrids, with priority given to venues such as school activity centers and shelters.

- (3) Previously, the promotion of green energy was often perceived as serving the interests of enterprises. The MOEA is expanding the promotion of rooftop photovoltaic systems and increasing subsidies for self-generation and self-consumption of power. Installing solar panels on homes can cut electricity bills, and gradually increase social acceptance of green energy.

4. Resolution

- (1) Regarding the nuclear energy issue, the government has consistently upheld the three principles of “ensuring nuclear safety, resolving nuclear waste issues, and building social consensus.” The competent authority is requested to provide explanations to the public in a timely manner and engage in dialogue with social groups.
- (2) The sharing of accurate information is an important element of social communication. This point was also included in the conclusions of the first committee meeting. Should there be any shortcomings, the government will redouble its efforts.
- (3) A proposal was submitted by committee members that involves both the Whole-of-Society Defense Resilience Committee and the National Climate Change Committee. Therefore, Executive Yuan Secretary-General Chang is requested to call together the executive secretaries of the two committees and the relevant ministries and agencies to deliberate follow-up implementation methods, and to communicate and discuss the situation with members of both committees.

VII. Chair's Closing Statement

Thank you all for attending today's meeting and offering your valuable suggestions. In closing, I would like to emphasize that many might say that climate change is all about science and data, but for most people, it is about feeling "cold or warm" in everyday life.

We have all had the experience of walking into the shade of a tree on a scorching hot afternoon. That instant sense of coolness and ease—such happiness. This is the kind of happiness that this committee hopes to give our citizens.

I often experience this happiness myself, as there are many large trees beside the door to my home where I can take a seat, cool off in the shade, and enjoy the breeze. I think this is wonderful, so I hope we can all work together to give our citizens this kind of happiness.

Therefore, the spirit of the two plans today is to restore the vitality of our land. I want to emphasize once again that although it takes time for trees to grow, every tree planted and every river managed now contributes toward building a resilient homeland.

I hope that in the future, whether it's a child's commute to school or a family's daily stroll, all people in Taiwan can be a little cooler and happier thanks to the protection of green cover.

This work cannot be rushed, but neither can it be delayed. We must govern with scientific rationality and carry out our plans with affection for our homeland, so that nature becomes the gentlest line of defense protecting the next generation.

Let's work together so that, no matter how fierce the storms or heatwaves it faces, the Taiwan of the future will stand like a deep-rooted tree, resilient, elegant, and full of vitality. Thank you.

VIII. Meeting Adjourned: 7:25 p.m.