

# National Climate Change Action Guidelines

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## I. Preface

Climate change, caused by greenhouse gas emissions from economic activities, has led to ever-rising average global temperature, impacting both humankind and the ecosystem. Taiwan is no exception; the frequency of extreme rainfalls, typhoons, days with high temperatures and volatility of precipitation in Taiwan are expected to increase significantly in the coming years. This will severely impact numerous areas, including water resources, homeland security, coastal environments, marine resources, food security, public health, and biodiversity.

Climate change is indeed posing a rigorous challenge to the entire planet. Despite the difficult challenge of transforming the energy and industrial structure, Taiwan has reiterated that it will spare no effort to reduce greenhouse gas emissions while complying with the Paris Agreement and the United Nations' Sustainable Development Goals. Pursuant to Article 9, Paragraph 1 of the Greenhouse Gas Reduction and Management Act, promulgated in 2015, the central competent authority, namely the Environmental Protection Administration of the Executive Yuan, has the responsibility to formulate the National Climate Change Action Guidelines (Action Guidelines) and the Greenhouse Gas Reduction Action Plan (Action Plan) as the general guidance for the task of reducing greenhouse gases for the whole nation.

Taiwan endeavors to reduce greenhouse gas emissions, realize environmental justice, establish global partnerships, adopt low carbon lifestyles, and achieve the ultimate goal of sustainable development. It will do so through cooperation between central and local authorities, non-governmental organizations and the general public as well as the development of climate change adaptation and mitigation strategies, which take into account intergenerational equity and the right of minority groups.

## **II. Prospects and Objectives**

### **1. Prospects**

Formulate adaptation strategies; reduce and manage greenhouse gas emissions; construct a green and low carbon homeland that is adaptive to climate risk; ensure sustainable development of the nation.

### **2. Objectives**

- (1) Enhance overarching adaptability; minimize vulnerability; build-up resilience.
- (2) Gradually reduce GHG emissions to 50% of the 2005 emission level by 2050.

## **III. General Principles**

The government shall observe the following principles:

1. Comply with the provisions of the Paris Agreement to enhance greenhouse gas mitigation and gradually phase out the use of hydrofluorocarbons (HFCs) (which have high global-warming potential) pursuant to the Kigali Amendment to the Montreal Protocol.
2. Acknowledge that transparency, environmental co-benefits and cost-effectiveness should be considered in both policy formulation and implementation of mitigation and adaptation issues.
3. Implement a cap-and-trade scheme for greenhouse gases and taxation to put carbon pricing and green finance into practice and enhance economic incentives, reduce greenhouse gas emissions, assist green industrial development, improve national competitiveness, and promote social welfare.
4. Comply with the objective of a nuclear-free homeland, such that expansion in nuclear power will not be adopted as a means of combating climate change.
5. Take mitigation and adaptation strategies into consideration while performing environmental impact assessments.
6. Enhance capacities with regard to basic science, early warning, adaptive response to climate change, and resilience development.

7. Improve energy and resource utilization efficiency, boost resource recycling, and ensure national energy security and sustainable utilization of resources.
8. Establish a communication platform on which to build partnerships between the central and local governments, as well as cooperation between public and private sectors, to practically execute localized adaptation and mitigation measures.
9. Boost international cooperation and authentic participation, based on the principle of reciprocity, to maintain industries' international competitiveness.
10. Increase public awareness and build the capacity to respond to climate change, and proactively assist non-governmental organizations to participate in relevant events.

## **IV. Adopted Policies**

### **1. Climate Change Adaptation**

#### **(1) Enhance disaster risk evaluation and disaster management**

- Conduct disaster risk evaluation of climate change; review the vulnerability highlighted by previous extreme climate disasters, assess measures that have been taken, and review their effectiveness in mitigating risks and vulnerabilities.
- Strengthen risk management of climate change; improve early warning and response mechanisms; conduct simulations of scenarios, comprehensive risk evaluation and management, climate risk sharing mechanisms, and develop an adaptation program to respond to extreme weather impacts and enhance resilience.

#### **(2) Raise resilience of infrastructure**

- Strengthen the ability of construction, risk assessment and repair of energy and water supply systems.
- Improve adaptability of facilities of transport, communication and information systems against climate change.

#### **(3) Maintain a balance between water supply and demand**

- Establish diversified water resource acquisition strategies as well as water conservation and water circulation habits; reasonably allocate water resources for different purposes to ensure sustainable usage of water.
  - Strengthen the flexibility of water resource system against climate change, drastic increase in rainfall, and increased volatility of water levels during wet and dry seasons.
- (4) Assure land use safety and strengthen land consolidation and management mechanisms
- Carry out environmental conservation; perform reasonable land conservation and restoration; strengthen land management mechanisms to assure land use safety.
  - Enhance the resilience of urban and rural areas and improve land use sustainability.
  - Implement river basin management policies, which include integration and harmonization of river basin safety, humans, the environment and ecology.
- (5) Prevent coastal hazards and ensure sustainability of marine resources
- Establish appropriate prevention facilities or mechanisms to mitigate coastal disasters.
  - Protect marine resources and marine wildlife habitats; foster sustainable development of the ecosystem.
  - Strengthen monitoring and an early warning mechanism to respond to coastal hazards and impacts of coastal change.
- (6) Improve adaptability of the energy supply system and industries
- Ensure infrastructure safety and stability of energy supply facilities.
  - Build an environment that reduces climate risks and strengthens adaptive capacities.

- Elevate businesses' ability of risk management and opportunity exploration, to develop climate-resilient products and services.

(7) Secure agricultural production and ensure biodiversity

- Safeguard resources for agricultural production; strengthen the monitoring and early warning system; reinforce government subsidies and insurance system; integrate technology to improve the capacity for stress resistance in agriculture, forestry, fishery and animal husbandry; ensure food security and construct sustainable agriculture that is adaptive to climate risks.
- Refine the management of nature reserves; establish a long-term ecology monitoring system; improve preservation and reasonable application of species and genetic diversity, respectively.

(8) Reinforce the public health and epidemic prevention system and improve health risk management

- Strengthen the capabilities of the public health and epidemic prevention systems for prevention, mitigation, contingency and recovery.
- Improve the ability of health risk monitoring, impact assessment and prevention to protect public health and ensure the rights of minority groups.

## 2. Climate Change Mitigation

(1) Adjust the energy supply structure and improve energy efficiency

- Adjust the structure of energy supply, increase renewable energy deployment, construct a low carbon energy supply system, and accelerate the expansion of green energy within the energy mix.
- Improve the efficiency of energy generation, usage, transmission and distribution, and promote energy conservation.
- Take environmental quality and regional development into account during energy planning.

(2) Transform to green business and execute sustainable production and

consumption strategies

- Provide counseling services to transform industries into green and low-carbon enterprises and boost green energy industries to raise the international competitiveness of products.
- Compose comprehensive incentives for greenhouse gas reduction and augment greenhouse gas mitigation measures taken by industries.
- Foster sustainable consumption habits and assist industries to apply sustainable production processes.

(3) Develop green transportation and improve energy efficiency of the transportation system

- Expand public transport systems and strengthen management of transportation demands.
- Construct a green transport network, promote the use of low-carbon transportation, and create a green mode-oriented environment.
- Enhance energy use efficiency of vehicles and transport systems.

(4) Construct sustainable buildings and low-carbon living areas

- Reinforce energy conservation regulations for buildings; improve energy efficiency of buildings; implement carbon reduction measures for both new and existing buildings.
- Implement energy efficiency classification and incentive mechanisms for existing buildings.
- Conduct urban afforestation and consolidate the efforts of local governments and citizens to establish low-carbon living areas.

(5) Boost the development of sustainable agriculture

- Implement eco-friendly agricultural cultivation to stabilize agricultural production; preserve the environment related to agriculture, forestry, fishery and animal husbandry to ensure sustainable development of agriculture.

- Promote low-carbon agriculture; encourage the application of renewable energy for agricultural purposes, and improve agricultural resource recycling.
- Strengthen forest resource management; increase forest resources; raise the net quantity of national carbon sinks to elevate the benefits of forests' carbon sequestration.

(6) Alleviate environmental burdens and build a society that reuses and recycles energy and resources

- Incorporate practical actions of building resilience, greenhouse gas reduction, and environmental co-benefits when conducting environmental impact assessment of government policies and development projects.
- Perform energy and resource recycling to enhance the reuse of regional energy and resources.
- Decrease the greenhouse gas emissions from waste and sewage treatment.

### 3. Complementary Policies

(1) Mobilize capital from the private sector through the implementation of green finance; foster the development of the green energy industry and boost resilience.

(2) Internalize the external costs incurred by greenhouse gas emissions via the carbon pricing scheme, including green taxation and cap-and trade.

(3) Construct channels for the general public to access relevant climate change information; provide incentives or subsidy measures to trigger behavior change and region-specific low carbon action.

(4) Promote climate change-related environmental education; cultivate professional personnel to respond to climate change issues; enhance the awareness and skills of the general public and convert them into daily low-carbon actions.

## **V. Future Implementation**

In order to reinforce adaptability to climate change, relevant central government agencies shall follow instructions of the Action Guidelines to implement adaptation action plans in various fields. To achieve the national long-term emission reduction goals, the Taiwan government will review the periodic regulatory goals every five years and examine their validity regularly. Through the implementation of the Action Plan, the Greenhouse Gas Emission Control Action Program of the energy, manufacturing, transportation, agriculture, environmental, residential and commercial sectors, along with the Greenhouse Gas Control Implementation Plan of municipality and city authorities, the vertical and horizontal integration of different bodies of the Taiwan government will comprehensively expand the capacity to combat climate change and create the co-benefits of sustainable development of society, the economy and the environment, along with public health protection.