

A Tale of Two Green Cities: Kaohsiung and Katowice

**Time
for**



CHANGE

Climate Change: Global Challenge Requiring Global Response

Dr. Lee Ying-yuan, Minister of the Environmental Protection Administration, Executive Yuan, ROC (Taiwan)

Continued growth in emissions of greenhouse gases around the world has caused abnormal and extreme weather events such as heatwaves, droughts, and catastrophic torrential rains. These events are no longer just abstract future scenarios; they are happening today in all corners of the globe.

Average temperatures in Taiwan in the past two years have been the highest in 100 years. Since 2017, rainfall has dropped markedly, affecting Taiwan's hydroelectricity generation. Indeed, these recent developments are having a considerable impact and pose a significant threat.

Other parts of the world have witnessed similar trends. During the 2018 summer season, many countries across the Northern Hemisphere in Europe, Asia, North America, and North Africa have experienced record-breaking heatwaves and deadly wildfires that seriously jeopardize human health, agriculture, natural ecosystems, and infrastructure.

To further implement the Paris Agreement on Climate Change and achieve the goals outlined therein, the United Nations Framework Convention on Climate Change, in addition to faithfully conducting important projects, consultations, and negotiations, has also invited parties from various fields to join the Talanoa Dialogue, so as to take full advantage of the collective wisdom of humankind in formulating workable solutions to climate change.

As a member of the global village, and in line with the Paris Agreement, Taiwan has actively encouraged all stakeholders to do their part and strengthen efforts toward reducing carbon emissions. Taiwan has passed the Greenhouse Gas Reduction and Management Act, under which five-year carbon reduction targets have been formulated. Taiwan has also created the National Climate Change Action Guidelines and implemented the Greenhouse Gas Reduction Action Plan, which targets six major sectors: energy, manufacturing, transportation, residential and commercial development, agriculture, and environmental management. By setting emission caps, promoting green finance initiatives, cultivating local talent pools and education, encouraging cooperation across central and local government agencies and across industries, and involving the general public, Taiwan seeks to reduce its greenhouse gas emissions by 2050 to less than 50% of 2005 levels.

Almost 90% of Taiwan's annual greenhouse gas emissions come from fuel combustion. The government is



striving to increase the share of renewable sources in overall energy generation to 20% by 2025, and raise the share of energy produced with natural gas up to 50%. At the same time, Taiwan is gradually reducing its reliance on coal, closing older coal facilities and equipping the remaining ones with high-efficiency ultra-supercritical units that cause less pollution. The government is also investing in other equipment and technology that can help reduce pollution, offering subsidies to encourage people to replace older vehicles as well as promoting electric vehicles. Earlier in 2018, Taiwan's Air Pollution Control Act was amended, with stronger measures to curtail air pollution and accelerate Taiwan's energy transition.

Taiwan's energy policies are being promoted in consideration of four core aspects: energy security, green economy, environmental sustainability, and social fairness. Furthermore, Taiwan is working on an energy transformation white paper and encouraging public participation and input during this process. It is also implementing key action plans under the Energy Development Guidelines, so as to make a decisive shift towards sustainable energy development.

The pursuit of economic growth often comes at the expense of environmental degradation and depletion of natural resources. According to research by the Global Footprint Network, human consumption of natural resources is outpacing the ability of the planet's ecosystems to regenerate resources by a factor of 1.7. In fact, in 2018, Earth Overshoot Day fell on August 1, which was earlier than ever before.

In order to find a proper balance between economic development and environmental protection, Taiwan is promoting the circular economy as part of the Five Plus Two Innovative Industries program. There is a widespread international consensus that the circular economy plays a vital role in achieving the goals of the Paris Agreement.

Taiwan has already made significant progress over the past two decades in recycling and reusing resources. In fact, in 2017, Taiwan's resource recovery rate was 52.5%, a ratio surpassed only by Germany and Austria. The recycling rate of plastic bottles in Taiwan in 2017 was 95%. And during the 2018 FIFA World Cup, about half of the 32 teams in the tournament wore jerseys produced with recycled bottles from Taiwan.

Looking to the future, Taiwan will continue to strengthen technological R&D and innovation, so as to bolster recycling while building integrated industrial value chains. The goal is to achieve a situation in which there is zero waste and everything that can be recycled is

recycled. Taiwan is more than willing to share its technology and experience with the international community.

By advancing environmental sustainability, we can ensure that our planet remains as uniquely beautiful and habitable as it has been more for millions of years. All countries and parties should take part in this common endeavor. Having benefited tremendously from industrialization, Taiwan is now fully committed to playing a key role in saving the planet and its precious ecosystems. Taiwan is ready and willing to share its knowledge and experience in environmental management, disaster prevention and warning systems, energy efficiency enhancement technology, and application of innovative technology.

Climate change is a matter of our planet's survival, and should not be reduced to a political issue. Taiwan has long been unfairly disregarded by and isolated from the United Nations system. This has not discouraged us. On the contrary, we have doubled our efforts based on our belief in the Confucian saying that "a man of morality will never live in solitude; he will always attract companions." In a professional, pragmatic, and constructive manner, Taiwan will seek meaningful participation in international organizations and events, and fulfill its responsibilities as a member of the international community. Let Taiwan join the world, and let the world embrace Taiwan.

For more information visit: www.epa.gov.tw



Special report on climate change for COP24 in Katowice, Poland

One of the World Leaders of Climate Action

Henryk Kowalczyk, Minister of Environmental Protection, talks to the Voice:

The COP19 summit was held in 2013 in Warsaw, COP24 will be held in Katowice: what has been achieved in Poland in the field of environmental protection during the time between those meetings?

Since the COP19 summit both Poland and the global climate policy have undergone a significant transformation due to the adoption of the Paris Agreement at COP21 in Paris, where the mechanism of action against climate change was adopted - with actions determined at the national level. [Governments of states participating in the summit decided to declare their contributions every 5 years, so that more ambitious goals may be set - the Voice]. Poland as a European Union member state adopted commitments to participate in the reduction of greenhouse gasses emitted to the atmosphere (40% reduction by 2030), which is reflected in the adopted EU legislation. Poland aims to fulfil its undertakings through actions pursued in different sectors. Moreover, it has unvaryingly upheld the position that for an effective implementation of commitments adopted in the Paris Agreement, it is necessary for all countries to undertake actions, and actions of the most developed countries should correspond to the level of the EU's ambitions. It is worth emphasising that from December 2013 until June 2018 the National Fund for Environmental Protection and Water Management paid out PLN 4.4 billion for climate and atmosphere protection. These funds were used to implement a significant number of investments connected directly or indirectly to climate protection.

Poland is hosting COP for the third time - does this mean that it aspires to the role of one of the leading global players in the battle for a "green planet"

Poland remains one of the world leaders of climate action. The COP24 presidency will be Poland's fourth, whereas the December summit in Katowice will be the third one hosted by Poland. In the

last 30 years, Poland reduced CO2 emissions from all sectors by around 30 percent, accompanied by simultaneous dynamic economic growth. Poland still invests intensively in the improvement of energy efficiency and development of the renewable energy industry, remaining also an active country on the EU forum where it works on the development of the EU climate and environmental policies.

What programme do Poland's representatives intend to present at the summit in Katowice?

You should clearly differentiate between COP Presidency which will be held by Poland this year and the representation of Poland's interests. In order to ensure credibility and effectiveness of the international climate negotiation process, the Presidency keeping neutrality is of key importance, as it offers all parties an opportunity to reach a compromise and develop the Katowice package implementing the Paris Agreement, which at the same time will constitute the best reflection of the needs of all parties.

Poland aims to adopt a complex Katowice package which will allow for all sectors of greenhouse gas emissions, as well as take the role of absorption of greenhouse gases by forests and land into consideration. Poland wants to point out that it is necessary to conduct a fair transformation, protecting jobs in the adoption of climate change actions by all states. Moreover, Poland has emphasised the need to face greenhouse gas emissions in all sectors, thus sustainable transport, and in particular electromobility, will constitute one of the leading subjects at COP24.

The Polish economy is still based on coal as the basic energy resource; in the following decades, will this situation change? Will Poland look for alternative solutions (renewable energy, nuclear technology), or focus on the implementation of "clean" technologies based on coal?

Polish economy depends on energy generated with the use of hard bitumi-



nous coal and lignite, where these fuels constitute natural resources of the country and the guarantee of energy security and security of supply in the world which is becoming more and more energy-dependent. The share of coal in the energy mix is decreasing, however it still provides over 80% of the generated energy. Poland is diversifying its energy mix, but this process is of long-term nature.

The use of own resources for the production of electricity also constitutes a guarantor of Poland's energy security. This also means that renewable energy sources are used appropriately (biomass, geothermal energy, wind, water and solar power). Poland intends to continue investing in RES, having certain development potential, mainly with regard to geothermal and water power. Polish economy is developing, which leads to an increased demand for electrical energy and the need to cover this demand in a cost-effective way, while simultaneously ensuring the fulfilment of environmental goals, including the reduction of greenhouse gases.

Does Poland cooperate with countries from South-Eastern Asia with regard to environmental protection?

The Ministry of Environmental Protection is engaged in bilateral cooperation with selected countries from South-Eastern Asia, such as Vietnam, Indonesia, and Singapore. The cooperation with partners from the region is also conducted under multilateral agreements and conventions which Poland is a party to.

For more information visit:
www.mos.gov.pl



COP24 in Katowice

The 24th session of the Conference of the Parties to the UN Framework Convention on Climate Change (COP24), the 14th session of the Meeting of the Parties to the Kyoto Protocol (CMP14) and the 1st Conference of the Parties serving as the meeting of the Parties to the Paris Agreement will be held in Katowice from 3 to 14 December.

The capital of Silesia will be visited by nearly 30,000 representatives of all the Parties to the Convention, namely, 196 countries and the EU to decide on further action to protect the climate and the operation of the Convention. COP24 will be attended by heads of state, prime ministers, representatives of governments, diplomacy and non-governmental organisations, scientists, activists, business representatives and other stakeholders interested in issues related to the climate. The COP24 Conference will be accompanied by scientific, social, as well as commercial events serving as a forum for presentation and exchange of ideas, innovations, strategies and solutions to combat global warming.

The plan for the COP24 is to adopt a full package implementing the Paris Agreement. The Agreement is the first international agreement in history, which compels all countries in the world to take action on climate protection. The implementation package will allow for the implementation of the Agreement in practice. It will thus set global climate and energy policy for the coming years.

The Paris Agreement does not provide for decarbonisation, but for so-called climate neutrality. This is a return to climate policy which is expected to protect the climate and, at same time, enable the preservation of the specificity of national economies - this is particularly important for Poland.

Poland's objective is to maintain the global character of the Paris Agreement, the voluntary choice of the method for limiting emissions, as well as the shaping of climate and energy policies depending on the possibilities and specific conditions in terms of raw materials and geography (using own natural resources).

United Nations states must act together in order to halt the dangerous climate change. However, these efforts must be tailored to the capabilities of the individual countries. They should ensure a balance in commitments between states in a different condition and at different stages of development.

Poland would like to be an ambassador of the sustainable approach to climate change. It would like to represent not only its own interests, but also those of the region and to defend the principle of voluntary action as the foundation of democracy and the European community.

For more information visit: www.cop24.gov.pl



Special report on climate change for COP24 in Katowice, Poland

Katowice – a City of Metamorphoses

The landscape of Katowice which, from a post-industrial city has become a dynamic centre of a metropolis with a population of over two million enrapturing anyone who has not seen it for a long time. The city is completely different today than it was 10 years ago.

In the Culture Zone, on land previously occupied by a coal mine, magnificent Silesia Museum was established, with its historic Warszawa Mineshaft from which you can admire the Katowice panorama, as well as the National Symphonic Orchestra of the Polish Radio. Next to it, near Spodek, the famous event and sports hall, the International Congress

Centre (MCK) was established – a meeting place for business, science, culture and sport. The extensive green areas of the city promote sports activity, and Spodek, MCK, or other facilities host many interesting games.

In Katowice first of all you should get on a bicycle, and anyone can do this because the city has its own bicycle rental chain. This way you can see the varied cityscape. The Three

Pond Valley (Dolina Trzech Stawów) is a gem – active people can go rollerblading on a special track – one of the first in the region. You can also go kayaking in Katowice, try angling, or use the extensive sports facilities currently expanded to include three swimming pools with sports halls. Active leisure enthusiasts may go running or cycling in parks, forests and around lakes which occupy half of the city area.

At the same time, Katowice remembers about the provision of jobs and the housing policy. Only such actions may make the city the right place to live.

After the great metamorphosis, the time has come for districts to change and for the transport system

International Congress Centre (MCK)



to undergo a great revolution. The municipal authorities place great emphasis on the development of sustainable transport, one that is friendly for pedestrians, drivers, cyclists and people using public transport alike. Four passenger transfer centres are being built, and a gigantic redevelopment of two junctions on national road No 81 is under way. Additionally, every few months, new modern buses roll out onto the roads, and recently over 47 million was allocated to create an Intelligent Transport Management System. City bike stations have appeared in many districts, and every year extra kilometres of cycle paths are built. As a result of all this, travel around Katowice will eventually be faster and more comfortable. In practice, smoothly flowing traffic means time and fuel savings as well as reduced exhaust fumes and noise emissions. In 2015-2018, a total of PLN 600 million was acquired for the investments mentioned above.

Business tourism has become a significant product offered by the city. Over 826,000 conference and trade fair visitors came to Katowice in 2017, 64,000 more than the year before. This means tangible profits for the city and its inhabitants. The hotel and conference base is developing, catering companies, restaurant owners, taxi drivers or local shopkeepers are all generating income. On average, a conference participant staying in local accommodation leaves nearly PLN 628 in Katowice, and one that does not stay the night – PLN 141. What is important, many people coming to Katowice for business, return happily for example to take the entire family to a concert at the National Symphonic Orchestra of the Polish Radio in one of the best concert halls in the world, or to see one of the Katowice music festivals well known in Europe.

Katowice is a strong brand in the eyes of entrepreneurs, composed of several factors: access to qualified personnel, excellent location and

developed support system. It is a truly European city in which modernity creatively refers to and merges with tradition. This is appreciated by entrepreneurs who are happy to invest here. In its strategy, Katowice placed strong emphasis on new technologies and innovation both as regards attracting investors and events. Thanks to 5 finals of the Intel Extreme Masters tournament, the city has become the global capital of eSport.

An intelligent city must be first and foremost attractive for its inhabitants, improve the quality of life, and at the same time continue changing, following modern trends. In the recent years, Katowice has been consistently becoming SMART.

During the climate summit, Katowice and the entire metropolis will play host to around 30,000 participants from nearly 200 countries. The role of the host of COP24 is an excellent opportunity for global promotion of the city and to show how much it has changed recently. The city will be visited by key global decision-makers – presidents, prime ministers, diplomats and scientists, who will debate in the International Congress Centre, Spodek and Culture Zone. It will be Katowice's task to ensure efficient transport. For this purpose among other things a mobile phone application will be created. A website devoted to COP24 has also been prepared. The summit participants will be able to take part in a number of accompanying events, organised in the debate zone and in the urban space, or use thematic excursions on offer. They will have the hotel and restaurant base at their disposal. Some of the restaurants will prepare a special menu for the duration of the conference. Delegates will receive gifts created by pupils of Katowice schools and gadgets prepared for the conference.

For more information visit:
www.cop24.katowice.eu



Marcin Krupa City Mayor of Katowice

Katowice is the host of the United Nations Climate Change Conference – COP24 – the most important global forum devoted to the global climate policy of key importance for the entire world. The Climate Change Conference organised in Katowice, in the heart of the metropolis, will constitute an excellent opportunity to present shared efforts undertaken for climate protection and the successes already achieved in this area. I am convinced that the organisation of the summit will on the one hand constitute a global promotion of the city, and on the other hand – an opportunity to undertake important ecological subjects with residents. We want to increase the residents' awareness with regard to climate protection and ecologically responsible environment management. The UN Climate Summit is an excellent opportunity to show how much our city has changed in the recent years.

KATOWICE – FACT SHEET

Region: Silesia

Area: 164,7 sq km

Population: city – 297,000 • urban zone – 2,700,000 • Silesian metropolitan area – 5,275,000

The whole metropolitan area is the 16th most economically powerful city by GDP in the European Union with an output amounting to USD114.5 billion

Kaohsiung – a Green City

Kaohsiung, a special municipality located in southern Taiwan, was once a center of heavy industry. But as the nation's economy shifted toward cleaner, potential-laden sectors of the 21st century and beyond, the local government seized the opportunity to transform the metropolis into a hub of eco-friendly, green and sustainable living. Energy-saving, carbon reduction and circular developments are the top priorities in responding to global climate change and building a more livable and sustainable city.

Thinking Outside the Box, Green Economy on the Rise

In order to achieve sustainability, the citizenry and public and private sectors were encouraged to get involved. Kaohsiung City Government introduced rolling-wave planning into its policymaking, and was the first local government in Taiwan to promote green financing for the photovoltaic industry. Such an approach channeled investment into the renewable-energy industry and increased the number of green rooftop installations.

Since the introduction of green financing in 2013, emissions have fallen 3,840 metric tons annually - equivalent to the amount of carbon dioxide absorbed by 10 Daan Forest Parks in Taipei City over 12 months. Kaohsiung is eliminating visually displeasing cement rooftops and replacing them with colorful PV installations producing clean energy and helping mitigate climate change. This achievement is testament to

concerted efforts by the local government and citizenry to advancing the green economy in the port metropolis.

Kaohsiung LOHAS Building Evolution

The Kaohsiung LOHAS Building policy was initiated in 2011 by the local government. Over the past seven years, the initiative has expanded to include an array of measures like Certification System for Kaohsiung LOHAS Building, Regulations for Designing and Rewarding Kaohsiung LOHAS Building and Self-Governance Articles for Kaohsiung's Green Building.

In 2015, Kaohsiung LOHAS Building 2.0 gave rise to the trend of designing functional balconies for new architecture projects in the city. The following year, universal design principles were implemented in Kaohsiung LOHAS Building 2.5, featuring residences accessible to all



Hsu Li-ming, acting mayor of Kaohsiung

KAOHSIUNG – FACT SHEET

Country: Taiwan
Region: Southern Taiwan
Area: 2,952/sq km
Population: 2,77 million
Density: 940/sq km
GDP per capita: USD 24,000



age groups. The Kaohsiung LOHAS building policy is a benchmark in designing sustainable architecture.

Colorful, Dazzling Green Roofs

Green roofs are one of the most distinctive characteristics of the Kaohsiung LOHAS building policy. The total coverage of green roofs in the city has reached the size of 40 football fields over the past 4 years on the back of strong incentives offered by the local government. This number is growing by more than 33,058 square meters each year.

180,000 Square Meters of Vertical Forests

In mitigating the impact of the scorching and long summer days in Kaohsiung, the city government elected to set the depth of a balcony at 3 meters, 50 percent more than the minimum set down under the national building regulations. This is complemented by a program rewarding those who help cool structures and save energy by potting flowers, shrubs and trees on their balconies. To date, applications for the establishment of such green living spaces have been submitted by more than 100 buildings and 300 houses. One after another, so-called vertical forests are springing up citywide.

Kaohsiung LOHAS Building 3.0 - Evolution to All-Age Residence

Given Taiwan's rapidly aging society, Kaohsiung City Government introduced an article to the Regulations for Designing and Rewarding Kaohsiung LOHAS Building. The new addition required the creation of a 200-square-meter public lounge for seniors-related activities on every ten floors of a structure.

This groundbreaking measure also called for the space to be equipped with bathrooms suitable for all ages. The idea was inspired by traditional Taiwan three-section compound building, allowing seniors living near the space to congregate and interact with neighbors in a pleasant setting.

Expanding Bikeway Network and Promoting Low-Carbon Vehicles

Taiwan's first bicycle-sharing system was launched in March 2009 by the

local government. The undertaking, which provided residents with a viable personal transportation alternative to cars and scooters, was seen as instrumental in improving air quality. Other efforts in this regard include building more rental stations and paths, as well as increasing space for bike parking. Kaohsiung's more than 926-kilometer cycle network, which complements light-rail and metro services, connects multifunctional lanes, recreational greenbelts and sightseeing routes. This helped the city win recognition eight years ago as one of the most bike friendly in Asia by CNN Travel.

As of 2017, the system boasted 450 stations with 3,800 bikes, while its annual ridership exceeded 4 million. In addition, air quality microsensing systems were installed at 50 stations, recording temperature and levels of humidity, carbon dioxide, and PM2.5 and PM10.

Building a Circular Light-Rail System

Last September, Kaohsiung took another step forward in the green stakes with launch of the 22.1-kilometer, 37-station circular light-rail system. First phase construction covered of 8.7 kilometers and encompassed Stations C1-C14. The second, which is in sync with progress on the city's metro extension project, is expected to be completed in 2019.

Adaptation Measures for Flood-Prone Areas

As per central government policy, the local government adopted the 2-year

Solar Power Promotion Plan. Working with the Water Resources Agency under the Ministry of Economic Affairs, Kaohsiung set about installing floating solar systems and maximizing use of public space. Cian Fengzi Flood Detention Pond, Dian-Bao-Chi Zone B Flood Detention Basin and Yongan Flood Detention Pond were selected as appropriate sites. All three generate 15 million kilowatt-hours of electricity per year, sufficient to meet the demands of 4,200 households while reducing about 8,000 tons of emissions - equivalent to the carbon reduction of growing 275,000 trees.

In the past, detention ponds were only used for drainage system improvement and flood prevention. The facilities have taken on a broader mission, serving as ecological water parks, green power plants and spaces for various outdoor recreational activities during nonstorm seasons.

Kaohsiung joined Germany-based ICLEI-Local Governments for Sustainability in December 2006, making it Taiwan's first ICLEI member city. It has participated in international events and conferences, focusing on combating climate change. In 2015, Kaohsiung reached full compliance with the Compact of Mayors, committing itself to reducing emissions and promoting a climate adaptation plan. The city also vowed to advance policies in response to the Paris Agreement. Kaohsiung continues to evolve and is successfully transforming from a center of heavy industry into a hub of eco-friendly, green and sustainable living.



Combating Climate Change: Taiwan Can Help

Calling for Taiwan's Professional, Pragmatic, and Constructive Participation in the UNFCCC

Foreword

The 24th Session of the Conference of the Parties (COP24) under the United Nations Framework Convention on Climate Change (UNFCCC) will take place in Katowice, Poland this December. During the event, the participants are expected to work out and adopt a package of decisions to better ensure the full implementation of the Paris Agreement. This will help focus international efforts on mitigating and adapting to the impact of climate change.

However, due to political constraints, Taiwan can only attend the COP sessions as an NGO observer. Being a responsible stakeholder in the international community, Taiwan will never let its exclusion become an excuse for not partaking in global efforts to combat climate change.

Taiwan has set ambitious reduction targets for its greenhouse gas emissions.

In June 2015, Taiwan passed the Greenhouse Gas Reduction and Management Act, setting five-year regulatory carbon reduction targets in the hope of reducing Taiwan's greenhouse gas emissions to 50 percent of 2005 (base year) levels by 2050. It seeks to reduce greenhouse gas emissions by two percent by 2020, 10 percent by 2025, and 20 percent by 2030.

To better control and reduce greenhouse gas emissions, Taiwan's Environmental Protection Administration created the National Climate Change Action Guidelines, Greenhouse Gas Reduction Action Plan, and Greenhouse Gas Emissions Control Action Program targeting six major fields: energy, manufacturing, transportation, residential and commercial buildings, agriculture, and environment management. The initiatives, which are to be reviewed once every five years, facilitate cross-ministerial cooperation within government.

Taiwan has set the goal of having 20 percent of its energy come from renewable sources and 50 percent from low-carbon natural gas by 2025, thus lowering its energy from coal-burning power plants to 30 percent of the total. Taiwan will continue to promote its energy restructuring in order to realize sustainable development.

In August 2018, Taiwan amended its Air Pollution Control Act to reduce air pollution and accelerate Taiwan's energy transformation. It also seeks to further restrict vehicle and factory emissions, improve air quality, and enhance the management of pollution sources and treatment of pollution.

Taiwan understands that the issues associated with climate change are inextricably linked to the UN 2030 Agenda for Sustainable Development, and is committed to helping achieve the 17 Sustainable Development Goals. In September 2017, Taiwan released its first Voluntary National Review to document the concrete progress it has made to this end.

II. Taiwan needs to participate in the UNFCCC and Paris Agreement. Taiwan's exclusion contradicts the spirit of the UNFCCC and the Paris Agreement.

The UNFCCC preamble acknowledges that the global nature of climate change calls for the widest possible participation of all countries in order to achieve an effective and appropriate response. In addition, the Paris Agreement highlights the important concept of climate justice, calling on all states to take action to address climate change. It is unjust to keep Taiwan excluded from the UNFCCC and leave the government to deal with the impact of climate change on its own. Taiwan's inclusion in UNFCCC initiatives would conform to the aims and spirit of the convention, as well as to the principles embodied in the UN Charter.

Taiwan is vulnerable to climate change.

The increasing frequency of extreme weather events and rising sea levels caused by global warming endanger Taiwan's environment and survival. Taiwan's average temperature in the past two years has been the highest in 100 years. Atypical heat waves have been causing water shortages, damaging the economy, threatening the people's welfare, and restricting the generation of hydroelectric power. To make matters worse, just this August, sudden torrential rains from a tropical depression caused severe flooding across southern Taiwan, seriously impacting people's lives and damaging infrastructure and property.

Taiwan's lack of access to UNFCCC meetings and mechanisms and exclusion from the international response framework have weakened its ability to formulate adaptation strategies in response to the challenges posed by global warming and climate change. There is an urgent need for Taiwan to be included in early warning systems for disasters, gain access to real-time information, and contribute more to global climate change adaptation mechanisms.

Taiwan needs to mitigate the negative impact on its economy and trade.

One of the key elements to the implementation of the Paris Agreement is the realization of both economic development and environment protection. Taiwan's 5+2 Industrial Innovation plan includes measures to create a sustainable homeland through the promotion of green energy and a circular economy for waste management. The plan will help shift Taiwan's industrial base from traditional contract manufacturing to foster a high valued-added and environmentally friendly economy.

Taiwan's exclusion from access to the UNFCCC climate finance mechanism will make it difficult for Taiwan to offset the high economic costs of carbon reduction measures. This could seriously harm the competitive edge of Taiwan's industries and discourage them from helping the government develop a green industrial structure, in order to aid the transformation of Taiwan into a low-carbon society. Almost all World Trade Organization (WTO) members are contracting parties to the UNFCCC and the

Paris Agreement. However, Taiwan, a WTO member, remains excluded. As WTO trade rules permit countries to impose tariffs on imports due to environmental protection considerations, Taiwan's industries might be targeted as a result.

As an important world economy, Taiwan should contribute to the UNFCCC.

As the world's 22nd largest economy, Taiwan plays a major role in both the stability and prosperity of the Indo-Pacific region, as well as the global economic and trade system. Like other countries, Taiwan has a responsibility to help mitigate the effects of climate change and, therefore, should not be excluded from the UNFCCC. Taiwan calls on the international community to support the participation of its Environmental Protection Administration as a non-member government observer in the upcoming COP24 in Poland.

III. Taiwan is ready to contribute to global efforts to combat climate change.

Taiwan can be a constructive partner in addressing climate change.

Taiwan is competitive on green technology. Many of our advanced renewable energy products are exported to other countries. Taiwan has much to offer the UNFCCC, not just in terms of technology, but also in ways of financial support and capacity building. Taiwan's experience with rapid economic development, industrialization, and environmental management would be extremely valuable to other island states and developing countries facing similar challenges associated with climate change. By drawing on Taiwan's advanced technologies and experience, these countries could modernize their economies, which minimizing harm to the environment.

Taiwanese is willing to share its experience and technology with other countries.

Over the decades, Taiwan has undertaken a wide array of projects in helping developing countries mitigate and adapt to the impacts of climate change. These include food and energy security, renewable energy, green technology, LED street lighting, biodiversity conservation, natural disaster management, post-disaster reconstruction, reforestation, environmental protection, water resource management, drought relief, and etc.

For example, Taiwan has sponsored the Enhancing Home Energy Efficiency and Promoting Renewable Energy Project in the Marshall Islands. This significant climate change mitigation project is anticipated to help the Marshall Islands reduce its carbon dioxide emissions by 992 tons annually.

In the Caribbean, Taiwan's modern agricultural techniques have helped countries adapt to climate change. For instance, Taiwan has worked with Saint Vincent and the Grenadines to implement the Strengthening Farmers' Organizations and Improving Fruit and Vegetable Production Technology projects. With Saint Christopher and Nevis, we have worked on the Enhancing Agriculture Adaptive Capacity to Climate Variability Project. Both partner countries have been able to strengthen their ability to respond to natural disasters and improve the sustainability of natural resources.

Moreover, starting next year, Taiwan and Belize will launch the Urban Resilience and Disaster Prevention Project to help minimize the impact of extreme weather by introducing modern Geographic Information System technologies that enhance Belize's disaster management capabilities.

Taiwan, a leader in the field of seismic and maritime weather monitoring, has the highest concentration of monitoring stations of any nation, with around 800 currently in operation. Given the vulnerability of Pacific Island states to climate change, Taiwan offers training to their meteorological personnel and dispatches experts to improve their weather forecasting systems. For example, Taiwan develop an early warning system for extreme weather events and earthquakes in Solomon Islands. The weather data collected through the system will also help Solomon Islands issue dengue fever alerts, which has drawn the attention from internationally community.

Multilateral cooperation helps promote green technology and energy efficiency.

For instance, in cooperation with the European Bank for Reconstruction and Development (EBRD), Taiwan's International Cooperation and Development Fund (Taiwan ICDF) has contributed US\$80 million to the Green Energy Special Fund. It is used to cofinance EBRD investment projects containing green energy components, such as LED street lights, smart meters, solar-powered technologies, and public transportation and electric systems.

Through such cooperation, Taiwan has supported the Moldova Chisinau Urban Road Project to modernize Chisinau's street lighting system. It will replace traditional mercury lamps with modern LED ones, improving energy efficiency by up to 70 percent.

TaiwanICDF's contributions have also supported the Bosnia and Herzegovina Elektrokraina Power Distribution Upgrade Project. This initiative should reduce their carbon dioxide emissions by 63,000 tons and save 80 GWh of electricity per year by introducing smart metering technology and upgrading the electricity distribution system.

Another cofinanced project is the Jordan Greater Amman Municipality Solid Waste Project, which has introduced gas collection technology to Jordan. The landfill gas-generated power will be connected to the national grid, helping the country reduce its carbon dioxide emissions by 150,000 tons annually, as well as its reliance on fossil fuel imports.

Conclusion

In May 2017, United Nations Secretary-General António Guterres said, "The sustainability train has left the station. Get on board or get left behind," urging the world to rally behind the landmark Paris Agreement. Taiwan, like other countries, should be afforded the opportunity to participate in global mechanisms, negotiations, and activities that promote the implementation of the Paris Agreement. Therefore, we call on all parties to look beyond political considerations and support Taiwan's professional, pragmatic and constructive participation in the UNFCCC. Let Taiwan help in global efforts to combat climate change.



Combating
Climate Change

**Taiwan
Can Help**

For more information, please visit:

<https://youtu.be/DZvaC-sE5-I>

