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TAIWAN'S GREEN EFFORTS

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Written by Chien Te Fan.

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Taiwan, also known in Europe as Formosa in the mid-16th century, is an island country with rich biodiversity. However, in the [Pacific Rim seismic zone and the main path of typhoons in the Northwest Pacific region](#), Taiwan has been one of the most vulnerable countries threatened by the current climate crisis. Therefore, since the late 19th century, Taiwan has been striving to maintain its precious natural resources and resilience to survive the effects of industrialisation and adapt to climate change.

Dating back to the late 20th century, Taiwan's fast-growing economic trend makes her one of the "Asia's Four Little Dragons." However, just like most industrialised experiences in the world, Taiwan's environmental conditions have also deteriorated. All the common environmental concerns relating to air, water, wastes, toxic substances, ocean dumping, etc., have long been challenges for Taiwan.

The Legal Institution to Support the Green Policy

In 1987, the Environmental Protection Administration (EPA) was established. It is

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probably the most crucial institutional effort of Taiwan's green policy so far. The EPA will release a "White Paper" on an annual basis, highlighting Taiwan's green efforts on a consistent and predictable basis. Further, the EPA's continuing legislation efforts, to some extent, has complemented the basic legal foundation to support Taiwan's consistent green policies and measures.

Pollution Prevention as the Main Focus

Concerning the common pollution prevention issues, EPA has an inclusive coverage, including 1) Air quality, (2) GHG reduction management, (3) Water quality, (4) Soil and groundwater protection, (5) Waste recovery, reuse, and disposal (6) Noise and vibration control, environmental management of non-ionising radiation (7) Management of toxic chemicals and environmental pesticides (8) Environmental sanitation management. Illustrated below are some of the efforts that may better exemplify Taiwan's green policy achievements.

In re: Air Quality

The "best available technology" for maintaining air quality was based on [standards](#) promulgated under the [Air Pollution Control Act](#). Thus, three types of control regions were announced. They were subject to established

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review criteria, and the cap of pollutants emission was set up as the regulatory “Bulb,” also. Recently, the regulatory paradigm has shifted its focus from back-end control to preventive and scientific-based regulation. For instance, a network of [84 monitoring stations](#) and [four mobile photochemical monitoring stations](#) has been deployed to allow immediate public access to good air quality and its related policymaking.

Also, Taiwan is the second country in the world to regulate indoor air quality by law. The [Indoor Air Quality Act](#) was enacted in 2011 to improve indoor air quality and maintain national health. Both [the public and private premises](#) will be officially announced batch by batch to meet the [indoor air quality standards](#). Furthermore, in July 2021, “[The Practical Guidelines of the Indoor Air Quality Self-management Label](#)” was issued to encourage public and private premises to obtain self-management badges to enhance corporate image and maintain national health.

In re: Water Quality

Regarding water quality control, to preserve the carrying capacity of the water body, the Water Pollution Prevention Act was enacted in 1974 for these purposes. Moreover, starting from a passive water quality standard regulation scheme, the EPA has set up 303

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water quality monitoring stations in major and tributary rivers and thus actively improved water quality. As a result, nowadays, the [heavily polluted river section](#) has dropped from 386.2 kilometres in 2001 (accounting for 13.2% of the total river length) to 95.6 kilometres in 2020 (accounting for 3.3% of the entire river length).

Due to the impact of climate change, there were no typhoons in 2020. And coupled with uneven rainfall distribution, Taiwan is experiencing water shortages. The EPA encourages industry and animal husbandry to [strengthen wastewater recycling](#), reduce water consumption and save costs, provide new business opportunities, and achieve a circular economy.


In re: Marine Debris Management

As an island country next to one of the busiest marine channels, Taiwan faces a serious marine waste pollution problem just like the UK. The [Marine Pollution Control Act](#) and the [Major Marine Oil Pollution Emergency Response Plan](#) provide an essential framework for Taiwan to prevent and reduce marine pollution.

In addition, the Marine Pollution Control Act also includes the marine [environment categories, marine environment quality](#)




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standards, marine control zones and marine environment control standards in the provisions. Since 1991, a database of marine water quality has been established, and the total achievement rate of marine water quality monitoring from 1992 to 2019 has exceeded 99.6%.

The EPA has further adopted a Marine Debris Governance Action Plan and, along with civic, environmental organisations, set up a Marine Debris Management Platform in July 2017 to cope with these challenges. The action plan comprises four mandates: source reduction, prevention and removal, research and investigation, and expansion of collaboration and participation.

In re: Circular Economy

Taiwan's natural resources are minimal. About 76% of the materials are imported. On the other hand, the waste disposal problem is getting worse because of land space restrictions. Therefore, in July 2021, the EPA established the "Resource Recycling Office" to make reused products suitable for suitable materials, establish an economic model of material recycling, and gradually move towards a country of sustainable recycling of resources.

Recent activities promoted by the office include: establishing a waste solar panel

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[recycling_system](#), enabling a [mobile_phone_recycling_plan](#), using [incinerator_recycled_pellets](#), and promoting a recycled [container_rental_service_model](#).

Also, To promote the recycling of marine waste, the retrieved marine waste bottle has been recycled and turned systematically and efficiently into consumer product “[Marine Treasure Garment](#).” Hence, to bring in the demand side for the completeness of circular economy policy, the [EPA](#) has issued the administrative rules: “[The Working Guidelines of Marine Waste Recycling Product Label](#)” to certify the “Marine Waste Recycling Product.”

In re: Green Procurement & Consumption

Following the global trend of Green Consumerism, Taiwan's Green Mark was launched in 1992 to encourage companies to produce – and for consumers to purchase – products that have less impact on the environment, reduce wastes, and promote recycling. So far, there have been more than 4,944 products with effective environmental labels, 386 products with carbon footprint labels and 45 products with carbon footprint reduction labels.

Also, by promoting environmentally friendly products, the EPA has implemented the “Government Green Procurement Promotion

Program” since 2002. As a result, in 2020, the amount of agency green procurement will be approximately [10.1 billion NTD](#). And since 2007, it further promoted the “[Green Procurement Plan for Private Enterprises and Organisations](#).” Furthermore, in 2019, the amount of green procurement reached [89.9 billion NTD](#).

In re: Climate Change

Climate change is a significant challenge faced by Taiwan. Having promulgated the Greenhouse Gas Reduction and Management Act in 2015, Taiwan is one of the few countries that include long-term reduction goals in its official legislation. It aimed to be a low-carbon economy and an environmentally friendly society. Hence, it aims at reducing carbon dioxide (CO₂) and other greenhouse gas (GHG) emissions.

Recently, the EPA aimed to speed up [Taiwan's carbon emission](#) reduction efforts and strengthen mitigation by [drafting amendments to the Greenhouse Gas Reduction and Management Act](#). Revisions will include a change of name to the Climate Change Response Act and a 2050 zero-emission goal included in the legislation. It will also strengthen climate management by appointing higher-level authorities in charge. Furthermore, they will Enhance emission controls and give

incentive mechanisms to facilitate carbon reduction. Finally, they will collect carbon fees specifically for reduction-related uses.

Conclusion

To sum up, greening Taiwan's future has been a national policy of no regrets. These efforts shall be even more inclusive and based on solidarity altruism. Envisioning the incoming 2050 Net Zero mandate, the EPA has promulgated a new "2030 National Environmental Protection Plan" in response to the UN's proclamation of "The 2030 Agenda for Sustainable Development". Their six policy goals are Carbon Reduction, Fresh Air, Clean Water, Recycled Resources, Fair Forestry and Living with the Wild. These are highlighted as Taiwan's common visions to guide the cross-generation green efforts now and in the future.

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