

# 2021 Kaohsiung City Voluntary Local Review





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## Message from the mayor



Kaohsiung is a special city, a rich tapestry of stories and legends that speak of the miracles of the city's tradition of innovation, growth, and transformation. In the past, Kaohsiung had the reputation of being a large factory and a cultural desert, a victim of its heavy industry and environmental degradation. Today's Kaohsiung is a brand-new city known for its landscape aesthetics, ecological livability, and cultural vibrancy. Moving forward, we want to raise Kaohsiung up further still, promote industrial transformation through urban upgrading to lay a solid foundation for another century of development.

Sustainability has become a household word around the world and is now recognized as one of the crucial tasks facing humanity. Therefore, the Kaohsiung City Sustainable Development Voluntary Review Report was included in my policy address after 100 days in office. Sustainability has become part and parcel of various municipal plans, including the four priority policies of industry transformation, employment creation, transportation infrastructure construction, and air pollution mitigation, which aim to upgrade and transform our city and offer our residents diversified employment opportunities as we move towards a sustainable, clean and zero-carbon city by 2050.

As Taiwan's leading industrial city, Kaohsiung is accelerating its rezoning, park development and commercial transformation, and leveraging its industrial and economic transformation as a driving force to build a city that is attractive for investment, innovation, culture, creativity, and tourism. 5G, AIoT and other high-tech industries

are drivers behind this industrial upgrading and building a sustainable consumption and production pattern. We are also investing in education, not just to build a competent and relevant labor force, but also to foster citizens that care for the environment. Our aim is to embed sustainability into our industry and society, so that everybody in the new Kaohsiung may thrive.

In the past, heavy industry has brought development, but at the cost of polluted air, drinking water, soil and groundwater. To improve the quality of life, the Kaohsiung City Government will comprehensively review residents' needs to improve environmental quality, public construction, and social welfare. We will also work with companies on the basis of the SDGs to undertake urgent climate action to mitigate the impacts of climate change.

Since Kaohsiung gained city status under Japanese rule in 1920, a century of tireless endeavors by countless residents has created a city of unparalleled achievements and vibrancy. The city government honors the legacy of these forebears, and works in their spirit of dedication to build a robust industry and infrastructure ready for another century of growth and becoming a smart and highly livable city in East Asia.

Mayor of  
Kaohsiung City

# Introduction

The United Nations published its 2030 Sustainable Development Agenda in September 2015, which laid down and described 17 Sustainable Development Goals (SDGs). Since then, the SDGs have become a shared concept and guideline for the sustainable development of countries, cities and businesses around the world, and solutions and evaluations are increasingly framed in terms of SDGs.

The SDGs are used at all levels within the Kaohsiung City Government to track trends under the KAO framework (Knowledge + Adjustment + Organization). The concept of sustainable development is integrated into the city government's urban transformation work and the five key policy areas of economy, employment, education, quality of life, and peace of mind which are linked back to the SDGs. Under the 17 SDGs, 169 targets have been selected as relevant to Kaohsiung's economy and society and to highlight the city's sustainable development goals and achievements, to track the work of the city government's departments and agencies, drive the city's upgrading and transformation, and lay a solid foundation to build Kaohsiung into a world-class sustainable and livable harbor city.

## **SDG 1 Eliminate all forms of poverty everywhere**

Through education, counseling and subsidies, disadvantaged and low-income households are assisted in employment and poverty reduction to eliminate all forms of poverty.

## **SDG 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture**

provided by industry, government, and academia in public-private collaboration for the public good. Kaohsiung is helping smart agriculture to take root.

## **SDG 3 Ensure healthy lives and promote well-being for all at all ages**

To support family planning, diversified childcare services and Social welfare bases, promote health and well-being.

## **SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**

Provide diverse learning resources and learning channels to promote native languages, the Reading City, and lifelong learning.

## **SDG 5 Achieve gender equality and empower all women and girls**

Overcoming gender stereotypes and violence, offers women diverse learning opportunities, respect women's decision-making rights, and create social equality and harmony.

## **SDG 6 Ensure availability and sustainable management of water and sanitation for all**

Developed multiple water supplies, water recycling and reuse, ambient water use, leak detection in the tap water network, improve soil water quality and provide clean drinking water.

## **SDG 7 Ensure access to affordable, reliable, sustainable and modern energy for all**

Promote green energy projects, Smart Building Project, Building this safe, stable, efficient and clean energy supply and demand system, reduce dependence on fossil fuels, and reduce air pollution.

## **SDG 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

Cultivate diversified talents, serve the needs of entrepreneurship and enterprise transformation, create a good employment environment, stimulate young people to return to their home region, and implement labor inspections and occupational safety work to create win-wins for labor and capital.

## **SDG 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**

Accelerate land planning, develop parks, transform business districts, foster innovative industries and marketing of Kaohsiung.

## **SDG 10 Reduce inequality within and among countries**

Create different employment opportunities to further the development of diverse groups and industries.

## **SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable**

The city government actively maintains and improves the quality of the environment, and builds infrastructure and parks so that citizens can live and work in comfort.

## **SDG 12 Ensure sustainable consumption and production patterns**

Implement the circular economy, promote resource recovery and reuse and create sustainable consumption and production patterns.

## **SDG 13 Take urgent action to combat climate change and its impacts**

Reduce greenhouse gas emissions, mitigating its greenhouse gas emissions, setting a long-term CO<sub>2</sub> emission reduction path, and promotes adjustments to reduce the impacts of climate change and improve urban resilience.

## **SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development**

Conserve and sustainably use the ocean and marine resources with the help of education and regular monitoring.

## **SDG 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**

To cultivate forests and support private afforestation, encourage and reward the public to participate in afforestation and build an ecological afforestation environment, continue to work to maintain the city's biodiversity.

## **SDG 16 Significantly reduce all forms of violence and related mortality throughout the city**

Maintain public order, protect lives and property, reduce all forms of violence, implement open government and citizen participation in public affairs.

## **SDG 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development**

We cultivate international exchange talents at all levels, and have established an international center for training and exchange, raise the city's international profile, build international exchanges, and collaborate on sustainable development.

## Vision and goals

The competitiveness of a city stems from both soft and hard power, and rests on public construction, industrial development, environmental protection and diversified education. Over the past century, Kaohsiung has transformed from a small fishing village into an industrial city. Over the next century, Kaohsiung must transform from an industrial city into an international harbor and a livable city.

At this point, urban transformation is the most important task facing Kaohsiung. This transformation is not about abandoning the past and starting all over. On the contrary, building on local characteristics both natural and manmade, this transition is about building historical strengths and planning environmental protection and economic development in a balanced way. Therefore, under the city's KAO framework (Knowledge + Adjustment + Organization), the concept of sustainable development has been integrated into the city government's urban transformation work and the five key policy areas of economy, employment, education, quality of life, and peace of mind which are linked back to the SDGs. The four priority goals are: increasing urban transformation, employment, developing transportation, improving air pollution. To achieve the sustainable development goals, the city has also declared five energy transition principles: coal reduction, green electricity, more gas, no to nuclear, and balance. The Kaohsiung City Government develops policies, puts knowledge and technology centerstage in the city's future development, creates an attractive and comfortable environment, leads the upgrading and transformation of the city, and lays a solid foundation for Kaohsiung in the century ahead.

To facilitate structural changes in Kaohsiung's industry, the Kaohsiung City Government works with the central government to promote the Kaohsiung Qiaotou Science and Technology Park and to help traditional industries upgrade themselves based on their advantages. Kaohsiung also develops brownfields to revitalize contaminated lands and develop the Asia New Bay Area, connect local, state-owned and international enterprises, creates a demonstration area for new innovative technologies, and introduces the concept of eco-city, to gradually heal the scarred land and rebalance economic development and environmental protection. Kaohsiung is our common homeland, where its citizens are its masters. Kaohsiung will use its resources and opportunities to enable everyone to realize their dreams in the maritime metropolis of Kaohsiung.



# Reading Kaohsiung

## Maritime metropolis

Located in southwestern Taiwan, Kaohsiung is endowed with a special geographical environment. The ocean has always been a driver behind the city's trade, industry and development. Kaohsiung Port, Taiwan's largest port, ranks 16th in the world, while Kaohsiung International Airport is an important passenger and freight hub as well. Kaohsiung is the country's first city with a seaport, airport, railway, subway and light rail at the same time. Thanks to the maritime climate, it is sunny year-round and the climate is pleasant. The city has a maritime flavor in many ways.

On December 25, 1999, Kaohsiung County and Kaohsiung City merged into Greater Kaohsiung City, with a 2,952 km<sup>2</sup> territory encompassing mountains, hills and plains. It is the largest city on Taiwan's western seaboard, with 2.77 million residents, a highly diverse and the third largest city in Taiwan.

## Industrial beginnings

Kaohsiung is one of the few cities in Taiwan with an industrial origin story. A new sugar factory in Qiaozaitou in 1901 marked the beginning of Taiwan's industrial development and ushered in the rise of Kaohsiung Port. Industries related to the sugar industry, such as machinery repair and shipbuilding, emerged around the port. After the September 18 Incident, the Japanese changed Taiwan's industrial focus from food production to military supply. Kaohsiung, which already had some foundation, built several factories next to the port. The Zuoying military port construction project, begun in 1939, had a profound impact. To provide fuel for military needs, Japan's sixth naval fuel plant was built in the Nanzi Houjin area adjacent to Zuoying from 1944 onward. This turned Kaohsiung into one of the few heavy industrial cities in Taiwan.

After the war, Taiwan's industrial development remained concentrated in and around Kaohsiung, from chemical fertilizers, processing and export zones to petrochemical industries. In the country's Ten Major Constructions from the 1970s onward, the industrial part was centered on Kaohsiung's heavy chemical industries, including petrochemical enterprises such as Renwu, Taishe, and Linyuan, as well as China Steel Corporation (CSC), China Ship Building Corporation (CSBC) and Taiki Industrial. Kaohsiung's Linhai Industrial Park breathes an industrial atmosphere that is very different from other cities, attracting a labor force that is ambitious in work and life. This area embodies tomorrow's Kaohsiung.

▼ New image and new style for the old port



Port of Kaohsiung Taiwan International Ports Corporation and Kaohsiung museum of history joint collect.



## Green transition

Taiwan's economy has been built on industry, which to this day places a heavy burden on Kaohsiung's environment. As the city's population grew, the industrial outskirts became surrounded by residential areas. The heavy pollution from the petrochemical and heavy industries and rising environmental awareness, as expressed by the green movement opposing the No.5 Naphtha Cracker Plant and demanding the restoration of the Love River and Shoushan, forced the heavy industries out of the city. In 1998, Kaohsiung City adopted the Maritime Capital concept to reshape its infrastructure and societal values, and chose the charm of "water" and "light" to revitalize the harbor city. Love River, once little more than a smelly ditch, has been transformed into a living river, attracting fish, birds, tourists and hospitality businesses again. In collaboration with the Kaohsiung Port Authority and Taiwan Sugar Corporation, the city government set up the Pier-2 Art Development Association to redevelop eight abandoned warehouses by the harbor into the Pier-2 Art Center, whose many high-profile festivals and exhibitions add to the cultural life of the once-industrial city.

As Taiwan's science and technology industry soared to global prominence during the 1990s, the Kaohsiung Export Processing Zone transformed from a traditional foundry industry area into a modern value-adding export zone focused on electronics and ICT, which transformed the city's industrial structure. The Multifunctional Economic and Trade Park (founded in 1999, the predecessor of Asia New Bay Area) used the old port and Shijia Industrial Zone as its main bases. Combining ongoing land development with technology companies in the Kaohsiung Science Park, Kaohsiung Port, CPC Corporation Taiwan, Taiwan Sugar, Taipower and other privately owned industrial land, a high-tech industry cluster developed in and around Kaohsiung, moving away from the heavy-industry focus.

In addition, to further improve residents' quality of life, the city set a schedule for pollution reduction and carbon reduction, requiring Taipower to decommission the coal-fired units at Xingda Power Plant early. CPC Corporation Taiwan and Formosa Plastics gas stations increasingly serve electric vehicles, while a smart environmental monitoring system was rolled out. Altogether, these developments greatly improved the air quality in Kaohsiung City. No longer synonymous with heavy industry, Kaohsiung is swiftly progressing toward a future centered on "green," "ecology," "technology," "culture" and "nature," stimulating and supporting green industries such as tourism, culture and technology to build a clean and healthy city with job opportunities for young people, environmental sustainability and social fairness.



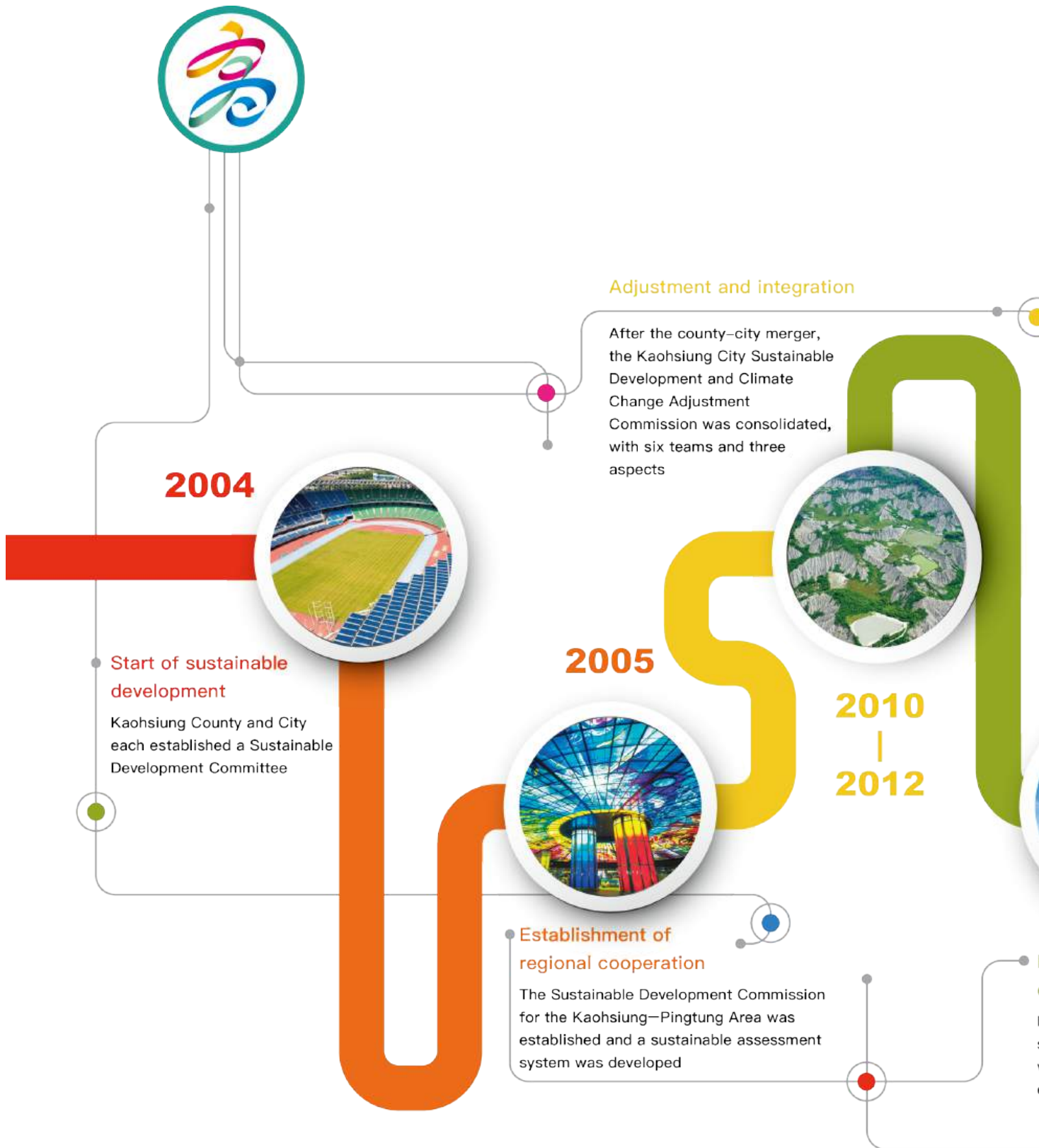
## From old harbor to Asia New Bay

The jurisdiction of Kaohsiung Harbor used to be divided between the central and local governments. Also, part of it was a military port, where soldiers and warships were stationed. Furthermore, the harbor was separated from the city by a two-meter-high wall. In 2005, Acting Mayor Chen Chi-mai signed an administrative covenant for the development of the old port area, opening a new chapter by removing the seaside walls along the Yancheng, Lingya and Gushan districts, which created a completely new relationship between the sea, the harbor and the city. Kaohsiung residents were finally able to truly enjoy an urban waterfront life, and the city and port grew closer.

Under the policy of integrating city and port, the skyline of the Port of Kaohsiung has gradually changed. The Kaohsiung Software Park, Kaohsiung Exhibition Center, Kaohsiung Public Library, Kaohsiung Music Center, Kaohsiung Port Terminal, and Pier-2 Art are linked by a light rail line. The Special Economic Zone has greatly changed the appearance of Kaohsiung's port, and contributed to the development of the Kaohsiung Multifunctional Economic and Trade Park in the Asia New Bay Area and its surroundings, replacing old factories and petrochemical warehousing with technology and cultural industries. The city with its mountains and rivers, ocean front and port area, is undergoing a transformation. Kaohsiung is becoming a sustainable city, no longer dependent on an industrial development model that runs at the expense of the environment and people's health. Sustainability is now the core value in Kaohsiung's development, as its industry transforms and a modern mass transportation network is taking shape, to create an eco-friendly and people-friendly city.



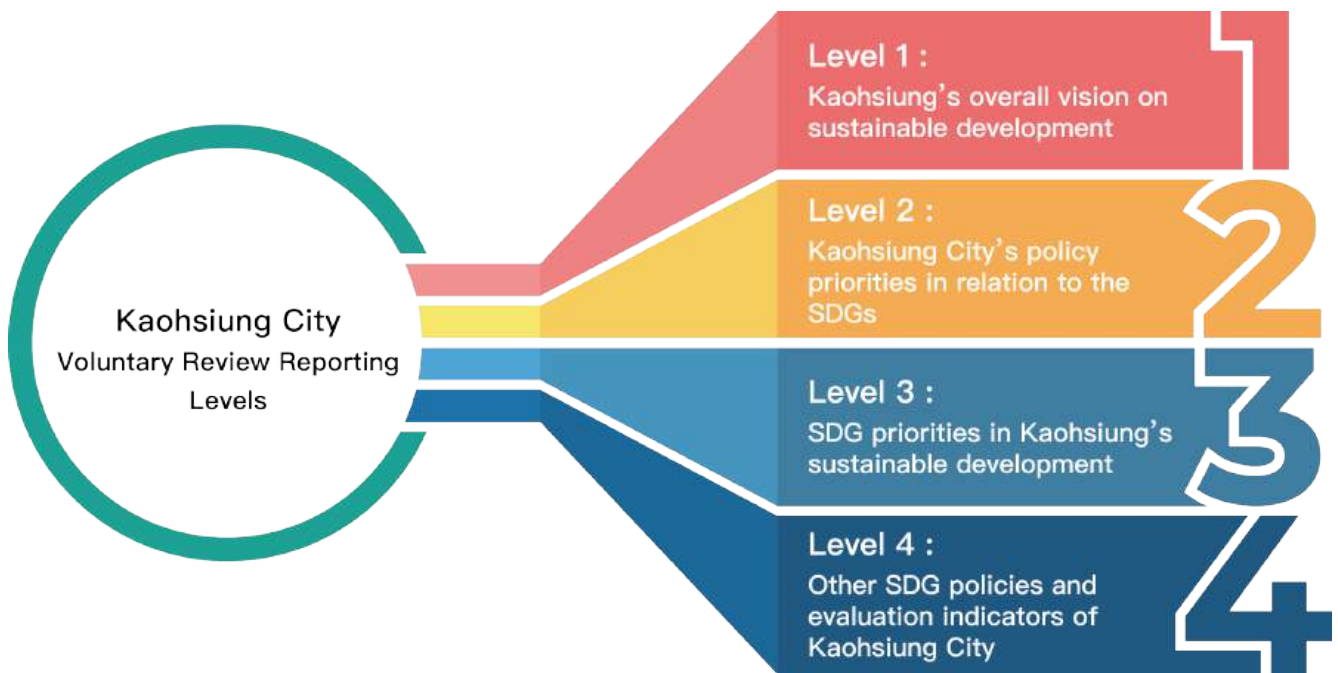
# Historic overview of Kaohsiung's sustainable development policy





# Voluntary Local Review inspection method

More than half of the global population lives in cities. Therefore, cities and communities will be key to realizing the SDGs. In 2016, the United Nations Sustainable Development Solutions Network published a report on SDGs in cities, outlining how an “urban SDG” (SDG 11) will help build strong partnerships and obtain more resources for cities. Taking reference from the United Nations’ Global Guiding Elements for Voluntary Local Reviews (VLR) of SDG Implementation, inspection methods of various counties and cities at home and abroad, and Kaohsiung’s own policies, this city has formulated a reporting hierarchy and inspection methods for its VLR.



▲ Reporting Levels of Kaohsiung City Voluntary Review

## Level 1 : Kaohsiung’s overall vision on sustainable development

Kaohsiung is going through a critical period of transformation. Mayor Chen Chi-mai maintains a sense of urgency to reinvent the city and drive the priority agendas in industry transformation, employment growth, transportation construction, air quality improvement as the four top priority governance goals, putting knowledge and technology centerstage for future development, creating an attractive and comfortable environment, using resources and opportunities to build Kaohsiung Maritime Capital.

## Level 2: Kaohsiung City's policy priorities in relation to the SDGs

A focus and priorities in the goals and planning for city policies were chosen to improve the economy, employment, education, quality of life, and peace of mind in line with the SDGs.

## Level 3: SDG priorities in Kaohsiung's sustainable development

Through the following procedures, preliminary highlight actions for the city's sustainable development have been formulated and submitted to expert consultation meetings and sustainability meetings for discussion and finalization.

**Research:** In response to the United Nations' Sustainable Development Goals and the city's plans and policies, the Environmental Protection Bureau has analyzed how the SDGs can be applied to the city.

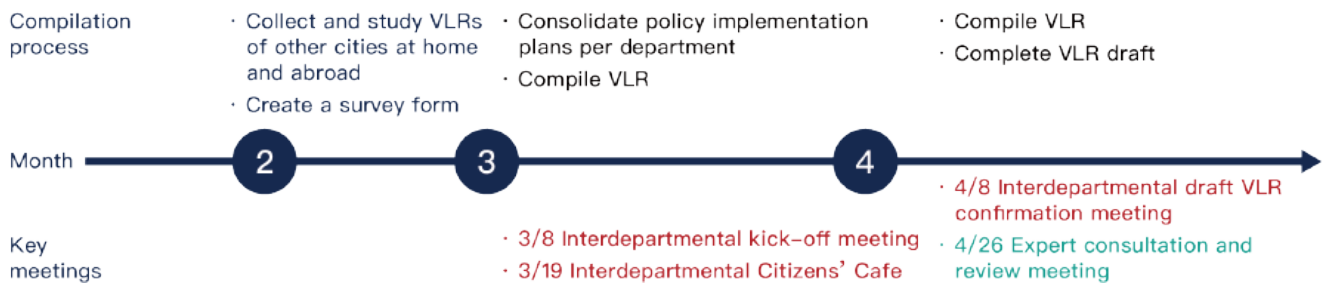
**Education and training:** External experts and scholars as well as specialists from various departments within the city government have delivered education and training to explain the sustainable development goals and compile the key points for the Voluntary Local Review to ensure staff have the necessary competences.

**Task analysis of city government**

**departments:** Through interdepartmental meetings and citizens' cafes, the main responsibilities, powers and responsibilities of various city government departments were analyzed and summarized, policies and plans were reviewed, and priorities in development were chosen.

**Benchmarking of existing policies and indicators:** The 17 project targets were compared with the city's vision, indicators and plans for sustainable development, and preliminary highlight action items was formulated for the city's sustainable development.

After research and discussion, these highlight action items were reviewed by external experts during consultation meetings to select detailed targets and indicators and aggregate and disclose the outcomes in this report.



▲ Development priorities for the meeting to focus on

## Level 4: Other SDG policies and evaluation indicators of Kaohsiung City

In the SDGs' spirit of "Leave No One Behind," this VLR compares and reviews Kaohsiung's sustainable development strategy on its own merits but also benchmarks the city's approach against as other cities' SDG policies and evaluation indicators. The VLR also reviews Kaohsiung's achievements in the light of Kaohsiung's Environmental Protection Plan.



## Sustainable development goals and outcomes

Kaohsiung City became a heavy industry base during the Japanese occupation era (1895–1945), when many companies were founded here. The industry gave rise to the international Kaohsiung Port, but also brought air and environmental pollution. Kaohsiung is undergoing a transformation, and big vessels now pass through Kaohsiung’s First Harbor into the new port area which houses shipyards, warehouses and cranes but is also home to coral, whales, a wave-shaped Kaohsiung Music Center, Kaohsiung Port Terminal, and Kaohsiung Exhibition Center. These new buildings mark Kaohsiung’s transformation. Meanwhile, the old factories and petrochemical storage tanks between the harbor and the city are being torn down to reconnect the city and the ocean once again.

To protect Kaohsiung’s natural ecology and cultural characteristics and create win-wins for economic development and environmental protection, Kaohsiung City has adopted KAO (Knowledge + Adjustment + Organization) as its guiding principle and has integrated sustainable development into all aspects of its urban transformation. In the city government’s work, the priority areas “economy, employment, education, quality of life, and peace of mind” are all linked to the SDGs. This VLR uses the UN’s 17 SDG’s and their 169 Targets as the guiding concepts for the city’s work and combines these with the city’s economic and social characteristics to select the highlighted action items (Figure 7 and Table 1) to review and report on the city’s sustainable development goals and achievements. The city government’s work is monitored to upgrade and transform the city and lay a solid foundation for its future and make Kaohsiung a world-class sustainable and livable harbor city.



▲ Five key areas of governance and sustainable development goals in Kaohsiung City

Key area	Goals	Description	Targets
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Economy



Sustainability industry, supplemented by infrastructure construction to develop industries in sustainable industry directions

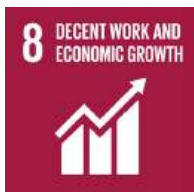
9.1、9.2、9.4



Build a circular economy and promote resource recovery and reuse to create sustainable consumption and production patterns

12.2、12.4、12.5、12.6

Employment



Respond to start-up and enterprise transformation needs, cultivate diverse talent, and create a good employment environment

8.2、8.3、8.5、8.6、8.8、8.9



Assist disadvantaged and low-income households in employment and poverty reduction

1.3、1.4、1.5



Reduce inequality and stimulate entrepreneurship among different social groups

10.2、10.3、10.4

Education



Offer diversified learning channels, promote the Reading City and lifelong learning

4.1、4.2、4.3、4.5、4.7、4.a










Conserve marine resources and promote marine education

14.2、14.a





Key area	Goals	Description	Targets
		Develop international talent and promote international exchange	17.9、17.14、17.15、17.16、17.17
	.....		
Quality of life		Improve environmental quality and upgrade public transportation	11.1、11.2、11.3、11.6、11.7、11.a
		Maintain health and well-being among all age groups, build a more complete social support system	3.2、3.7、3.8
		Ensure water safety and sanitation, protect river water quality	6.1、6.2、6.3、6.5
		Provide stable and sustainable energy	7.1、7.2、7.3
		Ensure food security and promote sustainable agriculture	2.3、2.4、2.c

Key area	Goals	Description	Targets
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Peace of mind



Ensure gender equality and empower women

5.1、5.2、5.4、5.5



Implement climate action, reduce greenhouse gas emissions, promote climate adjustment measures, and improve urban resilience

13.1、13.2、13.3



Conserve forests and maintain biodiversity

15.1、15.2、15.4、15.5



Reduce all types of violence, implement transparency, and stimulate citizen participation

16.4、16.6、16.7



▲ The mayor show his attempt for improving the air and environmental quality by attending the air pollution meeting personally.





# Key sustainable development strategies and actions of Kaohsiung City



**Economy - SDG 9 、 SDG 12**

**Employment - SDG 8 、 SDG 1 、 SDG 10**

**Education - SDG 4 、 SDG 14 、 SDG 17**

**Quality of life - SDG 11 、 SDG 3 、 SDG 6 、 SDG 7 、 SDG 2**

**Peace of mind - SDG 5 、 SDG 13 、 SDG 15 、 SDG 16**



# Economy



Accelerate land planning, develop parks, transform business districts, use industrial transformation for urban transformation, foster innovative industries, develop the cultural and tourism sectors, create sustainable consumption and production patterns, and rebuild and rebrand Kaohsiung in line with SDG 9 “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation” and SDG 12 “Ensure sustainable consumption and production patterns” to drive industrial transformation and stay in line with international trends.



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE

### SDG 9

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

#### The city's SDG Targets

TARGET 9-1

DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURES

TARGET 9-2

PROMOTE INCLUSIVE AND SUSTAINABLE INDUSTRIALIZATION

TARGET 9-4

UPGRADE ALL INDUSTRIES AND INFRASTRUCTURES FOR SUSTAINABILITY



Kaohsiung is actively improving its investment environment, environmental protection and basic facilities to transform itself into a high-end manufacturing center that links smart biomedicine, semiconductors, smart aerospace, innovative technologies, and smart machinery to drive industrial upgrading and transformation.

# 1 Develop industrial parks and transform into a high-end manufacturing center

## 1. Qiaotou Science Park

To prepare a hinterland for high-tech industries and drive the development of Kaohsiung’s suburbs, Kaohsiung City is preparing to establish Qiaotou Science Park in a later developed suburban district of the city to attract talent to return and promote industrial upgrading.

Positioned around Artificial Intelligence Internet of Things (AIoT), the park plans to focus on offering R&D and testing for five emerging innovative

industries: semiconductors, aerospace, smart machinery, innovative technology (5G, smart robots, etc.), and smart biomedicine. Together with Tainan Science Park, Luzhu Science Park, Nanzih Export Processing Zone and Yawan 5G AIoT Innovation Park, the Qiaotou Science Park will be part of the most important science and technology corridor in southern Taiwan.

► The picture of Qiaotou Science Park

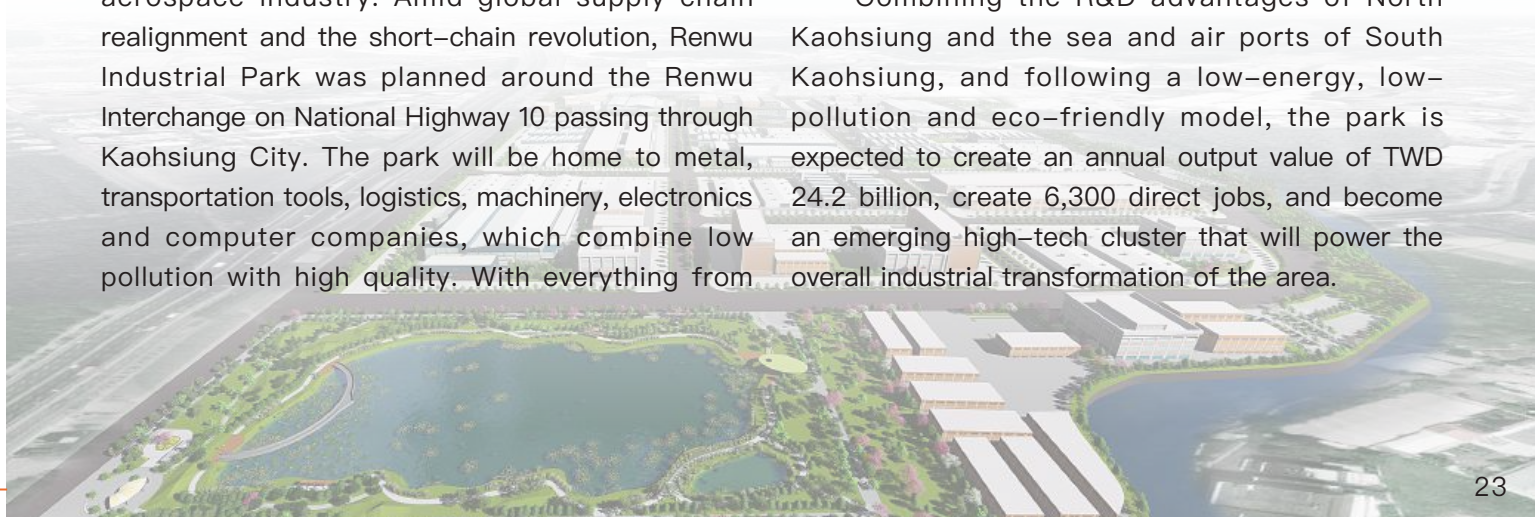


## 2. Development of Renwu Industrial Park

Kaohsiung has a solid industrial foundation. Its fastener industry ranks third in the world and its aerospace industry accounts for 25% of Taiwan’s aerospace industry. Amid global supply chain realignment and the short-chain revolution, Renwu Industrial Park was planned around the Renwu Interchange on National Highway 10 passing through Kaohsiung City. The park will be home to metal, transportation tools, logistics, machinery, electronics and computer companies, which combine low pollution with high quality. With everything from

R&D to production facilities, this park will be a comprehensive industrial cluster that covers much of certain supply chains.

Combining the R&D advantages of North Kaohsiung and the sea and air ports of South Kaohsiung, and following a low-energy, low-pollution and eco-friendly model, the park is expected to create an annual output value of TWD 24.2 billion, create 6,300 direct jobs, and become an emerging high-tech cluster that will power the overall industrial transformation of the area.





### 3. Investment and operation of Hofa Industrial Park

Hofa Industrial Park has a vision of being “green, smart, and sustainable” in contrast with polluting traditional industries. The park prioritizes low-pollution and low-emission industries, and has teamed up with Chunghwa Telecom to create a smart digital system to measure and monitor air quality, water resources, and streetlight status. This system is an important piece in the puzzle of Kaohsiung becoming a high-end Asian manufacturing center, with an estimated output value of TWD 54.8 billion and 10,000 direct jobs. Derivative consumer demand and related industries will follow suit and add further to local development and fiscal revenue.



▲ Hofa Industrial Park Service Center

## 2 Exhibition industry

Kaohsiung has promoted its convention and exhibition industry since 2014, and the number of conventions and exhibitions has grown year by year. Since 2016, Kaohsiung’s international conventions, exhibitions and trade fairs have topped 100 every single year. In 2020, when Covid-19 raged around the world, Kaohsiung held the annual meeting of International Congress and Convention Association (ICCA) in a hybrid form with online and offline elements. More than 1,000 ICCA members around the world experienced Taiwan’s capabilities in

smoothly hosting such hybrid conferences on a large scale. This was a first for ICCA. During the conference, the mayor of Kaohsiung and the ICCA chairman signed the Kaohsiung Protocol, the industry’s first protocol to be named after a city. This guide for the future development of global conventions and exhibitions marks an important milestone for Taiwan. Follow-up work will develop potential cases, bring more international conventions and exhibitions to Kaohsiung, and help boost the economic development of Kaohsiung City overall.



◀ The holography technology make the ICCA chairman be able to take a group photo with Minister Wang Mei-Hua and Mayor Chen Chi-mai from UK

## 3

## Land transformation, revitalization and industrial development

Due to its geographical location and historical background, Kaohsiung has an international harbor, heavy industry clusters and military bases. With Kaohsiung's economic growth, the surrounding population has increased as well. This has made it necessary to start with rezoning the land and reorganize districts according to local needs and possibilities.

### 1. Development of Asia New Bay Area

To promote industrial development, integrate the city and port, and maintain public safety, after the county-city merger in 2010, the Kaohsiung City Government proposed the Asia New Bay Area in 2011. The city's departments and agencies worked together to promote the old port area and Taipower Special Trade Zone Phase III, CPC Taiwan Warehouse Zone Phase III, and Bank of Taiwan Bank Phase IV. The projects of the 90th, 94th and 95th rezoning areas and the 205 Arsenal have been expropriated. Currently, Pier-2, Dagang Bridge, and MLD have been revitalized. The Cultural and Creative Hub of the Municipal Library has greatly changed the appearance of Kaohsiung Port. The development of the Kaohsiung Multi-Functional Economic and Trade Park in the Asia New Bay Area and surrounding land have taken off, laying the foundation for another century of growth and progress for Kaohsiung.

The city also works with the central government to promote the Asia New Bay Area 5G AIoT Innovation Park, a national-level plan that provides 5G and AIoT companies with a hinterland to develop. The Ministry of Economic Affairs has set up new innovation bases, provides incentives and subsidies, and has attracted international anchor tenants. A comprehensive service system for start-ups is being built to spur the development of two main industries of interactive entertainment and smart exhibitions. The goal is to drive local investment toward TWD 400 million in two years, increase overall output value to TWD 1 billion, and turn the Asia New Bay Area into Taiwan's largest R&D and testing base for 5G and an application display platform.



▲ "Asia New Bay Area 5G AIoT Innovation Park" provide a well development condition for industries

## 2. CPC Kaohsiung Refinery's R&D area for transformation

CPC Kaohsiung Refinery is located on the north side of Banping Mountain in Kaohsiung City. It was once one of the most important oil refineries of Taiwan. It also boost the economic development of Kaohsiung City. Ceased at the end of 2015, began to plan for land transformation and utilization, and simultaneously carried out plant demolition and renovation operations. In the future, it will be built as a "recycling technology and material innovation research and developmentSpecial Zone" to integrate industry,Industry—government—university collaboration and corporate energy Invest in the research and development of innovative materials, strengthen domestic research and development energy, develop high value-added products.



▲ Special district of CPC Kaohsiung Refinery's R&D for transformation cycle technology and material innovation

## 3. The Fengshan City Project

Since the early Qing dynasty, Fengshan District has been an important military site with military academies and training bases. In 1979, a military conference decided that the Weiwuying Base would no longer be used for military purposes. Nearly 67 hectares of vacant land was released and transformed into the Weiwuying Metropolitan Park. In 2020, to propel the transformation of Fengshan District, the Fengshan City Project was started to form an innovative hub for cultural, creative and performing arts and activities and to revitalize the three warehouses of Weiwuying Metropolitan Park.

The Taiwan Design Research Institute and the Taiwan Creative Content Agency were secured as tenants. The urban development along the Yellow Line of the subway (KMRT) and an overall update of the transit-oriented development TOD strategy, and the review of the Taiwan Railway Kaohsiung Machinery Plant's relocation and reconstruction plan have all contributed to the suitable and effective development of the land and public facilities to strengthen the surrounding areas and their environmental and public functions. The urban landscape has also improved.

▼ Weiwuying Metropolitan Park



## 1. Develop the 5G interactive technology industry based on somatosensory technology

In line with Kaohsiung's niche advantages in digital content, six major fields (medical treatment, entertainment, education, film and television, manufacturing, and marine) were selected as the focus for the future development of the somatosensory industry. A framework of experimental sites, business matchmaking, theme testing and refinement subsidies, and diversified innovative applications will help upgrade Kaohsiung to a development base and experimental area for the somatosensory industry.

Preferential subsidies attract manufacturers' investment and tenancy, field demonstrations serve companies' needs, international innovative technologies and academic research produce forward-looking scientific research outcomes, and cross-industry innovation application demonstration

cases are developed. Open trial fields to foster investment and development in Kaohsiung aim to attract leaders in digital content and interactive technology, including important manufacturers in 360-degree film and television production, somatosensory entertainment, VR education, somatosensory medical care, and smart factories.

In line with the current digital content industry, 5G AIoT and e-sports management and development, the e-sports industry is the future star industry in Kaohsiung City. Besides hosting e-sports competitions such as the 2020 Kaohsiung Show Your Power E-sports Carnival, the city also matches colleges and e-sports-related industries for industry-university collaboration, so that students interested in e-sports can not only be players but also develop careers in e-sports-related industries.

## 2. Kaohsiung Smart Technology Innovation Park

"KO-IN Intelligence Navigator-Kaohsiung Smart Technology Innovation Park" is the one of the only two financial technology parks in Taiwan. The Kaohsiung City Economic Development Bureau and Academia Sinica have created a Smart Finance Hill, as a park-in-park concept, to develop real-time transaction data services for stock exchanges and over-the-counter trading centers. KO-IN also integrates innovative technologies such as FinTech, AI and cloud data to offer financial startups focusing on R&D and applications tailored financial service models exclusively for companies in southern Taiwan. It also assists start-ups that wish to conduct practical trials in this city with land, resources and opportunities. In KO-IN Dreamer Arena competition for innovative start-ups held in May 2020, 14 Kaohsiung technology demonstration projects were completed.

Among these, the Financial Data Innovation Laboratory, established on December 29, 2020 as the largest smart financial service demonstration platform in southern Taiwan, will provide an excellent technical verification field where students in finance and IT can strengthen their practical skills.

► The world's first MR theater in Kaohsiung



## 5 Development and marketing of Kaohsiung tourism

### 1. Develop local tourism



▲ YOLO trip in East Kaohsiung

#### ① Donggao Slow Food Travel

The nine districts of eastern Kaohsiung (“Donggao”) have a rich cultural heritage, with ethnic groups such as Fukienese, Hakka, and Indigenous, Burmese, which form a unique local culture with stories and customs. Kaohsiung City’s Donggao Slow Food Travel integrates the nine districts of Donggao, their existing and undeveloped stores, attractions, experiences, talents, accommodations, etc., launched three themed travel routes suitable for independent travel along with a Donggao Slow Food travel book and app, which bring together information on stores, attractions, hot springs with food, hospitable homestays, online shopping and more, to offer the best localized experiences in food, beverages, experiences, and accommodations.

#### ② Fengshan City Museum

Working with the Fengshan City Cultural Volunteers Association, the city has created the Fengshan City Museum as a tourism resource. Through Facebook marketing, physical visitor centers and information desks, and guided tours, Fengshan’s past as a military powerhouse and political center is promoted through activities such as Roaming Kaohsiung for 100 Years and the Summer Equinox Picnic Festival. Maps of Fengshan’s historical sites, culture, and food have been released, allowing visitors to experience the rich legacy of Fengshan through music, picnics, talks, children’s workshops, charity bazaars, and other activities to revitalize the veteran village culture.

▶ Biking together across Fengshan city museum



### ③ Cijin Black Sand Festival

In 2020, invited artists painted murals in the Cijin Tunnel, and popular bands and local youth music groups and family activities added to the fun of the beach festival. Local food and beverage companies also organized a beach food festival. Small hotels and local companies also issued discount vouchers to make the festival more attractive to people near and far.



◀ ▲ Black Sand Festival in Cijin



### ④ Cycling fun

Cycling tourism combines cycling, history, culture, food, and local customs in collaboration with local associations and companies. Guides take tourists around to experience the area in depth. In 2020, Fengshan, Zuoying, Meinong, Gangshan and Jiading offered five in-depth cycling tours that combined sightseeing fun and local culture, as well as guided tours that introduce the local highlights to tourists.

In 2021, the Ambush on Ten Sides cycling series comprises 10 routes planned by the Tourism Bureau of the Ministry of Transport on the occasion of the Year of Cycling Tourism. The newly opened Kaohsiung Music Center, regional characteristics, and local businesses are staging cycling-themed activities to raise their profile and increase revenue from local tourism.



## 2. Kaohsiung city marketing at home and abroad

To present Kaohsiung’s new image and attract foreign tourists, the city uses high-end, creative methods to produce and broadcast Kaohsiung city image content in short films, flyers, booklets, social media, radio and TV, etc., using domestic and foreign media channels to promote Kaohsiung to attract domestic and foreign companies to visit or invest in Kaohsiung, to further boost its economy.

The Kaohsiung’s One Hundred Facebook fan page uses lively texts, pictures and short videos to publicize Kaohsiung’s major policies, traffic information, arts and cultural events, and local culture to communicate the attractiveness of Kaohsiung. Topical pages, active Q&A management, and online activities form effective communication channels between the city and its target groups.

With regard to radio and TV, the Roaming Kaohsiung for 100 Years–New Year’s Eve Gala webcast was organized, and Dawn on Kaohsiung presidential palace concert was broadcast live by the Kaohsiung Radio Station. In addition, Kaohsiung’s culture, local celebrities, seasonal products, cultural and creative programs and other special events, combined with by Potter King, Logan Beck, Manaki and IKU teachers, internet celebrities such as Hsieh Che-Chin, Nick Wang, Tai Tzu-Ying were engaged, while public channels, national channels, cable TV channels, YouTube, Facebook and other online platforms were also used, altogether creating more than one million views and marketing Kaohsiung tourism culture humanities.



▲ Winter tourism ambassador– Tai Tzu-Ying, top-ranked women’s singles badminton player



▲ City Marketing of Kaohsiung

## 6

## Creating added value from marketing and transforming agricultural products

Kaohsiung has abundant agricultural resources. To increase the diversified value of agricultural products, the city's farmer associations collaborate with processing manufacturers to extend their shelf life of local ingredients, e.g. by canning yuhebao lichees and papayas, or by making banana rib soup to promote novelties and grow the market.

Farmer associations are also assisted with improving product packaging design, such as Alian District Farmers' Association – Alian Village Candied Date Bags and Gift Boxes, Yanchao District Farmers' Association – Yanchao Guava Gift Boxes and Xishi Pomelo Gift Boxes, Liugui District Farmers' Association – Liugui Mountain Tea Gift Boxes, Daliao District Farmers' Association – Daliao Kaohsiung 147 Rice Vacuum Bags, Fangjing Fruit and Vegetable Transportation Collaborative – marketing Yuhebao Lichee Gift Boxes. Such initiatives add and communicate product value.

In response to online shopping, the Kaohsiung City Farmers' Association was commissioned to set up and operate the Kaohsiung First Choice E-Commerce Retailers Platform, which discloses local products' traceability, Certified Agricultural Standards (CAS), production and sales history and organic verification to consumers, offering them critical information while up to 30% of profit is donated to public welfare. The association and its members also participate in international food exhibitions to promote the city's agricultural specialties.



▲ The e-commerce platform "Kaohsiung Picks" 24/7 serving and selling litchi for nearly 10 million



► Products from Kaohsiung Picks





## 7 Building a Kaohsiung Agricultural and Fishery Team

The city's rich and diverse fishery resources account for more than 50% of the country's fishery output. Besides aquatic products' safety control, aquatic product certifications further ensure the hygiene and safety of aquatic products consumed by the public and help build a positive image for aquatic products from Kaohsiung. In addition, the Kaohsiung Seafood brand was launched in 2014. Kaohsiung's major fish varieties tuna, squid, saury, grouper and milkfish have great potential and were selected for the Kaohsiung Seafood brand from among many other high-quality aquatic products. The marketing of the Five Treasures has created business opportunities for these aquatic products and has raised the profile for the city's high-quality aquatic products in the international market.

In addition, to promote One District One Specialty, the district-level fishermen's associations were assisted with organizing marine culture festivals such as the 2020 Milkfish Marketing Promotion in Mituo District, 2020 Yongan Grouper Fresh Season in Yong'an District, 2020 Ocean Fresh Cultural Festival in Xingda Port, 2020 Kaohsiung Saury Festival in Qianzhen District and 2020 Seafood Festival in Ziguan District.

Amid the Covid-19 epidemic in 2020, the export of fishery products took a hit. To promote the Kaohsiung grouper industry, in September 2020, the Yongan District Fishery Association and Mos Burger collaborated to develop a product. The fishery association provided high-quality local dragon tiger groupers, which were combined with MOS's classic rice burger, creating a special local product that was sold as Dragon Tiger Grouper Rice Burger around Taiwan, successfully opening a new channel for fishermen in Taiwan. In May 2021, we helped develop the Kabayaki Grouper Rice Burger to help local fishermen weather the epidemic through capturing value from new products.

◀ Marine Flavor of Kaohsiung



## 8

## Halal certification for aquatic products to expand marketing channels

The Kaohsiung City Government and the Fisheries Agency, Council of Agriculture have collaborated since 2018 to guide the industry to adopt halal certification, let manufacturers better understand Muslim needs, and promote Kaohsiung's high-quality aquatic products in the global halal market.

To date, nearly 100 highly diverse and ultra-fresh aquatic products have obtained halal certification, including grouper, bream, bass,

milkfish and tuna. Since the certification, businesses have begun receiving orders from distributors, and the city government has also reached out to the tourism industry, supermarkets and e-commerce channels to create business opportunities. We have also assisted through producing bilingual product catalogs to expand the sales channels of the city's aquatic products to halal markets at home and abroad for the benefit of local farmers and fishermen.



▲ Halal certificated marine products from Zihguan





**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**SDG 12**

Ensure sustainable consumption and production patterns

The city's SDG Targets

TARGET 12-2

SUSTAINABLE MANAGEMENT AND USE OF NATURAL RESOURCES

TARGET 12-4

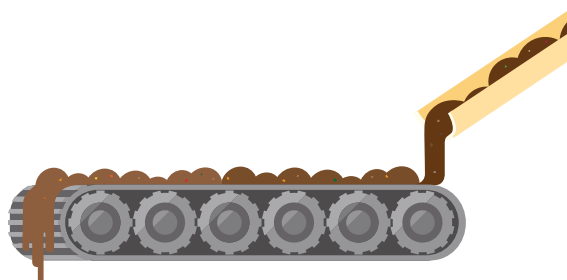
RESPONSIBLE MANAGEMENT OF CHEMICALS AND WASTE

TARGET 12-5

SUBSTANTIALLY REDUCE WASTE GENERATION

TARGET 12-6

ENCOURAGE COMPANIES TO ADOPT SUSTAINABLE PRACTICES AND SUSTAINABILITY REPORTING



To implement the circular economy, Kaohsiung City has made the establishment of a new material recycling industrial park a key project to promote resource recovery and reuse and create sustainable consumption and production patterns.

## 1 Reuse of bottom ash from waste incineration in recycling plants

Kaohsiung’s incinerators produce 230,000 MT of bottom ash each year. In the past, this was sent to the landfill. As landfill space tightened and a circular economy emerged, the city actively promoted incineration bottom ash recycling. The recycled pellets are used in public infrastructure projects. At present, all incineration bottom ash is reused. In addition, the landfills at Luzhu, Yanchao and Alian will dig up previously dumped bottom ash for processing into pellets to extend the life cycle until the final landfill.

Since July 2017, Kaohsiung City Environmental Protection Bureau’s CLSM Ready-Mixed Concrete Factory Quality Capability Certification Pilot Program for Recycling Products Containing Bottom ash, Taiwan’s first such program, has ensured the quality of incineration recycled pellets used in controlled low-strength materials (CLSM) projects.

In 2020, nine ready-mixed concrete factories have passed the accreditation. In 2018, the Regulation for the Operation of Kaohsiung City Government’s Waste Incineration Plants Regarding the Use of Recycled Pellets was published. These pellets are provided free of charge to public works units in the city upon request. The principle of controlled low-strength backfill materials (CLSM) is to add 800 kg of recycled pellets per cubic meter, and incentive measures encourage all municipal units to fully collaborate. The volume of used pellets produced and used increase year by year, and Kaohsiung is the only among the country’s top six cities to be awarded the highest marks for two consecutive years in evaluations of the nation’s bottom ash businesses.

► ▼ The reuse of the bottom ash from the incineration



## 2 New Material Recycling Industrial Park

Under the Ministry of Economic Affairs’ National Recycling Zone Pilot and New Material Recycling Industrial Park Application Plan, Kaohsiung City is relocating several villages in the Dalinpu area to build a New Material Recycling Industrial Park. This park will be home to companies engaged in new materials, recycling auxiliary products, and recycling services. It will integrate surrounding companies’ production resources such as oil, electricity, and steel, and help create short chains for materials, by-products, waste, electricity and heat to exchange and reuse.

- Planning of The New Material Recycling Industrial Park

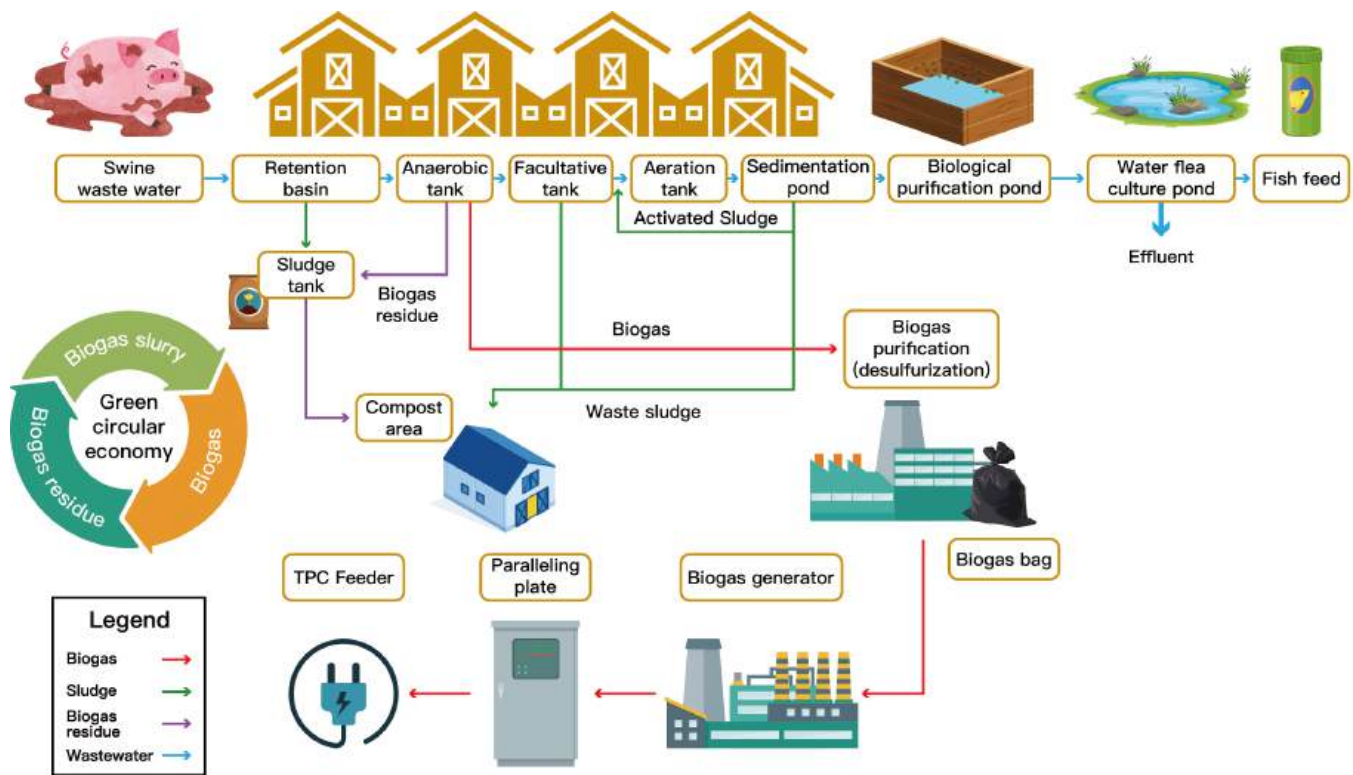


### 3

## Reuse of biogas slurry and residue

To reduce pollution from livestock wastewater into rivers, livestock manure is converted into fertilizer while the remaining livestock wastewater is returned to the agricultural land, thus reducing the use of chemical fertilizers and improving the quality of agricultural products. Since 2017, 128 types of resources have been used, including 88 biogas slurry and residue types used as farmland fertilizer, 21 cases of agricultural waste reuse, and 19 cases of reuse of discharged water to irrigate plants, which each year has prevented about 130,000 MT

of livestock wastewater being discharged into the rivers. Farmland irrigated with livestock wastewater reached 113.09 hectares, preventing the use of 6,325 bags of chemical fertilizers, and cutting biochemical oxygen demand (BOD) by 350.4 MT and suspended solids (SS) by 464.6 MT. A biogas center has been built, where specialized companies process livestock wastewater from small farmers to produce biogas, biogas slurry, algae and other by-products, an inspiring example of sustainable management of natural resources.



▲ The process of biogas center in Neimen





# Employment



Employment rates depend on industrial development and talent quality. Thus, the first priority is to improve the investment environment to promote industrial transformation and attract new companies, create jobs, and ensure the right to work of different groups (disadvantaged and indigenous), so that everyone has decent work and a livable income. This approach is especially linked with SDG 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all,” SDG 1 “End poverty in all its forms everywhere,” and SDG 10 “Reduce inequality within and among countries,” the SDGs that are most closely related to employment-related actions to eliminate inequality and creating a good employment environment.





**8** DECENT WORK AND ECONOMIC GROWTH

**SDG 8**

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

The city's SDG Targets

TARGET 8-2



DIVERSIFY, INNOVATE AND UPGRADE FOR ECONOMIC PRODUCTIVITY

TARGET 8-3



PROMOTE POLICIES TO SUPPORT JOB CREATION AND GROWING ENTERPRISES

TARGET 8-5



FULL EMPLOYMENT AND DECENT WORK WITH EQUAL PAY

TARGET 8-6



PROMOTE YOUTH EMPLOYMENT, EDUCATION AND TRAINING

TARGET 8-8



PROTECT LABOUR RIGHTS AND PROMOTE SAFE WORKING ENVIRONMENTS

TARGET 8-9



PROMOTE BENEFICIAL AND SUSTAINABLE TOURISM

Cultivate diversified talents, serve the needs of entrepreneurship and enterprise transformation, create a good employment environment, stimulate young people to return to their home region, and implement labor inspections and occupational safety work to create win-wins for labor and capital.

## 1 Create a Kaohsiung where young people can thrive

Young people are key to urban transformation. To create an entrepreneurial environment friendly to young people, provide support and education for start-ups by young people, create jobs, revitalize the city's industrial development, and strengthen young people's competences to drive urban innovation and attract young people to come or return to Kaohsiung, the city government has gathered industry, academia, and government in a Kaohsiung youth entrepreneurship consultation network called O'Star, which collaborates with six universities spread over Kaohsiung as one-stop service windows for entrepreneurial consulting services. The service introduces young entrepreneurs to industry,

government, and academic resources, including entrepreneurial funds, government support, events, knowledge, courses, etc., as well as customized services such as consultations by teachers and experts. It is expected that these courses and activities, along with building a sharing, inspiring and supportive innovation and entrepreneurship environment, will provide substantial entrepreneurial support for young people to develop the attitude and capabilities needed for innovation and entrepreneurship, and create an atmosphere of innovation and entrepreneurship in Kaohsiung to spur the city's industrial development.



▲ Network event for young entrepreneurs



▲ 2020 Meet Taipei entrepreneurship festival

▼ Young Attack! Party



## 1. Youth entrepreneurship subsidies

When starting a retail business, remodeling and rent are the top worries for entrepreneurs. To create a friendly environment for young entrepreneurs, lower the threshold for them, and help them develop business models for growth, the city offers a Young Entrepreneurship and Start-Up Fund, Loan Interest Subsidy, and Youth Entrepreneurship Subsidy. Companies registered in Kaohsiung for less than five years, with paid-in capital or commercial capital below TWD 30 million, led by a representative or person in charge registered in Kaohsiung, who is a Taiwanese national between 20–45 years old, are eligible for these support measures.

In addition to relaxing various types of business sizes, we also offer “on-the-spot reviews” and “fast customs clearance within 7 days,” and other thoughtful improvements to widen business scopes accepted (without formal plans), and accelerated reviews to increase the success rate of young entrepreneurship, drive Kaohsiung’s economic development, and become a “friendly city for youth entrepreneurship.”

► Loan for young entrepreneurs

**青年創業貸款**  
小貸價大夢想

高雄市政府  
青年局  
YOUTH BUREAU,  
KAOHSIUNG CITY  
GOVERNMENT

- 貸款對象**  
公司、商業或辦有稅籍登記之小規模商業  
1. 設立登記於高雄市且未滿 5 年  
2. 實收資本額 1,000 萬元以下  
3. 金融業、保險業或特殊娛樂業不能申請  
公司代表人或商業負責人  
1. 年齡 20 歲以上 45 歲以下之中華民國國民  
2. 設籍高雄市 3 個月以上  
3. 3 年內曾參與創業輔導相關課程或講座達 20 小時以上
- 貸款金額**  
1. 公司、商業最高新台幣 200 萬元  
2. 稅籍登記之小規模商業最高新台幣 50 萬元
- 資金用途**  
1. 購置營業設備、生財器具、場所裝潢  
2. 營運週轉金
- 貸款利率 1.94%**  
按郵局 2 年期定期儲蓄存款利率(目前為 0.845%)  
+ 年利息 1.095% 機動計息
- 貸款期間**  
最長 7 年(含寬限期最長 1 年)
- 利息補貼**  
首次申貸者得享前 3 年利息補貼，參加國內外創業或設計競賽獲獎者得延長至 5 年

## 2. Support young and diversified entrepreneurship

The Young Entrepreneurship Development Fund of the Youth Bureau, in collaboration with the city’s bureaus of economic development, cultural, agricultural, and marine affairs, addresses the needs for funding, marketing, talent, advice, and locations to promote young entrepreneurship in the city, cultural and creative enterprises by young people, 5G AIoT innovation, shopping districts, agriculture, fishery and young innovation.

### ① Agriculture, fishery and youth entrepreneurship

The Youth Bureau relies on the expertise of the Agriculture Bureau and the Marine Bureau to reduce the operating costs of young farmers and fishermen through entrepreneurial subsidies, interest subsidies, internships, and consulting to upgrade their management and marketing skills. A matchmaking youth design team assists with image upgrading of agricultural and fishery products, enhance their branding, online promotion, production, sales and distribution structures to increase turnover and profit.

## ② Young cultural and creative industry

Support young cultural entrepreneurs with working capital assistance, entrepreneurial subsidies, cultural and creative loan from the central government and consulting services. The Youth Bureau and the Bureau of Cultural Affairs work together through the Young Cultural and Creative Community Plan and are building three cultural and creative clusters.

## ③ 5G AIoT innovative companies

The Youth Bureau and the Economic Development Bureau jointly launched the 5G AIoT Cluster in Asia New Bay Project, to attract innovative companies, R&D centers, and talent training centers, as well as rent subsidies to support new ventures and emerging industrial clusters that bring big benefits to small businesses and assist start-ups to connect with the digital market.

# 2

## Develop the local cultural and creative industry

### 1. Cultivate young cultural, creative and artistic professionals

The Cultural and Creative Talent Cultivation Program and the Award Subsidy Program aim to develop young talent in cultural and creative arts and design. This talent cultivation comprises a Cultural and Creative Design Talent Homecoming Plan, the Kaohsiung Awards, and the Kaohsiung Sings Taiwanese Opera competition. Since 2014, the homecoming plan has handled 404 applications, offering short residencies in the Pier-2 Art Center where they can gain direct market exposure and experience. The Kaohsiung Awards and the Kaohsiung Sings Taiwanese Opera competition have unearthed new performing arts talents, provided them with a stage, and encouraged interest in Taiwanese opera as a profession that earns a decent living and strengthens traditional Taiwanese art and local identity.

The Agongdian River Literature Awards, Kaohsiung Youth Literature Awards, and Young Design Festival encourage young people to devote themselves to literary creation and offer students from cultural and creative college departments a stage to show their creativity. In 2020, amid the Covid-19 epidemic, the physical events were replaced with online exhibitions, allowing visitors at home and abroad to view the creative works of these young students.

### 2. Create a good environment for cultural and creative employment

The Pier-2 Art Center fosters exchange through artist residences, co-creation bases, and large-scale cultural and creative exhibitions, connecting cultural and creative clusters such as Hamaxing and Fengshan. Through resource injections and marketing collaboration, it enhances brand promotion and the visibility of young talents. The Pier 2 Co-Creation Base offers guidance, courses, exchange, etc. This new type of cultural and creative industry cluster aims to stimulate cross-industry exchanges and interdisciplinary collaboration.

Through industry-government-academia collaboration, the center also organizes activities such as the Young Design Festival and Young Art Kaohsiung, linking young artists and designers with galleries and private enterprises to get the flywheel of industry-government-academia synergy spinning.



### **3 Support young farmers and grow agricultural soft power**

#### **1. Consulting for young farmers (model farmer training)**

In view of domestic and global agricultural trends, a six-level case benchmark and support framework encourages potential young farmers, upgrades local agricultural products, and integrates agricultural marketing into our city marketing. The Kaohsiung Farmers League offers support with marketing and promotion, an agricultural magazine, local agricultural development and upgrading, so that more people understand the relationship between agriculture and their daily lives, shorten the distance from farm to table, and change the public's perception of agriculture.

#### **2. Support for fishery start-ups**

The Young Farmers Business Loan Interest Subsidy Program and the Young Farming Entrepreneurship Subsidy Program aim to attract young people to return home to Kaohsiung and supports them with starting their businesses through developing their competences in research and development, planning, production, processing, and equipment selection. Through training and consulting, the programs' experts and scholars help these young people set up stable and sustainable businesses with competitive power and future potential.

#### **3. Collective marketing and promotion by and for small farmers**

The Kaohsiung Farmers League connects the primary, secondary, and tertiary agricultural industries (production, processing, and services) and offers a marketing network integrating six agricultural industries. The league joins and hosts trade shows and sales activities representing the league and its members. Through physical and online activities, and the development of marketing channels, the Kaohsiung agricultural brand has gained higher visibility and trust. The Kaohsiung First Choice E-Commerce Platform has successfully increased exposure and sales of local agricultural products.

### **4 Promote workplace safety and health, and reduce occupational incidents**

We use publicity, coaching, supervision and inspection to assist businesses to ensure the safety and health of workers. The aim is that occupational safety and health supervision and inspections will cover 10.1% of local businesses by 2030, and gradually increase this coverage until the ultimate goal of zero job incidents will be reached.

## 5

## Uphold labor standards and create win-wins for labor and capital

Kaohsiung is an industrial city with a hard-working reputation. Its blue-collar workers work hard and thus help advance the city. To safeguard labor standards and protect workers' rights and interests, the city conducts labor inspections: in 2020, 4,617 labor inspections were carried out, 122.6% of the annual target. We actively increased the number of visits and used counseling instead of administrative penalties to create win-wins for labor and capital.

The city has about 1.3 million workers and 84 trade unions. To understand grassroots needs and aspirations, and create win-wins between labor and management, the Kaohsiung City Labor Self-

Government Committee offers labor representatives a stage to voice opinions and participate in labor policy development and enforcement, to safeguard labor rights and help ensure that labor unions can exercise their rights to organize, fight and negotiate, so that labor policies can do more justice to laborers' needs, rights and interests.

Through advocacy, counseling, supervision, and inspection, companies are assisted with managing occupational safety to ensure the safety and health of workers. The aim is to cover 10.1% of enterprises with occupational safety and health supervision and inspections by 2030 and gradually achieve the vision of zero occupational accidents.



◀ Labor Committee in Kaohsiung





**SDG 1**  
End poverty in all its forms everywhere

The city's SDG Targets

TARGET 1-3

IMPLEMENT SOCIAL PROTECTION SYSTEMS

TARGET 1-4

EQUAL RIGHTS TO OWNERSHIP, BASIC SERVICES, TECHNOLOGY AND ECONOMIC RESOURCES

TARGET 1-5

BUILD RESILIENCE TO ENVIRONMENTAL, ECONOMIC AND SOCIAL DISASTERS



Through education, counseling and subsidies, disadvantaged and low-income households are assisted in employment and poverty reduction to eliminate all forms of poverty.

## **1 Assist the underprivileged to overcome poverty and become self-reliant**

Through the Children and Youth Future Education and Development Accounts for low-income households and children in low-income households, the city government annually allocates funds based on household deposits. Upon turning 18, the education funds become theirs. These savings accounts invite households to add deposits to them to accumulate future assets. This education fund improves the chances for disadvantaged children and teenagers to receive higher education or vocational training, to pursue self-employment through a start-up or other human capital investments, to break the intergenerational cycle of poverty.

## **2 Assist low-middle-income people capable of work to find employment**

To assist people capable of work in low-income households and low-middle-income households to find work, we have an Action Plan for Joint Services to Assist Low-/Low-Middle-Income Households to Find Employment, in line with central government policy. Through collaboration among social and labor departments and low-income and low-middle-income households, individual barriers to employment have been eliminated and more jobs have been found.

## **3 Promote employment for people with disabilities and create happiness**

The city's Boai Vocational Skills Training Center (est. 1987) helps people with disabilities find work. It is the only public institution in Taiwan offering integrated training and professional retraining for people with disabilities. The center promotes the employment of people with disabilities through developing new employment models, offering thoughtful services, bringing private resources together, and promoting employment measures for people with disabilities. In 2020, to further integrate training and hiring, we first found partner companies before setting up training categories to ensure that vacancies and skill sets matched. Tailor-made courses proved by lecturers from industry instilled skillsets in demand within industry. This increased the number of trainees with disabilities being hired into decent jobs and a better future.

## **4 Home rent subsidies for disadvantaged families**

To implement housing justice, improve the housing market, and upgrade the quality of housing, the Kaohsiung City Government follows the Executive Yuan's policy of supporting industry, revitalizing land, and utilizing vacant houses, and rents and lets housing from house rental businesses, to develop rented social housing, and provide disadvantaged families and studying or working youths with affordable housing while avoiding the cost of direct construction of social housing. To address the housing needs of disadvantaged families, we offer integrated housing subsidies (i.e. rent subsidies, interest subsidies for mortgages and house repair loans). We offer 12 months' rental subsidies up to TWD 3,200 to reduce the burden of renting houses.







**SDG 10**  
Reduce inequality within and among countries

The city's SDG Targets

**TARGET 10-2**

PROMOTE UNIVERSAL SOCIAL, ECONOMIC AND POLITICAL INCLUSION

**TARGET 10-3**

ENSURE EQUAL OPPORTUNITIES AND END DISCRIMINATION

**TARGET 10-4**

ADOPT FISCAL AND SOCIAL POLICIES THAT PROMOTES EQUALITY



Create different employment opportunities to further the development of diverse groups and industries.

## 1 Furthering the development of diverse groups and industries

### 1. Enhance the value of indigenous industry

Kaohsiung has three original rural areas: Maolin, Namaxia, and Taoyuan, home of 16 of Taiwan's indigenous groups. The former harbor terminal was transformed into the Pier-2 Art Center as a marketing channel. Beside arts, the area also relies on eco-tourism, with three eco-tourism routes: Spring Hymn – Soaring Dreams (Namaxia District), Southern Heart – Peach Spring Land (Taoyuan District), and Artistic Maolin – Three Blacks Rising (Maolin District). These routes have boosted local cultural and creative industries and agricultural specialty industries. Immersive tourism experiences take visitors deep into the culture and ecology of these original townships, creating local jobs and income.



▲ Tourism into Indigenous Village



## 2. Boosting Hakka tourism and business

指導單位：客家委員會 高雄市政府  
主辦單位：高雄市政府客家事務委員會  
承辦單位：樂誠創意有限公司  
遊程執行：雙向國際旅行社



▲ Kaohsiung Hakka Trip Festival

To boost the tourism industry, in 2020, we built an alliance among companies within four Kaohsiung districts with Hakka villages (Meinong, Shanlin, Liugui, Jiaxian) to organize the Kaohsiung Hakka Trip Festival, for which three cultural and creative products were developed, three local bazaars were organized and 14 half-day and one-day trips were designed to experience Hakka village life. Local cultural workers guided visitors around to introduce Hakka culture, aesthetics, and cuisine. This festival has boosted the Hakka economy and Hakka businesses.

### 3. Promote barrier-free and inclusive tourism

Kaohsiung has a wealth of natural and cultural sights. To allow people with disabilities to enjoy Kaohsiung's beautiful scenery as well, the city has integrated cross-regional resources to highlight selected scenic spots and local cuisine: Perspicacity — an architectural art trip; Transformation — a trip around Asia New Bay; Wind — a Qimei ecological trip; Fresh — a trip along the coastal tides and tastes; Scenery — a cultural tour around northern Kaohsiung. These five trips have been designed with people with disabilities as the foremost guests in mind: barrier-free routes and barrier-free promotion films, which have attracted visitors from around the country.



▲ Accessible tourism one day trip



▲ Accessible tourism map



## 2 Education and coaching for new residents

There are more than 60,000 new residents in Kaohsiung. To help them integrate faster into Taiwanese society, the New Resident Affairs Committee runs five new residents service centers and 22 new residents service bases that serve as one-stop windows for good, convenient and instant services.

In November 2020, the New Residents Club was opened in the city center to serve new residents with a wide range of services such as consultations in residents' mother tongues, translation, liaising, education and training. The club offers adult basic education classes for foreign spouses, practical life counseling, parenting lectures, festive events on the occasion of native festivals, education and coaching for new residents' children, etc. Kaohsiung is the first city in Taiwan to offer mother tongue education to second-generation immigrants to enable them to understand and appreciate their parents' home country's language and culture and give them a firmer footing from which to interact with their Taiwanese environment.

Adult basic education seminars help local residents and new residents from 15 years of age and up, who are illiterate or have not finished elementary school to improve their language and communication skills.

The city also offers practical life skills courses related to local culture, marriage and family affairs, parenting and the like, to empower the new residents to better handle their marriages and families, become involved in their neighborhood communities, and help build a friendly multicultural environment.

In 2020, four practical life skills courses were held, with 118 participants. Courses and events were also held at the household registration offices of the Lingya, Sanmin, Renwu and other districts, including cooking and tasting events, home safety classes, succulent-based remedies, and more.



▲ Education for new immigrants

### 3

## Create a multi-gender friendly environment

In pursuit of its vision of diversity and gender equality, Kaohsiung City promotes the Gay-Friendly Environment Plan, which includes publicity, events and training on gender equality and gay-related issues to make the general public more aware and knowledgeable of these issues and more familiar with the LGBTQ+ community. Spaces for dialogue have been created to foster dialogue and respectful exchange between different groups. The city government also regularly meets with gay businesses. The Civil Affairs Bureau coordinates all these efforts. At least three times a year, gender-friendly agents are invited to join study and discussion meetings to understand the needs of the

gay community and how policy can accommodate those, so as to promote gay citizen rights and build a friendly social environment.

Kaohsiung City has seen 11 Kaohsiung Gay Parades so far. Mayor Chen Chi-mai emphasizes that Kaohsiung is a city of love and tolerance, where love as a human right is respected. The nation's largest rainbow landscape was set up in the Pier-2 Art Center, and during the Kaohsiung Gay Parade 2020, rainbow flags were raised on top of the government administrative centers of Siwei and Fengshan to express the city government's wish for a colorful and diverse city.

▼ LGBTQ at Pier 2



$AD \perp BC$

$BQ \perp AC$



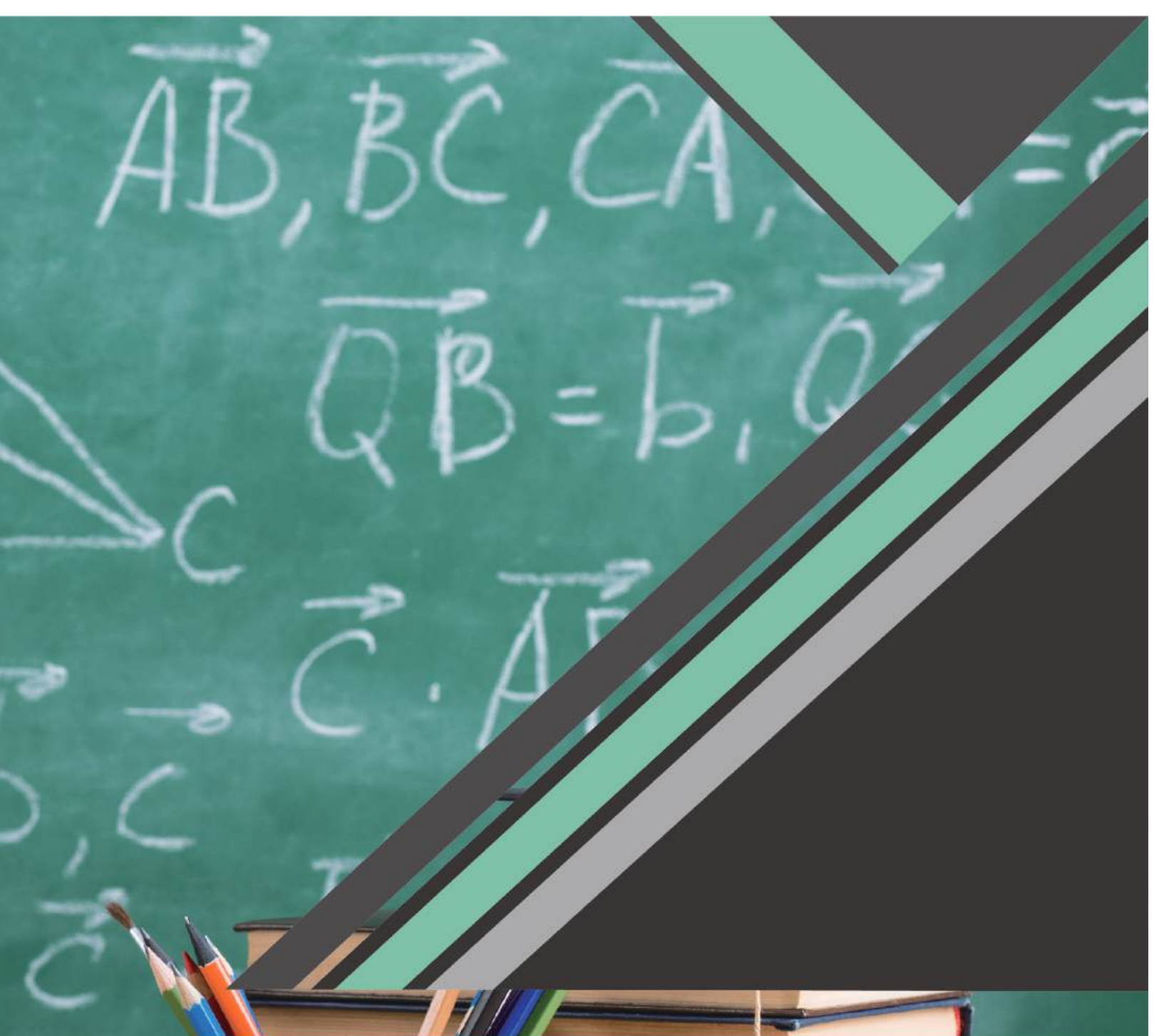
$\vec{AB}, \vec{BC}, \vec{CA} = \vec{a}, \vec{b}, \vec{c}$

$\vec{AB} = \vec{b} - \vec{a}, \vec{BC} = \vec{c} - \vec{b}$

$\vec{a}(\vec{c} - \vec{b}) = 0$



# Education



As industry transforms and people need local jobs, education is key to ensure people's skills remain relevant to business needs. Education is also instrumental in instilling environmental protection early on, so that people have the skills and mindsets to serve the new industries well and take good care of the environment at the same time. As people grow together, they are better able to contribute to SDG 4 "Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" ; SDG 14 "Conserve and sustainably use the oceans, seas and marine resources for sustainable development" ; and SDG 17 "Strengthen the means of implementation and revitalize the global partnership for sustainable development." Education equality, lifelong learning and sustainable development go hand in hand.





**4** QUALITY EDUCATION

**SDG 4**  
 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

The city's SDG Targets

**TARGET 4-1**

FREE PRIMARY AND SECONDARY EDUCATION

**TARGET 4-2**

EQUAL ACCESS TO QUALITY PRE-PRIMARY EDUCATION

**TARGET 4-3**

EQUAL ACCESS TO AFFORDABLE TECHNICAL, VOCATIONAL AND HIGHER EDUCATION

**TARGET 4-5**

ELIMINATE ALL DISCRIMINATION IN EDUCATION

**TARGET 4-7**

EDUCATION FOR SUSTAINABLE DEVELOPMENT AND GLOBAL CITIZENSHIP

**TARGET 4-A**

BUILD AND UPGRADE INCLUSIVE AND SAFE SCHOOLS

We provide diverse learning resources and learning channels to promote native languages, the Reading City, and lifelong learning.

## 1 Industry–government–university collaboration offers skills learning channels

The Kaohsiung Diversified Talent Cultivation Project aims to make students more aware of the relationships between education, society and work, and learn various ways to develop their careers. They take stock of their situation using career exploration, practical learning, flexible teaching, technical and vocational regeneration, and industry collaboration. The project offers 20 implementation strategies to prepare future talents by focusing on the cultivation of professional skills and practical competences in response to industry and

international trends.

In response to talent needs in emerging industries and central policies, Kaohsiung has offered e–sports classes and related courses in its schools since 2015 to cultivate diverse talent for industry. The city offers classes and courses in e–sports, branding, media promotion, industrial management, product design, multimedia production, hardware engineering, etc., to help students find their passion and future employment direction.

## 2 Online education and action learning

Since the county–city merger in 2010, Kaohsiung has invested in infrastructure construction for cloud services and Blue Ocean goals such as smart foundations, smart networks, smart campuses, and smart teaching, and promoted the QEC teaching platform to support teachers’ innovative teaching. Building on the Ministry of Education’s forward–looking digital construction designs, industry–university partners jointly created 1,020 AI robots, which were introduced into 252 elementary and middle schools in the city in 2020, which we used in AI coursework. AI learning was integrated into various subjects through AIoT connections. The Daxuetang platform combines live broadcasts, games and digital learning through a large–screen live classroom curriculum design. One hundred and eighty–five interdisciplinary theme–based courses were recorded to enrich teaching around the city. The gamification approach enables students to learn autonomously. Thanks to live broadcasts, students in different locations can learn together, learning in the countryside faces fewer restrictions, and the urban–rural divide is shrinking.



▲ Digital Learning in School



▲ Aircraft maintenance courses in Darong High School





▲ Open University of Kaohsiung

### 3 Building a lifelong learning base

The Open University offers social education, adult education, lifelong learning, and distance learning. It is also a university with the characteristics of a city university. Anyone over 18 can enroll at the university without minimum education requirements or study duration limitations. Continuous education enables students to attend university to gain professional knowledge, enrich their lives, and enhance their competitiveness in the workplace. In addition to serving Kaohsiung

residents, the university, since 2010, also offers special classes to people in other counties and cities, police classes, and prison courses to encourage inmates to study and increase social welfare.

Since 2019, six courses have been given in Pingtung Prison for 78 learners to encourage the inmates to study, to strengthen their professional capabilities, and to improve their chances of employment.

#### 1. Establish lifelong learning bases in Kaohsiung city, suburbs and rural districts

To serve different groups and remote areas, the Open University (OU) opened classes in Yunlin County in 2010; in Taitung in 2013; in Changhua, Nantou, and Pingtung in 2015; and even held special classes in Vietnam. Since 2017, classes have been held in northern Kaohsiung. The year 2018 saw the start of bachelor-level classes for Kaohsiung Police, classes on the Penghu Islands and the seaside township of Fangliao, a Tainan class for HCT Logistics, as well as a class in Zhongli. In 2019,

a special class for the Taipei Police opened, where police from northern Taiwan may earn a Bachelor's degree, thus officially expanding lifelong learning to the north. In 2020, classes started in rice township Chishang, and in Chenggong near Taitung, the first OU class on the east coast. Police classes for officers in Taoyuan and Taichung offer Bachelor's degree pathways to police officers in northern and central Taiwan.

## 2. Senior Education

Senior citizens over 65 enjoy reduced tuition fees, while middle-aged and senior citizens have access to non-credit-based learning channels. The Senior University offers diversified senior-age courses, including life law, creative science, urban water control and disaster prevention technology, long-term care, music appreciation, coffee workshops, cultural and historical tours, and more, so that the elderly can enjoy their old age and take classes relevant to their life stage, rights and interests. In 2020, 800 senior students of 65 years and older were enrolled, with the oldest being 95 years of age.

## 3. Lifelong learning for civil servants

To serve societal trends and learning needs, the Open University's curriculum planning keeps abreast with the times and assists civil servants with developing their professional competences. Diversified learning courses help trainees to obtain licenses and create a second expertise in life.

Some free courses were also selected and placed on the teaching platform and app for people inside and outside the school to have the opportunity to watch or listen freely without formally enrolling. These free online courses attract people inside and outside the school to discover more OU courses and raise their interest in learning.



▲ Admission of Open University of Kaohsiung

## 4. Integrate the supply and demand of businesses and vocation training

The Training and Employment Center of the Kaohsiung Labor Bureau adjusts or adds curriculum content and teachers based on industry developments and surveys of talent needs in the market. The center offers employment-oriented vocational training courses, upgrades labor employment skills, and cultivates talents needed by the industry, in line with long-term employment policy. It also provides training for care staff and promotes care staff retention through various policies to enrich the city's care service talent base.





▲ Table game for senior

## 4 Promote the Reading City and lifelong learning and improve education resources

### 1. Senior reading promotion

To encourage and enable senior citizens to read, Kaohsiung has special areas in its libraries for the elderly with large-print books and large-print magazines, to provide the elderly with diverse reading resources, and invites professional art therapists. In addition, art therapists held two creative workshops, attended by 29 seniors, who created large painted circles and unique sound picture book stories.

The Caoya Branch of the Kaohsiung Municipal Library, Kaohsiung Municipal Xiaogang Hospital and Yuying Medical and Nursing Management College have set up Kaohsiung's first long-term care library for the elderly, which also offers lectures on health, tourism, and leisure to enrich the reading life of senior citizens.



▲ Sewing course for senior

## 2. Parent-child reading promotion

Parent-child reading is an important way to foster children's growth. To promote parent-child reading, Kaohsiung City participates in the Ministry of Education's Diverse Reading Program. In addition, the city offers reading book boxes for children aged 0-2 years old in Kaohsiung. The Bureau's 33 medical institutions for obstetrics and medical care support their distribution. From 2018 to 2020, more than 43,000 boxes were distributed, reaching 75% of the city's toddlers. In 2020, the revised Xiong'ai Reading Book 2.0 was published and introduced in parent-child reading lectures and workshops. The book continues the local cultural characteristics of the first edition, with the theme of family travel around Kaohsiung, keeping the theme fun and familiar.

Children's reading promotion activities have included an AR Somatosensory Park Experience Workshop, Sherlock Holmes Overnight Library Event, The Little Drawing Master picture book appreciation activities. Taiwan's Rural Education Care Center runs the Kangaroo Project, Stories Knock Knock!, Rural Library Bus, Story Mother Train, Little Book Lovers and other related activities that are hugely popular and plant the precious lifelong reading habit.



▲ Reading activities for children



## 5 Promote diverse learning channels and implement lifelong learning



▲ Fitness course for senior

In view of declining birthrates and an aging population, trends like multiculturalism and interdisciplinary collaboration, artificial intelligence and digital technology, Kaohsiung has integrated the resources of lifelong learning institutions, deepened the management of community colleges and senior learning, and had set seven community colleges by 2020. These community colleges offer 173 learning places, three types of courses (academic, club, life) and 1,095 courses. Public and private primary and secondary schools, colleges and universities, and private organizations offer 39 senior-age learning centers and multiple active aging courses to serve senior citizens with learning opportunities nearby, expand their life circle, and enrich their lives.

## 6 Promote the Hakka language and native language teaching

To prevent the extinction of the Hakka language, the Hakka Affairs Council assists public and private kindergartens and schools at all levels to offer Hakka courses or teach children to sing Hakka nursery rhymes or speak Hakka. The council provides Hakka teachers, teaching materials and pays for their hourly teaching fees. Since 2013, taking reference from the recovery of New Zealand's Maori language, Hakka language immersive teaching has been implemented in kindergartens in Hakka districts, and Mandarin-Hakka bilingual curriculums have been promoted in elementary schools to offer children an environment where they can talk and be taught in Hakka, be immersed in the Hakka environment, and naturally learn Hakka. In addition, several parent-child activities were held to recruit 20 Hakka seed families in the city to participate, enhance family motivation to use Hakka more regularly and fully, and build up publicity to invite more families to join.



▲ Hakka lesson for mother language saving

## 7

## Promote indigenous language learning and traditional knowledge

To preserve and develop Taiwan's indigenous languages, and to ensure their continued use, Kaohsiung City has language extension teaching staff for indigenous language promotion, teaching, clubs, family learning, immersive language learning, and indigenous nanny counseling. The city also compiles corpus records about ceremonies, customs, tribal history and legends, revitalizes subsidized organizations and indigenous peoples' associations, to help promote, restore, develop and pass on indigenous languages as prescribed by law.

Indigenous language use in childcare, families and tribal affairs is stimulated to build a nourishing environment at home, school and other places where the languages can be used and thrive again. This way, indigenous languages may once again become the native language of indigenous children

as they inherit the culture at home. The city also builds multi-ethnic language and cultural learning channels, creates an environment that encourages indigenous language learning, and produces an indigenous language radio program titled "Ya! Indie rules." constructing a natural indigenous language and culture learning environment. The living history and legacy of the indigenous peoples, their ancestral languages, culture and wisdom will enable more people to understand the lifestyles and cultural background of the indigenous people, and reduce distance and misunderstandings between different ethnic groups. This growing foundation of indigenous languages and cultures' inheritance fosters mutual understanding and forms a cultural platform for Taiwan's indigenous people.

### ▼ Indigenous culture preserving







## SDG 14

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

### The city's SDG Targets



Conserve and sustainably use the ocean and marine resources with the help of education and regular monitoring.

## 1 Implement education on marine ecology and resources

### 1. Maintaining the city's marine environment

Kaohsiung's coastline has a length of 83.6 km, from the estuary of the Erren River in the north to the estuary of the Gaoping River in the south. The city's jurisdiction includes the estuaries of various rivers, military ports, commercial ports, fishing ports, and marine parks. Due to changes in the natural environment and human factors, the sea water quality may change instantly and drastically, which adversely impacts the marine environment. Thus, besides regular monitoring of the sea water quality, the city also surveys the water quality, hydrology, sedimentation and ecological resources in the sea, collecting abundant environmental monitoring background data for the Kaohsiung area as a reference for future protection and restoration of the marine environment.

#### ▼ Coral Reef Ecosystem in Tungsha Island



## 2. Promoting beach clean-ups

To implement beach cleaning work, the city has invited various units to form a “Salute to the Sea Working Group” to set up a plan and system for regular management, examination and review of the city’s coastal cleaning and maintenance; each coastal land unit may determine its own ways to carry out its tasks such as the frequency of coastal cleaning, as long as the “Salute to the Sea” policy and overall coastal cleaning and maintenance work is carried out systematically.

In 2020, with the theme of “Kaohsiung is so clean, the beaches are super CLEAN,” the city’s joint beach clean-ups were held to implement “Salute to the Sea – Coastal Clean and Maintenance Plan” adopted by the Executive Yuan, and build awareness that the deterioration of the marine ecology is caused by human waste and the marine environment must be protected and used sustainably.



► ▼ Joint beach cleanup



### 3. Marine environmental education

Kaohsiung is a marine city. Since 2016, it has developed marine education for local schools and rolled it out to schools along the seaboard. This program eventually developed into citywide marine education, a school alliance for marine education, and realized increase capacity, resources, courses, and activities for marine education. For teachers, we offer a marine education bus, general marine knowledge courses, and a marine education manual for elementary and middle schools. At the same time, Taiwan's first aquatic product vocational exploration center was established in Qianzhen High School, where a comprehensive maritime and aquatic product simulation equipment and a curriculum allow students to engage early in marine education, maritime and aquatic group exploration and other diversified knowledge, and cultivate outstanding domestic talents in maritime and aquatic products and business management.

Kaohsiung also offers six marine study tour courses, each attended by students from two schools. The courses cover the cultural and economic characteristics and the beauty of natural ecology. This basic knowledge and the visits to scenic spots help students and teachers appreciate the city's historical origins and development as well as its close interdependence with the ocean.

**高雄市仁武區八卦國民小學**  
BA-GUA ELEMENTARY SCHOOL, KAHSIUNG

**減塑大作戰**

我鼓勵參加減塑大作戰  
為地球盡一份心力

- 我願意使用環保餐具
- 我願意使用環保杯
- 我不使用塑膠吸管
- 我願意使用購物袋

發願人簽名： \_\_\_\_\_ 年 \_\_\_\_\_ 班

**八卦減塑友好商店列表**

店名	地址
南興	八卦中街209號
南興	八卦中街109號
南興	八卦中街197號
南興	八卦中街111號
南興	八卦中街87號
南興	八卦中街435號
南興	八卦中街217號
南興	八卦中街83號
南興	八卦中街87號
南興	八卦中街98號
南興	八卦中街77號
南興	八卦中街35號
南興	八卦中街43號
南興	八卦中街土地公廟對面
南興	八卦中街48-1號
南興	八卦中街136號
南興	八卦中街213號
南興	八卦中街100號(土地公廟對面)
南興	八卦中街1679號
南興	八卦中街1637號
南興	八卦中街1658號
南興	八卦中街1648號
南興	八卦中街1588號
南興	八卦中街1689號
南興	八卦中街17473號
南興	八卦中街1631號
南興	八卦中街1627號
南興	八卦中街1379號
南興	八卦中街1409號
南興	八卦中街100483號
南興	八卦中街1256號
南興	八卦中街103號
南興	八卦中街398號
南興	八卦中街427號
南興	八卦中街100481-17號
南興	八卦中街430號
南興	八卦中街488號
南興	八卦中街632號
南興	八卦中街430號
南興	八卦中街610號
南興	八卦中街642號
南興	八卦中街472號

**高雄市鳳山區中崙國民小學**  
Kaohsiung City Fengshan District Zhong-Luo Elementary School

**減塑大作戰**

我鼓勵參加減塑大作戰  
為地球盡一份心力

- 我願意使用環保餐具
- 我願意使用環保杯
- 我不使用塑膠吸管
- 我願意使用購物袋

發願人簽名： \_\_\_\_\_ 年 \_\_\_\_\_ 班

**中崙減塑友好商店列表**

店名	地址
1 大港超市	高雄市鳳山區中崙一路436號
2 克林姆早餐店	高雄市鳳山區中崙四路23號
3 包手早餐店	高雄市鳳山區中崙四路11號
4 早安!美芝城	高雄市鳳山區中崙四路19號
5 小田園早餐店	高雄市鳳山區中崙二路947號

▲ Marine education

▼ Cijin Seaside





**17** PARTNERSHIPS FOR THE GOALS

**SDG 17**

Strengthen the means of implementation and revitalize the global partnership for sustainable development

The city's SDG Targets

TARGET 17-9

ENHANCE SDG CAPACITY IN DEVELOPING COUNTRIES

TARGET 17-14

ENHANCE POLICY COHERENCE FOR SUSTAINABLE DEVELOPMENT

TARGET 17-15

RESPECT NATIONAL LEADERSHIP TO IMPLEMENT POLICIES FOR THE SUSTAINABLE DEVELOPMENT GOALS

TARGET 17-16

ENHANCE THE GLOBAL PARTNERSHIP FOR SUSTAINABLE DEVELOPMENT

TARGET 17-17

ENCOURAGE EFFECTIVE PARTNERSHIPS



We cultivate international exchange talents at all levels, and have established an international center for training and exchange, raise the city's international profile, build international exchanges, and collaborate on sustainable development.

## **1 Domestic and international certification and license training for municipal administration**

### **1. Kaohsiung Open University municipal think tank**

As part of the city government's Kaohsiung Think Tank, the Kaohsiung Open University Municipal Think Tank Group strengthens the city government's Southeast Asian Think Tank and resource platform, regularly holds urban science seminars and Kaohsiung-related seminars. The group also participates in international academic conferences and meetings. It also hosts study and discussion meetings to contribute to the city's policy development.

Kaohsiung's population is older than the national average, and immigrants over 60 years of age coming to this city are also increasing year by year. As a result, there is a higher demand for long-

term care for the elderly as well as for advanced healthcare and health management. This special population profile warrants extra attention for policy and services in these areas.

Therefore, the Open University has established a Department of Elderly Health Care, which offers health management courses to offer middle-aged residents and their families' knowledge and skills to take good care of themselves. The aim is to promote preventive healthcare, vital aging, prevent disabilities, promote senior health and well-being, and build an environment where senior citizens actively participate in society.

### **2. International professional certification courses for the Open University**

Due to rapid changes in the international society, the Open University courses need to be adjusted and improved continually. In 2019, OU offered two international certification courses. In 2020, these courses were increased to four and attended by 20 students interested in reaching international standards and obtaining the related licenses. Through course adjustments and student guidance, they can meet the requirements of the international community and keep up with international trends in a rapidly changing industrial environment.

### **3. Kaohsiung obtained the agency rights in the Greater China Region for certification courses from the International Organization of Professional Cultivation and Accreditation (IOPCA)**

To increase the employability and international competitiveness of Open University (OU) students, and strengthen their career prospects, OU obtained the agency rights for IOPCA certification courses in the Greater China region, and successfully created collaborations, and assists students with obtaining international licenses, to enhance their international competitiveness.



## 2 International Mental Health Training Center Taiwan



In 2018, with funding and resources from the Ministry of Health and Welfare (MOHW), the ministry's Taoyuan Psychiatric Center, Taipei Veterans General Hospital Yuli Branch, and Taichung Veterans General Hospital Department of Psychiatry formed an alliance to jointly establish the International Mental Health Training Center Taiwan (IMHTCT) to provide professional training for mental health personnel in partner countries under Taiwan's New Southbound Policy, namely Vietnam, Indonesia, Thailand, Cambodia, the Philippines, Myanmar, Malaysia, and India. In 2019, the Taiwan Nursing Home System, Kaohsiung Tsyu-Huey Mental Hospital and psychiatric hospitals in North, Central, and South Vietnam jointly established the Dai Nam Overseas Teaching Center and Khanh Hoa Overseas Teaching Center in Vietnam to expand the partnership with Vietnam and step up communication and collaboration between Taiwanese mental health institutions and groups and mental health networks in Australia, New Zealand and Southeast Asian countries.



◀ ▼ IMHTCT promote in Vietnam



## 3

## ICLEI KCC Training International Collaboration

Local Governments for Sustainability (ICLEI), established in 1990 with more than 1,000 member cities, is the world's largest local government network committed to sustainable development. After joining in 2006, Kaohsiung has actively participated in various international conferences. In 2012, it signed a contract with ICLEI's headquarters in Germany to establish the ICLEI East Asia Environmental Sustainability Training Center in Kaohsiung (ICLEI Kaohsiung Capacity Center, KCC), ICLEI's only training center outside its headquarters, to help develop capabilities to respond to climate change and promote effective use of local environmental resources.

ICLEI KCC has sponsored or co-organized international conferences, including the 2014 Conference on Disaster Mitigation and Adaptation, 2015 Safe Cities-Industrial Pipeline Conference, 2016 Velocity EcoMobility Workshop, 2017 Ecomobility World Festival Event Series – Innovative Smart Transport Forum, 2018 Kaohsiung Green City Mitigation Strategy Transformation International Seminar, Smart Water Management and Application Seminar – Global Class. Through hosting and attending these international conferences and many other events, Kaohsiung has had the opportunity to exchange and share experiences with representatives of other cities in an alternative city diplomacy, and enhance Kaohsiung's global reputation.

On November 12, 2020, the Kaohsiung Civil Service Development Institute co-hosted A Closer Look at Resilient Kaohsiung, a Model United Nations climate negotiation course. The city government also promoted the ICLEI concept of sustainable development, conducted training on climate mitigation and adjustment, and strengthened awareness on the city's climate resilience, and developed and disseminated knowledge on sustainability and climate change.



▲ Resilience City in Kaohsiung







▲ Bilingual teaching in school

## 4 International education and exchange

### 1. Bilingual education school

Language learning requires a supportive environment. To implement the bilingual national policy of 2030 and increase the opportunities for students to use English, Kaohsiung City employs foreign teachers in its municipal primary and secondary schools who co-teach with local teachers to create a comprehensive English learning environment. In 2020, 82 local schools with bilingual education employed 50 foreign teachers. During the winter and summer vacations, some of those schools organize English learning camps at schools in remote areas to enrich those students' English learning and continue uninterrupted.



### 2. Kaohsiung International Education Development Center

To build a robust foreign language learning environment and promote the internationalization of schools at all levels in Kaohsiung City, the Kaohsiung International Education Resource Center (KIERC) was established in Sanmin Elementary School in 2008. In 2020, in response to the education ministry's White Paper 2.0 on International Education for Primary and Secondary Schools, the center changed its name to Kaohsiung International Education Development Center (KIEDC) to reflect its mission of integrating and recording the city's international education work, promote the city's international education and bilingual education, and provide support services to the city's international education professionals.



▲ International Education Center



▲ ETA cultural exchange events

### 3. Fulbright ETA Project

The Fulbright ETA Project is an academic and cultural exchange project between the US State Department and foreign governments. This exchange of people, knowledge and technology promotes mutual understanding between people in the United States and around the world.

Since 2018, Kaohsiung City has collaborated with the Academic Exchange Foundation in 2018 to run the Elementary School English Collaborative Teaching Program, where Fulbright Scholarship

recipients from the US winners serve as English teaching assistants. Under the program, senior and outstanding elementary and middle school teachers from Kaohsiung receive five-month intensive professional training in the US to improve their teaching skills, expand their understanding of American culture, promote Chinese culture, and strengthen local Chinese learning in mutually beneficial exchanges.





**Quality of life**



In the early days of heavy industry, Kaohsiung's environment paid a price. In recent years, to improve the quality of life, the Kaohsiung City Government examined people's life needs in a comprehensive manner, comprising environmental quality, public construction, and social welfare. As a result, the city government especially pursues SDG 11 (Make cities and human settlements inclusive, safe, resilient and sustainable), SDG 3 (Ensure healthy lives and promote well-being for all at all ages), SDG 6 (Ensure availability and sustainable management of water and sanitation for all), SDG 7 (Ensure access to affordable, reliable, sustainable and modern energy for all) and SDG 2 (End hunger, achieve food security and improved nutrition and promote sustainable agriculture), so that all citizens may enjoy good quality of life and a livable city.



**11 SUSTAINABLE CITIES AND COMMUNITIES**

**SDG 11**  
 Make cities and human settlements inclusive, safe, resilient and sustainable

The city's SDG Targets

TARGET 11-1

SAFE AND AFFORDABLE HOUSING

TARGET 11-2

AFFORDABLE AND SUSTAINABLE TRANSPORT SYSTEMS

TARGET 11-3

INCLUSIVE AND SUSTAINABLE URBANIZATION

TARGET 11-6

REDUCE THE ENVIRONMENTAL IMPACT OF CITIES

TARGET 11-7

PROVIDE ACCESS TO SAFE AND INCLUSIVE GREEN AND PUBLIC SPACES

TARGET 11-A

STRONG NATIONAL AND REGIONAL DEVELOPMENT PLANNING

The city government actively maintains and improves the quality of the environment, and builds infrastructure and parks so that citizens can live and work in comfort.

## 1 Speed up social housing construction for housing justice

In line with the central government’s housing policy, the Kaohsiung City Government serves the housing needs of Kaohsiung residents, young families, economically and socially disadvantaged groups, and corporate employees with a social housing policy that is mass transportation-oriented, relieves densely populated areas, and moves away from industrial areas. Social housing is built in the Gangshan, Daliao and, Qianzhen districts as well as bases in Zuoying, Nanzi, Renwu, Sanmin and Fengshan, to build 8,800 social housing units in total.

The district-led social housing projects in Gangshan, Qianzhen and Yawan are in their preliminary planning phases and are scheduled to

be contracted out in 2021 and 2022. In addition, about 900 households in several locations are under evaluation. The Ministry of the Interior has commissioned the National Housing and Urban Regeneration Center (HURC) to lead the construction.

All social housing facilities are designed as natural, sustainable, well-ventilated, and diversified living spaces. The ground floors will house social welfare facilities such as childcare centers, public kindergartens, and tanning centers in accordance with the needs of the residents and surrounding communities. This is a safe and efficient way to take care of the disadvantaged, young people and corporate employees as part of housing justice.

## 2 Environmental improvement in the coastal area

In the past, excessive human activity disrupted the balance of natural sand deposits and caused coastal erosion on the coast. To reduce coastal erosion, a coastline dike has been completed and slope protection measures have been strengthened. About 100 kilometers away from the coast, 16 off-shore embankments/artificial beaches have been created. As a result, a clear recovery of siltation can now be observed. In addition, the city covered up motor engine rooms and box culverts to repair landscape damage caused by the illegal facilities along the coast, and transformed those into recreational facilities in line with the landscape. Bicycle lanes were added or expanded for people to enjoy the upgraded coastal landscape of Jiading District.



▲ Qieding seashore



### 3 Building an ecological city

#### 1. Wetland conservation

Wetlands are an important feature in urban development. They provide biological habitats and conserve water. Kaohsiung has nearly 1,000 hectares of wetland making it the county with the most wetlands in Taiwan. In its wetland corridor, the city invests in the restoration of biodiversity. For instance, the Agongdian Forest Park has water habitats that have restored firefly, butterfly and bumblebee populations. In the Jhouzih Wetlands Park, the Golden Birdwing, a third-level conservation butterfly, has been found, while protected crested goshawks and red-tailed shrikes have been observed in the Jhongdou Wetlands Park. Golden jellyfish have appeared in Linyuan Ocean Wetland Park, a jellyfish haven in Taiwan. In the Jiading Wetlands and Yongan Important Wetland are well-known bird-watching areas for spotting black-faced spoonbills in southern Taiwan. Last year alone, more than 1,000 black-faced spoonbills visited, the largest number anywhere in the country.



▼ Kaohsiung Wetlands Allocation

#### 高雄市濕地生態廊道分布圖 Kaohsiung Wetlands Allocation



## 2. Underground railways and road development

The underground railway stretches 15.37 km from the south of Xinzuoing Station to the west of Dazhilu Bridge. After the railway opened to traffic, the city government turned the vacant railroad track into a park road, including little squares, tree-lined trails, pedestrian and bicycle paths, etc., offering a brand-new recreational space for residents, and creating convenient new street-level crossings. The backyards along the former track have turned into attractive front yards. The cityscape has changed dramatically.



▲ Underground Railway Project

## 3. Inclusive parks

Parks should provide playgrounds where children of all ages, irrespective of general and special needs, can play together. The city builds inclusive parks in line with local needs based on input from people of different backgrounds and ages provided through barrier-free creative participation mechanisms. Since 2018, inclusive playgrounds have been set up in parks and public spaces such as Xiaogang Forest Park, Weiwuying Metropolitan Park, Shantou Park in Qianzhen District, Liuling Children's Playground in Xiaogang District, and Erlinger 5-3 (Huaren) Children's Playground. In 2020 Fushan Park in Zuoying District was remodeled into an inclusive park, and in the near future other parks will follow suit: Gangshan Hedi Park, Phases 65, 70 and 88 in Qianzhen District, Phase 77 in Fengshan District, Phases 69 and 99 in Sanmin District, Pingfeng Park in Xiaogang District will be remodeled into inclusive parks to offer all residents accessible and pleasant recreational spaces.



► Inclusive Park







▲ Shantou Park

## 4. Improvement of parks and green spaces

The city continues to renovate its parks. Since 2020, 150 old parks have been renovated. With 10.31 m<sup>2</sup> of green space per capita, Kaohsiung is the greenest city among the six main cities of Taiwan. Improvement projects have included Fu'an Park in Lingya District, Xiaogang No.1 Park in Xiaogang District, Ziqiang Park in Fengshan District, and Xingren Park in Qianzhen District. Also, the waterfront, green spaces, garden road and open spaces have been made greener. The Siwei, Minsheng, Miquan, Zhengqing, Guotai, Zhongzheng, Zhonghua, Boai and Tongmeng districts and the green belt along the light rail have contributed much to the city's greener looks, while key areas such as Aozidi I and II, Xingfuchuan Coast, Sihwei Administration Center, the traffic circles of Zuoying, Qimenwen, Minsheng and No.8, Qianzhen Star Station, Shidai Avenue, Xinguang Garden Road, etc., are shaping a new aesthetic in the city.

## 4 Convenient and diverse public transportation

The city continually develops its tiered public transportation services to meet the travel needs of the public, with the subway system (KMRT) as the backbone, the light rail and five top-tier buses (express buses, trunk line buses, general buses, long-distance buses, and Joy buses), public buses, bus-style taxi vans, and YouBike 2.0 public bike rental system to meet the needs of the public.

### 1. Electrification of transportation

To promote the electrification of buses, we offer subsidies to bus companies for purchasing electric buses under the Electric Public Buses Subsidy program of the Ministry of Transport and Communications to reduce air pollution from buses. We also require passenger transport operators to adopt all-electric buses when opening new routes. As of the end of May 2021, among the 994 buses in the city, 174 are electric. In the future, we will continue to assist bus companies to apply for subsidies to replace diesel buses over 10 years old. This is expected to upgrade 8% of the city's bus fleet per year to electric low-floor buses. The goal is to have a 100% electric bus fleet by 2030.



▲ Low-floor electric buses

## 2. Kaohsiung MRT

To expand the scope of the subway services, the planned MRT Gangshan–Luzhu extension line running through the North Kaohsiung Science and Technology Corridor, will serve 353,000 residents in the Gangshan, Luzhu and Hunei districts and 75,000 commuters in various industrial parks. In addition, in the dense city center the subway network will be expanded with a Yellow Line connecting the Asia New Bay Area, Sihwei Administrative Center, Fengshan Administrative Center, Weiwuying National Kaohsiung Center for the Arts, City Council, Chang Gung Memorial Hospital, Chengqing Lake Scenic Spot, Chengqing Lake Baseball Stadium, Kaohsiung University of Applied Sciences, Kaohsiung Vocational High School, the Fengshan, Wujia and Qianzhen District Offices, etc. There will also be transfer stations with the Red Line, Orange Line, Circular Light Rail and Taiwan Railways. Altogether, this comprehensive rail network in the city center will greatly strengthen the scope, quality, convenience and efficiency of the city's public transport services.



▲ Kaohsiung MRT System





▲ Kaohsiung Light Rail

### 4. Multiple billing methods

To encourage the use of public transportation, the city also collaborates with the Transportation Research Institute of the Ministry of Transport to promote the MeN Go public transportation monthly pass service. The Unlimited Travel Plan entitles one to unlimited use of the city’s public transport services for a month, plus four free ferry rides, free 30-minute use of YouBike 2.0 for an unlimited number of times, and 600 MeN Go points that can be used for taxi vans, shared electric motorbikes and discounts on monthly subscriptions for parking at subway transfer stations. Moving forward, big data analysis from the electronic ticketing system, integration of rate structures, studying passenger incentive systems, and strengthening of trunk line bus marketing will be used to further improve the quality and utilization rate of the city’s public transportation.



### 3. Circular Light Rail

Kaohsiung’s mass rapid transit system consists of a subway (KMRT) system with a Red Line and an Orange Line plus a Circular Light Rail. Phase I with stations C1–C14 is about 8.7 kilometers long and opened to traffic on September 26, 2017. Phase II, 12.8 km long, with stations C15–C17 and C33–C37, completed the circle of the light rail and intersects with the Red Line at various places. This phase was opened on January 12, 2021. To protect the environment and to encourage people to take public transportation, the light rail’s e-tickets are sold at a discounted fare of TWD 10. In 2020, the Light Rail transported 6,350 people per day.

票種	一般	學生	優惠價	贈送MeN Go POINT
無限暢遊 (捷運+輕軌+公車)	1499	1099	600	600
公車暢遊	479	199	200	200
公車&客運暢遊	1499	1050	600	600
渡輪暢遊	1800	1400	600	600

MeN Go POINT 適用範圍：計程車、共享電動機車、捷運轉乘停車場  
 ◆計程車 (含永年路、中華大馬路)：單趟最高折抵135點。  
 ◆共享電動機車 (UrDa悠遊超動、WeMo)：租借前12分鐘折抵25點。  
 ◆捷運轉乘停車場 (青埔、橋頭、五塊厝及松聖車站)：  
 機車停車場月票180點及汽車停車場半月票600點。  
 ◆租借高雄市YouBike 2.0腳踏車，享有前30分鐘免費。

主辦單位：高雄市政府交通局  
 詳情請上MeN Go官方網站(https://men-go.tw/)

◀ ▲ MeN Go monthly ticket

## 5. Shared transportation and public bicycles

In response to the growing sharing economy, the city formulated regulations on shared transportation equipment in 2019, regarding electric motorbikes and other shared vehicles. In 2020, iRent introduced car sharing to the city, and by January 2021 there were already five companies offering such services. GoShare operates shared electric vehicles in the city. In June 2021, they operated 1,200 electric-assist bicycles, 2,645 electric motorbikes, 100 electric cars, making a total of 3,945 shared electric vehicles to provide services. Moving forward,

the city will actively coach companies to expand their e-vehicle service and fleet, and it will help integrate those with the subway, light rail, bus and other public transportation networks. The Kaohsiung City Public Bicycle Rental System with 891 rental stations and 8,660 public bicycles is expected to gradually reduce private vehicle ownership and utilization rates, reduce bicycle parking spaces and free up the limited urban space for other uses.



▲ Vehicle sharing system (U bike)



## 5 Improving rural transportation

### 1. Integrated platform for rural travel information

To make city bus availability more responsive and convenient for the public, the city has launched the Kaohsiung iBus Real-time Bus Information App, Kaohsiung Dynamic Bus System Website, QR-code-based mobile webpage, Interactive Voice Response Bus Inquiry System, RWD mobile webpage, and many other smart bus convenience services, which are continually revised to make their functions and interfaces more intuitive and user-friendly (including English versions of these applications and websites). People without smartphones may use the Interactive Voice Response Bus Inquiry System.



▲ Kaohsiung iBus app

### 2. Bus-style taxi vans

In remote areas, bus occupancy rates are low and subsidies are not an efficient solution. Travel demand at the end of the routes often cannot be met. Thus, the city uses bus-style taxi vans to offer better transportation services while reducing subsidy outlays. Combined with the Kaohsiung iBus app, this has increased the utilization rate. As of the end of May 2021, there were 54 service routes served by 179 taxi vans, a great solution to the lack of bus services in remote rural areas.

► Taxi serve as bus





▲ New bus stop

### 3. Large-scale transfer and waiting points

In view of the large number of waiting people in the city, at medical centers or important tourist attractions, multiple large-scale transfer and waiting points with modern amenities and comfort have been set up. These friendly and caring waiting environments help further improve the quality of public transportation.



## 6 Improving air quality

Kaohsiung's early industrial development was dominated by large-scale heavy industries such as steel, shipbuilding, petrochemical, and electric power, which emitted larger amounts of pollutants than other counties and cities in Taiwan. Due to the Central Mountain Range blocking the northeast monsoons in winter, the Kaohsiung-Pingtung Area often has little or no wind and therefore less diffusion of air pollution than other areas in the country. Therefore, local and incoming pollutants can hardly disperse, which results in poor air quality in autumn and winter.

Kaohsiung City has put in a lot of effort into improving air pollution. In 2009, the Kaohsiung City Electric Power Facilities Stricter Standards Phase I went into effect, introducing various air pollution prevention and control measures every year (Table 2 and Figure 6). The city has manually monitored the annual average concentration of PM<sub>2.5</sub>, registering a drop from 27.3 $\mu\text{g}/\text{m}^3$  in 2015 to 18.3 $\mu\text{g}/\text{m}^3$  in 2020, a 33% improvement rate. The concentration of other air pollutants also fell significantly. The days with good air quality (air quality indicator,

AQI, below 100) increased from 65.6% in 2015 to 82.8% in 2020, a 17.2% increase, an impressive improvement in just a few years' time.

Since 2021, the Xingda Power Plant has been required to expand its coal-free operation days by 30 days. State-owned enterprises have invested TWD 34 billion replacing process equipment. Air quality maintenance areas were instituted to ban old diesel vehicles. Subsidies for replacing high-polluting motorbikes and electric bus purchases were raised. Stricter standards for power facilities and the steel industry were proposed. After formal announcement by the EPA, these will be implemented in a two-phase approach over the next three years. The pollutant emission rights of power plants and cogeneration plants in the city will be tightened to half of the current standards, and the steel industry's emission standards will become the most stringent in the country. All in all, the PM<sub>2.5</sub> concentration is expected to drop to 15.0 $\mu\text{g}/\text{m}^3$  in 2026 to meet national standards.

### ▼ Electrical scooter promotion



**General air pollutant monitoring items**

Carbon dioxide (SO<sub>2</sub>), carbon monoxide (CO), oxygen (O<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), including nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>), total carbon chloride (THC), suspended particles (PM<sub>10</sub>), fine suspended particles (PM<sub>2.5</sub>)

**Meteorological monitoring items**

Wind direction, wind speed, temperature, relative humidity, rainfall

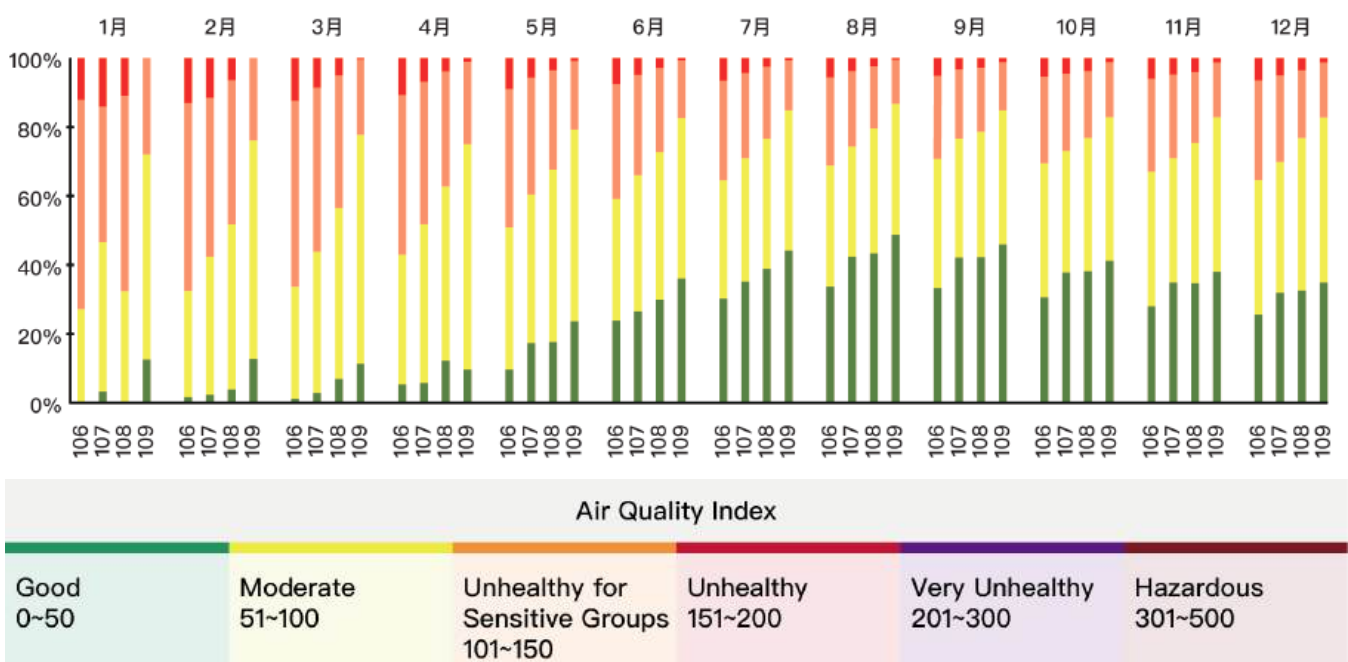
**Other air pollutant monitoring items**

These include organic photochemical precursors, harmful fluorine pollutants, formaldehyde and acetaldehyde; nickel, arsenic, manganese, lead compounds in suspended particulates (PM<sub>10</sub>) and hexavalent chromium (Cr<sup>6+</sup>) in total suspended particulates (TSP); inorganic acids (including hydrofluoric acid, hydrochloric acid, nitric acid, phosphoric acid and sulfuric acid), acetic acid, ammonia and chlorine; hydrogen sulfide, methyl mercaptan, carbon disulfide,

▲ Kaohsiung Air Quality Index monitor items

- 2009** >> · Kaohsiung City Electric Power Facilities Stricter Standard Phase I is implemented
- 2012** >> · Kaohsiung City Equipment Components Volatile Organic Compound Control and Emission Standard is implemented
- 2015** >> · Kaohsiung–Pingtung Area comprehensive air pollutant control zone is announced and implemented  
· Two-stroke motorbikes are phased out
- 2017** >> · Autumn and winter air pollution levies are implemented
- 2018** >> · Air polluting particulate matter levies are implemented
- 2019** >> · The sulphur content of oil used by ships in Kaohsiung Port can no longer exceed 0.5%  
· The Xingda Power Plant is required to halt two coal-fired units in autumn and winter, while the coal consumption of the remaining two units must be reduced to less than 65%
- 2020** >> · The Xingda Power Plant is required to halt two coal-fired units in autumn and winter, while the coal consumption of the remaining two units must be reduced from 65% to less than 50%  
· 744 boilers in Kaohsiung City were improved with advice from the city government by the end of 2020 (far earlier than the original deadline of July 1, 2022)

▲ History policy of air pollution



▲ History of Air Quality Index







**6** CLEAN WATER AND SANITATION

## SDG6

Ensure availability and sustainable management of water and sanitation for all

### The city's SDG Targets

**TARGET 6-1**

SAFE AND AFFORDABLE DRINKING WATER

**TARGET 6-2**

END OPEN DEFECTION AND PROVIDE ACCESS TO SANITATION AND HYGIENE

**TARGET 6-3**

IMPROVE WATER QUALITY, WASTEWATER TREATMENT AND SAFE REUSE

**TARGET 6-5**

IMPLEMENT INTEGRATED WATER RESOURCES MANAGEMENT



## 1

## Diversified water resources policy

### 1. Water recycling and reuse

Due to a 9:1 water retention ratio in the south, high turbidity of raw water during the flood season, and insufficient river water in the dry season, the water supply in Kaohsiung City is highly unstable. In the face of climate change, the risks of water shortages are increasing. Thus, the city has actively developed multiple water supplies since 2015. In 2010, Kaohsiung City promoted the recycle and reuse plan for discharged water. Sewage water regeneration is not affected by the weather, so each drop of water can be used at least twice, to maximize the use of water resources and increase water security for the industry. To reduce the pressure of water rationing during the dry season, the Fongshan River Wastewater Treatment Plant was completed in 2020, the country's first public wastewater treatment plant to recover discharge

water. The plant also houses the country's first ecological learning campus on water recovery. The Linhai Sewage Treatment Plant's reclaimed water project will be the second sewage regeneration plant in the country. Slated for completion in 2022, it will supply the city with 78,000 CMD of industrial water in the Linhai Industrial Zone, and over the entire period it can reach 100,000 tons, which will greatly reduce water consumption pressure for companies. In addition, the North Kaohsiung Reclaimed Water Project will continue and write a new chapter in Taiwan in terms of recycling and reuse of discharged water from the country's public sewage treatment plants. It will also be a benchmark for reclaimed water projects in other counties and cities.

► ▼ Fongshan Water Resources Center



## 2. Ambient water use

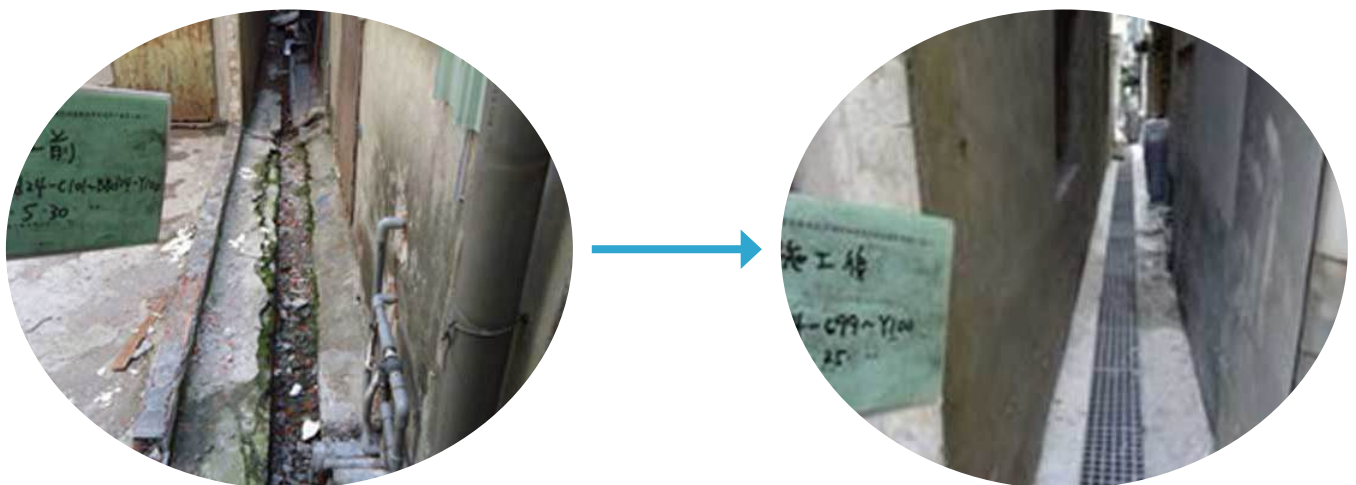
The Kaohsiung area lacks large-scale water storage facilities. The rivers in the Kaohsiung Pingtung Area are the main water source, and highly uncertain due to rainfall. The middle and upper reaches of the Kaohsiung River Basin have large porosity and high permeability, causing much water to leak into the soil. Taiwan Water Corporation has built aquifers and underground wells and other facilities in Zhuliao, Weng Park, Jiuqutang and Huijie along the Gaoping River, which can provide 300,000 tons of backup water per day. Since 2015, seven underground water projects have been developed along the Gaoping River, including Xipu and Daquan, whose total maximum water supply can reach 700,000 tons per day. These backup functions now suffice to ensure stable water supply.

## 3. Leak detection in the tap water network

In accordance with the 2013–2022 Water Leakage Reduction Plan, the Taiwan Water Corporation is planning and building a monitoring network to measure water flows and combine these with local user data to carry out statistical analysis and formulate strategies. About TWD 3.3 billion will be invested in inspection work and leak repairs at the pipe level and household level. This is expected to reduce the leakage rate by 7%, equivalent to saving 110,000 tons of tap water leakage per day.

## 2 More users connecting to the sewage system

Expanding the sewer system, proper collection and treatment of domestic sewage, and reducing the pollution load of rivers, drainage channels and other waterbodies are the main water pollution prevention and control approaches. The household sewer system connection rate in Kaohsiung is 46.41% (April 2021). The goal is to increase this by 1–1.5% per year. In response to illegal construction of back alley buildings not connected to the sewer system, the city carries out local briefings, alley-level briefings, demolition orders with deadlines, clearance surveys, handling by the Public Works Bureau, etc., to list illegal buildings as priority demolition objects, where the users are forced to either construct water connections or take down their illegal buildings to improve river water quality for all.



▲ Sewage system set up

## 3

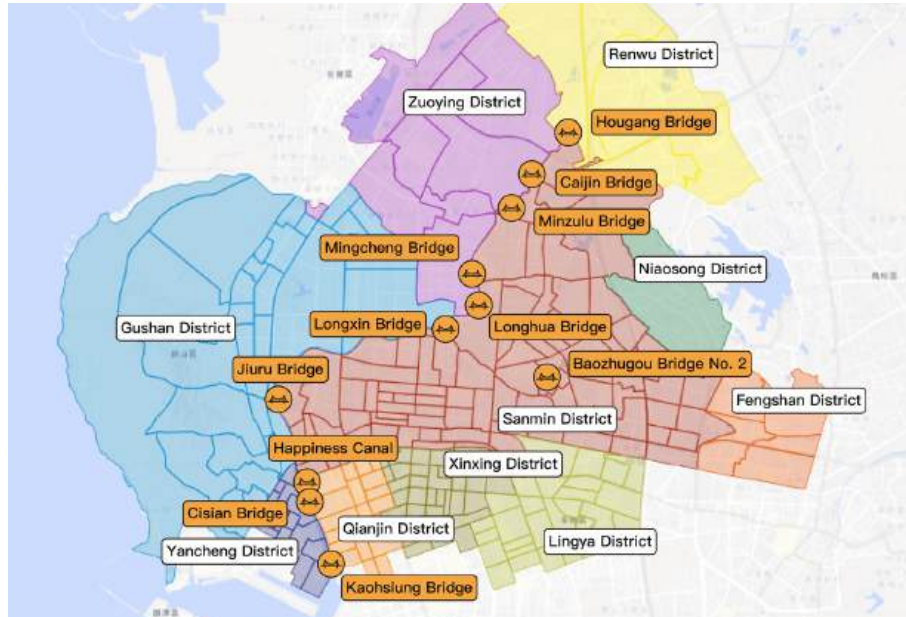
## Improve soil water quality and provide clean drinking water

### 1. Set pollution control areas and improve urban rivers

There are eight rivers flowing through Kaohsiung City. Except for the Kaohsiung and Agongdian River, there are no natural water sources in the river basin. During the dry season, these rivers are reduced to trickles. In addition, Kaohsiung is an industrial town, which adds serious pollution to some rivers.

To improve the urban rivers of Kaohsiung City, in 2020, we defined the Fengshan River Dadong Bridge Upstream Water Pollution Control Zone, Love River Water Pollution Control Zone, and other legal

measures, to create a legal basis for inspections of illegal constructions and activities along the Fengshan River (including the Qianzhen River) and in the Love River Basin. We also promote the growth plan for environmental protection volunteer groups such as The Inspection Team of Rivers, by strengthening partnerships with civil society and giving these teams a greater role to play.



▲ Scope of Love River Water Pollution Control Area

### 2. Strengthen industrial wastewater management through audits, guidance, and science-based law enforcement

There are 1,759 registered businesses in this city, with 466 in animal husbandry enterprises – the main sector – followed by 202 metal surface treatment companies, and 130 basic chemical raw material manufacturing companies. Together, these make up the majority.

The city inspects these registered businesses and their sewer systems in accordance with the law, and regularly checks their scheduled application data and performs spot checks on the operating conditions of their wastewater/sewage treatment facilities. It uses frequent inspections and heavy

penalties to achieve efficacy and control. Various technological law enforcement methods, including time-lapse photography, CCTV surveillance equipment, AI identification, big data, and remote monitoring replace traditional on-site surveys by staff while collecting more and better water pollution evidence and making inspections more effective. Staff can quickly pinpoint the sources, tie periods and frequency of pollution, which improves the efficiency of investigation and handling, and closes down more illegal sources of water pollution.



### 3. Stimulate brownfields and create new opportunities for land use

Since Kaohsiung developed as an industrial town early on, old factories now stand in prime locations. Due to soil and groundwater pollution, the land cannot be redeveloped and is an irritant to the surrounding environment. In this context, brownfield reuse serves as a new urban land development strategy. It not only eliminates the environmental crisis, but also relieves the pressure of urban development. It promotes the sustainable land use, increases investment, creates jobs, and enhances economic development.

Over the past decade, the city has promoted brownfields through rezoning, relisting, and rapid activation of land. Due to its proximity to Kaohsiung Port and Kaohsiung Multifunctional Economic and Trade Park, the 600–hectare Asia New Bay Area in its early days created many polluted sites in this area (about one–sixth of the area). These companies include the former Formosa Plastics Kaohsiung Factory, Port Transportation Center, CPC Taiwan Qianzhen Factory, Kaohsiung Main Public Library, Lingyaliao Storage and Transportation Station,

and 205 Armory. In conjunction with the central government’s investment in large–scale public construction in Yawan District, and to enhance the value of the land in this area, the Kaohsiung City Government encourages perpetrators to remediate the soil pollution they caused. At present, 32 sites with a total area of 96.3 hectares have removed their pollution and/or ceased operations. Five sites are still in progress; the remediation completion rate is about 60.1%. The rezoning and desilting is expected to result in activation and reuse of land.

In addition, the CPC Taiwan Kaohsiung Refinery closed down in November 2015. The plant area has 177 hectares of contaminated soil. The company originally planned to spend 17 years to remediate its soil and groundwater pollution. However, CPC Taiwan has only cleaned 1.32% of its polluted soil so far. To improve the people’s living environment, promote urban development, and follow national industrial policy, the city keeps urging CPC Taiwan to accelerate its work, so that the land may be put to better use sooner.

► ▼ Asia New Bay Area : Before and After



## 4. Improve water quality and strictly control the city's drinking water

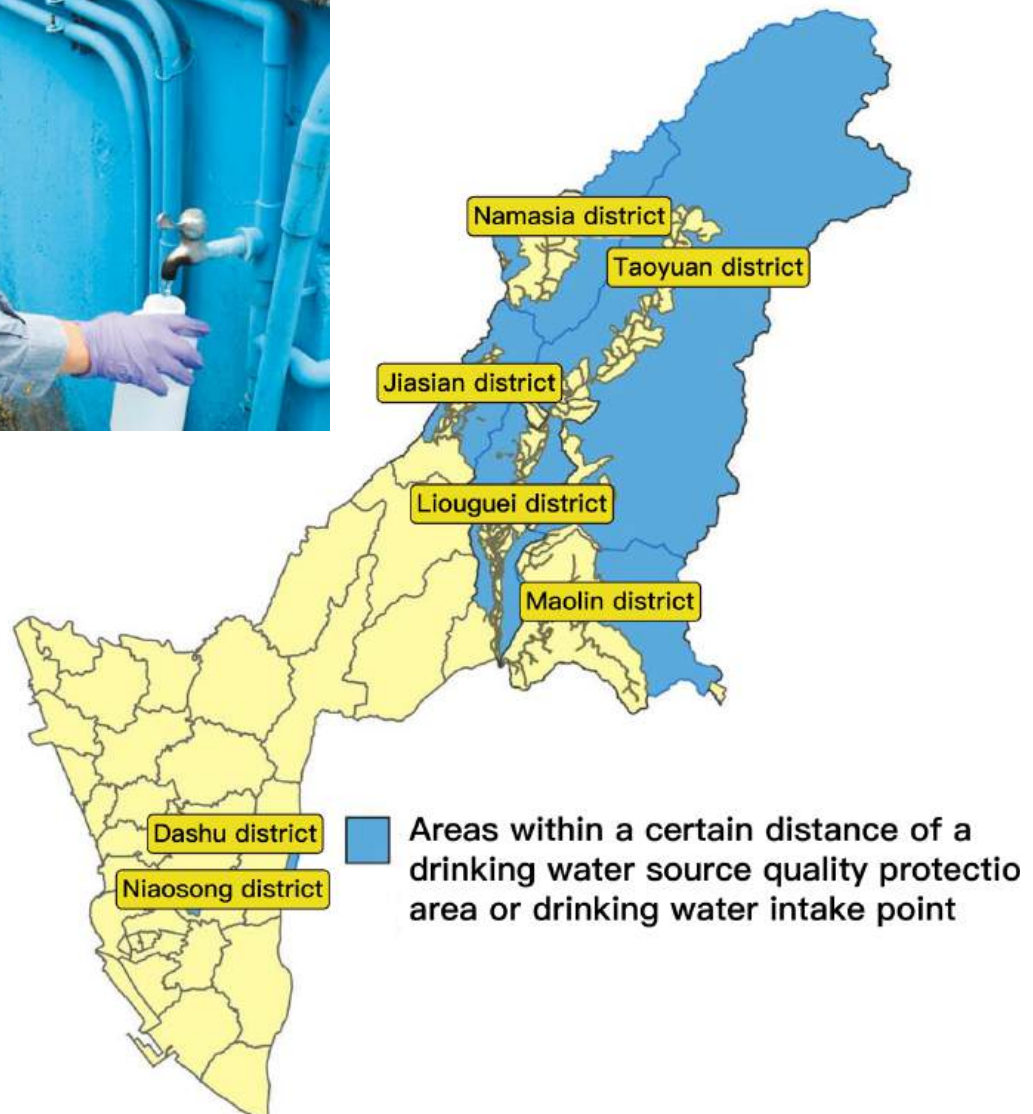
Since Kaohsiung has no large reservoir that can be used as a drinking water source, its water is simply taken from the Gaoping River. The public has criticized the water quality for a long time. Kaohsiung City has a drinking water protection zone at a certain distance within its jurisdiction in the districts of Niasong, Dashu, Namaxia, Jiasian, Taoyuan, Liugui, and Maolin. These are vast and have many economic activities. Thus, water polluting behavior and water quality in the protected areas cannot be controlled. This severely restricts drinking

water volumes and necessitates more intense and costly water purification by the water plants.

Therefore, if an economic development may affect drinking water quality in a protection zone, polluting behavior is prohibited. The bureau regularly inspects tap water source, water quality (in the front, middle, and end of the tap water pipelines), simple tap water source, water quality, packaged drinking water quality, and drinking fountains, to ensure the safety of drinking water around the city.



▲ Tap water sampling





**7** AFFORDABLE AND CLEAN ENERGY

**SDG7**  
Ensure access to affordable, reliable, sustainable and modern energy for all

The city's SDG Targets

TARGET 7-1

UNIVERSAL ACCESS TO MODERN ENERGY

TARGET 7-2

INCREASE GLOBAL PERCENTAGE OF RENEWABLE ENERGY

TARGET 7-3

DOUBLE THE IMPROVEMENT IN ENERGY EFFICIENCY



# 1

## Promote green energy projects

With its abundant sunshine, Kaohsiung City is an ideal place for solar energy generation in line with the central government's green energy policy. The Kaohsiung City Government and the Bureau of Energy, Ministry of Economic Affairs signed a collaboration agreement to start a Green Power Promotion Project Team. The deputy mayor serves as the convener of this interdepartmental team which works to create, conserve and store energy.

In 2020, the capacity of photovoltaic (PV) devices reached 0.57 GW; it will reach 1.0 GW

in 2022, and 1.5 GW in 2030. Building this safe, stable, efficient and clean energy supply and demand system is expected to attract domestic and foreign high-tech companies and talents in the future, create high-quality jobs, achieve greater environmental sustainability, increase the share of renewable energy, drive the development of green energy technology and industrial transformation, reduce dependence on fossil fuels, and reduce air pollution.

### 1. Photovoltaic Smart Building Project

Since 2012, Kaohsiung City has been the national leader in formulating certification mechanisms and regulations for photovoltaic smart buildings, to promote green energy and model-based learning through integrated R&D and applications. Examples are found in Renwu District, a 135-household solar photovoltaic community, the largest in the country, and Sanmin District, the country's first case of unauthorized roof construction converted into PV panels. The four-year Energy Generation Photovoltaic Program was launched in 2019. It is estimated that by 2022, 500 MW of solar photovoltaic facilities will be installed. A rooftop capacity inventory of state-owned large buildings will be carried out, and citizens will be encouraged to install PV panels with continued subsidies for solar power facilities on residential, high-rises, and farm buildings.

Photovoltaic smart buildings are promoted through installing smart digital meters that upload information from the photovoltaic system to databases in the cloud and analyze operation status to prompt interventions as need. Such building systems also monitor electricity consumption to enable users to understand their electricity consumption and the efficiency and/or volume of their electricity consumption and CO<sub>2</sub> emission reduction.



▲ The Promotion of Building Transformation with PV roof system







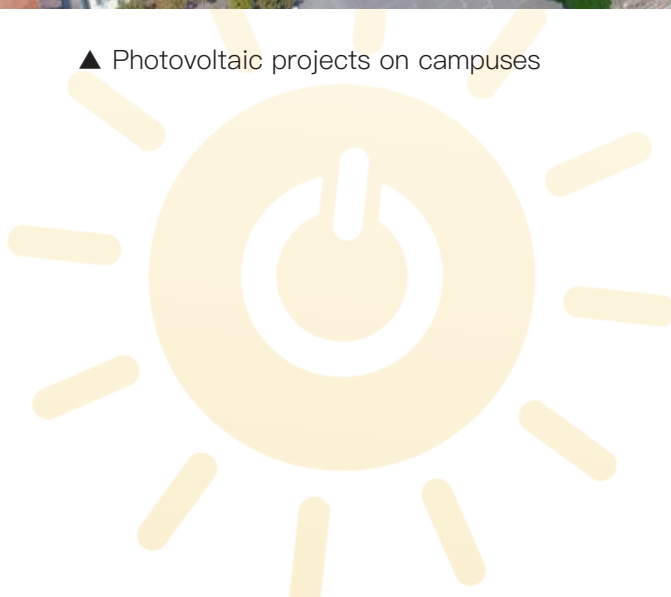
▲ Photovoltaic projects on campuses



▲ Photovoltaic projects on campuses

## 2. Photovoltaic projects on campuses

To realize the vision of “low-carbon Kaohsiung and sustainable campuses,” the Kaohsiung City Government takes reference from the Executive Yuan’s Taiwan Sustainable Development Goals and the Ministry of Education’s curriculum guidance to develop sustainable campuses and urban environmental education through sustainable campuses, solar energy projects, and green new school buildings. In line with the city government’s Green Energy Promotion Group Plan, schools are supported with installing solar panels and communities are also encouraged to adopt solar energy, to achieve the goal of a “green, low-carbon, sustainable city.” By the end of January 2021, 391 schools in Kaohsiung had installed PV panels, ranking first in the country with a total installed capacity of 85.3 MW. Together, these systems can generate about 29.86 GWh of electricity per year, or 22.96 times that of the National Stadium (1.3 GWh of electricity per year), a reduction of 15,800 metric tons of CO<sub>2</sub> emissions annually.



### 3. Fish farms capture value from green energy

The Ministry of Economic Affairs and the Council of Agriculture announced at a 2020 meeting titled Pioneer Districts for the Symbiosis of Fishery and Energy, seven pioneer counties and cities: Tainan City, Chiayi County, Kaohsiung City, Pingtung County, Yunlin County, and Changhua County. Kaohsiung City's seven pioneer districts include Mituo, Hunei, Luzhu, Jiaxian, Yong'an, Qieding and Alian, where aquaculture culture land totaling 621.76 hectares, 16% of the city's fish farm area, is combined with solar energy generation.

Kaohsiung has the country's first fishery and electricity symbiosis project office to provide comprehensive, convenient and specialized services and investment consulting windows for the public, farmers and PV system operators. Local briefing sessions have given the public a better understanding of the policies for the promotion of fishery and electricity symbiosis, as well as the rights and obligations of fish farmers. These have increased their willingness to participate, transform business models, and create a vision of symbiosis and co-prosperity between the fishery and green energy sectors.



▲ Kaohsiung Fishery and Electricity Symbiosis promotion office





**3** GOOD HEALTH AND WELL-BEING

**SDG3**

Ensure healthy lives and promote well-being for all at all ages

The city's SDG Targets

**TARGET 3-2**

END ALL PREVENTABLE DEATHS UNDER 5 YEARS OF AGE

**TARGET 3-7**

UNIVERSAL ACCESS TO SEXUAL AND REPRODUCTIVE CARE, FAMILY PLANNING AND EDUCATION

**TARGET 3-8**

ACHIEVE UNIVERSAL HEALTH COVERAGE



## 1 Ensure food security

Taiwan is rightly proud of its universal health insurance system, which has safeguarded public health for a long time and has served as a model for other countries to follow. International media often report on the system's outstanding performance in terms of healthcare services, quality, information and outcomes. The central government also offers co-pay reductions to disadvantaged groups. On top of that, the Kaohsiung City Government offers additional co-pay reductions to seniors and people with physical and mental disabilities to further improve their health and well-being.

## 2 Public childcare centers (0–2 years old)

To support family planning, the city has public childcare centers and community childcare centers and supports private childcare centers, childcare resource centers, childcare resource bases, fixed-point and time-based childcare services and other diversified childcare services to relieve busy families and offer high-quality childcare.

To reduce the urban–rural gap in childcare resources, childcare resource vehicles Green Crazy Boy No. 1 and Strawberry Girl No. 1 were launched in 9 Districts of Qishan and 11 Districts of Gangshan (including the coastal areas) offering service at fixed places and times as well as by appointment. These mobile service vehicles provide professional and complete childcare services for families.

To meet parents' urgent childcare needs, private organizations are also entrusted to provide instant childcare services for children from 6 months to 6 years old. Existing social welfare facilities are used to set up fixed-point and time-based childcare services for the daytime, nighttime, weekends, as well as other flexible and convenient instant childcare services.

► Public childcare service



### 3 Childcare services (2–5 years old)



▲ 45 public childcare service

Under the national childcare policy, the Kaohsiung City Government has a mid-range plan for affordable public education and childcare services from 2017 to 2020. For the school years 2019–2021, spaces in public kindergartens were inventoried, and private enterprises meeting the six requirements for collaboration were encouraged to sign contracts to become quasi-public kindergartens, providing parents with multiple choices to take their children aged 2 to 5 to kindergarten early. Also, early childhood education subsidies are offered, so that children in every type of kindergarten or receiving childcare at home enjoy government support. In the 2020 school year, Kaohsiung counted 212 public kindergartens, 30 non-profit kindergartens, 159 quasi-public kindergartens, and 269 private kindergartens, thus offering parents a wide array of options. A total 38,372 children received affordable education and childcare services, 60% over the public supply volume, thanks to the city’s quasi-public kindergartens, the highest number in the country. This reduces parents’ stress and burden, and protects children’s rights to receive universal, affordable, and diversified education and childcare services.

### 4 Thoughtful subsidies, healthy and active aging

#### 1. Social welfare bases

To enable residents of different genders, ethnicities, ages and areas to enjoy welfare services nearby, Kaohsiung offers services through various models for children and adolescents, new residents, elderly, persons with disabilities, homeless people, single parents, parents in special circumstances, disadvantaged families, etc., through welfare facilities in every administrative district of the city.

In 2020, the city had 1,008 social welfare bases, with a coverage rate of 26.53%. The plan is to add 50 new social welfare bases every year, so that citizens can receive comprehensive care in the most convenient way.

## 2. Community-based elderly care

To empower senior citizens to grow old in their own, senior-friendly environment, the Kaohsiung City Government has promoted community care and care bases since 2005, providing diversified care such as care visits, telephone consultation and referral services, food delivery, and health promotion activities, to ensure that more elderly can remain in their own home and environment.

In addition, to further business development and activities, we will use multiple locations for contact meetings to enhance two-way communication, and organize volunteer training courses based on community needs. We will also provide subsidies, disseminate good practices, and apply innovation and creativity to improve the capabilities of community care and care bases.

Initial welfare programs will be used to foster the establishment of private groups in areas with many senior residents, and support communities with experience to in turn support other communities beginning similar projects. The goals are that long-term care 2.0 will lead to a robust community-based long-term care system able to provide high-quality, universal services, so that seniors can enjoy a wide range of services “ALL IN ONE” at a nearby care base.

In 2020, Kaohsiung had 417 community care and care bases (including lane-level bases) in this city. For 2021, the goal is to have 470. In the future, we will continue to increase the number of community care and care bases by 40 to 50 each year.



► Activities set up in communities for elders



## 5 Develop communities and improve the quality of care

### 1. Improve the quality and accessibility of rural healthcare

Healthcare in remote areas and on the outlying islands is less accessible due to inconvenient transportation, scattered population, and difficulty in staff recruitment. As a result, healthcare is often insufficient in comparison with general areas. Kaohsiung City provides mobile healthcare services in remote rural areas such as the districts Tianliao, Neimen, Yongan, Liugui, Shanlin and Jiaxian provide medical services to under-served areas. The coverage rate of mobile healthcare treatment is 85.7%.

### 2. Growing old well in one's neighborhood

Kaohsiung's population grows older year by year. To make long-term care easier to obtain, 38 district health clinics have set up 38 sub-stations, where specialists will be stationed based on the estimated population of disabled elderly people, to be conveniently available for local residents. Long-term care is becoming more popular, as people increasingly understand, favor and use long-term care. In 2020, the coverage rate of long-term care services reached 55.87%. In the future, a long-term care resource integration platform will streamline resources and processes, so that the public may use the long-term care services more conveniently.

### 3. Love and care for special groups

The city's healthcare institutions report prenatal examination records of underage pregnant women in the Integrated Mother and Child Health Management System, while the Health Bureau records the data of underage pregnant women on a monthly basis to provide the Social Bureau with review cases of vulnerable families to enable it to timely provide social welfare services.

In addition, to strengthen the quality of healthcare for pregnant minors, the Health Bureau also runs a Weekly High-Risk Pregnant Woman and Child Tracking Plan, to integrate the obstetrics and gynecology related healthcare resources from 19 related medical institutions, two local midwives associations and 38 district health clinics, which are all connected to the maternity care resource

network to carry out telephone tracking and home visits to ensure mother-fetus safety, good nutrition during pregnancy, and psychological well-being during pregnancy, proper delivery preparation, and breastfeeding guidance.

For minor pregnancies, the Intervention Plan for Underage Childbirth and Infant Health Care combines interdepartmental resources in the city government and regular follow-up by public health nurses through family visits and telephone care up to six months after delivery.

- SMILE provide service for special group such as teenage parent



The Kaohsiung City Government offers allowances for agricultural insurance, senior farmers' allowances, and farmers' occupational accident insurance, and carries out agricultural health insurance inspections to ensure proper use of farmer welfare resources under its jurisdiction. With regard to occupational accident insurance, we use the method of "injury first, illness second" to increase voluntary insurance, and give priority to trials of "occupational injuries" with clear causal relationships (such as acute pesticide poisoning, and stroke, cramps or exhaustion from heat). We also promote the Farmers Retirement Savings System, whereby farmers under the age of 65 with agricultural insurance but without old-age benefits can join the pension system. In addition, senior farmers' allowances and the two-tier system makes elderly farmers' lives more secure.

陳其邁 @chimai chENCHIMAI

# 農民退休 儲金上路!

月繳多少，政府也  
提撥相同金額入帳

生活  
更保障

## 參加條件

- 未滿65歲之  
農民健康保險被保險人
- 未領取相關  
社會保險老年給付  
(與老農津貼不衝突)

詳情請洽  
各戶籍所在地農會保險部!

圖片來源：總統府flickr

▲ Farmers Retirement Saving System







## SDG 2

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

### The city's SDG Targets

TARGET 2-3

DOUBLE THE PRODUCTIVITY AND INCOMES OF SMALL-SCALE FOOD PRODUCERS

TARGET 2-4

SUSTAINABLE FOOD PRODUCTION AND RESILIENT AGRICULTURAL PRACTICES

TARGET 2-C

ENSURE STABLE FOOD COMMODITY MARKETS AND TIMELY ACCESS TO INFORMATION





▲ Farmer's market

## 1 Organic agriculture

Organic agriculture is an industry that revolves around production, life and ecology. It is also the most environmentally friendly farming method. Besides producing safe and high-quality agricultural products for the market, it also reduces environmental pollution and promotes biodiversity. Lastly, it ensures food safety and public health. The Kaohsiung City Government coaches farmers to switch to organic production, and coordinates the management of public land and land belonging to public enterprises. It allocates land for organic use and recruits farmers to grow organic agricultural zones. To date, the city government has helped establish 115 hectares of organic agriculture. In total, 1,008 hectares of certified organic farming areas now produce high-quality and safe fruits and vegetables in Kaohsiung City.



## 2 Precision agriculture

### 1. Constructing smart agriculture

Kaohsiung City is the first local government to establish a farmers' newsletter, the Kaohsiung Farmers News, which serves as a platform to collect and disseminate value-adding agricultural industry information. We also use the Telegram app to spread production and marketing information to provide integrated information and customized subscription push services.

Kaohsiung Farmers News offers smart services including disaster prevention, production and marketing information and support provided by industry, government, and academia in public-private collaboration for the public good. Kaohsiung is helping smart agriculture to take root.



▲ Kaohsiung Farmers News participated in “AI\_Day\_2020”



### 2. Safe agriculture

In recent years, food safety incidents have kept emerging, causing consumers to doubt the safety of agricultural products. The Kaohsiung City Government promotes the Traceable Agricultural Products (TAP) system among farmers to join this production and marketing resume verification system for agricultural and grain products, which has been around since 2012. TAP allows consumers to buy agricultural products with peace of mind. By the end of 2020, 1,640 farms with a total area of 1,948 hectares were using the TAP system.

◀ Traceable Agricultural Products in Kaohsiung got first place in the country



▲ Traceable Agricultural Products connect to the e-commerce

### 3. Contract farming and group production areas

To promote order-oriented precision agriculture, the Kaohsiung City Government supports stable farming businesses within its jurisdiction to set up group production areas to increase safe and stable agricultural production and sales. In 2020, we continued to support farmers growing rice, red beans, soybeans, grains, guava, papaya, dates and lychees, and supported them set up group production areas. Total production areas reached 1,000 hectares. There is another 1,000 hectares of contracted crops such as edamame, and taro.

In addition, to maintain excellent farmland resources and develop advantageous industries, we also assisted the Meinong District Farmers' Association to set up a 1,400-hectare area for miscellaneous grains and vegetables, as a safe production base with economies of scale and division of labor, enabling value-added benefits and stronger brand marketing.

### 3 Ensure food safety

To maintain the healthy diets of consumers, build a safe food environment, and encourage food companies to obtain high-level certifications to enhance their self-management capabilities, in 2020, 333 food companies applied for certification, of which 318 high-quality companies passed. 283 were excellent stores, 35 good stores, 29 international tourist restaurants, 84 food courts, 56 school canteens, 25 healthcare institutions and food delivery businesses, 4 bakeries, 61 fast food restaurants, 4 large-scale deli areas in large stores, 5 postpartum food companies, and 50 general food companies. We will continue to drive improvements in certifications, aiming for more companies receiving higher certifications with due process every year.





**Peace of mind**



As the impacts of climate change intensify, Kaohsiung is mitigating its greenhouse gas emissions, setting a long-term CO<sub>2</sub> emission reduction path, and promotes adjustments to reduce the impacts of climate change and improve urban resilience in response to SDG 13 (Take urgent action to combat climate change and its impacts), and SDG 15 (Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss). To build a more harmonious society and bring about greater gender equality, we also invest in SDG 5 (Achieve gender equality and empower all women and girl) and SDG 16 (Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels) to build a world-class, livable, sustainable city with economic, environmental, and social justice.



**13** CLIMATE ACTION

**SDG 13**

Take urgent action to combat climate change and its impacts

The city's SDG Targets

TARGET 13-1

STRENGTHEN RESILIENCE AND ADAPTIVE CAPACITY TO CLIMATE RELATED DISASTERS

TARGET 13-2

INTEGRATE CLIMATE CHANGE MEASURES INTO POLICIES AND PLANNING

TARGET 13-3

BUILD KNOWLEDGE AND CAPACITY TO MEET CLIMATE CHANGE



The impact of global warming is all-encompassing. Severe storms and abnormal floods and droughts are growing in frequency and intensity. Kaohsiung, as a major industrial town in southern Taiwan, has many resource-intensive, energy-intensive, high-carbon emission and polluting industries, which places the city's per-capita CO<sub>2</sub> emissions at 4.37 times the global level, and extreme weather shocks often occur here. The serious floods by Typhoon Morakot in 2009 hit Kaohsiung severely, with rainfall of more than 2,500 mm, causing the most serious destruction of the village of the Xiaolin tribe in Xiaolin Village, Jiaxian Township, Kaohsiung County, burying 474 people alive. The following year, Typhoon Fanapi hit Kaohsiung Gangshan, with accumulated rainfall in one hour reaching 124 mm, flooding 6,988 hectares in Kaohsiung. The year 2021 has seen the most severe weather events in 50 years. These disasters remind us that we should actively try to slow down global warming and make adjustments in the face of climate change.

## 1 Disaster prevention and rescue capabilities

After natural and man-made disasters such as typhoon Morakot in 2009 and the gas explosion in 2014, Kaohsiung City not only remediated the impacts of these disasters as soon as possible, but also reviewed and adjusted its disaster prevention and relief mechanisms to build a robust and safe city. The improved system enhances the city's ability to implement disaster prevention and responses at the stages of disaster reduction, preparation, response, recovery and reconstruction, to reduce the occurrence of disasters and the loss of lives and property and build a well-prepared, resilient, livable and sustainable city.

► National drill



### 1. Disaster Prevention and Rescue Project Phase III

To strengthen local disaster resilience, the Kaohsiung City Government conducts disaster risk surveys, uses and updates disaster prevention maps, district-level disaster prevention and relief plans, and sets up work flows. It carries out education and training to upgrade district staff capabilities to carry out disaster prevention work. It monitors and rewards activities to strengthen district-level disaster prevention knowledge. To date, 38 administrative districts in Kaohsiung City have completed their disaster risk maps, disaster prevention maps, neighborhood disaster prevention cards, and plans to strengthen their disaster resilience.





## 2. District-Level Disaster Prevention and Rescue Plans

To integrate the city's disaster prevention and rescue planning and coordinate and integrate disaster prevention and rescue operations, the City Government has had a disaster prevention and rescue office since March 15, 2011, which started operations on April 1. The office completed in 2020 a report on the revision of the district-level disaster prevention and rescue plans, that will strengthen the city's disaster prevention, pre-disaster preparation, disaster response and recovery and reconstruction capabilities to improve residents' quality of life and safety. The city government and its bureaus have improved their disaster relief processes, and they can effectively and quickly implement disaster prevention and rescue measures when faced with a major disaster.



▲ National Disaster drill

## 3. Ensure smooth communication of disaster prevention information

To avoid issues like disaster communication breakdown during typhoon Morakot typhoon, regular inspections and maintenance are carried out for the radio base stations of fire stations, district offices and fire brigade satellite phones and communication platform vehicles, through daily testing and pre-disaster communication testing to ensure smooth information and communication flows, quick response and rescue capabilities, and reduce losses during disasters.

- ▶ Communication signal provide vehicle test in a rural area
- ▼ Disaster prevention education and training



## 2

## Reduce greenhouse gas emissions

Kaohsiung City has tracked its greenhouse gas emissions since 2005, and set CO<sub>2</sub> emission reduction targets in accordance with the National Greenhouse Gas Reduction and Management Law. The Kaohsiung City Government has formulated Phase I of the Kaohsiung City's Greenhouse Gas Control Implementation Plan (2018–2020) and implemented CO<sub>2</sub> emission reduction work through six major departments. Kaohsiung City accounts for one-fifth of the country's CO<sub>2</sub> emissions. Although industrial CO<sub>2</sub> emissions account for more than 80% of the city's total CO<sub>2</sub> emissions, Kaohsiung's net greenhouse gas emissions in 2019 were 55,892 billion MT of CO<sub>2</sub>e, a 15.5% reduction from the base year (66.147 million tons of CO<sub>2</sub>e). This reduction of more than 10 million MT of CO<sub>2</sub> far exceeded the national reduction targets for 2020 and 2025, and Kaohsiung's performance is the best in the country.

In addition to structural adjustments to production chains, transforming industry to more efficient and smarter models, and as a city moving towards green sustainability with low energy intensity, low carbon emissions, low pollution, and a high degree of resource recycling, the

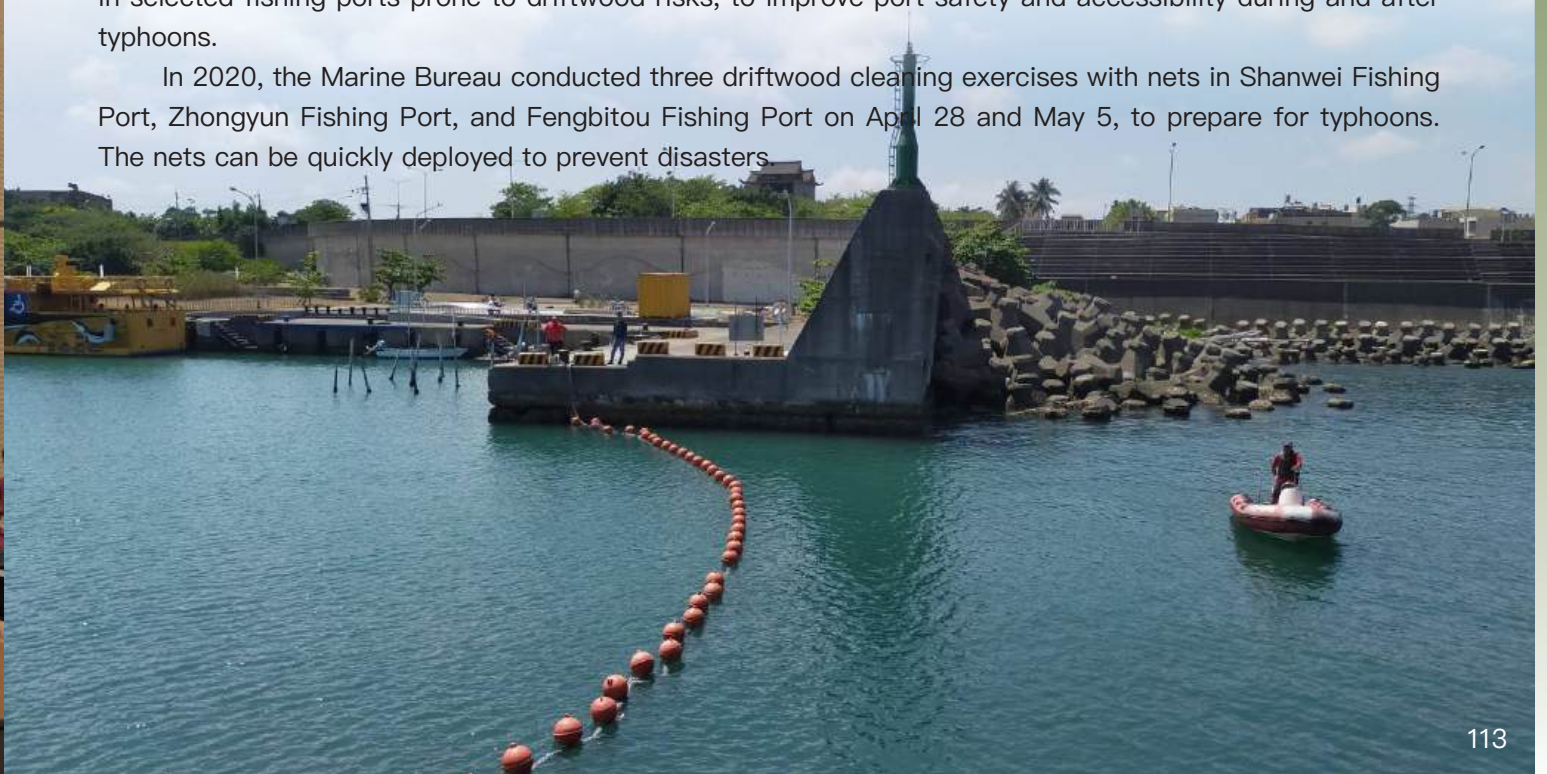
Kaohsiung City Government takes reference from the Environmental Protection Agency's Regulation Regarding the Examination of Incremental Greenhouse Gas Emissions Offset Processing to insist that development activities commit incremental offsets during their operational period. The offset rate should be at least 10% per year for ten consecutive years. We also require developers to obtain a certain percentage of carbon credits to reduce the impact on the environment by supporting CO<sub>2</sub> emission reduction outside the scope of their development activities (such as residential and commercial energy-consuming equipment, old vehicles) to reduce environmental impact. The Kaohsiung City Government's draft Measure for the Implementation of Self-Management of Greenhouse Gases refers to the national phased control targets and regulates the main greenhouse gas emission sources within its jurisdiction. Companies must submit self-management plans. A 2% reduction by 2025 means a CO<sub>2</sub> emission reduction of 830,000 MT. In a 10% reduction scenario, the CO<sub>2</sub> emission reduction will amount to 4,193 billion MT.

## 3

## Disaster prevention and rescue, safe ocean

To prevent driftwood from entering into the fishing port during typhoons, which prevents fishing boats from leaving the port afterward, the City Government holds driftwood cleaning exercises with nets in selected fishing ports prone to driftwood risks, to improve port safety and accessibility during and after typhoons.

In 2020, the Marine Bureau conducted three driftwood cleaning exercises with nets in Shanwei Fishing Port, Zhongyun Fishing Port, and Fengbitou Fishing Port on April 28 and May 5, to prepare for typhoons. The nets can be quickly deployed to prevent disasters



## 4 Mountain control and disaster prevention

Kaohsiung City has a land area of 295,185 hectares, with hills accounting for 74% of this, or 223,268 hectares, the highest proportion of hills among Taiwan’s six main cities. In recent years, due to climate change and extreme rainfall, landslides on mountain slopes have occurred, at increasing frequency and scale. Kaohsiung has 111 sites with landslide risks and three sites with the risk of large-scale collapse.

To reduce the scale of such soil and sand disasters and reduce related losses, the Kaohsiung City Government maintains its sound laws and regulations, implements hillside conservation, builds smart disaster prevention slopes, carries out bottom-up disaster prevention, enforces the Soil and Water Conservation Act, and reviews,

supervises and manages development activities under the Water and Soil Conservation Plan, and uses digital technology (such as unmanned aerial vehicles — UAV) to conduct survey operations and measure excavations and violations. We also carry out disaster prevention education in communities and schools to strengthen public awareness of disaster prevention and recognize community risks. Through public-private collaboration, we have improved the effectiveness of grassroots disaster prevention in communities, protect cash crops and public and private land through the prevention, mitigation and management of disasters, which has greatly reduced the frequency of disasters and protects lives and property.

▼ Landslide prevent construction



▼ River dredging



▼ Check dam



## 5

## Solving drainage bottlenecks and upgrading flood control

Greater Kaohsiung has 14 water catchment areas that seem independent but are in fact tributaries and densely connected drainage systems. Wetland systems such as ponds and lakes between the water systems are also part of Kaohsiung's water environment.

After the county-city merger in 2010, Kaohsiung's number of jurisdictions increased to 119 local drainages with a length of 396.8 kilometers. Therefore, the Water Bureau reviewed and adjusted its water control strategies, and upgraded its urban flood prevention through upstream water conservation, midstream flood retention, and downstream flood drainage from 2006 to 2018, taking reference from the central government's Flooded Areas Management Plan, Comprehensive River Basin Management and Forward-Looking Infrastructure Design, to carry out drainage in a holistic and systematic manner. The renovations to the drainage system cost about TWD 23.8 billion.

For the 116 drainage areas, water treatment and flooding simulation analysis were carried out in the catchment area, and water conservation facilities were built, with a drainage and dredging

length of about 100 km per year. The length of the bank improvement projects totals about 221 km. Pumping stations were added to regulate newly adjusted flood detention parks in the river basin to develop a sustainable city to mitigate or prevent flooding in the city's 26 flood-prone areas and ensure the safety of lives and property. Our water governance experience balancing ecology, community-level hydrology and culture set new benchmarks for the construction of sustainable and livable cities.

In 2020, the system was upgraded through the Smart Flood Control Network Construction Project, which uses IoT transmission to support a disaster prevention and response center to respond to typhoons and heavy rain. The system's comprehensive functions include flood control preparation, flood control monitoring, water level early warning, information monitoring, disaster data organization, information reporting, response execution, decision-making assistance and analysis, data sharing and exchange, etc., to provide real-time and accurate information for disaster prevention personnel and residents alike.

## 6

## Space to breathe

To create a pedestrian-friendly environment suited for extreme weather, the pavements in Kaohsiung are gradually being replaced with permeable materials. Along main roads, such as near Hengshan Elementary School in Yanchao District, Qiwei Elementary School in Qishan District, Qixian Elementary School in Xinxing District, Yongfang Elementary School in Daliao District, and Fengjia Elementary School in Fengshan District, the pavements will be gradually replaced with rigid permeable materials that can absorb water and dissipate heat. This will provide pedestrians and schoolchildren with safe and comfortable walking spaces, prevent water accumulation and reduce peak burdens on the drainage system. It also builds up groundwater, reduces the heat island effect, improves the city's safety and environmental protection, and makes Kaohsiung move towards a "sponge city."





▲ Heart of Love River

▲ Cao-Gong Canal

## 7 Set up flood detention ponds to manage river basin water flows

The most important function of detention ponds is flood prevention and water control. In the past, water control focused on widening river beds and raising dikes to quickly discharge floods, but this may cause flooding in downstream areas due to insufficient drainage capacity. Therefore, under the limited conditions in the hinterland, we have chosen appropriate locations for flood detention ponds to temporarily store water during typhoons and heavy rain, to slow down drainage into rainwater channels and rivers, and prevent drainage capacity overflow and flooding.

Kaohsiung's 15 flood detention ponds reflect the city government's low-impact development

approach and green infrastructure design techniques. In addition to combining flood control, landscape development, ecological restoration, and even green energy, the flood detention ponds even allow for water-based solar photovoltaic power generation systems without obstructing their flood prevention and safety purposes.

Another flood detention pond at Wujiawei added by the end of 2021 will take the total flood storage capacity to 3.86 million MT, the highest in the country. In addition, the central government has agreed to subsidize the flood detention ponds at Guangchang and Sanqia, which will add greatly to the overall flood control synergy.

## 8

## Improving tribal infrastructure

There are three indigenous regions in Kaohsiung City: the districts of Namaxia, Taoyuan and Maolin, characterized by indigenous culture and rich natural resources. However, most of the tribal villages in these areas have insufficient infrastructure and poor services, impacting the living environment, quality of life, and cultural heritage of the tribe. To prepare for climate change, public construction has become even more necessary.

Therefore, to improve the roads in and between tribal villages in the indigenous areas and ensure the safety of residents and tourists, we secured funding from the central government to improve infrastructural works such as Jianguo Bridge, Longqiao, Longqiao Phase II, Baoshan Tribal Road, and Lovers Valley Road in Maolin District, six important roads and bridges between the Tangaanua and Vanga villages in Namaxia District. By improving the basic environment and public facilities in the indigenous areas, the local impacts of climate change are reduced.



▲ Bridge build for accessibility into indigenous town



▶ The accessibility into indigenous town

## 9

## Agricultural insurance against climate risks

To mitigate farmers' risks amid the increasingly serious global climate change, the Council of Agriculture has offered agricultural insurance since 2015. In October 2020, the Kaohsiung City Government offers a 20% subsidy for crop insurance premiums for eight crops such as rice and mango and bee keeping, to help farmers cushion themselves from natural disasters. In January 2021, the Liugui, Linyuan, Jiaxian, Namaxia and Taoyuan districts were included in the national banana income insurance pilot areas. The city has also increased its natural disaster insurance premium subsidies for aquaculture fisheries, so that fishers only need to pay a quarter of their premiums.





## SDG 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

### The city's SDG Targets



## 1

## Maintain the city's biodiversity

Statistics from the Forestry Bureau of the Council of Agriculture show that Kaohsiung City has the largest forest area (170,523 hectares) among Taiwan's six major cities. Besides absorbing carbon dioxide from the atmosphere, forests also mitigate various impacts of climate change. Therefore, the maintenance, preservation, and restoration of forests is of crucial importance.

To cultivate forests and support private afforestation, the City Government works with the national Forestry Bureau to promote and reward afforestation on hillsides and on open flat lands within its jurisdiction. We encourage and reward the public to participate in afforestation and build an ecological afforestation environment. The reafforestation area under the national afforestation plan totals is 149 hectares, the supported and rewarded afforestation plan area is 74 hectares, while the flat land afforestation area is 22 hectares to date. In addition, to support the city's reafforestation, the Shenshui Nursery donated seedlings to organizations, groups and individuals.

Kaohsiung City signed the Local Action for Biodiversity MOU (LAB MOU) with other cities around the world in 2011. As a declaration of Kaohsiung's commitment to biodiversity conservation in the city, the Kaohsiung City Biodiversity Database and Monitoring System was established to facilitate collaboration with the central government, communities, and environmental assessment development units to collect and analyze long-term ecological survey data to understand the impact of land use on the ecology — an important part in conserving biodiversity.

The Kaohsiung City Government has signed the Durban Commitment, binding itself to incorporating biodiversity into its local governance and monitoring systems. It has also secured funding and support for expanding the city's natural parks and the wetland corridor and for transforming heavy industry into forest parks. Moving forward, Kaohsiung will continue to work to maintain the city's biodiversity, natural ecology and carbon absorption function to mitigate the impacts of climate change.

The city's abundant and diverse natural resources of mountains, the sea, rivers and harbor are the best course material for environmental education. The Environmental Protection Bureau has the goal of "Hike and experience the mountains, sea and harbor. Let environmental education take root in Kaohsiung." In its e-book Land of beauty and abundance (2014), the city introduces 14 parks and wetlands around Kaohsiung City, their geology, flora and fauna to stimulate residents and visitors to autonomously conduct ecological observations. The book contains detailed descriptions of animal characteristics, behaviors, sounds and a simple survey form. With this form, everyone can become a citizen scientist, collecting environmental data and developing environmental awareness and ethics through the process of experience, exploration and reflection.



▲ E-book about Biodiversity







**16** PEACE, JUSTICE AND STRONG INSTITUTIONS

## SDG 16

Significantly reduce all forms of violence and related mortality throughout the city

### The city's SDG Targets

**TARGET 16-4**

COMBAT ORGANIZED CRIME AND ILLICIT FINANCIAL AND ARMS FLOWS

**TARGET 16-6**

DEVELOP EFFECTIVE, ACCOUNTABLE AND TRANSPARENT INSTITUTIONS

**TARGET 16-7**

ENSURE RESPONSIVE, INCLUSIVE AND REPRESENTATIVE DECISION-MAKING



# 1

## Investigate illegal firearms to protect lives and property

According to the Illegal Firearms Investigation and Suppression Work Plan for Police Agencies from the National Police Agency, Ministry of the Interior, the city investigates illegal firearms, traces their origins, and controls the occurrence of shooting cases. In addition, in 2020, the Kaohsiung City Police Department participated in three national illegal firearms investigation projects. Statistics show that 173 illegal firearms and 2,666 pieces of ammunition were seized in 128 cases involving 107 persons.

► Regular DUI checkpoint



# 2

## Strengthen public space monitoring and traffic safety

Pursuant to the Policy Key Video Surveillance System Equipment Maintenance Plan of the National Police Agency, Ministry of the Interior, the Kaohsiung City Government promotes proper, efficient and effective use of the city's video surveillance system to maintain public order, protect lives and property, 22,917 cameras were installed in public spaces – a compliance rate of 84.4%.

# 3

## School bullying and children's protection against domestic violence

### 1. Support children to grow up in their families, encourage asking for help

As the social environment and family dynamics change, the front-end prevention (police) and child protection awareness still need diligent work. In cases with multiple issues, without proper or unstable resources or interventions, insufficient information exchange will make it impossible to effectively build a complete safety net for a child and vulnerable adults.

In 2019 and 2020, the number of children and adolescent protection orders stood at 5,984 and 6,560 respectively, showing an upward trend. By 2020, the total number of children receiving services was 4,894, and the child protection rate grew 74.60%. In 2020, there were 8,090 child

protection orders, of which 2,509 were reported actively through the toll-free numbers 110 (police) and 113 (women and children protection line) and 31% of those reports led to protection and support.

Moving forward, we will continue to promote prevention and awareness work for the protection of children. By entering communities, campuses, institutions, etc., we will keep raising awareness of the law. When children and adolescents are the victim of violence, they may ask for help, ranging from social work, police intervention, medical treatment to judicial handling. A network of agencies stands ready to ensure that children can grow up with peace of mind.



## 2. Prevention of school bullying

The Kaohsiung City Government uses multiple publicity methods, such as flyers, posters, contact book stickers, to promote its anti-bullying hotline. The city has also published the Kaohsiung City Schools and Colleges Bullying Prevention and Control Manual, holds bullying prevention workshops, and collaborates with other departments to counter bullying at schools. Together with the District Prosecutors Office, Police Department, Social Affairs Bureau, civil organizations, school principals and parent representatives, a School Bullying Prevention Committee was set up, which convenes twice a year to coordinate school bullying prevention. Since February 5, 2021, a School Bullying Incident Investigation, consisting of lawyers, psychiatrists, psychological counselors, and

educators, has independently investigated campus bullying incidents and patterns to assist schools and colleges to conduct effective anti-bullying work with the victims and perpetrators.



▲ Promotion of Anti-bullying on campus

## 4 Integrate citizen participation in city government work

To implement open government and citizen participation in public affairs, the Kaohsiung City Government has citizen participation mechanisms and a mentoring system in place to support agencies and departments to further engage citizens in its affairs. We offer citizen participation training courses to those agencies and departments and encourage them to use public hearings, briefings, workshops, public forums, world cafes or participatory budgeting to incorporate citizens' opinions in their policies and practices.



◀ ▲ Taiwan Design Citizen Participation Project Workshop

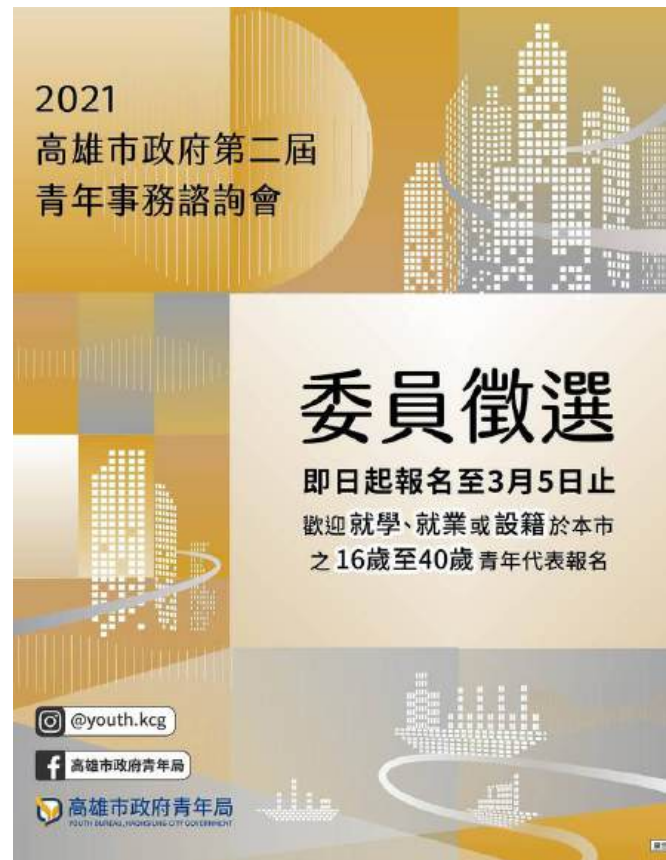


## 5

## Establishment of the Kaohsiung City Government Youth Affairs Advisory Committee

Young people are a vibrant and creative force in society. Kaohsiung City has a Youth Affairs Advisory Council (YAAC) to increase the participation of young people in public affairs, promote deep democracy through civic self-organization and engagement, and stimulate young people to pay attention to international exchanges and social issues, cultivate their enthusiasm for participation and service, making public policy proposals and speaking up for the development of their communities.

To expand the depth and breadth of participation, the age qualification has been lowered from the original 18–45 to 16–40 years of age. In addition to school- and college-age youths, young working people in the city will increase. For the second committee more outstanding young people from different fields were selected. We hope that the Youth Affairs Advisory Council will succeed in integrating the expertise, experience, energy and wisdom of the committee members into the city government's work, so that young people no longer feel a gap between themselves and the policy makers and policies that affect them, and inject vitality into the city's progress and a bright future for its young residents.



▶ ▲ Committee of advisory for youth recruitment





## SDG5

Achieve gender equality and empower all women and girls

### The city's SDG Targets

**TARGET 5-1**

END DISCRIMINATION AGAINST WOMEN AND GIRLS

**TARGET 5-2**

END ALL VIOLENCE AGAINST AND EXPLOITATION OF WOMEN AND GIRLS

**TARGET 5-4**

VALUE UNPAID CARE AND PROMOTE SHARED DOMESTIC RESPONSIBILITIES

**TARGET 5-5**

ENSURE FULL PARTICIPATION IN LEADERSHIP AND DECISION-MAKING



# 1

## Women’s Rights Committee to achieve gender equality

Kaohsiung City established the Kaohsiung City Women’s Rights Promotion Committee in 2010 to protect women’s rights, develop women’s potential, and promote gender equality. Consisting of the mayor as chairman and heads of related bureaus and agencies, experts, scholars, women and gender-related groups, the committee reviews review issues related to women’s rights. In 2019, it adopted the Kaohsiung City Government’s Policy Principles for Women’s Rights and Interests to improve women’s safety in the workplace, women’s personal safety, women’s health, well-being, education, cultural and social participation, and environmental spaces. These principles are applied by the 28 bureaus and agencies of the city government.

# 2

## Eliminate gender violence

### 1. Services for survivors of domestic violence

To prevent domestic violence and protect the rights and interests of victims, the Kaohsiung City Government runs several preventive service programs for domestic violence victims. Social workers offer crisis assessment, consultation, negotiation and legal assistance to support survivors to reflect on and modify their own behavior in the face of verbal and physical violence, to reduce domestic violence and family conflicts and improve family interaction. In 2020, 5,804 people were served.

In the future, we will continue to integrate social, police, healthcare, educational and judicial resources to expand the scope of our domestic violence protection network. Through information sharing and collaboration, we will provide victims with better intervention and protection to reduce violence and harm to the victims.

- ▼ Promotion of sexual assault prevention on campus



### 2. Prevent domestic violence and sexual assault

The Kaohsiung City Government works to prevent and contain domestic violence and sexual assault, and holds awareness, prevention and control activities at schools, in communities and institutions at all levels. In 2020, 191 events attracted 11,452 participants.

Moving forward, we continue to integrate resources across departments and agencies to prevent and control domestic violence, sexual assault, and sexual harassment, to raise the public’s awareness of gender-based violence through education and publicity, to eliminate cultural myths and misunderstandings and spread correct concepts of prevention. Safe and personal services help people rebuild stable lives with a safe home and a personal safety net. We aim for a healthy, safe and livable city with “zero tolerance for violence.”

- ▼ Promotion of domestic violence prevention



### 3 Reduce and eliminate gender discrimination

Taiwan enacted the Act for Gender Equality in Employment in 2002 to guarantee the gender equality of work rights and implement the Constitution’s spirit of eliminating gender discrimination and promoting substantive gender equality.

The Kaohsiung City Government annually organizes lectures on preventing employment discrimination and promoting gender equality at work, and invites organizations that have been reported and/or penalized to participate in order to help break down traditional occupational gender segregation, implement the Act for Gender Equality in Employment, and prevent sexual harassment in the workplace. Small businesses publishing recruitment advertisements on Facebook groups often violate the prohibition on employment discrimination because they do not understand the law. We check the content of Facebook groups and send private messages to group moderators to alert

them to discrimination issues and offer support in reducing gender discrimination and ensuring equality of employment opportunities for all citizens.

Pregnancy discrimination is another widespread issue in gender discrimination. Despite Taiwan’s declining birthrates, it is still common for pregnant women to suffer from unfriendly behavior in the workplace. Employers may lay off pregnant employees for trumped-up reasons, using various methods to conceal their motive for giving differential treatment. This causes economic harm and disadvantage to female employees and seriously damages their labor rights. Both the Labor Standards Act and the Act for Gender Equality in Employment contain provisions to protect pregnant women. The competent authority must ensure enforcement and support female workers that suffer pregnancy discrimination, to ensure their rights and reduce their economic damage, and create social equality and harmony.



▲ Promotion of Gender Equality

## 4

## Overcoming gender stereotypes

The Kaohsiung City Government has worked hard for women's equal rights for a long time. In 2005, it adopted regulations to completely remove the discriminatory "foreign bride intermediary" signboards out of respect for female immigrants.

To support family planning, parenting and care, in 2013, the city initiated the country's first public maternity care at home, to transfer parenting skills for newborns and offer maternity care. Priority was also given to setting up mother and child-friendly parking spaces – a national policy. In 2020, the country's first 24/7 fixed-point public childcare service was launched, providing parents with different working hours with comprehensive childcare services. In 2021, we offer transportation

subsidies for vulnerable pregnant women to create a safe and friendly environment for pregnant women in this city.

Training course for at-home childcare staff was launched to enhance their professional knowledge and encourage men to enter the childcare profession as well. The home childcare service center in six districts coordinates home childcare service staff. By the end of 2020, these centers managed 3,088 registered childcare professionals, comprising 78 males (2.53%) and 3,010 females (97.47%). By improving the childcare services network, supporting families' needs, women's unequal burdens are relieved.



▲ Gender Equality and Gender Discrimination Remove

## 5

## Respect for female voices and female governance

The Kaohsiung City Government offers women diverse learning opportunities to empower women in every corner of Kaohsiung society. As of March 2021, women accounted for 72.6% of students in community colleges in Kaohsiung. To better respect local women's decision-making rights, Women's Social Participation Promotion Groups were set up in 38 neighborhoods around the city. 36% of neighborhood wardens are female now, marking another milestone in female governance.







# **Future outlook**

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Kaohsiung is our home. We are ready for the future. Economic development need not involve damage to the environment. On the contrary, our comprehensive land plan guides industry transformation, and also improves environmental protection at new industrial parks. Key policies linking smart biomedicine, semiconductors, smart aerospace, innovative technology, and smart machinery attract manufacturers to invest, transforming Kaohsiung into a high-end manufacturing center with clean industries, blue skies and green spaces for residents. New jobs enable young people to stay in their hometown and have careers in industries that combine environmental sustainability with social fairness.

The Paris Agreement (PA) has begun in 2021. Countries have put forward legislation and commitments for net zero emissions or carbon neutrality, to be pursued through carbon pricing strategies (carbon taxes/fees, emissions trading). The Carbon Border Adjustment Mechanism (CBAM) will impact Kaohsiung's industry, in particular steel and petrochemicals, which may be among the first batch of regulated objects. Therefore, the Kaohsiung City Government must urgently assist these industries within its jurisdiction to internalize the external cost of their CO2 emissions and we will work with them to open up new opportunities for industry.

Sustainable development is more than a slogan. We will implement Mayor Chen Chi-Mai's governance philosophy of opening up the government and engaging citizens in public affairs. Each agency will integrate civic participation into its policies and processes that affect residents within their scope. Public affairs need public participation, including hearings, forums, world cafes, and participatory budgeting, to incorporate public opinions. The principle of "openness as the principle, non-openness as the exception" encourages departments and agencies to share more of their data, integrate and stream data across departments, and promote value-adding applications through public-private interdisciplinary collaboration. Public issues are great matters to activate value-adding energy and stimulate creativity.

The Kaohsiung City Government will no longer make citizens' health subservient to economic growth, but ensure that economic growth and environmental protection go hand in hand to ensure sustainable development in every sense of the word and steadily build and weave a sustainable and livable harbor city.



## Appendix

The values regarding the year 2020 in this appendix are actual values. The values for 2025 were set by the Kaohsiung City Government Sustainable Development and Climate Change Adaptation Committee, and the values for 2030 were taken from the Kaohsiung City Environmental Protection Plan and the Kaohsiung City Voluntary Review Report.



### SDG 1

#### End poverty in all its forms everywhere

Indicator	2020	2025	2030
Account opening rate of Children and Youth Future Education and Development Accounts	51%	53%	55%
Account applicants/eligible persons			
Continuing deposit rate of Children and Youth Future Education and Development Accounts	69%	72%	74%
The total number of deposit slips and agreed deductions/total number of sent payment receipts and agreed deductions			
Mobile healthcare coverage	85.7%	86%	90%
(Mobile healthcare area) ÷ (areas with insufficient healthcare resources as announced by Ministry of Health and Welfare)			
Completion rate of vulnerable household assessment visits within the time limit	97%	100%	100%
Percentage of care visits completed within the time limit for vulnerable family service cases			
Number of culture and health stations within sensitive indigenous communities	27	32	37
Deployments (locations)			
1. Indigenous areas:			
(1) Tribal villages within the jurisdiction of indigenous areas (towns, cities, districts) that have not yet established culture and health stations.			
(2) Tribal villages where the population over 55 years old is 150 or more and without a culture and health station.			
2. City area: Area with a high proportion of indigenous population but without indigenous agglomeration areas			

Indicator	2020	2025	2030
The number of disadvantaged households under the Housing Act renting social housing and receiving a housing allowance	<div style="display: flex; align-items: center;"> <div style="background-color: #003366; color: white; padding: 2px 5px; margin-right: 5px;">Social housing</div> <div style="margin-left: 5px;">63%</div> </div> <div style="display: flex; align-items: center;"> <div style="background-color: #CC0000; color: white; padding: 2px 5px; margin-right: 5px;">Rental subsidies</div> <div style="margin-left: 5px;">56%</div> </div>	Observational indicator	Observational indicator
The number of disadvantaged households under the Housing Act renting social housing and receiving a housing allowance			
Public property losses caused by fire disasters per year	7.5	Observational indicator	Observational indicator
Fire Department Statistical Report (TWD 1 million)			
Support rate for employable persons in low-income households or low-middle-income households	61%	62.5%	64%
Number of employed individuals in low-income, low-middle-income households/number of registered employment-seeking individuals in low-income, low-middle-income households in a given year			



## SDG 2

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

Indicator	2020	2025	2030
Production and sales history verification area	1,948	2,448	2,948
Accumulated verified area over the years (hectares)			
Physical relief service bases	62	65	67
In-kind relief service bases (offices)			
Food manufacturing industry verification rate	11%	45%	100%
Number of inspected food manufacturing companies/Total number of companies			



Indicator	2020	2025	2030
Annual Excellent certification rate of food companies	96%	96%	98%
The number of food companies with Excellent certification/number of inspected food companies applying for Excellent certification each year			
Young people's agricultural entrepreneurship loan volume	7,044	Observational indicator	Observational indicator
Statistics on the loan amounts of young people's agricultural entrepreneurship loans (TWD 100 million)			
Proportion of organic farming area	2.2%	Observational indicator	Observational indicator
Kaohsiung City organic farming/total cultivated land area			
Cumulative water conservation from dry farming facilities	0.9	2.2	3.4
Cumulative water conservation statistics of dry farming facilities (1 million MT)			
Agricultural expenditure as a percentage of the government's total annual budget	45.5%	45.5%	45.5%
$(\text{Agricultural expenditure}/\text{city government annual total budget}) \times 100\%$			
Total public funds invested in the agricultural sector	6.67	40.02	73.37
Economic development expenditure data (TWD 100 million)			
Approved number of agricultural rezoning cases in rural communities	58	61	62
After submitting a rural regeneration plan, a community can become a rural regeneration plan community upon review and approval (case)			



## SDG3

Ensure healthy lives and promote well-being for all at all ages

Indicator	2020	2025	2030	
Number of childcare resource bases	117	162	167	
Public kindergartens + home childcare + private kindergartens + parenting resource center + parenting resource base + parenting resource bus + fixed-point and timed-based daycare base (location)				
Social welfare bases coverage rate	27.7%	36.8%	43.4%	
Total number of social welfare facilities/Number of administrative regions in the city				
Number of community care bases	417	640	840	
Number of establishments (offices)				
Children receiving affordable education and childcare	3.8	4.4	4.4	
Statistics on the quota of affordable education and childcare services (10,000)				
Homeless Care Project	7,192	7,300	7,400	
Actual number of people served				
Screening coverage rate for three cancers (cervical, breast, colorectal)	Cervical cancer	53%	53.5%	54%
	Breast cancer	37.4%	37.5%	38.5%
	Colorectal cancer	37.8%	38.5%	39.5%
Cervical cancer screening rate = number of people screened by Pap smear in 3 years / mid-year population				
Breast cancer screening coverage = 3 years of mammography screenings / middle-aged population				
Colorectal cancer screening coverage = 3 years of fecal blood screening / middle-aged population				



Indicator	2020	2025	2030	
Coverage rate of healthcare institutions participating in the Diabetes Common Care Network	13.05%	13.15%	13.2%	
Number of institutions participating in the Diabetes Quality Payment Scheme/Number of participating institutions in diabetes care				
Traffic safety indicators	350	301	258	
Number of deaths in traffic accidents within 30 days (person)				
Ratio of citizens using publicly funded health check resources	Aged 40–64	31.55%	31.6%	31.6%
	Over 65	30.89%	30.92%	30.95%
Total number of people aged 40–64 screened in the past three years/Number of people aged 40–64 screened in January of that year Number of people over 65 years of age screened in the current year/Number of people over 65 years of age screened in January of that year				
Utilization rate of long-term care services	56%	58%	65%	
Annual number of service users/estimated number of disabled persons				



## SDG 4

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

Indicator	2020	2025	2030
Supply of public and quasi-public education and childcare services	63%	72%	75%
(Public + quasi-public approved enrollment number)/Number of children aged 2–5 years old enrolled in the kindergarten based in school year 2018 is 60,799			

Indicator	2020	2025	2030	
Disadvantaged groups (including special education students, indigenous, new residents) eligible for learning care and guidance	95%	Observational indicator	Observational indicator	
Number of students receiving special education/Number of students with disabilities in the city				
Personal counseling and placement rate for students with disabilities	97%	98%	99%	
Number of placements/number of applicants				
Pre-employment training and support for the unemployed among disadvantaged groups	1,185	1,199	1,199	
Number of participants from disadvantaged groups in a given year				
Teachers learning global professional knowledge	sessions	51	54	56
	people	1,800	1,900	1,960
The number of seminar sessions per field/topic, the number of participants also increased or decreased due to different themes				
Lifelong learning participation	civil servants	12.3	10	10
	promotion activities	217.7	220	225
	students participating	0.86	0.88	0.9
	community colleges	6	12	13
	senior learning	25.6	27.7	28.8
Statistics of life-long learning of civil servants in Kaohsiung City (10,000 persons) Number of people reached by promotion activities (10,000 persons) Number of students participating in lifelong learning courses (10,000 persons) (Number of participants in Changqing Academy Education Course + participants in special lectures at community women's colleges + number of volunteer service education and training) (10,000 persons) Statistics on the number of students at community colleges and senior learning centers (10,000 persons)				
Number of environmental protection volunteers in the city	2.8	2.9	3.1	
Number of environmental protection volunteers in the city (10,000 persons)				





Indicator	2020	2025	2030
Number of people using digital learning materials	1,664	3,500	5,000
Number of students participating in the project plan (10,000 persons)			



**SDG5**  
Achieve gender equality and empower all women and girls

Indicator	2020	2025	2030
The sex ratio of male to female at birth in Kaohsiung	107%	Observational indicator	Observational indicator
Number of male births/Number of female births			

Cases in multi-agency domestic violence prevention program	recipients	166	180	180
	persons	5,804	6,000	6,200
Annual number of service recipients and persons				

Domestic violence and sexual assault prevention activities during the year	1	3.1	3.2
Annual number of persons reached by awareness events (10,000 persons)			

Number of same-sex marriages	306	Observational indicator	Observational indicator
Number of same-sex marriages			

Male-to-female ratio of kindergarten staff in home kindergarten service centers	Male	2.53%	2.54%	2.56%
	Female	97.47%	97.46%	97.44%
Number of home daycare staff in Kaohsiung City with male/female staff / number of daycare staff in home daycare service center in Kaohsiung City				

Indicator	2020	2025	2030	
Proportion of deputy chiefs, chiefs of staff and first-level units in Kaohsiung City Government	28%	29%	30%	
The number of women among the current deputy chiefs, chiefs of staff, first-level unit supervisors, and the chiefs, deputy chiefs, and chiefs of staff of the municipal government				
Proportion of female non-supervisors in the municipal government and its first-level agencies	28%	29%	30%	
The number of female non-supervisors in the municipal government and its first-level agencies				
Number of chairpersons of non-governmental organizations Male to female ratio	Male	71.7%	71.3%	70.8%
	Female	28.3%	28.7%	29.2%
Number of male/female chairpersons of non-governmental organizations in Kaohsiung City at the end of the year/total number of chairpersons of non-governmental organizations				



## SDG6 Ensure availability and sustainable management of water and sanitation for all

Indicator	2020	2025	2030
Daily water consumption per person	281	Observational indicator	Observational indicator
(Tap water domestic water consumption/water supply population) / 365 days (liter)			
The ratio of premium public toilets in Kaohsiung City	79%	82%	85%
The ratio of premium public toilets in Kaohsiung City			



Indicator	2020	2025	2030
Number of households connected to sewer system and sewer penetration rate	46%	51%	56%
Number of households connected *Number of households per county/city/total population per county and city (Approximately 2.6 people per household))			
Used water recycling	54,640	85,000	105,000
The amount of recycled water discharged from the public sewage treatment plant + the total amount of recycled water produced by the Water Resources Center (CMD)			
Qualified rate of industry waste water audits	93%	Observational indicator	Observational indicator
Number of qualified households sampled/total number of audited households			
The ratio of slightly/not polluted length of the main rivers	35%	≥ 40%	≥ 50%
(Slightly polluted length + not/slightly polluted length)/total polluted length			
Achievement rate of DO ≥ 2.0mg/L per station in each watershed within the jurisdiction	≥ 95%	≥ 100%	≥ 100%
DO ≥ 2 mg/L Number of stations/Number of effective stations (38 stations in total)			
Tap water leakage density and pipeline replacement length	4,126	Observational indicator	Observational indicator
Repair leak density (cases)			
Tap water penetration rate in Kaohsiung City	97%	Observational indicator	Observational indicator
Number of people with water supply/Number of people in Kaohsiung City			
Green building rainwater storage and rainwater recovery	3.5	4	4.5
Designed capacity of rainwater storage and rainwater recycling facilities for green buildings (liters/day)			

Indicator	2020	2025	2030
The number of soil and groundwater pollution business sites in Kaohsiung City removed from the management	9	Observational indicator	Observational indicator
The number of soil and groundwater pollution business sites in Kaohsiung City removed from the management (site)			
Subsidence area or amount of stratum in Kaohsiung City	0 (Maximum annual subsidence rate: 1.4 cm/year, area: Jiading)	Observational indicator	Observational indicator
Monitored annual subsidence rate greater than 3 cm (km <sup>2</sup> )			
Number of Water Environment Patrol Teams in Kaohsiung City	30	30	30
Number of Water Environment Patrol Teams in Kaohsiung City			
Percentage of Water Environment Patrol Teams that keep volunteer records	75%	79%	80%
Number of Water Environment Patrol Teams that keep volunteer records			



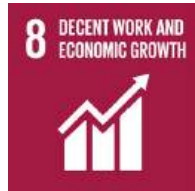
## SDG7

Ensure access to affordable, reliable, sustainable and modern energy for all

Indicator	2020	2025	2030
Per capita energy consumption	2,745	Observational indicator	Observational indicator
Annual electricity sales of electric lights announced by Taipower/Kaohsiung population (kWh/person)			



Indicator	2020	2025	2030
Promote photovoltaic facilities	0.57	2	2.5
Cumulative capacity of solar photovoltaic facilities installed on buildings (GW)			



### SDG 8

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Indicator	2020	2025	2030
Offer entrepreneurship training courses	29	35	35
Statistics of entrepreneurship training courses (session)			

Number of support and advice cases	249	260	260
Statistics of support and advice cases (person)			



### SDG 9

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Indicator	2020	2025	2030
Park development and transformation into a high-end manufacturing center	400	-	2,442
Support manufacturers to expand investment (TWD 10 million)			

KO-IN Zhigao Point (Financial Data Innovation Lab)	2	5	10
The number of applications for the financial data innovation laboratory (case)			



## SDG 10

## Reduce inequality within and among countries

Indicator	2020	2025	2030
Multiples of the quintile gaps in household disposable income	as announced in October 2021	Observational indicator	Observational indicator
Average disposable income per household in the 5th quintile / Average disposable income per household in the 1st quintile			
Promote employment for people with physical and mental disabilities	3,151	3,160	3,160
Number of referred job-seeking persons			
Employment-by-referral rate of disadvantaged employment seekers	54%	56%	58%
Number of job seekers with special needs/Number of newly registered job seekers for specific target applicants			
Gini coefficient of disposable income per household	as announced in October 2021	Observational indicator	Observational indicator
The ratio of the area between the Lorenz curve and the perfectly equal straight line to the area of the entire triangle below the perfectly equal straight line			





## SDG 11

Make cities and human settlements inclusive, safe, resilient and sustainable

Indicator	2020	2025	2030	
Number of disadvantaged households	<div style="background-color: #003366; color: white; padding: 2px;">Social housing</div> <div style="background-color: #990000; color: white; padding: 2px;">Rental subsidies</div>	<b>63%</b> <b>56%</b>	Observational indicator	Observational indicator
Households disadvantaged under the Social Housing Act/households in social housing				
Households disadvantaged under the Social Housing Act/households receiving housing rent subsidy				
Urban renewal	1	2	2	
Number of approved urban renewal cases				
Increase in number of barrier-free buses	54%	100%	100%	
Percentage of barrier-free buses				
Promote public bicycles	669	739	816	
Number of public bicycles used (10,000 times)				
Bicycle lanes	1,035	1,048	1,050	
Bicycle lane length (km)				
Increased length of the MRT	42.7	42.7	78.7	
Subway (KMRT) extended length (km)				
Increased length of the Light Rail	8.7	22.1	22.1	
Light Rail extension length (km)				

Indicator	2020	2025	2030	
Senior Fun Caravan	122	123	123	
Senior Fun Caravan trips (trip)				
The city's 20 main bus schedules	Peak	10-15	10-15	10-15
	Off-peak	15-25	15-20	15-20
Operating Hours/Number of Main Line Bus Departures				
Urban planning public facilities land area	1.24	1.24	1.25	
Statistics of areas opened up for public facilities in urban planning (ha)				
Urban planning public facilities land area cases	0	1	1	
The overall planning case of the city's land planning and rural areas (case)				
National land plan and non-urban land development permit reviews	0	3	3	
National land plan and non-urban land development permit reviews (case)				
Completion rate of barrier-free facilities in public buildings	90.9%	91%	91.3%	
Barrier-free public buildings ÷ total public buildings in the city				
Pavement environment and access area around schools	12.3	18.2	24.2	
Walkable pavement area (ten thousand square meters)				
Continuous selection of public/private facilities in each jurisdiction suitable for shelter for emergency use during n disasters	9.5%	> 10%	> 10%	
Evacuation capacity/number of citizens				





Indicator	2020	2025	2030
The length of pavements with motorcycles' parking space removed	4.5	22.5	22.5
The total length of the motorbike parking spots indicated on the pavement (km)			
The number of people died, missing, injured during major disasters (only earthquakes, typhoons, floods)	0	Observational indicator	Observational indicator
Fire Department Official Statistics Report (person)			
Annual average concentration of fine suspended particles	18.4	15	13
$\Sigma$ Annual average sum of fine suspended particulate found through manual monitoring stations/number of fine suspended particulate manual monitoring stations ( $\mu\text{g} / \text{m}^3$ )			
Ozone for eight hours	75	74	73
Annual average annual ozone concentration of 12 air quality automatic monitoring stations in Kaohsiung City (ppb)			
AQI value	83	83	88
Improve air quality, improve AQI $\leq$ 100			
Air quality automatic monitoring data availability rate	> 89%	> 93%	> 94%
Hourly data included in the number of valid data/month included in the total scheduled number of transactions			
Environmental noise monitoring	100%	96%	96%
1-(Number of periods of anomalous environmental noise monitoring $\div$ total number of periods of monitoring)			
Increase the average park/green area per capita	10.3	11.3	12.3
Average park/green area per capita (square meters)			



## SDG 12

### Ensure sustainable consumption and production patterns

Indicator	2020	2025	2030
Increase the number of green factory certificates issued	18	20	20
Number of green factory certificates issued (factory)			
Industrial food waste reuse rate	94.4%	95%	95.5%
Industrial food waste reuse/industrial food waste output			
Recycling rate of industrial waste	90.6%	91%	91.5%
Industrial waste reuse/total industrial waste generation			
Number of tracing cases of the flow of toxic chemical substances	83%	85%	88%
Proportion of audits in factories where toxic chemical substances are regulated			
Incineration bottom ash regenerated pellet decomposition rate	80%	82%	85%
Volume of removed recycled pellets/Volume of finished recycled pellets			
Agricultural waste recycling rate	84.7%	85.2%	85.7%
Agricultural waste recycling rates in registered companies/Total amount of agricultural waste in the management industry			
Food waste recovery rate	2.4%	4.5%	5.5%
Food waste recycling volume/waste generation volume (excluding domestic waste from companies) *100%			



Indicator	2020	2025	2030
Pollution reduction of livestock wastewater	–	≥ 5%	≥ 10%
Proportion of resource utilization of livestock farms			
Waste collection rate	61.5%	61.5%	62%
(Volume of food waste recovered + volume of resource recovery + volume of huge garbage collected and reused)/volume of waste generated			
Companies are encouraged to fulfill their social responsibilities and integrate those into their operations and core strategies, and become the cornerstone of their sustainable operations	521	Observational indicator	Observational indicator
Number of registered companies in the country that have submitted a corporate social responsibility report during the previous year to the Market Observation Post System of the Taiwan Stock Exchange			
Public organizations' green procurement rate	99%	99%	99%
The annual total purchases of environmentally friendly products that meet the first category (with environmental protection labels) and the second and third categories of "low pollution, resource conservation, and recyclability" should reach a set target ratio of the agency's total purchase budget for the year			
Green procurement by private enterprises and organizations	28.35	29.5	30.5
The total annual purchases compliant with the total amount of Taiwan's environmental protection labels, second-grade environmental protection labels, energy conservation labels, water conservation labels, green building material labels, carbon footprint labels, carbon reduction labels and foreign green products (TWD 100 million)			
Tourist hotels' occupancy rate	41%	49%	50%
Tourist hotels' number of rooms/Tourist hotels' number of rooms occupied by guests			
Low-carbon sightseeing	3	4	4
Number of low-carbon routes			



## SDG 13

### Take urgent action to combat climate change and its impacts

Indicator	2020	2025	2030
Encourage farmers to set up a disaster prevention and climate network room facility area	67	267	467
Encourage farmers to set up a disaster prevention and climate network room facility area (ha)			
Kaohsiung City's flood detention ponds have a detention volume	327	420	431
Flood detention capacity in flood detention ponds in Kaohsiung City (10,000 MT)			
Permeable pavement ratio	40%	Observational indicator	Observational indicator
(Pedestrian environment permeable pavement area (square meters)/Pedestrian environment suitable for permeable pavement area (square meters))			
Greenhouse gas reduction status	2%	15%	20%
(Annual Greenhouse Gas Emissions–2005 Greenhouse Gas Emissions) / 2005 Greenhouse Gas Emissions*100%			
Number of smart flood prevention and monitoring stations	172	208	208
Flood sensors + water level stations + mobile pump sensors/stations			
Number of sewer monitoring stations	0	7	7
Each monitoring station is equipped with flow meters, water level meters, pH meters, conductivity meters, and total organic carbon analyzing devices/locations			
Number of sustainable campuses	213	250	290
Cumulative value of approved schools			



Indicator	2020	2025	2030
Landslide disaster prevention education and training	24	130	150
Number of training sessions for disaster prevention education and training (landslide prevention drills, actual military drills, etc.) accumulated per year			
High temperature adaptation prevention and treatment awareness raising sessions	700	3,500	7,000
Cumulative number of sessions on high temperature adjustment prevention and disposal knowledge (session)			
Sustainable environment and high/low temperature adjustment courses	10	50	100
Cumulative number of participants (10,000 persons)			
Number of autonomous communities ready for landslide disaster prevention	3	8	9
Number of communities awarded with the 2.0 Bronze Community Certification Award for Quality Independent Disaster Prevention Communities by the Water and Soil Conservation Bureau of the Council of Agriculture			
Number of autonomous flood prevention communities established	31	37	41
The number of communities that operate autonomous flood prevention communities			



## SDG 14

### Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Indicator	2020	2025	2030
Conduct marine water quality monitoring along the coast and offshore, and calculate the pass rate target values based on 7 items related to marine environmental quality standards: pH, dissolved oxygen, lead, copper, mercury, zinc, and cadmium.	100%	100%	100%
Total number of water quality indicator items meeting marine environmental quality standards/7 total number of effective monitoring instances of water quality indicators			
Marine education and environmental education	40	40	40
Marine conservation and marine environmental education courses per year (session)			
The Ocean Conservation Administration, Ocean Affairs Council awards subsidies for the removal of marine debris and marine environmental education and publicity program funds	4	4	4
Remove the nets covered in artificial reef areas every year (site)			
Cancel preferential fuel subsidies for vessels fishing illegally	0	Observational indicator	Observational indicator
Cancellation of fuel subsidies (vessel)			
Incentives to stop fishing	98%	100%	100%
Proportion of accepted fishing moratorium applications: number of approvals/the number of applications			





## SDG 15

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Indicator	2020	2025	2030
Forest cover rate	57.9%	57.9%	58%
Forest area/Land area			
Research and investigation report of the nature protection area managed by Kaohsiung	4	2	2
Number of investigations per year in Wushanding Mud Volcano Nature Reserve and Nanzihsonian River Wildlife Reserve, Namaxia District, Kaohsiung			
Important wetland area	584	Observational indicator	Observational indicator
According to the Wetland Conservation Act, the total area of important international, national, and local wetlands approved by the central government (hectares)			
Conservation area of indigenous reserve areas	13	25	25
People's annual applications (hectare)			
Number of registered cases of memorial trees	558	600	600
Number of memorial trees in Kaohsiung			
Proportion of mountain areas included in the protected area system	23%	23%	23%
Total area of the city's nature reserves/total area of the city's mountainous areas			
Number of afforestation seedlings issued	3.8	2.4	2.4
Number of afforestation seedlings gifted to the people by the city (10,000 seedlings)			

Indicator	2020	2025	2030
Increased number of entries in the Kaohsiung Biodiversity Database	118	130	140

Number of entries in the Kaohsiung Biodiversity Database

	banded bullfrogs	202		
	spot-legged tree frogs	36		
	spot-legged tree frog eggs	2		
	green iguanas	3,047		
	zebra doves	28		
	white-rumped shama	42		
			Observational indicator	Observational indicator
Alien animal species removal		Total area is about 27.4 hectares		
	white popinac	2 hectares		
	bittervine	14.2 hectares		
	mimosa pigra	3.5 hectares		
	congress weed	1 hectares		
	fragrant eupatorium	6.7 hectares		

Number of alien species removed



## SDG 16

Significantly reduce all forms of violence and related mortality throughout the city

Indicator	2020	2025	2030
Number of violent crimes	76	125	125

Number of violent crimes





Indicator	2020	2025	2030
Investigation rate of wanted criminals and current criminals in violation of the Narcotic Hazards Prevention Act	100%	100%	100%
(Children interviewed by telephone + Children interviewed face-to-face)/Children that should be interviewed			
Investigation rate of children suspected of violating the of the Narcotic Hazards Prevention Act	100%	100%	100%
Number of visits to persons that violated the of the Narcotic Hazards Prevention Act whose family is vulnerable or is under a child protection order for less than one year / Number of persons that violated the of the Narcotic Hazards Prevention Act whose family is vulnerable or is under a child protection order for less than one year			
Proportion of the general public reporting a crime and asking for help	29%	31%	32%
General public reports through the 110 police phone number and the 113 women's and children's protection phone number			
Restorative Justice Seed Teachers	76	100	120
Restorative Justice Seed Teachers			
Birth registration rate	100%	100%	100%
(number of Taiwanese birth notifications during the whole year-the number of missing birth registrations)/number of Taiwanese birth notifications during the whole year			
Kaohsiung City Government open data downloads	40	60	80
Cumulative total of downloads from the official data open platform (10,000 persons)			
Kaohsiung City Government information platform queries provided	452	900	1,200
The total amount of query services provided by the Kaohsiung City Government information platform (case)			



## SDG 17

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Indicator	2020	2025	2030		
Dissemination of sustainable development information	40	84	94		
Cumulative number of viewers (10,000 persons)					
Sustainability-related meetings	4	20	40		
Number of sustainable development-related conferences/education session/training sessions (session)					
Participants in Fulbright Project	20	20	20		
Schools participating in Fulbright Project (school)					
Number of collaboration projects with international sustainable organizations/government units	29	Observational indicator	Observational indicator		
Number of sustainable technical or strategic partnerships with international organizations and government units					
International Mental Health Training Center Taiwan (IMHTCT) under the New Southbound Policy	<div style="background-color: #003366; color: white; padding: 2px;">Number of foreign participants visiting Taiwan to attend training</div> <div style="background-color: #cc0000; color: white; padding: 2px;">Number of experts teaching abroad</div>	428	336	Observational indicator	Observational indicator
Number of participants from overseas visiting Taiwan for training, number of experts teaching abroad (person)					



