



Environment and Ecology Bureau The Government of the Hong Kong Special Administrative Region of the People's Republic of China



Agriculture, Fisheries and Conservation Department

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# Formulated the **Blueprint for the Sustainable Development of Agriculture and Fisheries** in collaboration with the trade





# Preface



Hong Kong's agriculture and fisheries industries have a rich and significant history, deeply rooted in the local cultural heritage. Despite relatively small in scale, the local agriculture and fisheries industries still play a role in ensuring food supply and creating job opportunities for local residents. Moreover, they are closely linked to our local ecology, serving as key elements for both tourism and education. Many people find it enjoyable in visiting the countryside and engaging in leisure agricultural and fisheries activities. This allows them to slow down their hectic pace of life and refresh their minds. It is evident that Hong Kong's agriculture and fisheries industries are not merely the domain of industry producers but are assets shared by the public at large.

The Government has all along attached great importance to the development of the local agriculture and fisheries industries. The Agriculture, Fisheries and Conservation Department (AFCD) released the *Report of the Committee on Sustainable Fisheries* and the *New Agriculture Policy* in 2010 and 2016 respectively, putting forward comprehensive and well-balanced recommendations for the sustainable development of the local agriculture and fisheries industries. We have been actively implementing the recommended measures, encouraging the sectors to cope with the changing business environment by adopting sustainable modes of operation.

The key national strategies and policies introduced by our country in recent years, including the National 14th Five-Year Plan, the development of Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and the Belt and Road Initiative, provide Hong Kong with unlimited opportunities. The comprehensive development of agricultural and fisheries resources can help Hong Kong better contribute to our country, integrate into the overall national development, and bring more diversified development opportunities to the agriculture and fisheries industries.

It was mentioned in the Chief Executive's 2022 and 2023 Policy Addresses that the Environment and Ecology Bureau would work hand in hand with the agriculture and fisheries industries to formulate a *Blueprint for the Sustainable Development of Agriculture and Fisheries ("the Blueprint")*, and would publish *the Blueprint* by the end of 2023. I would like to express my sincere gratitude to the Hon Steven HO Chun-yin, BBS, JP, member of the Legislative Council of Hong Kong representing the functional constituency for agriculture and fisheries, as well as industry representatives, who actively organised and participated in the consultation meetings for the trade and provided valuable insights in formulating *the Blueprint*.

*The Blueprint* presents the industries' visions for the future sustainable development of local agriculture and fisheries. It serves as both a comprehensive development plan, which consolidates the wisdom of the sectors, and also a strong commitment from the Government to support and promote the growth of these industries. By focusing on eight major areas of development and an array of concrete measures in *the Blueprint* covering finance, infrastructure, land and technical support, particularly in promoting deep sea mariculture, planning for the establishment of fisheries protection areas (FPAs), establishing a fisheries research centre, developing an Agricultural Park (Agri-Park), facilitating the development of multi-storey enclosed livestock farms and introducing urban farming, we aim to upgrade and transform these industries towards modernisation, intensification, and sustainable development, and to integrate with the Guangdong-Hong Kong-Macao GBA planning layout. Ultimately, the quantity, quality and value of local agricultural and fisheries produces will be raised in the long run, resulting in the improvement of the livelihoods of fishermen and farmers in general.

Mr TSE Chin-wan, BBS, JP Secretary for Environment and Ecology December 2023

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## **CHAPTER 1**

# **Visions and Work Targets**

The Government is committed to promoting the sustainable development of the local agriculture and fisheries industries and enhancing the quantity, quality and value of local agricultural and fisheries products. Taking into account the situation and opportunities in different sectors of the agriculture and fisheries industries, we have formulated the following visions and set out the corresponding targets.



# **D** Capture Fisheries

#### **Visions:**

- To maintain the marine ecological environment and fisheries resources in a healthy and abundant condition so as to ensure the long-term sustainability of capture fisheries in local waters.
- To enable some of the Hong Kong mobile fishermen operating in the Mainland waters to upgrade themselves and switch to other more sustainable modes of operation with a view to improving their livelihood.

#### **Targets:**

- To maintain the catch in local waters at a stable level and highvalue fish catch will increase within 10 years, so as to raise the value of the fisheries produces, with a view to improving the livelihood of fishermen and benefitting the public with a stable and quality supply of fisheries products.
- To assist capture fishermen through practical means in switching to other sustainable operations, including aquaculture, leisure fisheries and offshore fisheries, thereby enabling the industry to achieve diversified development.

# **2** Mariculture

#### Visions:

- To establish large-scale Fish Culture Zones (FCZs) in which fish farms will be operated in intensification mode, advanced technologies, systems and equipment will be adopted, and highvalue marine fish species will be cultivated.
- To achieve comprehensive development of modernised mariculture with the support of the branding of quality local produces and effective sales chain, which will provide career pathways for practitioners and a stable supply of high-quality marine fish to the public at large.

#### Targets:

- To gradually increase the area of FCZs to some 800 hectares. The annual production of locally cultured marine fish will be doubled to 1,200 tonnes within 5 years and to about 6,000 tonnes within 15 years, which will represent a ten-fold increase in the total production value.
- The enhanced competitiveness of the local mariculture industry and the improved income of mariculturists will provide incentives for capture fishermen, younger generation and enterprises to join the mariculture sector.

# Pond Fish Culture

#### **Visions:**

- To integrate the concepts of nature conservation and pond fish culture, and to enhance the ecological functions of fish ponds and develop modernised and high-tech pond fish culture with high stocking density through the development of the Wetland Conservation Parks (WCPs) System where the dual functions of fish ponds and wetlands are fully utilised. The WCPs also provide the freshwater fish farming industry with a long-term and stable operating environment to culture quality and ecofriendly freshwater fish and brands will be built in order to meet the market demand.
- The pond fish culture sector will develop steadily, and the trade will actively participate in the conservation and management of fish ponds in the WCPs.

#### Targets:

- To develop ecological culture practice by combining the concepts of nature conservation and pond fish culture or modernised high-density culture practice within 10 years through the development of the WCPs System.
- To progressively build brands for local eco-pond fish and enhance the fish quality so as to increase their production value by 20%.

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# Crop Farming

#### Visions:

- To designate "Agricultural Priority Areas" (APAs) where quality agricultural land (including the Agri-Park) will be planned for long-term agricultural use. By applying environmentally friendly and modernised technologies, farmers can produce safe and specialty fresh agricultural products of high quality.
- To establish local brands and simultaneously exploit the industry's strength to develop agriculture-related leisure activities, thereby facilitating the greening of rural fringes and contributing to the integration of urban and rural development.
- To implement the"urban farming"strategy in New Development Areas (NDAs). Apart from building modernised urban farms at suitable Government sites and facilities, commercial enterprises will also be encouraged to actively consider identifying suitable locations at their facilities and properties for developing modernised urban farms. The whole concept is to integrate agriculture into urban lives and to provide urban dwellers with low-carbon food, green landscapes and modernised farming experience while improving the quality and liveability of urban life.

#### **Targets:**

- To progressively promote the extensive adoption of environmentally friendly and modernised operation modes in local farms with a view to increasing the annual production of vegetables significantly by four folds from about 15,000 tonnes at present to about 60,000 tonnes within 15 years. The farmers' income is expected to increase, and this will attract the younger generation and enterprises to join the industry.
- To launch the first pilot urban farm at Ma On Shan in 2024 and integrate urban farms into new towns and communities within 15 years. Vegetable production by future urban farms is expected to account for not less than 10% of the local production.

# 5 Livestock Farming

#### **Visions:**

- With the intensification of production in multi-storey enclosed buildings, livestock farms will adopt modernised and environmentally friendly operation for livestock rearing. Through the introduction of technologies and automation equipment, the problems arising from sewage and odour will be resolved while enhancing the farming efficiency and biosecurity levels.
- Local farms will produce safe and quality livestock products and succeed in building their brands as well as meeting public demand for high-quality live and fresh livestock products.

#### **Targets:**

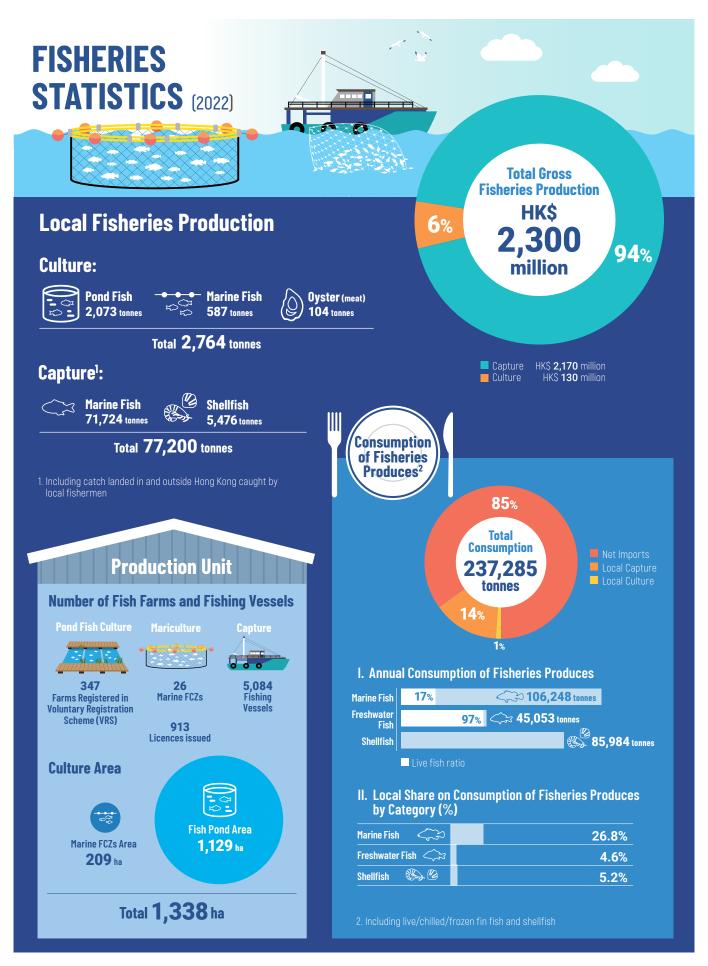
- To embrace the opportunities arising from the development of the Northern Metropolis and encourage all local livestock farms (29 chicken farms and 43 pig farms) to switch completely to modernised operation in multi-storey buildings with a view to producing quality branded livestock products. This will help to meet the target of achieving sustainable development through optimising land use and adopting an environmentally friendly approach.
- To complete formation of the land for establishment of the first multi-storey modernised and environmentally friendly livestock farm by 2026 and the farm is expected to commence operation before 2030. Subsequently, other livestock farms will gradually switch to modernised and environmentally friendly production by adopting a similar operation mode as soon as possible.
- The current annual live pig production and chicken production are about 12,000 tonnes and 7,400 tonnes respectively. With the enhanced farming efficiency and biosecurity levels, the overall annual production of local livestock farms is expected to increase by at least 10% and the production value by 30% in 15 years.

To realise the above visions and targets, the Government will continue to work in collaboration with the trade to support the sustainable development of the industry through the implementation of specific measures as detailed in the following chapters.

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CHAPTER 2

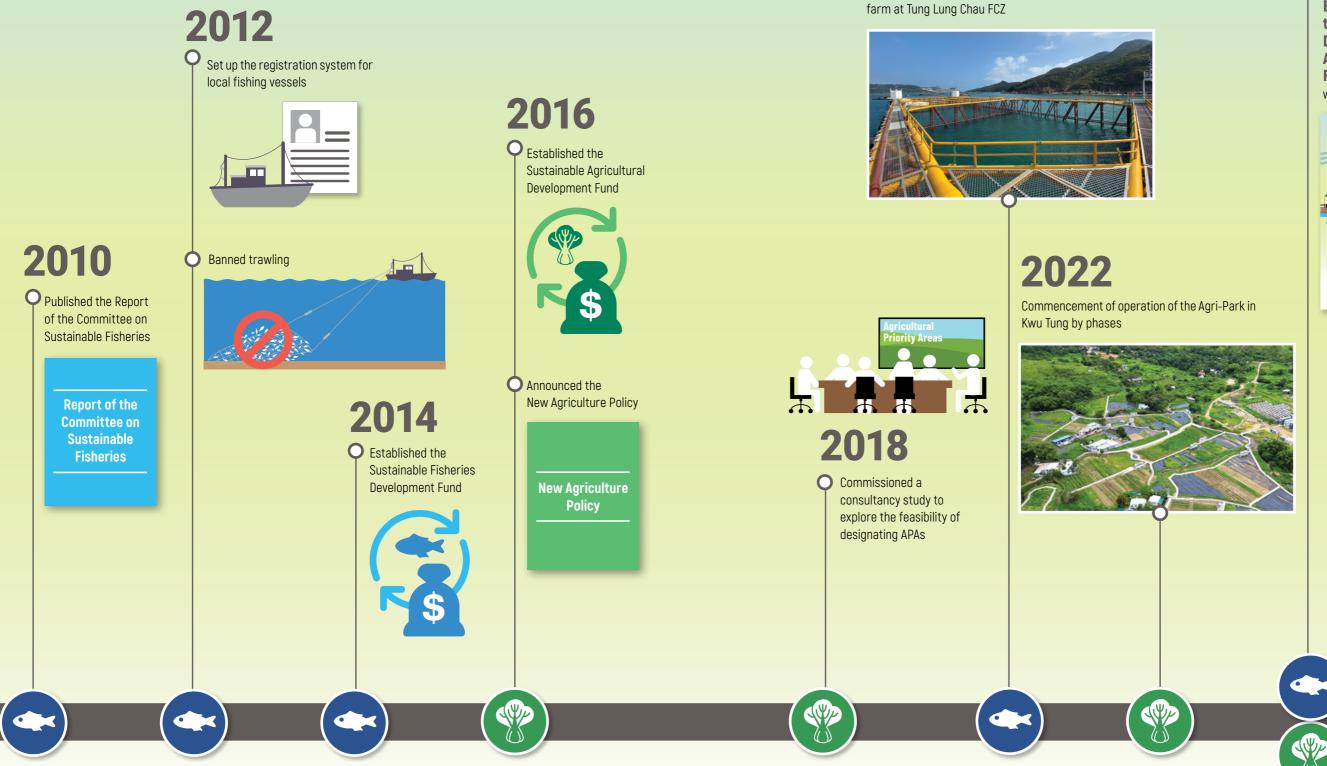
Overview of the Agriculture and Fisheries Industries





# Milestones of the Sustainable Development of the Agriculture and Fisheries Industries

- 10



2021

Established a modern mariculture demonstration



• Formulated the Blueprint for the Sustainable Development of Agriculture and Fisheries in collaboration with the trade

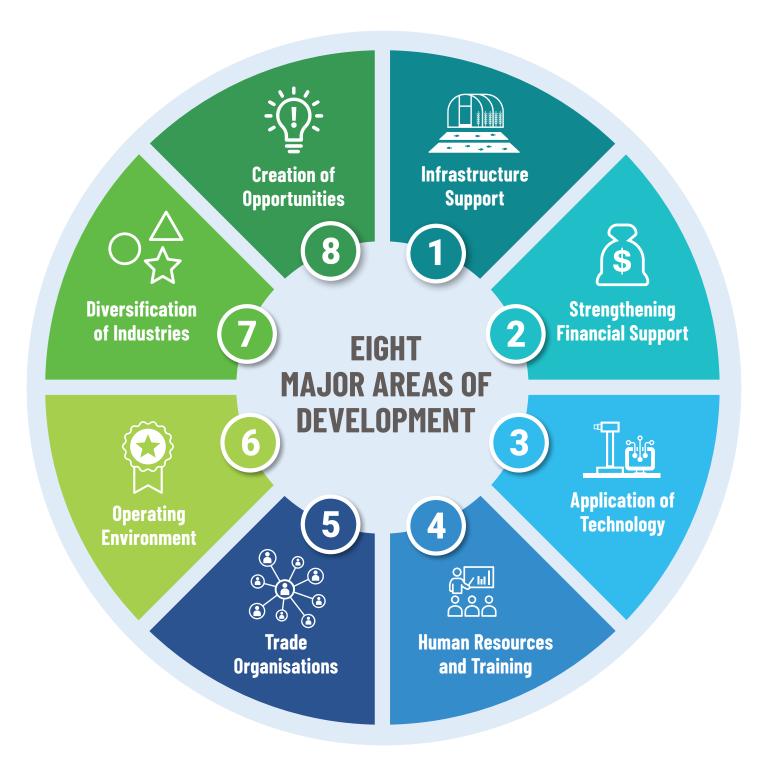


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# CHAPTER 3 Eight Major Areas of Development

We will promote the upgrading, transformation, modernisation and sustainable development of the agriculture and fisheries industries from the perspective of industrialisation. Through the specific measures to be implemented in the following eight major areas of development, we hope to promote market orientation of the industries, leverage their strengths and achieve economies of scale while fostering sustainable development of the industries through professional division of labour, mutual support amongst trade organisations as well as support and ancillary services provided by the Government.



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Stable land use and appropriate infrastructure support are crucial components for the development of the local agriculture and fisheries industries. We will proactively seek resources for the industries, improve the quality of related facilities and equipment, set up scientific research bases and relevant demonstration zones, speed up technological transfer, and reduce production costs. This will effectively stimulate the integrated development of these industries and create greater opportunities for increased value, efficiency, and growth in revenue.







# Area 2: Strengthening Financial Support

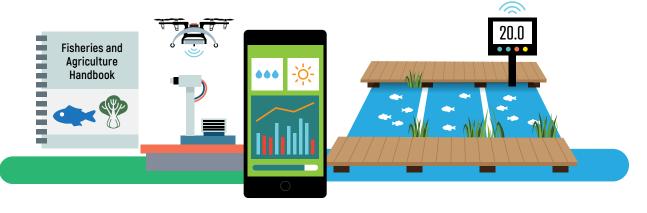
The Government has been offering various financial support schemes to boost the development of the agriculture and fisheries industries. By enhancing the current financial support schemes, we will promote the development of the industries in terms of the application of advanced technologies and intensification of production, appropriately alleviate the impacts of major infrastructure projects on farmers and fishermen, encourage community involvement in the sustainable development and modernisation of the agriculture and fisheries industries, and provide stronger financial support for the implementation of initiatives outlined in *the Blueprint*.





There has been a global trend to use advanced technologies to promote sustainable development of the agriculture and fisheries industries. Our aim is to drive these industries towards high-quality development, generate new business, and promote the upgrading and transformation of traditional industries. The Government will also actively assist the industries in adopting new modes of production, new technologies and new materials, strengthening technical services and facilitating scientific research. Moreover, efforts will be intensified to promote standardised, mechanised and smart production, and upgrade production facilities and equipment within these industries.







In addition to infrastructure improvements, human resources play a crucial role in the development of the agriculture and fisheries industries. The Government will actively lead and encourage relevant parties, including post-secondary institutions, research institutions, government departments, and trade organisations, to leverage their strengths to strategically intensify efforts in cultivating talents for the agriculture and fisheries industries, including offering training courses, employment counselling as well as referral and follow-up services. These initiatives aim to help practitioners to upgrade their vocational skills and encourage young people to join these

industries, thereby promoting rejuvenation, modernisation and professionalisation of the industries.



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Local farmers and fishermen operate on a relatively small scale. To foster a synergistic effect of these industries, the Government will lead the growth of trade organisations by enhancing their role in coordinating farmers and fishermen. Moreover, these organisations will be given the opportunity to participate in agricultural and fisheries development and management projects and collaborate with the Government to jointly promote its policies. By working together with enterprises, trade organisations can integrate into the local agriculture and fisheries industries, implement innovation and R&D projects, establish a safe and high-quality production and marketing system for the agriculture and fisheries industries, and improve industrial chain management. This ensures that farmers and fishermen can benefit from the advantages of intensification of production. After analysing the experience of trade organisations in the participation of the management of agricultural and fisheries projects, we will actively explore the feasibility of establishing relevant development and management organisations that will empower these industries to take a more prominent role in leading development in the long run.





# Area 6: **Operating Environment**

The Government is creating a favourable operating environment for the agriculture and fisheries industries by taking initiatives such as establishment of Agri-Park, designation of APAs, improvement of the monitoring system for fisheries resources, continuous efforts for fish stocking and enhancement of measures for enforcement and regulation. Moreover, the Government encourages the industries to intensify efforts for expanding their product lines and special features in operation strategies catering for the market and customer demands, and improve their business operation from the aspects such as brand building, marketing and promotion. We will support them in their efforts to develop their own brands, practise brand storytelling and enhance product competitiveness. A diverse range of marketing and promotional activities on agricultural and fisheries products will be carried out to enhance the public's consumption desire for these products and facilitate the connection of producers and different consumption ends and information technology will be applied to expand the channels for product circulations and sales. We will also explore how to enhance the current roles of Vegetable Marketing Organization (VMO) and Fish Marketing Organization (FMO). In the future, the VMO and the FMO will not only strengthen the direct sales services for local

agricultural and fisheries products, including integrating the sales of agricultural and fisheries products, expanding online and offline channels and upgrading modern marketing and supporting logistics facilities, but also step up efforts to develop local characteristic processed agricultural and fisheries products, establish distinctive brands, provide relevant supporting facilities and services, upgrade and transfer processing technologies, so as to link the production of local agricultural and fisheries producers with the market and meet the consumers' demands.





The agriculture and fisheries industries must seek transformation from a primary production-oriented operation mode to the knowledge-based economic development strategy oriented at value enhancement. By providing technical and financial support and reviewing the existing policy, the Government will facilitate the industries to pursue expansion from the production-targeted primary industry to the secondary industry focusing on processing of agricultural and fisheries products as well as the tertiary industry centered on providing services including sales and marketing of relevant products, leisure, culture and experiential activities relating to agricultural and fisheries, in order to improve the added value.





# Area 8: Creation of Opportunities

The future economic development of Hong Kong is closely linked with Mainland. The agriculture and fisheries industries in Hong Kong should seize the opportunity from the Guangdong-Hong Kong-Macao GBA and ride on the country's rapid development to bring in new technologies and open up a wider scope for further development. The HKSAR Government will continue to collaborate with the Mainland authorities and provide support to assist agricultural and fisheries producers to start business and work in the GBA. The HKSAR Government will also encourage capture fishermen to "go out" and make best use of their technical advantages in capture fisheries to develop offshore fisheries in the major countries and regions along the Belt and Road or other waters.



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**CHAPTER 4** 

Specific Development Direction of the Agriculture and Fisheries Industries

We have set out in Chapter 3 the eight major areas for promoting the sustainable development of the agriculture and fisheries industries. To support various sectors within the industries to achieve sustainable development, upgrading, and transformation, we will in this chapter conduct a detailed analysis of each sector and focuses on the key measures that foster their development.

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Hong Kong's fisheries industry has a long development history and was a local prime industry during the early days when Hong Kong was established as a free port. Subsequently, fishing yields in Hong Kong waters has been diminishing since the late 1980s, due to the decline in fisheries resources and changes in business. Since 2012, the Government has implemented a series of measures to promote sustainable development in the fisheries industry. These measures include imposing a ban on trawling in Hong Kong waters, setting up a registration system for local fishing vessels to limit the entry of new fishing vessels so as to maintain an appropriate level of fishing effort. In 2022, the local fisheries production accounted for about 15% of fisheries produces<sup>1</sup> consumed in Hong Kong.

We have analysed the strengths, opportunities and challenges faced by the capture fisheries, mariculture, pond fish culture and leisure fisheries sectors and put forward supportive measures as follows:

# **Capture Fisheries**

#### Strengths

Advanced knowledge in the operation, management and preservation of fish catch

Close co-operation with Mainland authorities/local fishermen organisations

Some Hong Kong fishermen possess experience of engaging in distant water capture fisheries

#### **Opportunities**

Fisheries resources enhancement through planning for the establishment of FPAs and marine parks

Signs of recovery in local fisheries resources after implementation of the trawl ban

The Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA) allows investments related to offshore fisheries in the Mainland

#### Challenges

Suitable sites for deployment of artificial reefs or restocking are limited

Keen competition from welldeveloped capture fisheries in the Mainland and peripheral areas

The long sea boundary lowered the effectiveness of law enforcement against cross-boundary illegal fishing activities

#### **Relevant Measures**

**Improving the operating environment** – We will continuously monitor the fisheries resources in Hong Kong waters and implement fisheries enhancement and management measures, including planning for the establishment of FPAs, deployment of artificial reefs and fish restocking to conserve and enhance fisheries resources. Furthermore, we will strengthen the management of fishing vessels with a view to maintaining fishing efforts of various types of fishing vessels at reasonable and sustainable levels.



Artificial reef

**Promoting diversification of industry** (also applicable to other fisheries sectors) – We will revitalise the Aberdeen Wholesale Fish Market and bolster the functions of other wholesale markets to upgrade and enhance the supporting facilities. For instance, we will expand the fish processing centre of the FMO and explore the feasibility of developing the FMO into a processing and promotion base for prefabricated premium local fisheries products. Our aim is to enhance the output of processed fisheries products, improve the processing technology and position the processing of fisheries products as a leading secondary industry. In addition, we offer support facilities for cold storage, retailing, catering, exhibition and experiential activities etc., in a bid to assist and empower fishermen to develop leisure, sales and service-oriented tertiary industries.

**Enhancing law enforcement and strengthening co-operation** – We will strengthen Guangdong-Hong Kong joint enforcement operations and utilise newly developed tools to assist in interception of vessels engaged in illegal fishing activities. Working with fishermen associations, we will gather intelligence and remove fishing gears associated with illegal cases. Moreover, we will explore the feasibility of establishing a sea enforcement supporting platform at strategic locations (e.g. Wong Chuk Kok Hoi). To improve enforcement efficiency, we will explore the application of technologies such as unmanned aircraft, real-time satellite identification system, artificial intelligence and video analytics system. Additionally, we will strengthen regulation of fishing methods and gears that exert pressure on fisheries resources through the local fishing vessel registration system.



Processing of fisheries products

**Promoting the development of offshore fisheries** – We will formulate and implement suitable and feasible measures to assist capture fishermen in capitalising on new opportunities in offshore fisheries. We will provide technical advice on their offshore fisheries projects and assist in the liaison with regional and overseas organisations. In addition, we will offer financial support for study tours, pilot schemes and training initiatives. Through our loan schemes, we will support the construction and retrofitting of offshore fishing vessels. Furthermore, we strive for the support of national status, indicators and quotas for the operation of offshore fisheries.





Patrol vessel

Assisting mobile fishermen from Hong Kong and Macao in engaging in/switching to other sustainable operations – We will formulate and implement suitable and feasible measures to assist capture fishermen in switching to other sustainable operations, including aquaculture and leisure fisheries, to achieve diversified development within the industry. We will also continue strengthening communication and cooperation between Guangdong and Hong Kong with a view to creating a favourable operating environment for mobile fishermen in Hong Kong and Macao.

**Providing financial support** (also applicable to other fisheries sectors) – We will utilise effectively the Sustainable Fisheries Development Fund (SFDF), of which the approved commitment and scope have been expanded, and critically review from multiple perspectives the packages of ex-gratia allowance provided to those affected by the development plan.

Offshore fishing vessel

#### Mariculture

#### Strengths

Systematic monitoring of water quality and planktonic algae

Set up of "Accredited Fish Farm Scheme" to ensure the quality and safety of local aquatic food products

Suitable aquatic environment for cultivation of high-value species

#### **Opportunities**

Designation of new FCZs facilitates the development of modernised deep sea mariculture, which will attract young people to join the industry

A new mariculture training programme to provide relevant training opportunities for practitioners and novices

Local produces and brands are in line with the trend for environmentally friendly, sustainable and low-carbon production

#### Challenges

Higher production costs than the neighbouring regions

Lack of mature supply chains and robust marketing strategies

Lack of infrastructure and ancillary facilities for large-scale aquaculture

Need for intensification mode of operation for development due to high investment threshold

Aging workforce with insufficient new blood

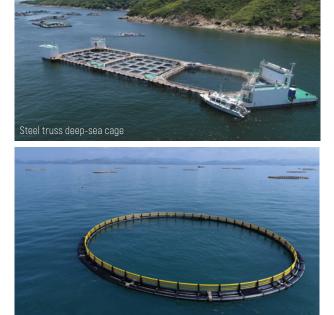
#### **Relevant Measures**

**Developing deep sea mariculture** – We have designated new FCZs at Wong Chuk Kok Hoi, Mirs Bay, outer Tap Mun and Po Toi (Southeast), with a total area of about 600 hectares which are three times the total area of existing FCZs. Deep sea cages will be set up in the new zones by phases for renting to fishermen associations. We will also provide multi-function floating platforms and testing services for supporting mariculture operation, mobilise trade organisations to co-ordinate and manage the mariculture activities in the new zones as well as support the daily operation of mariculturists. We will encourage investors to apply for the marine fish culture licences for mariculture operation in the

new FCZs through funding from the SFDF or private investment. Suitable measures will be implemented in parallel to assist capture fishermen in switching to the sustainable aquaculture operations.



Locations of the four new FCZs



Construction of deep-sea cages in the new culture zones for renting to fishermen associations

**Promoting the modernisation of existing FCZs** – We will upgrade the mariculture facilities of the existing fish rafts and promote the use of renewable energy. We will introduce advanced mariculture technologies and facilities and to promote the popularisation of high-density polyethylene (HDPE) mariculture platforms and smart monitoring facilities. We will strengthen regulation of mariculture activities and issue new marine fish culture licences in FCZs with surplus carrying capacity.

**Promoting the development of trade organisations –** We will encourage and support fisheries organisations to proactively participate in promoting modernised mariculture activities in the new FCZs, building brands and making fisheries development plans while extending their support to other fisheries sectors. The functions of fisheries organisations will be highlighted in a bid to strengthen their role in the future development of the fisheries industry.

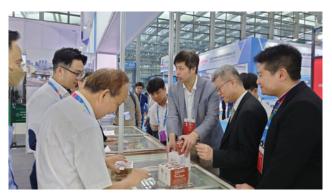
Promoting the application of mariculture technology -

We will work with academic institutions to formulate the Standard Operating Procedure (SOP) and the Hazard Analysis and Critical Control Point (HACCP) for culture operations. We will assist the industry in developing the hatchery and cultivation technology for new species with high production values (e.g. lobsters, pearl oysters, red groupers, speckled blue groupers and orbicular batfish) through pilot programmes collaboration, professional consultation and seminars. Free screening programmes for new fish stocks and fish feed testing services will be provided to lower the risks of mariculture.

**Expanding marketing channels for fisheries products** (also applicable to other fisheries sectors) – We will strengthen the participation and brand promotion of Accredited Fish Farms through multiple channels. The integrated development between the primary industry and the secondary industry will be promoted to foster the development of diversified products such as prefabricated dishes. We will provide more channels for farmers and fishermen to sell and promote local agricultural and fisheries products through large-scale food and beverage fairs, social media, the mobile application "Local Fresh"<sup>2</sup>, fishermen and farmers' markets and the FarmFest as well as innovative marketing campaigns. The local fisheries products will be exported to the Mainland for tariff-free under the CEPA.



Expanding the diversity of aquaculture products in the Accredited Fish Farms, illustrated by lobster (top left), pearl oyster (top right), and speckled grouper (bottom)



Participating in food exhibition event to promote local fisheries and agricultural products.



Mobile App for Local Fish and Vegetable Direct Delivery

<sup>2. &</sup>quot;Local Fresh" is a mobile application, jointly operated by the VMO and the FMO, to provide consumers with a variety of local high quality agricultural and fisheries products.

**Nurturing young talents** (also applicable to other fisheries sectors) – We will provide free and diverse training and internship opportunities, and co-organise higher education programmes related to agriculture and fisheries with local tertiary institutions. Trade organisations will be encouraged to launch collaborative or sponsored fisheries training and development projects through funding from the SFDF or private investments. We will foster youth exchange with the Mainland fisheries authorities and tertiary institutions.

Strengthening the management of oyster farming activities -

Through the joint effort of the inter-departmental working group, we will properly regulate the oyster culture activities in Deep Bay, including delineating oyster culture areas, limiting the number of oyster rafts in the areas as well as formulating and implementing the management measures related to culture operation, environmental hygiene and navigational safety etc., in order to provide the industry with a stable environment for development and to provide local premium fresh oysters to the public.

#### Deepening exchanges and co-operation with the Mainland -

We will strengthen co-operation and technical exchanges between the Mainland and Hong Kong in respect of modernised aquaculture, R&D and supply of fish fry and fish feed, and open up markets and sales channels for aquaculture products in the GBA.



Providing training and internship opportunities for young talents



Oyster farming in Deep Bay



Strengthening exchanges and co-operation with the Mainland

# **Pond Fish Culture**

#### Strengths

Various reputable local brands

Aquaculture techniques of individual indoor high stocking density fish farms have become more mature

The culture and techniques are worth preserving given its long history

Suitable environment and climate for the cultivation of various new species

#### **Opportunities**

Re-planning of aquaculture activities along with the development of Northern Metropolis

Contiguous fish ponds are conducive to intensive development

Setting up a fisheries research centre to facilitate R&D, industrial demonstration and technology promotion

#### **Challenges**

Scattered operations in small scale

Aging workforce with insufficient new blood

Reduced culture area

Keen competition with imported aquatic products

#### **Relevant Measures**

**Providing infrastructure support and improving operating environment** – By taking the proposed Sam Po Shue WCP in Northern Metropolis as a pilot, we will provide suitable land and supporting facilities to create a stable operating environment for long-term development by fish farmers and offer an eco-friendly fish pond habitat to maintain a balance between aquaculture and ecology, so as to promote the synergistic effect of pond fish culture and nature conservation.



Fishponds in north-west New Territories



Conceptual design of the fisheries research centre

**Setting up a fisheries research centre** – By setting up a new fisheries research centre in Northern Metropolis, we will conduct research and experiments on the development direction of modernised aquaculture, promote processing of aquatic products, build a platform for industrial demonstration and promotion of technology, and establish a remote real-time monitoring platform. It will also help deepen cooperation and exchanges in aquaculture R&D in the Guangdong-Hong Kong-Macao GBA.

#### Implementing modernised culture techniques and management

– In the proposed Sam Po Shue WCP, we will pursue high-density, high-tech and high-yield culture operations and introduce modernised aquaculture techniques and management to improve the production efficiency, quality and reduce pollution and carbon emissions. Demonstration facilities for high-density culture practices (such as container culture systems) will also be adopted at suitable locations.

**Building brands advocating ecological culture –** We will promote eco-friendly pond fish culture, develop eco-friendly fish and its processed products, establish a certification system for local quality ecological fish products and strive to promote brand marketing.

**Promoting the development of trade organisations** – We will encourage the development of trade organisations, strengthen their coordination function and provide opportunities for suitable fisheries organisations to participate in the future operation and management of the WCPs.



Smart feeding system



Container culture system

# **Leisure Fisheries**

#### Strengths

A profound foundation of fishermen history and culture

Fishing ports and villages with different styles and features

Long and undulating coastline with diverse marine habitats and fisheries resources

Some fishermen have successfully transformed their business to leisure fisheries operations

#### **Opportunities**

Planning for the establishment of FPAs, fisherman's wharfs and relevant supporting facilities to create favourable conditions for developing leisure fisheries

Leisure tourism with local characteristics has become popular in recent years

Emergence of "comprehensive" leisure fisheries integrating elements such as experiential, sightseeing, catering and education

#### Challenges

Lack of support of some laws and regulations for the transformation of fishermen and development of leisure fisheries

Fishermen are skeptical about engaging in leisure fisheries and lack the relevant knowledge and experience for operation

Low level of diversity of existing leisure fisheries projects and inadequate facilities for supporting their further development

#### **Relevant Measures**

**Creating favourable conditions for development** – We will plan for the establishment of FPAs and provide supporting measures that can promote the development of leisure fisheries such as floating multi-function leisure bases/platforms, fisherman's wharfs and relevant supporting facilities (including berthing and landing facilities) to create favourable conditions for fishermen to develop leisure fisheries. Meanwhile, appropriate and practicable measures will be formulated and implemented to help capture fishermen switch their business to sustainable leisure fisheries.



Conceptual design of floating bases

**Exploring dual uses of vessels and the possibility of relaxing relevant restrictions** – We are exploring with relevant departments the possibility of relaxing relevant restrictions to facilitate fishermen to use the same vessel for fishing and leisure activities (such as Class III fishing vessels or Class IV pleasure vessels which can engage in both fishing-related activities and the carrying of passengers at sea) while ensuring the safety of vessels in navigation and at sea, with a view to helping fishermen to transform their business to leisure fisheries.

**Enhancing measures to facilitate leisure fishing on mariculture rafts** – We will allow fish farmers to provide food and drinks on a limited scale to the public participating in leisure fishing on mariculture rafts, explore the feasibility of organising mariculture related guided tours and strengthen regulation of incompatible activities in such areas, so as to provide a better operating environment for sound development of the sector.

**Providing technical and financial assistance** – We will provide training courses, exchanges and field visits relating to leisure fisheries, encourage the trade to launch pilot projects of developing leisure fisheries activities based on commercial mode of operation through funding from the SFDF. We will also establish a platform for publicity to enhance promotion of local leisure fisheries, explore suitable development modes for leisure fisheries in Hong Kong and opportunities for jointly developing leisure fisheries in the GBA.





In the past, most of Hong Kong's agricultural land was located in the New Territories and primarily utilised for producing a variety of agricultural products. However, due to the rapid urbanisation of Hong Kong and the ample supply of crops from neighboring regions, the local agricultural industry gradually declined. Currently, the agricultural industry in Hong Kong operates at a relatively small scale, with farms predominantly focused on producing leafy vegetables, live pigs and live chicken. We have analysed the strengths, opportunities and challenges faced by the crop farming, urban farming, livestock farming and leisure farming sectors and proposed the following supportive measures:

# **Crop Farming**

#### Strengths

There is a market demand for local fresh and high-quality agricultural products

Hong Kong's free and open market enables the introduction of advanced agricultural production technologies and equipment

The implementation of the "Accredited Farm Scheme" ensures the quality and safety of local agricultural products

Local production shortens transport distance, reducing carbon emissions

#### **Opportunities**

Current policies actively encourage and support the modernisation and sustainable development of local agriculture

The "Sustainable Agricultural Development Fund" (SADF) offers financial assistance

The public recognises the local agricultural sector for its contribution towards creating an environmentally-friendly, healthy, and eco-conscious community, thus enhancing Hong Kong's liveability values

The APAs can be integrated into the future development of the Northern Metropolis and other districts to foster urban-rural integration

#### Challenges

Continuous urbanisation results in a significant depletion of high-quality agricultural land

The absence of incentives for landowners to lease out their land for agricultural use hampers the stable development of agriculture

Farms operate on a smaller scale with low cost effectiveness

Climate change leads to extreme weather which affects open field cultivation

Applications for construction of agricultural structures must comply with various statutory requirements, resulting in longer processing time

Aging workforce with insufficient new blood

#### **Relevant Measures**

**Designating quality agricultural land as APAs** – In 2024, we plan to consult stakeholders regarding the recommendations from the consultancy study on APAs, which include reserving quality agricultural land for active agricultural use in the long run through the designation of APAs to accommodate the urban-rural integration plans for the Northern Metropolis and other districts and release the remaining land for other development purposes.



Quality agricultural land

**Implementing Agri-Park Phase 2** – Agri-Park Phase 1 has commenced operation progressively since late 2022. To expedite the development of Agri-Park Phase 2, the Government will proceed with the first stage first, which covers approximately 19 hectares of land. At the same time, it will facilitate the establishment of a "Modernised Techno-Agricultural Park" (about 11 hectares), led by an agricultural organisation through a public-private partnership model, within the other part of Agri-Park Phase 2, with a view to securing a stable tenancy term and providing infrastructure for farmers as early as possible, as well as promoting agricultural modernisation and knowledge transfer to enhance productivity. **Facilitating the development of trade organisations** – We will encourage and support agricultural organisations to actively participate in the implementation of agricultural land rehabilitation, brand building and agricultural development programmes, and extend their participation to other agricultural fields. Moreover, efforts will be made to strengthen their functions as well as their roles in future agricultural development by means such as facilitating the establishment of the "Modernised Techno-Agricultural Park" led by the trade, co-organising the FarmFest with the trade and enhancing participation in "Accredited Farm Scheme" to promote the building of local brands.



Agricultural Park

**Reviewing legislation and regulations to improve the business environment** – We will conduct a review of the further streamlining of the procedures and requirements for applying for the construction of agricultural structures as well as the relaxing of the relevant area requirements, taking into account the stability and safety of previous agricultural structures and the actual needs of farmers.

**Facilitating technical knowledge transfer** (also applicable to other agricultural sectors) – We will promote sustainable and advanced production technologies to local farmers by organising technical seminars and workshops on different areas, including organic farming, horticultural techniques, plant pest and disease management, controlled-environment hydroponics, greenhouse production and modernised agricultural machinery, to enhance their productivity and competitiveness.

**Exploring diversified operation modes** – The AFCD and the VMO will continue to jointly develop the "Controlled Environment Hydroponic Research and Development Centre" to provide reference for the trade and investors through research and demonstration of more advanced technologies.

**Introducing high-quality crop varieties** – We are committed to exerting every effort to select, introduce and promote high-quality crop varieties, such as supersweet corns, mini watermelons, strawberries, hydroponic edible flowers and hydroponic cherry tomatoes. Our goal is to assist farmers in exploring new markets and improving their competitiveness, enabling them to achieve greater economic returns and meet the demands of the market.



Hydroponic edible flowers



Controlled Environment Hydroponic Research and Development Centre



High-quality crop varieties



Cherry tomatoes of different colours

**Building modern multi-storey crop farms** – We plan to reserve land in the Northern Metropolis to facilitate the trade to develop multi-storey crop farms. Advanced hydroponics or other modernised production technologies will be introduced to grow high-quality crops. This will promote the modernisation and sustainable development of the crop farming industry as well as creating value for the industry.

**Human resources and training** (also applicable to other agricultural sectors) – Continuing with the "Hydroponic Cultivation Pilot Attachment Programme", we aim to provide interested investors and start-up farmers with professional knowledge and internship opportunities. We will collaborate with local tertiary institutions offering agriculture-related bachelor's degree programmes, and organise educational activities and internship programmes to attract the younger generation to engage in agriculture. Additionally, we will provide training for farmers and individuals interested in entering the agricultural industry through the SADF.



Agricultural technical seminar



Hydroponic Cultivation Pilot Attachment Programme

# **Urban Farming**

#### Strengths

Market demand for fresh and highquality local agricultural products

Close to the market, thus reducing carbon emissions from transportation and providing environmentally friendly, fresh and high-quality products

Building a green landscape in the community, offering closeto-home experiential farming activities and science education

#### **Opportunities**

Current policies actively encouraging and supporting the modernisation and sustainable development of local agriculture

Financial support from the SADF

The Northern Metropolis prioritises "industrial drive" in its planning and incorporates urban farming elements. Citizens recognise that local agriculture contributes to an environmentally friendly, healthy, and green lifestyle, enhancing the livability of Hong Kong

The business sector advocates for environmental protection, social responsibility, and corporate governance

#### Challenges

Application for construction of agricultural structures must comply with various regulatory requirements, leading to longer processing time

Relatively high rents for urban land in general

Aging workforce with insufficient new blood

#### **Relevant Measures**

**Introducing urban farming elements into the planning stage of New Development Areas (NDAs)** – We will introduce urban farming elements into the planning stage, making effective use of urban spaces in Northern Metropolis and other NDAs, such as parks and outdoor public recreation areas. Additionally, we will explore opportunities to establish modernised commercial crop farms on the rooftops or podiums of government buildings. **Prioritising the launch of a pilot project on urban farming** – We will launch a pilot project on modernised urban farming in Ma On Shan Sai Sha Road Garden. The project will run for five years, with a trial expected in 2024. It will provide dwellers with high-quality and fresh agricultural products with low-carbon footprint. Simultaneously, it will offer premium green landscapes and venues for leisure tourism, public education and agricultural outreach activities, and enhancing the quality of community life.





Modern hydroponic farm

**Introducing urban farming to government buildings** – We will set up modern hydroponic farm-cum-stall on suitable rooftops of public markets and introduce the concept of "harvest-to-sale" (the first to be set up in the Tin Shui Wai Public Market under construction, expected to operate by 2027). We will also continue to explore the development of rooftop farms on other suitable government properties.

#### Encouraging business enterprises to develop modern urban

**farms** – We will work with public bodies or non-profit making organisations relating to green buildings, such as the Hong Kong Green Building Council Limited, to explore the possibility of setting urban farming as one of the indicators of green buildings. For example, incorporating urban farming into the assessment scheme of the Building Environmental Assessment Method Plus (BEAM+) to encourage business enterprises to incorporate the element of urban farming into the planning of property development projects. This integration aims to blend agriculture into urban life, promote the physical and mental well-being of the building users, and enhance Hong Kong's development and standards in sustainable architecture.



Photo credit: K-Farm by Avoid Obvious Architects and Imagennix

# **Livestock Farming**

#### Strengths

Strong market demand for fresh and high-quality local agricultural products

Hong Kong's free and open market enables the introduction of advanced agricultural production technologies and equipment

Local production helps reduce transport distance, leading to decrease in carbon emissions

#### **Opportunities**

Current policies actively encouraging and supporting the modernisation and sustainable development of local agriculture

Financial support from the SADF

Opportunities from the reservation of land for the development of techno-agriculture under the Northern Metropolis Development Strategy

#### Challenges

Short and unstable tenancy term for agricultural land hinders long-term industry investments

Application for construction of agricultural structures must comply with various regulatory requirements, leading to longer processing time

With increasing aspiration for environmental protection, the public expects the industry not to exert pressure on the environment

Aging workforce with insufficient new blood

#### **Relevant Measures**

#### Facilitating construction of multi-storey livestock farms -

We will advocate the adoption of multi-storey, environmentally friendly and enclosed buildings for livestock farming within the industry. Operating in an intensive and modernised manner, we will introduce technologies and automation equipment to effectively address environmental issues associated with livestock farming. This initiative aims to enhance farming efficiency, conserve land, protect the environment and achieve sustainable operation and development. We will provide government sites in the Sheung Shui area for the construction of multi-storey livestock farms, especially for those affected by government development projects. Additionally, we plan to reserve land in the Northern Metropolis to facilitate the industry's development of multi-storey livestock farms with the introduction of advanced technologies, high efficiency and environmentally friendly multi-story buildings for rearing high-quality livestock. The goal is to promote the modernisation and sustainable development of the livestock industry, contributing to industry value addition.

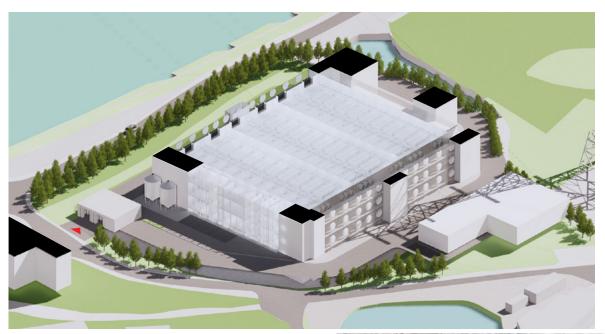


Modern livestock farm

**Providing technical and financial assistance** – We will provide support to the industry in formulating the *Guidelines for Architectural Design of Multi-Storey Livestock Farms* and conduct a feasibility study on a pilot project for the construction of multistorey livestock farms through the SADF. Besides, livestock farm operators may also apply for matching grants from the SADF to self-finance the construction of multi-storey livestock farms.

**Fostering the development of trade organisations** – We will encourage agricultural organisations to actively participate, seize collaborative opportunities and coordinate the construction of multi-storey enclosed buildings for intensive livestock production. By providing management knowledge and assistance to agricultural organisations, we aim to enhance their planning and implementation capabilities, as well as leadership and management functions. **Promoting local brands** – The Government will assist the industry in promoting local brands by providing financial support through the SADF so as to raise public awareness of local agricultural products, ultimately boosting the overall competitiveness. We will launch various marketing and promotional campaigns to promote brands developed by local farms.

**Creating opportunities** – We will deepen technological exchanges and co-operation between Guangdong and Hong Kong in the area of livestock farming in multi-storey buildings to further promote the sustainable development of the livestock farming industry in the Guangdong-Hong Kong-Macao GBA.



Modern multi-storey livestock farm design model



#### **Leisure Farming**

#### Strengths

Market demand for fresh and highquality local agricultural products

Hong Kong's free and open market enables the introduction of advanced agricultural production technologies and equipment

Citizens are keen to learn more about the unique rural history, culture and farming techniques

#### **Opportunities**

Citizens aspire to a healthy and green lifestyle, recognising that local agricultural development brings positive benefits to Hong Kong

The business sector advocates for environmental protection, social responsibility, and corporate governance

Emerging development of "integrated" leisure farming, combining elements such as sightseeing, experiencing, catering and education

#### **Challenges**

Application for construction of agricultural structures, processing of agricultural products and food business licences must comply with various regulatory requirements, leading to longer processing time

#### **Relevant Measures**

**Relaxing restrictions to provide scope for development** – We will relax the requirements for farms engaged in commercial agricultural production in applying for a food permit or licence and review the definition of "Agricultural Use" in statutory plans to facilitate the organisation of agriculture-related ancillary activities by farmers on their farms, such as selling homegrown products with simple cooking, conducting agricultural experiential education and guided tours.

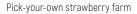
**Enhancing publicity and promotion** – We will promote leisure farming activities held by farms engaged in commercial agricultural production through the development and updating of the mobile application "Hong Kong Leisure Farms" to facilitate public visits to these farms. We will also organise large-scale carnival events to assist local farms in promoting and selling their agricultural products, as well as agriculture-related ancillary activities.

**Promoting diversity of the industry** – We will proactively review and establish a legal and safe operation mode for leisure farming under the existing legal framework to facilitate the development of more diversified agricultural ancillary activities by farms engaged in commercial agricultural production, so as to increase the incomes of farmers and maintain regular liaison and inspection of qualified farms, to ensure that the ancillary activities conducted by them are consistent with those declared and are operated in a safe manner.

**Providing technical and financial support** – We will provide farmers a one-stop service to facilitate their application for construction of agricultural structures. Farmers may also apply for financial assistance through the "Farm Improvement Scheme" to improve their farm facilities.



Mobile App "Hong Kong Leisure Farms"





# CHAPTER 5 Action Agenda

	FISHERIES	Short Term (2023 - 2027)		Medium Term (2028 - 2032)
Capture Fisheries	Continue to conserve and enhance local fisheries resources	Conduct restocking exercise with the public	Deploy artificial reefs and plan fo	r the establishment of FPAs
	Promote diversification of the industry	Develop processing technology for fisheries products Aberdeen Wholesale Fish Market		Complete the revitalisation of Aberdeen Wh
	Enhance the fisheries management measures and strengthen the enforcement to combat against illegal fishing activities so as to protect fisheries resources	Apply technologies to enhance enforcement efficiency	Establish a sea enforcement supporting platform	Launch en
	Assist capture fishermen to venture into offshore fisheries	Strive for the support of national status, indicators and quotas for the operation of offshore fishing vessels		
Mariculture	Application of modern technology to develop deep sea mariculture so as to steadily enhance the quality and production of fisheries products	New FCZs in Wong Chuk Kok Hoi and Mirs Bay come into operation	Provide deep sea cages and steel truss cages for renting to fishermen associations	New FCZs in outer Tap Mun and Po Toi (Sou
	Promote modernisation of existing FCZs	Promote the use of HDPE mariculture platforms	Set up offsite real time monitoring facilities	
	Enhance the publicity and promotion of fisheries products, explore effective sales chains to raise product value	Foster the development of diversified products such as prefabricated dishes	Enhance modern sales and marketing and ancillary facilities	
Pond Fish Culture	Provide stable operating environment and infrastructure support to maintain the balance between aquaculture and ecology	Conduct investigation and design study on Sam Po Shue WCP	Commence the construction of Sam Po Shue WCP	Integrate the concepts of nature conse fish culture, develop and promote bran
	Set up a fisheries research centre to promote modernised culture research and technical exchange	Study and prepare for the establishment of the fisheries research centre	Set up offsite real time smart monitoring facilities	Construct fisheries research centre
	Conduct research and trials on modernised high-density culture operations to improve efficiency of production	Conduct researches and trials on modernised high production culture systems		
Leisure Fisheries	Review legislation and regulations, provide convenience, and continue to enhance measures	Explore dual uses of vessels and relax relevant restrictions	Enhance management measures for leisure fishing on mariculture raft	Launch en
	Formulate and implement measures for the development of leisure fisheries	Establish a platform for external publicity to enhance promotion of local leisure fisheries		Set up facilities for supporting leisure
				20

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	Long Term (After 2033)
Vholesales Fish Market by phases	
enhancement measures continu	ously
Southeast) come into operation	
nservation and pond and for eco-pond fish	Implement modernised or eco- friendly culture for all the fish ponds within the WCP
Fisheries resear into operation by	ch centre comes y phases
enhancement measures continu	ously
ure fisheries	

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	P AGRICULTURE	Short Term (2023 - 2027)		Medium Term (2028 - 2032)
Crop Farming	Implement Agri-Park project to provide a stable operating environment and infrastructure to enhance productivity	Launch the "Modernised Techno- Agricultural Park" project through Public-Private Partnership of Agri-Park Phase 2	The "Modernised Techno- Agricultural Park" gradually comes into production	The first stage of Agri-Pa gradually comes into pro
	Designate APAs to encourage landowners to release agricultural land for long-term agricultural use and release the remaining agricultural land for other development purposes	Complete the consultancy study on APAs Prepare and carry out the planning of APAs, and formulate implementation policies and measures	Implementing Al	PAs measures
	Review regulations, providing convenience and implement enhancement measures continuously	Review the regulations on relaxing the restriction on the size of agricultural structures		Launch en
Urban Farming	Explore the development of planning measures and environmentally friendly building guidelines for urban farming and continuously implementing enhancement measures	Explore the possibility of incorporating urban farming into the assessment scheme of the "Building Environmental Assessment Method Plus (BEAM+)"	Introduce urban farming elements in the planning stage and "urban farms" in the Northern Metropolis	Launch en
	Continuously explore the establishment of urban farms in suitable urban spaces and providing technical support	Launch the first pilot project on urban farming in Ma On Shan Sai Sha Road Garden	Set up the first modern hydroponic farm-cum-stall at the Tin Shui Wai Public Market	Establish
Livestock Farming	Promote the construction of modern and environmentally friendly multi-storey livestock farms to achieve sustainable development	Complete the consultant study on the Architectural Design Guidelines for Multi- Storey Livestock Farms Continuously deepening technological exchange with the Mainland and providing training for the industry	Complete site formation for the first multi-storey livestock farm	The first multi-storey lives farm comes into operation
	Promote local brands so as to add value to the products	Assist the industry in developing their own brands		
Leisure Farming	Review regulations, provide convenience and implement enhancement measures continuously	Relax the requirements for commercial farms to apply for food permits or licences	Review regulations to facilitate the development of agriculture- related auxiliary activities	Launch en
	Publicise and promote local leisure farming industry	Enhance publicity and promotion work		
	40			41

	Long Term (After 2033)
i-Park Phase 2 production	
enhancement measures continu	ously
enhancement measures continu	ously
	ousiy
sh urban farms in other suitable u	irban spaces
ivestock Encourage the industrition livestock farms in the l	y to build other multi-storey Northern Metropolis
enhancement measures continu	ously



Blueprint for the Sustainable Development of Agriculture and Fisheries

http://www.eeb.gov.hk/food/cn/our\_work/afblueprint.html https://www.afcd.gov.hk/A&Fblueprint.html

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