



MEDIA FACTSHEET

SINGAPORE AQUACULTURE PLAN TO UPLIFT LOCAL AQUACULTURE SECTOR

SFA's Marine Aquaculture Centre (MAC) as the anchor research campus of AquaPolis

Singapore imports more than 90 percent of our food. This makes us vulnerable to food supply chain disruptions that could occur due to global factors such as climate change, geopolitical developments, disease outbreaks or export restrictions by foreign governments. To ensure our food resilience, we have set a “30 by 30” goal to build the capability and capacity of our agri-food industry to sustainably produce 30 percent of our nutritional needs by 2030.

2 Singapore’s aquaculture sector contributes significantly to our “30 by 30” goal. We have identified seafood as our priority area as it is one of the more productive and resource-efficient food types, a good source of protein and suitable for land-scarce Singapore.

3 To uplift the local aquaculture sector, the Singapore Food Agency (SFA) developed the Singapore Aquaculture Plan that seeks to transform the aquaculture sector to also become more productive and sustainable.

Strategies to uplift the aquaculture sector

4 As part of our Singapore Aquaculture Plan, we will transform the sector in three ways:

i. Invest in research and innovation

5 Singapore aspires to be a centre for aquaculture research and innovation. This is why we continue to invest in sustainable tropical aquaculture. The Government has made available S\$309 million under the Singapore Food Story R&D programme to drive research into sustainable urban food solutions, future foods, and food safety science and innovation, of which over S\$60 million is allocated to aquaculture research and innovation.

6 To support Singapore in becoming a leading research and innovation hub for sustainable tropical aquaculture, AquaPolis, an aquaculture research development programme to transform the aquaculture research landscape, was introduced in November 2022.

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7 The [AquaPolis programme](#) brings together research institutes, Institutions of Higher Learning (IHL), farms and companies to reap strategic synergies in developing innovative and sustainable aquaculture solutions. Scientists from SFA and research institutions such as Temasek Life Sciences Laboratory (TLL) and National University of Singapore (NUS) will come

together to serve as the brain trust of AquaPolis. Under the programme, we will also cultivate talent for the local aquaculture sector.

8 Through the AquaPolis programme, scientists will develop solutions for real world aquaculture challenges, with the objective of addressing problem statements from our farms. For example, the scientists will look into developing superior fingerlings with traits such as faster growth rates, higher Omega-3 content and reduction in fish mortality from common fish diseases.

9 The research activities of AquaPolis will span across Singapore, from land-based research institutions to the Johor Straits and Southern Waters where our sea-based fish farms operate. SFA's MAC at St John's Island, which aims to deepen Singapore's expertise in the areas of aquaculture genetics, nutrition, and health, will serve as AquaPolis' anchor research campus.



The Singapore Aquaculture Plan will comprise 3 distinct centres – the West Johor Strait, East Johor Strait, and AquaPolis in the Southern Waters.

10 AquaPolis researchers can also build on MAC's expertise in fish husbandry (e.g., breeding and hatchery production) to develop solutions. In fact, we have already seen synergistic partnerships through the [SFA-INVE Hatchery Technology Centre at MAC](#), jointly set-up by SFA and INVE Aquaculture under the AquaPolis programme, to develop advanced hatchery technologies compatible with tropical marine species and environments. The centre will also serve as a training hub for farmers from Singapore and the region.

11 MAC also provides shared facilities such as replicated tank systems and biological materials such as eggs, larvae, rotifers and microalgae for research. There are also designated incubator space for start-ups to testbed and commercialise R&D results. These inputs of husbandry-related expertise, shared facilities, incubator space and access to biological materials will enable researchers in Singapore to conduct aquaculture R&D and translate the results.

12 Dr Yue Gen Hua, Senior Principal Investigator at TLL, who is working on breeding, genetics, and genomics projects, said: "AquaPolis brings together local and overseas aquaculture researchers and industry partners to innovate and develop sustainable solutions

in all aspects of the aquaculture industry, including selective breeding, disease control, fish nutrition and water quality control. My colleagues and I look forward to smarter breeding techniques that significantly contribute to the growth of tropical aquaculture in Singapore. We hope to inspire the industry, building more capacities and capabilities that sustainably enhance our food security."

13 To support Singapore's ambitions to lead in aquaculture research and innovation, we will enhance our facilities to attract companies and researchers to base themselves in Singapore. As the anchor research campus of AquaPolis, MAC's facilities will be enhanced to cater to R&D needs, with upgrades such as the installation of recirculating aquaculture systems for research in intensive farming within closed environments.

14 As part of longer-term planning to support the aquaculture sector and Singapore's food security vision, SFA will review how our research facilities could be developed and integrated with other aquaculture infrastructure such jetties and hatcheries in the future.

ii. Increase and optimise spaces for aquaculture

15 SFA will launch new sea spaces on 20+10-year leases in the next few years to provide farmers with certainty on the tenure of sea spaces, and a longer runway to amortise their investments in high-tech, productive, and sustainable farming systems. SFA has been conducting studies and surveys to identify suitable sea-based farming sites.

iii. Help industry adopt technology and better farm practices

16 SFA has been working with sea-based farms to improve their farming and management practices, as well as leverage science and technology to raise productivity and innovation.

17 Farms can tap on the \$60 million Agri-Food Cluster Transformation (ACT) Fund which co-funds the adoption of productive, resource-efficient, and sustainable farming technologies and systems.

18 To encourage the adoption of sustainable sea-based farming management methods, SFA has been encouraging fish farms to use pelleted feed, that can minimise the environmental impact. SFA will also deploy real-time water quality monitoring stations and conduct routine samplings of other water and seabed quality parameters around our farming areas to monitor the overall health of our marine environment. This would serve as an early warning system for adverse environmental conditions such as low dissolved oxygen, and in turn safeguard our farms' production.

19 SFA launched an [industry guide for sea-based farms](#) in November 2022, to provide farmers with an overview of the procedures and regulatory requirements involved in setting up a sea-based farm in Singapore. In addition to providing biosecurity guidelines for aquaculture farms, SFA will also provide [aquatic animal health services \(AAHS\)](#) to help farms strengthen biosecurity so that they can prevent and control diseases in their farms.

Transforming the aquaculture sector

20 Our vision is to grow the aquaculture industry into a sustainable sector contributing to our food security, and eventually a leader in sustainable tropical aquaculture. SFA will continue to work with the industry to develop the potential of Singapore's aquaculture sector by transforming it to become more productive and sustainable.

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