

From sky farms to lab-grown shrimp, Singapore eyes food future

REUTERS, Singapore
Singapore, the tiny Southeast Asian city-state, is an unlikely place for a farming revolution.

With tiered fish farms, vegetable plots atop office buildings and lab-grown shrimp, the island aims to beef up its own food production and rely less on imports to feed its 5.6 million people.

Singapore produces about 10 percent of its food but as climate change and population growth threatens global food supplies, it aims to raise that to 30 percent by 2030 under a plan known as '30-by-30'.

The challenge is space. With only 1 percent of Singapore's 724 sq km (280 sq miles) land area devoted to agriculture and production costs higher than the rest of Southeast Asia, the pressure is on new urban farmers to answer the government's call to "grow more with less".

"Whenever I talk about food security in Singapore, I tell folks don't think land - think space. Because you can go upwards and sideways," said Paul Teng, a professor specialising in agriculture at Nanyang Technological University.

Sustenir Agriculture is one of more than 30 vertical farms in Singapore, which has seen a doubling in so-called sky farms in three years.

The hydroponic farm grows non-native varieties like kale, cherry tomatoes and strawberries indoors under artificial lights and sells the produce to local supermarkets and online grocers.

Sustenir raised \$522 million (\$16 million) from backers including Singapore state investor Temasek and Australia's Grok Ventures last year, which will be used for an expansion in Singapore and opening in Hong Kong.

Temasek is also providing funds to Apollo Aquaculture Group which is building a \$570 million highly-automated, eight-storey fish farm. Apollo says the new farm will deliver more than a twenty-fold increase in its annual output of 110 tonnes of fish.

"It is too unpredictable to do things now in the traditional way," said Apollo CEO Eric Ng, citing problems with algae blooms in recent years that have wiped out farmers' fish stocks.

Singapore has not given a total pricetag for '30-by-30', first unveiled in March, but it has various funding schemes.

Aside from Temasek, the government has put aside \$5144 million for research and development into food, and \$563 million for agriculture firms to use technology to boost productivity.

It also plans to build an 18-hectare (44 acre) agri-food site for indoor plant factories and insect farms by mid-2021.

"Investor interest in urban agriculture is rising as environmental pressures and technology developments catalyse new ways of producing food locally," said Anuj Maheshwari, a managing director at Temasek who focuses on agri-business.

Not everyone is convinced by the focus on high-tech. Egg farmer William Ho, 53, says the

government is putting too much stock in new agri-tech firms with no track record.

"Many of them have failed. That's why I'm always asking the government why don't you invest in us old-timers. We are more practical," he said.

A major hurdle for urban farmers, said Teng, are the expensive inputs like technology that puts their products out of reach for many consumers.

One Singapore firm still in its infancy but hoping to reach a mass market is Shioik Meats, which aims to be the world's first to sell shrimp grown from cells in a lab.

The process, which is harmless to animals, involves cells grown in a nutrient solution in tanks. After four to six weeks, the fluid is siphoned off and leaves behind raw shrimp mince.

Shioik is backed by Henry Soesanto, CEO of Philippines' Monde Nissin Corp IPO-MNIP.S, which owns British meat substitute firm Quorn.

Shioik co-founder Sandhya Sriram hopes to tap into the enthusiasm for alternative protein that propelled the market value of U.S.-based Beyond Meat to more than \$5 billion after its debut this month.

After raising \$4.6 million in seed funding this year, Sriram said Shioik Meats plans to sell its product in one or two premium restaurants by late 2020, and by 2030 hopes to produce enough shrimp meat to feed Singapore.

"It ('30-by-30') is achievable but it depends which part of the food industry they want to take a leap of faith on," she said.

M Shaifur Rahman Mazumdar, managing director of Chittagong Stock Exchange, poses at a "Promotional Reward Program-April 2019" in Chattogram recently. The bourse rewarded top traded terminals of stock brokerage houses from Dhaka, Chattogram and Sylhet in separate events.



CHITTAGONG STOCK EXCHANGE



Kazi M Aminul Islam, centre, executive chairman of Bangladesh Investment Development Authority (Bida), attends the opening of a training for trainers organised by its Entrepreneurship Creation and Skill Development project at its auditorium in Dhaka yesterday.

Malaysia PM proposes common Asia trading currency

AFP, Tokyo
East Asia should consider a common regional trading currency based on gold to promote commerce, and free the region from relying on dollar transactions, Malaysia's prime minister said Thursday.

Mohamad Mahathir said the proposed currency could be used for regional trade, but would not replace national currencies for use at the domestic level.

"In the Far East if you want to come together, we should start with a common trading currency, not to be used locally but

for the purpose of settling of trade," he said at the Future of Asia forum in Tokyo.

"At thzze moment we have to depend upon the US dollar but the US dollar is also not stable. So the currency that we propose should be based on gold because gold is much more stable," he added.

He said the exchange rate of the regional currency would "relate to" the performance of individual countries and would help harmonise regional trade.

"That way we know much we owe, we know how much have to pay, in the currency of east Asia," Mahathir.

S&P rating remains same for Bangladesh

FROM PAGE B1
Low economic development, as represented by per capita GDP of around \$1,900 for 2019, has been one of Bangladesh's main rating constraints, it said.

This income level offers a weak and narrow revenue base, in turn limiting the fiscal and monetary flexibility needed to respond to exogenous shocks.

Despite the low-income level and numerous structural impediments, particularly in infrastructure, Bangladesh's real per capita GDP growth of about 5.9 percent over 2013-2022 indicates consistently strong real economic growth.

Garment exports and worker remittances are key anchors of Bangladesh's strong external position but face risks from global factors and maturing of construction boom in host countries.

The country's fiscal flexibility is constrained by a large interest burden from the issuance of high-yield national savings certificates.

However, many basic social and infrastructure needs remain unmet, implying higher outlays ahead for which the fiscal capacity of the government is lacking.

Although the government's debt burden is low, its high interest expense at 20 percent of revenue limits fiscal flexibility.

Due to the government's increasing reliance on the costlier national savings schemes rather than commercial borrowing, S&P expects the debt-servicing

ratio to remain well above 15 percent for fiscals 2019-2022.

Furthermore, more than 40 percent of total government debt is denominated in foreign currency, albeit mostly from official concessional donors.

The American ratings agency went on to forecast that the net general government debt will average 4.2 percent of GDP annually over fiscals 2019-2022.

"We assess a limited risk related to contingent liabilities from financial institutions. The banking sector remains small with assets less than 100 percent of GDP, which informs our view of the contingent risk it poses."

Bangladesh's exports have gained momentum, which narrowed the deficit in the first half of fiscal 2018-19.

"We expect the trend of export recovery to continue."

The agency expects remittances to recede and stabilise once the construction boom in host countries for Bangladeshi workers mature over fiscal 2019-2020.

This implies that the gap between the country's external debt and its liquid external assets is unlikely to reduce.

S&P may raise the ratings if the government implements fiscal measures that strengthen future fiscal performances, or lower it if fiscal or external metrics weaken materially from current levels.

This could happen if persistent fiscal slippages cause net general government debt to overshoot 30 percent of GDP.

Japan business lobby urges sales tax hike to proceed as planned

REUTERS, Tokyo

The head of a Japanese business lobby said a planned sales tax hike should proceed in October to sustain the social security system for a rapidly ageing population, despite calls from elsewhere to postpone it given growing economic challenges.

The intensifying Sino-US trade war and slowing Chinese economy threaten to derail Japan's export-reliant economy, keeping alive expectations that Prime Minister Shinzo Abe may forego a twice-delayed increase in the national sales tax.

"Economic uncertainties persist even now but I don't think they will morph into a crisis on the

scale of a Lehman shock, so I want (the hike) to proceed," said Akio Mimura, head of the Japan Chamber of Commerce and Industry, which represents Japanese small and medium-sized businesses.

"With just a few months left before October, it's impossible to delay it again." While a tax hike could hurt growth, it would also help Japan achieve fiscal reform in the long run, which will more than offset the near-term pain, Mimura told Reuters in an interview conducted on Wednesday.

Japan needs revenue to pay for bulging welfare costs to support an ageing population and curb the industrial world's heaviest public debt burden, which is twice the size of its \$5

trillion economy.

The government plans to spend 2 trillion yen (\$18.3 billion) in offsetting measures, which Mimura said should help ease the tax hike pain "to a considerable degree".

Further delays could cause confusion to many Japanese firms that have made significant preparations to overcome the shift to the 10 percent sales tax, Mimura added.

His view is shared by other Japanese corporations: more than 60 percent of firms called for the sales tax to rise as planned, a Reuters Corporate Survey showed last month, although they felt that additional stimulus was needed to cushion the blow on the economy.

Market access should continue

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Hoping that all human beings would live in a civilised and fair way in the world, the minister said: "We want fair trade and deals for everyone and this is the call of time...so these international support measures should continue."

Mentioning that Bangladesh would continue to work with UNESCAP in the coming days, Mannan said: "Asia is moving up and we're also moving up. Let us put our hands together in Asia, in the North and in the West."

Recognising the role of the expatriate Bangladeshi workers, he said about 11 million Bangladeshis work in different countries and are contributing greatly to the economy.

The minister said Bangladesh has done fairly well over the last few years thanks to the dynamic leadership of Prime Minister Sheikh Hasina.

Delays in freight train service irk importers

FROM PAGE B1
Divisional Railway Manager (East Zone) Md Borhan Uddin admitted that the congestion resulted from the strike and cyclone.

Denying that the number of trips has been reduced, he blamed the Kamalapur ICD authority for making delays in unloading containers from trains against the backdrop of equipment shortages.

Ahmedul Karim Chowdhury, head of Kamalapur ICD, said unloading delays used to occur a month back and they brought in new equipment to address the situation.

He blamed the railway for not providing the required number of train trips.

"We sought at least three train trips a day from the railway to transport over 150 TEUs of containers daily. But in the past 15 days the railway managed to allocate only two trains a day," he informed.

Borhan Uddin said they were trying to use an increased number of wagons.

Faruq urged immediate coordinated measures to improve the situation so that businesses do not get harmed.

Summit, Mitsubishi brief PM on progress

FROM PAGE B1
The planned project includes four units of 600-megawatt combined cycle power plants, two units of onshore liquefied natural gas terminal with 380,000-cubic metre capacity, oil terminals with capacity of 100,000 tonnes, and one 300MW HFO-based power plant.

Beginning from 2019, the project is designed to be completed at a global best tariff by 2023, according to the statement.

Summit will be the majority owner of the project, which will double its generation capacity.

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কম্পিউটার সামগ্রী মোরামত করার দরপত্র বিজ্ঞপ্তি

ক্র.সং	বিভাগ	বিবরণ
১	মন্ত্রণালয়/বিভাগ	অভ্যন্তরীণ সম্পদ বিভাগ, অর্থ মন্ত্রণালয়, ঢাকা।
২	দপ্তর/সংস্থা	কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট।
৩	দরপত্র সংগ্রহকারী দপ্তর/সংস্থার নাম	কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট।
৪	সমগ্রকারী দপ্তর/সংস্থার কোড	১-১১০২০৪-১০২০২৪
৫	সমগ্রকারী দপ্তর/সংস্থার জেলা	সিলেট
৬	দরপত্র আহবানের কারণ	কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট এর জন্য কম্পিউটার সামগ্রী মোরামত।
৭	দরপত্রের আরক নং	০৮/০৬/২০১৯/২০২৫.০১.০০৫.১৯
৮	দরপত্রের পদ্ধতি	উন্মুক্ত দরপত্রের মাধ্যমে।
৯	বাজেট ও অর্ধের উৎস	জাতীয় রাজস্ব বোর্ডের অনুকূলে "অর্থনৈতিক কোড-৩২৫১০১৩" এর আওতায় "কম্পিউটার" খাতে বরাদ্দকৃত অর্থ হতে।
১০	দরপত্র প্যাকেজ নং ও নাম	প্রযোজ্য নহে।
১১	দরপত্র প্রকাশের তারিখ	২৯/০৫/২০১৯খ্রিঃ।
১২	দরপত্র সিডিউল সর্বশেষ প্রান্তির তারিখ	১১/০৬/২০১৯খ্রিঃ, সকাল ১২.০০ ঘটিকা পর্যন্ত।
১৩	দরপত্র দাখিলের স্থান, তারিখ ও শেষ সময়	৪র্থ তলা, কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট, কে.এস.আর টাওয়ার, বোরহানউদ্দিন রোড, মেদিনিয়া পয়েন্ট, উপশহর, সিলেট। ১১/০৬/২০১৯খ্রিঃ, বেলাঃ ৪.০০ ঘটিকা পর্যন্ত।
১৪	দরপত্র খোলার তারিখ ও সময়	১১/০৬/২০১৯খ্রিঃ, বেলাঃ ৪.৩০ ঘটিকা।
১৫	দরপত্র সম্পাদনকারী দপ্তরের ঠিকানা	কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট, কে.এস.আর টাওয়ার, বোরহানউদ্দিন রোড, মেদিনিয়া পয়েন্ট, উপশহর, সিলেট।
১৬	দরপত্রদাতার যোগ্যতা	সরকারি/ব্যক্তিগত/স্বতন্ত্র বা অন্য কোন সংস্থার কম্পিউটার মোরামত সরবরাহের অভিজ্ঞতা। দরদাতা কর্তৃক হালনাগাদ নয়ানকৃত ট্রেড লাইসেন্স, ব্যাংক সলভেন্সি, আয়কর, ভ্যাট নিবন্ধন সার্টিফিকেট, নাপরিকল্পিত সনদ, অভিজ্ঞতার সনদ থাকতে হবে। উল্লিখিত কাগজপত্র/দলিলাদির সত্যায়িত অনুলিপি দরপত্রের সাথে সংযুক্ত করতে হবে।
১৭	কাজের বিস্তারিত বিবরণ	সিডিউল উল্লেখ আছে।
১৮	সিডিউলের মূল্য ও ধরণ	প্রতি সেট ৫০০/- (পাঁচশত টাকা) যা অর্থনৈতিক কোড নং- ১-১১৩৩-০০১৮-২৬৮১তে ট্রেজারী চালানের মাধ্যমে জমা প্রদান করতে হবে।

কাজের বিবরণঃ						
ক্র.সং	লট নং	কাজের নাম	কাজের স্থান	নিরাপত্তা জামানতের পরিমাণ	কাজ সম্পন্ন করার সময়	
১		কম্পিউটার সামগ্রী মোরামত	কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট	সিডিউল মোতাবেক	সিডিউল মোতাবেক	
দরপত্র আহবানকারীর বিবরণীঃ						
২০	দরপত্র আহবানকারী কর্মকর্তার নাম					মোহাম্মদ সফিউর রহমান।
২১	দরপত্র আহবানকারী কর্মকর্তার পদবী					অতিরিক্ত কমিশনার (চসদাঃ)।
২২	দরপত্র আহবানকারী কর্মকর্তার ঠিকানা					কাস্টমস, এন্ড্রাইজ ও ভ্যাট কমিশনারেট, সিলেট।
২৩	দরপত্র আহবানকারী কর্মকর্তার ফোন ও ই-মেইল					টেলিফোনঃ ০৮২১-৯১৪৪৬৩, ই-মেইলঃ sylhetcustoms@yahoo.com
২৪	মন্তব্য					কর্তৃপক্ষ কোন কারণ দর্শানো ব্যতীত সকল/যে কোন দরপত্র গ্রহণ বা বাতিল করার ক্ষমতা সংরক্ষণ করেন।