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THE STRAITS TIMES



An aerial view of the southern part of Lazarus Island (top left) and Kusu Reef, off the northern shore of Kusu Island (bottom right). The boundaries of the proposed marine park are expected to be finalised by 2025, after the National Parks Board finishes discussions with government agencies and community partners. ST PHOTO: LIM YAOHUI

S'pore plans to designate second marine park in its southern islands

Southern part of Lazarus Island, Kusu Reef are home to rare rocky shore, coral habitats

**Shabana Begum
and Leow Wen Xuan**

Singapore's rich marine biodiversity may lie out of sight for many, but a second marine park that is being planned for the nation's southern islands could offer people here a glimpse of the thriving ecosystems underwater.

National Development Minister Desmond Lee announced on May 9 plans to designate the southern part of Lazarus Island and the reef off Kusu Island as the Republic's second marine park. From knobbly sea stars and fluted giant clams hiding in rocky shores to intact coral reefs, the area is home to exceptionally rich marine life.

Speaking to the media on Lazarus Island, Mr Lee said: "When we finally designate the second marine park, it will enable us to strengthen marine and terrestrial conservation, provide tremendous opportunities for education and research, and provide spaces for nature-based recreation to be done sensitively."

The country's first marine park –

the 40ha Sisters' Islands Marine Park – was announced in 2014, and 2024 marks its 10th anniversary.

With a second marine park, island hoppers will have more opportunities to learn about marine biodiversity in the southern waters while enjoying recreational activities.

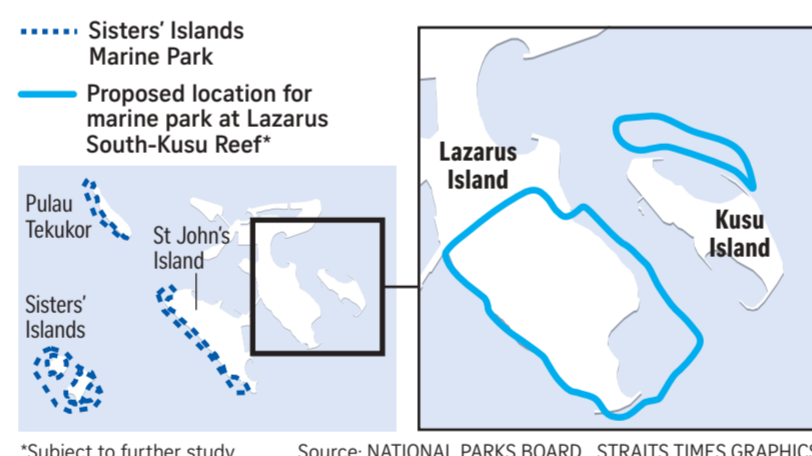
By 2025, the boundaries of the proposed marine park are expected to be finalised, after the National Parks Board (NParks) finishes discussions with government agencies and community partners.

The discussions will also cover the types of features and amenities, such as walking trails, that visitors can expect from the second marine park.

The authorities will also be working with heritage experts, as the history of Lazarus Island is tied with the orang laut (sea nomads) and colonial Singapore, which stored ammunition on the island, added Mr Lee.

Singapore's first marine park comprises Big Sister's Island, Small Sister's Island, and the western reefs off both St John's Island and Pulau Tekukor.

Proposed site



*Subject to further study Source: NATIONAL PARKS BOARD STRAITS TIMES GRAPHICS

In the second half of 2024, Big Sister's Island – which has been closed to the public for enhancement works since 2021 – will reopen with new features such as a forest trail and a lagoon tidal pool that visitors can snorkel in.

Lazarus and Kusu islands are a 30-minute boat ride from Marina South Pier.

About 60 per cent of Singapore's reef area has been lost to land reclamation and development, leaving healthy and intact reefs to be most-

ly found in the Southern Islands.

The Republic's waters are home to around 250 species of hard corals of various colours and shapes – about one-third of the world's more than 800 species of hard corals.

To date, 97 and 141 coral species have been sighted at the reefs off Lazarus Island and Kusu Island, respectively, including rare ones. The southern part of Lazarus Island has one of the country's remaining rocky shore habitats and one of the largest mature secondary coastal

forests. The island also has a large intertidal lagoon, with creatures such as knobbly sea stars.

With urban development, much of Singapore's natural rocky shores have been replaced with coastal defence structures such as seawalls. Labrador Nature Reserve has one of the last remaining natural rocky shores on the mainland.

Kusu Reef, which is off the northern shore of Kusu Island, is home to a host of marine life, including cuttlefish, stingrays and lobsters. The reef that runs alongside the entire Sisters' Islands Marine Park is known as Singapore's "mother reef" that seeds coral larvae to other marine habitats. The reefs at Lazarus, on the other hand, receive the baby corals from Sisters' Islands, allowing them to take root and grow.

The high ecological significance of Lazarus and Kusu islands was confirmed after NParks completed the ecological profiling exercise for Singapore's coastal and marine environment in 2022. The exercise helped to identify the country's biodiversity hot spots, and how flora and fauna disperses through land and sea.

As the reef areas off Kusu Island are extensive and well-consolidated, they are an ideal location for coral transplantation and restora-

tion efforts, which can help to expand Singapore's overall coral cover, said NParks.

Over the next 10 years from 2024, 100,000 corals will be progressively planted and grown in Singapore's waters to beef up marine life and protect coastlines from waves and storms.

Emeritus Professor Chou Loke Ming of the National University of Singapore's Department of Biological Sciences told The Straits Times that it had been "a dream come true" when the first marine park was established in 2014.

"I never expected 10 years after that, we can have a second. It shows commitment to preserve and protect our natural heritage," said Prof Chou.

Having recommended Kusu Island as a protected area in 2012 as an ideal source of coral larvae, Prof Chou said that all the work he and other conservationists have done has come to fruition with the proposed marine park.

While it is uncertain how the proposed second marine park will be safeguarded, Sisters' Islands Marine Park has laws against fishing, collecting corals and mooring boats within the site, under the Parks and Trees Act.

Dr Jani Tanzil, senior research fellow and facility director at the St John's Island National Marine Laboratory, said that with more long-term protection provided by the marine park, researchers are also able to conduct longer-term research without having to worry their research sites on the islands are going to be redeveloped into a resort, for example.

She added that factors affecting corals such as climate change do not happen overnight, but happen over decades or longer, so more time is needed to observe how corals respond to these factors.

Kusu Island is a destination for devotees who make a yearly pilgrimage to the island's Da Bo Gong (Tua Pek Kong) Temple. The proposed marine park is unlikely to interfere with the pilgrimage season as the reef area planned to be gazetted is offshore.

In 2024, short-term staycations in eco-friendly "tiny houses" were introduced on Lazarus Island.

In response, nature groups raised concerns that allowing visitors to stay may have detrimental impacts on the fragile ecosystem. For example, heavy litter such as glass bottles left by visitors may damage corals.

To balance human activity and marine conservation, Prof Chou believes that exposing people to nature is key. "Because of the limitations of space, we can't afford to have completely protected areas out of bounds to everyone. We need to allow people to enjoy being in a natural setting."

Through being exposed to the natural environment and seeing corals, people can learn to appreciate and protect the environment, he said.

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Tan Tock Seng Hospital to roll out flexi-shifts for nurses by end-2024

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Tan Tock Seng Hospital (TTSH) will roll out a flexi-work arrangement for all 2,500 nurses in 27 inpatient wards by the end of 2024, making it the first public hospital to do so.

Having piloted what it calls a liquid nursing initiative in October 2023 with 52 nurses in one ward, the hospital has so far introduced the arrangement to 200 nurses in four wards.

About 90 per cent of the nurses have opted for flexi-shifts, and at any one time, about 30 per cent to 40 per cent will be on flexi-shifts.

Typically, the nurses work three routine shifts a day, starting from 7am for the first eight-hour shift, to

8pm for the 12-hour night shift. With this initiative, they can now opt for a mix of routine and flexible shifts each week, as long as they fulfil the 80-work-hour requirement every fortnight.

There are six flexible shifts, with variable start and finish times, as well as durations, to apply for. They range from four hours with flexible timing to seven hours from noon to 7pm, and the 12-hour shift from 7am to 7pm.

TTSH chief nurse Hoi Shu Yin said during a media briefing that the nature of nursing requires routine shifts, with handover done between each shift taking an hour or more, but this process has been shortened to around 15 minutes with the use of technology.

The hospital has also redesigned nursing, with nurses on flexi-shifts handling specific duties, while

those on the routine shifts continue with the full duties.

Calling it a breakthrough for nursing, Dr Hoi said the flexi-work arrangement will help to strengthen the attractiveness of the profession, now that the attrition rate has stabilised after the Covid-19 pandemic and TTSH can focus on retaining nurses.

The nursing sector has always grappled with manpower strains, and the Government has been supporting it with various incentives. In particular, TTSH, like other hospitals here, lost a number of nurses during the pandemic.

Dr Hoi said TTSH is starting with the inpatient wards but plans to eventually scale up to all the nurses in the hospital, which now totals about 4,000.

A major challenge is the rostering of the shifts. It is done manually

now, but TTSH is working with a vendor to come up with artificial intelligence-supported software that will generate the rosters.

She said this arrangement will give nurses the autonomy to continue nursing through their life stages, commitments and professional aspirations.

Several focus group discussions with nurses were held in 2023 to find out about their challenges at work, and the issues that came up included a lack of flexibility in shift start and end times.

Dr Hoi said she has seen some nurses who are passionate about inpatient care choosing to transfer to other departments because of the daytime hours so they can spend more time with their young children.

Nurses who have opted for the flexi-shifts include new parents,

those with elderly parents and even those who are newly married. One of them is senior staff nurse Tan Jia Hui, 31, who has been with TTSH for seven years.

She used to rotate among the three shifts, but has since October 2023 opted for two rotational shifts a week so she can spend more time with her two-year-old son.

For instance, under the new flexi-shifts, in a week, she could be working from 10am to 7pm one day, followed by 7am to 7pm the next day, and 8am to 2pm on Saturdays. Previously, she would have to do at least four night shifts a month, but she has requested not to do any night shifts for now.

Nurses need to give three weeks' notice if they want to opt for the flexi-shift arrangement.

Ms Manjares Melody Blag, 34, a Filipino senior staff nurse with an

eight-month-old son, opted for flexi-shifts when she returned to work in November 2023.

Instead of doing two night shifts a week, she now does one night shift a week, she said.

The arrangement has enabled her to have a better quality of life, especially as her husband has resigned from his job as an airport technician when their baby arrived.

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