

Annex A: Summary of Singapore Pavilion features and highlights

A prototype for liveable and resilient cities of the future, the Singapore Pavilion will echo Singapore’s vision of being a City in Nature, as part of the Singapore Green Plan 2030.

The Pavilion features and highlights are summarised under the Pavilion themes of **“Nature. Nurture. Future.”**.

<p>NATURE</p> <p>The Pavilion’s biophilic design and architecture</p>	<ul style="list-style-type: none"> • Designed by Singapore-based architectural practice WOHA, known for its distinct approach to biophilic design and integrated landscaping, the Singapore Pavilion showcases how the built environment does not have to displace nature, but can, in fact, co-exist with it. • The creative vision for the Singapore Pavilion is that of a dense, multi-layered three-dimensional green space – reflecting Singapore’s own vision of being a City in Nature. • The Ground Garden will be a welcoming space for visitors. This greenery extends into the Pavilion, where visitors will experience a lush array of trees, verdant shrubs, vibrant orchids and edibles, capped with a hanging garden and anchored by three large modular cones draped in vertical greenery. • These modular cones, each housing sensory and multimedia exhibits, form the centrepieces of the pavilion, and are connected by a meandering Canopy Walk leading to the Sky Market, an open platform at the top of the Pavilion with vantage points of the Expo site. The Sky Market will host programmes and events that facilitate the sharing and exchange of ideas.
<p>NURTURE</p> <p>Singapore’s most precious resource - our people</p>	<ul style="list-style-type: none"> • As a country with limited land and no hinterland to provide natural resources and fresh water, we have always relied on our most precious resource - our people – to derive innovative solutions to overcome our limitations. • Beyond the awe-inspiring pavilion design, the Singapore story is also told through our boundless creativity, entrepreneurial spirit and can-do attitude of our selection of vendors representing the country. Visitors can look forward to a curated selection of homegrown local brands to give people a glimpse into our vibrant city life (see Annex B). • A selection of films and documentaries will be screened at the Sky Market to showcase Singapore and its people, together with programmes that encourage interaction with thought leaders, trailblazers and change makers in Singapore.
<p>FUTURE</p> <p>Sustainable and smart urban innovations</p>	<ul style="list-style-type: none"> • Solar panels: 100% of the Pavilion’s energy demands will be met by the 517 solar panels on the roof canopy, making it a net-zero energy Pavilion throughout the entire six-month duration of the Expo. • Solar desalination: Saline groundwater drawn on-site is desalinated in the pavilion by a reverse osmosis process to cater to various needs and uses, such as irrigation and misting. The desalination system is powered fully by solar energy harvested on-site to achieve a closed-loop net-zero energy system.

- Lush landscaping: The Pavilion will feature an extensive variety of plants, including those native to Singapore. The trees and palms planted along the Pavilion's perimeter form a unified canopy that will help to withstand strong winds, provide shade to visitors, and create a microclimate within. The nine-metre tall cones are covered in vertical greenery and interspersed with edible garden varieties which form 5% of the surface area. A grid of planters with draping vines covers the entire ceiling, forming the spectacular hanging garden. The lush greenery on the ground plane, vertical surfaces and ceiling work together to create a voluminous three-dimensional green space, emphasising the experience of the lush tropical urban landscape of Singapore.
- Dry mist fans: The large roof canopy shelter, lush vegetation combined with strategically placed dry mist fans create a comfortable visitor experience journey despite the heat of the desert. These fans produce fine mist and, combined with evapo-transpiration cooling, lower perceived temperatures by six to ten degrees Celsius. They keep the Pavilion cool in the desert without energy-intensive air-conditioning.
- Sun pipes and grow lights: These sun pipes capture and funnel sunshine from the roof deep into interior spaces of the Pavilion. Together with grow lights that mimic the sun, they deliver a calibrated boost to allow plants to thrive in deeper indoor areas with low natural light.
- EcoDigester: A fully automated machine which digests food waste into clean, odourless greywater. The F&B menu has been carefully chosen to minimise non-food waste, and easy to separate into waste that can be processed in an EcoDigester and waste that will get recycled. Processing food scraps in this way reduces the amount of waste to be transported offsite for recycling, and the bin rooms do not need to be air-conditioned, thereby saving energy.
- Repurposed timber benches: For the Re:Bench project, wooden bleachers were salvaged from Singapore's former National Stadium and given a new lease of life as public furniture. Some of these repurposed and uniquely designed benches, encapsulating many Singaporeans' shared memories of National Day Parades and sports events at the old stadium, will be on display at the Singapore Pavilion.