



Just the sight of *uchimizu*, the traditional custom of sprinkling water that is part of the summer routine in Japan, makes the day feel cooler.

TOKYO 2020 >>> Japan's Preparations for the Olympic/Paralympic Games

Beat the Heat with Japanese Technology and Ingenuity

At last, we are only one year away from the Olympic and Paralympic Games Tokyo 2020. Preparations are steadily underway in Japan to provide both athletes and spectators with the ultimate experience.

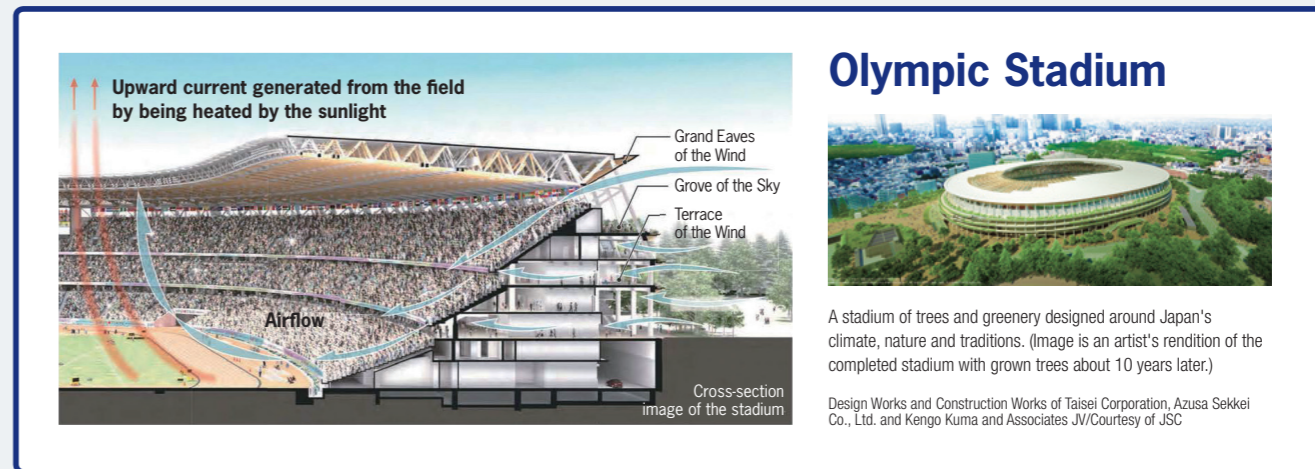
In the summer of 2020, the Summer Olympic and Paralympic Games will be held in Tokyo 56 years after the last Tokyo Games in 1964. Events for 33 Olympic sports and 22 Paralympic sports are scheduled from July 24 to September 6. Excitement for the

intense midsummer competition is already rising, but beating the heat will be critical, too.

The finishing touches are being put on the Olympic Stadium, whose target date for completion is the end of November 2019. With the concept of "Stadium in Forest" that blends

in with the natural surroundings, the sports venue employs modern technology to present traditional Japanese wooden architecture. Its innovative design allows the wind to flow through easily, thus mitigating the heat.

While the space above the



stadium's field is open, the spectator seats are fully covered by the roof to block direct sunlight. In addition, the structural design of Grand Eaves of the Wind and Terrace of the Wind is made to facilitate the flow of seasonal winds to the stands. The sunbathed field will create an updraft that the incoming breeze will ride, carrying the stadium's heat and humidity over the field and outside. Meanwhile, the 185 airflow-creating fans blowing air from behind the seats will help strengthen the flow of air throughout the stadium. Furthermore, air-conditioned break rooms and cold water fountains to keep spectators hydrated will be complemented by a mist cooling system to cool down their bodies for a full suite of measures to counter the summer heat.

Japan is also taking steps to make the marathon and other events on public roads more comfortable for athletes and spectators. First, approximately 136km of road, including the marathon course, have a special pavement to suppress rising road surface temperatures. The chief technology behind that innovation is heat insulation paving, which was developed in Japan. It applies a heat-shielding coat to the road surface that deflects many of the sun's infrared rays. That prevents

the road from retaining as much heat, thus keeping the road surface's temperature about eight degrees Celsius cooler.

Additionally, the time-honored Japanese method of *uchimizu* has garnered notice. This involves sprinkling water on the road to produce water vapor that allows the heat in the ground to escape into the air. Since long ago, families and local shopkeepers have done this as a way to recycle their wastewater and combat the heat in an environmentally friendly manner. Furthermore, a sight that will make anyone feel cooler will be people sprinkling water while

dressed in colorful *yukata*, a lightweight summer kimono that is a traditional piece of Japanese dress. Those standard features of the Japanese summer will provide visiting spectators with a fresh view of the host country's long-practiced customs.

The composite array of cutting-edge technology and knowledge acquired long ago is an essential quality of Japan and will be the key to the variety of countermeasures to overcome the heat. Preparations are in full swing to welcome athletes and spectators from across the globe with the renowned Japanese style of hospitality known as *omotenashi*. *

