Is Cricket Sustainable Amid Climate Change?

The warming of the earth, combined with the exhausting nature of the game, is raising questions about the future of the second most popular sport in the world.

By Jeré Longman and Karan Deep Singh

Jeré Longman reported from Port of Spain, Trinidad and Tobago; and Karan Deep Singh from New Delhi. Aug. 4, 2022

The joke is that if you want it to rain during this wetter-than-usual summer in the Caribbean, just start a cricket match.

Beneath the humor is seemingly tacit agreement with the assertion in a 2018 climate report that of all the major outdoor sports that rely on fields, or pitches, "cricket will be hardest hit by climate change."

By some measures, cricket is the world's second most popular sport, behind soccer, with two billion to three billion fans. And it is most widely embraced in countries like India, Pakistan, Sri Lanka, Bangladesh and South Africa and in the West Indies, which are also among the places most vulnerable to the intense heat, rain, flooding, drought, hurricanes, wildfires and sea level rise linked to human-caused emissions of greenhouse gases.

Cricket in developed nations like England and Australia has also been affected as heat waves become hotter, more frequent and longer lasting. Warm air can hold more moisture, resulting in heavier rainstorms. Twenty of the 21 warmest years recorded have occurred since 2000.

This year, the sport has faced the hottest spring on the Indian subcontinent in more than a century of record keeping and the hottest day ever in Britain. In June, when the West Indies — a combined team from mainly English-speaking countries in the Caribbean — arrived to play three matches in Multan, Pakistan, the temperature reached 111 degrees Fahrenheit, above average even for one of the hottest places on earth.

"It honestly felt like you were opening an oven," said Akeal Hosein, 29, of the West Indies, who with his teammates wore ice vests during breaks in play.



South Africa cricketers took a water break during a match against India at Arun Jaitley Stadium in New Delhi in June. This has been the hottest spring on the Indian subcontinent in more than a century of record keeping. Anindito Mukherjee for The New York Times



India's Shreyas Iyer in action during the match. To cope with the heat, some players have worn ice vests during breaks in play. Anindito Mukherjee for The New York Times

Heat is hardly the only concern for cricket players. Like the roughly similar pitching and batting sport of baseball, cricket cannot easily be played in the rain. In July, the West Indies abandoned a match in Dominica and shortened others in Guyana and Trinidad because of rain and waterlogged fields.

An eight-match series between the West Indies and India concludes Saturday and Sunday in South Florida as the height of hurricane season approaches in the Gulf and the Atlantic. In 2017, two Category 5 storms, Irma and Maria, damaged cricket stadiums in five countries in the Caribbean.

Matches can last up to five days. Even one-day matches can extend in blistering conditions for seven hours or more. While rain cleared July 22 for the 9:30 a.m. opening of the West Indies-India series in Port of Spain, Trinidad and Tobago, players still had to contend with eight hours of sun at Queen's Park Oval in temperatures that reached the low 90s with 60-plus percent humidity.

According to a 2019 report on cricket and climate change, a professional batsman playing over a day can generate heat equivalent to running a marathon. While marathon runners help dissipate heat by wearing shorts and singlets, in cricket the wearing of pads, gloves and a helmet restricts the ability to evaporate sweat in hot, humid conditions often lacking shade.

"It's pretty evident that travel plans are being disrupted because of weather conditions, along with the scheduling of matches, because of rainfall, smoke, pollution, dust and heat," said Daren Ganga, 43, a commentator and former West Indies captain who studies the impact of climate change on sport in affiliation with the University of the West Indies.

"Action needs to be taken for us to manage this situation," Ganga said, "because I think we've gone beyond the tipping point in some areas. We still have the opportunity to pull things back in other areas."

The International Cricket Council, the sport's governing body, has not yet signed on to a United Nations sports and climate initiative. Its goal is for global sports organizations to reduce their carbon footprint to net-zero emissions by 2050 and to inspire the public to consider the issue urgently. While Australia has implemented heat guidelines, and more water breaks are generally permitted during matches, there is no global policy for play in extreme weather. The cricket council did not respond to a request for comment.

"This is like stick your head in the sand denial," David Goldblatt, the British author of a 2020 report on sport and climate change, said of the council. "Cricket really needs to get its act together. A whole bunch of trouble is not really far away."

A suggestion in the 2019 climate report that players be allowed to wear shorts instead of trousers to keep cool in excessive heat may seem like a common-sense idea. But it has not gone over well with the starchy customs of international cricket or seemingly with many players, who say their legs would be even more susceptible to brush burns and bruises from sliding and diving on hard fields.



A spectator stood next to a mist fan and wiped sweat off his face. Matches can last for days, testing both fans and players. Anindito Mukherjee for The New York Times



In July, cricket fans sat in the sun in Durham, England, to watch a match between England and South Africa. Oli Scarff/Agence France-Presse — Getty Images

"My two knees are already gone," said India's Yuzvendra Chahal, who is 32.

Still, questions are being raised inside the sport and out about the sustainability of cricket amid the extremes of climate and the exhausting scheduling of various formats of the game. The English star Ben Stokes retired on July 19 from the one-day international format, saying, "We are not cars where you can fill us up with petrol and let us go."

Coincidentally, Stokes's retirement came as Britain recorded its hottest day ever, with temperatures rising for the first time above 40 degrees Celsius, or 104 degrees Fahrenheit. As climate scientists said such heat could become the new normal, England hosted a daylong cricket match with South Africa in the modestly cooler northeastern city of Durham. Extra water breaks, ice packs and beach-style umbrellas were employed to keep the players cool. Even with those precautions, Matthew Potts of England left the match, exhausted.

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Aiden Markram of South Africa was photographed with an ice bag on his head and another on his neck, his face in apparent distress, as if he had been in a heavyweight fight. Some fans were reported to have fainted or sought medical attention, while many others scrambled for thin slices of shade.

On June 9, South Africa also endured taxing conditions when it faced India in the heat, humidity and pollution of New Delhi. The heat index was 110 degrees Fahrenheit for an evening match. A section of the stadium was transformed into a cooling zone for spectators, with curtains, chairs and misting fans attached to plastic tubs of water.

"We are used to it," said Shikhar Dhawan, 36, one of India's captains. "I don't really focus on the heat because if I start thinking about it too much I will start feeling it more."

In India, cricket players are as popular as Bollywood actors. Even in sauna-like conditions, more than 30,000 spectators attended the match in New Delhi. "It feels great. Who cares about the heat?" said Saksham Mehndiratta, 17, attending his first match with his father since the coronavirus pandemic began.

After watching some spectacular batting, his father, Naresh, said, "This chills me down."

South Africa, though, was taking no chances after a tour of India in 2015, when eight players and two members of the coaching and support staff were hospitalized in the southern city of Chennai by what officials said were the combined effects of food poisoning and heat exhaustion.



A staff member refilled water bottles for spectators at the match at the Riverside cricket ground in Durham, England. Oli Scarff/Agence France-Presse — Getty Images



England's Ben Stokes walked past his teammate Jos Buttler after losing his wicket. Lee Smith/Action Images Via Reuters

"It was mayhem," said Craig Govender, a physiotherapist for the South African team.

For South Africa's recent tour, Govender took along inflatable tubs to cool players' feet; electrolyte capsules for mealtimes; slushies of ice and magnesium; and ice towels for the shoulders, face and back. South Africa's uniforms were ventilated behind the knees, along the seams and under the armpits. Players were weighed before and after training sessions. The color of their urine was monitored to guard against dehydration. During the June 9 match, some players jumped into ice baths to cool down.

"Global warming is already wreaking havoc on our sport," Pat Cummins, the captain of Australia's test cricket team, which plays five-day matches, wrote in February in The Guardian newspaper of Britain.

In 2017, Sri Lankan players wore masks and had oxygen canisters available in the dressing room to counter the heavy pollution during a match in New Delhi. Some players vomited on the field.

In 2018, the English captain Joe Root was hospitalized with gastrointestinal issues, severe dehydration and heat stress during the famed, five-day Ashes test in Sydney, Australia. At one point, a heat-index tracker registered 57.6 degrees Celsius, or 135.7 Fahrenheit.

The incident led Tony Irish, then the head of the Federation of International Cricketers' Association, to ask, "What will it take — a player to collapse on the field?" before cricket's governing body implemented an extreme heat policy.

Also in 2018, India's players were asked to limit showers to two minutes while playing in Cape Town during an extended drought there that caused the cancellation of club and school cricket.

In 2019, the air in Sydney became so smoky during a bush fire crisis that the Australian player Steve O'Keefe said it felt like "smoking 80 cigarettes a day."

Climate change has touched every aspect of cricket from batting and bowling strategy to concerns by groundskeepers about seed germination, pests and fungal disease. Even Lord's, the venerable cricket ground in London, has been forced at times to relax its fusty dress code, most recently in mid-July when patrons were not required to wear jackets in the unprecedented heat.



India's Hardik Pandya paused for a drink during practice before a match. Climate change has touched every aspect of the sport, from the care of the pitch to the spectator dress code at matches. Anindito Mukherjee for The New York Times



Children played cricket in New Delhi in June. Because of global warming, "our love and appetite for sport risks straying into brutality," said Russell Seymour of Lord's Cricket Ground in London. Anindito Mukherjee for The New York Times

Athletes are being asked "to compete in environments that are becoming too hostile to human physiology," Russell Seymour, a pioneer in sustainability at Lord's, wrote last year in a climate report. "Our love and appetite for sport risks straying into brutality."

To be fair, some actions have been taken to help mitigate climate change. Matches sometimes start later in the day or are rescheduled. Cummins, the Australian captain, has begun an initiative to have solar panels installed on the roofs of cricket clubs there. Lord's operates fully on wind-powered electricity. The National Green Tribunal of India, a specialized body that addresses environmental concerns, has ruled that treated waste water should be used to irrigate cricket fields instead of drinkable ground water, which is in short supply.

Players on the Royal Challengers Bangalore club of the Indian Premier League wear green uniforms for some matches to heighten environmental awareness. Team members appeared in a climate video during a devastating heat wave this spring, which included this sobering fact: "This has been the hottest temperature the country has faced in 122 years."

Yet some in the cricket world counter that climate change cannot be expected to be the most immediate concern in developing nations, where the basics of daily life can be a struggle. And countries like India and Pakistan, where cricket is wildly popular, are among the least responsible for climate change. One hears the frequent admonishment that rich, developed nations that emit the largest amount of greenhouse gases must also do their share to lower those emissions.

"In the U.S., people are flying on private jets while they're asking us not to use plastic straws," said Dario Barthley, a spokesman for the West Indies team.