

As Europe's heat wave melts roads, Tour de France races into an uncertain future

By [Rick Noack](#)

Updated July 23, 2022 at 4:10 p.m. EDT | Published July 23, 2022 at 2:28 p.m. EDT

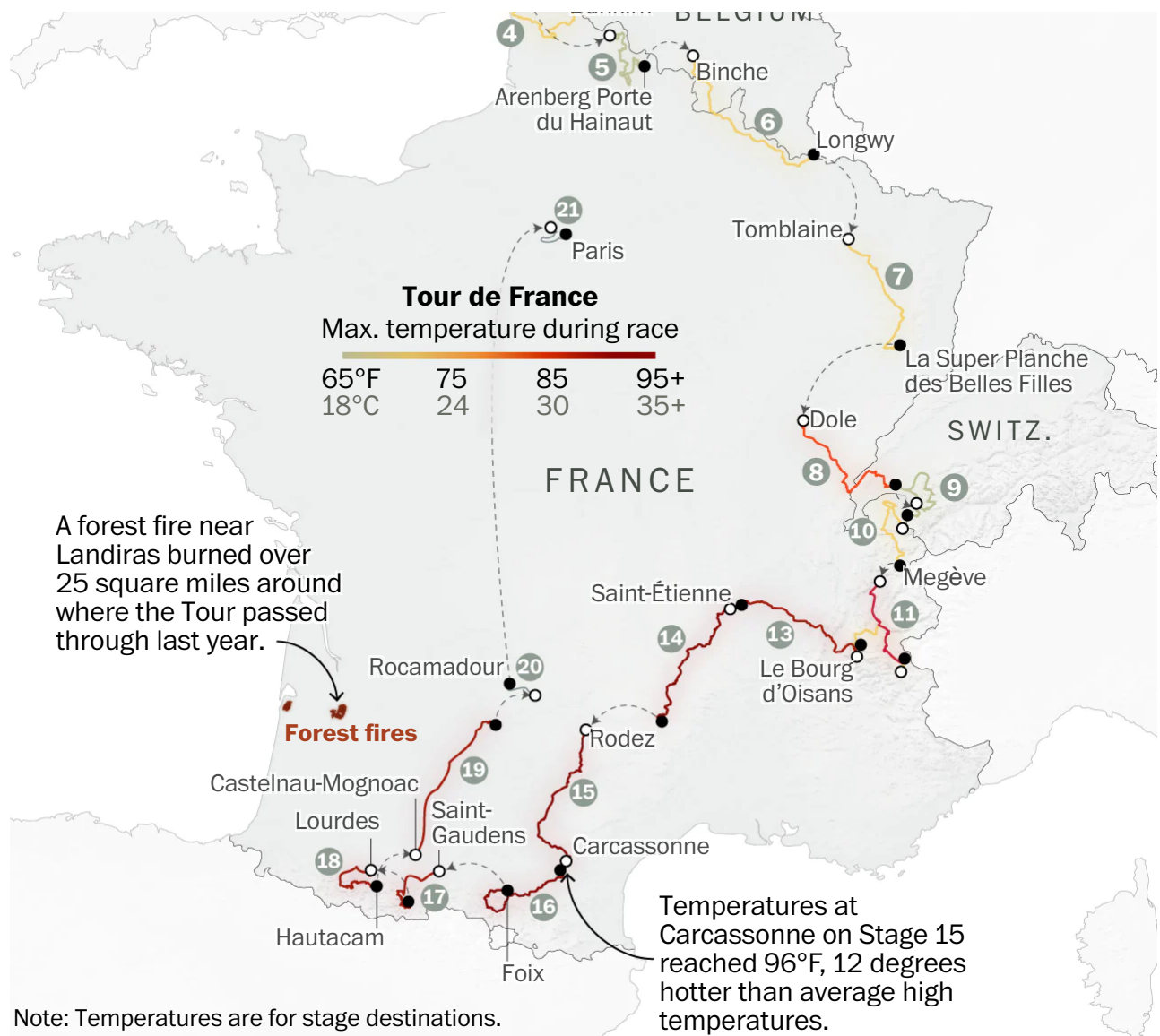
AYROS-ARBOUIX, France — The Tour de France has always been a test of human endurance.

The cyclists cover epic distances over the course of three weeks, speeding past fields of sunflowers, bouncing along cobblestone roads and climbing dizzyingly steep mountains with frightening corkscrew descents.

But as the peloton makes its way down the Champs-Élysées toward the finish line Sunday — on a day forecast to reach 93 degrees Fahrenheit, 20 degrees higher than the average July high for Paris — there are questions about whether the world's most prestigious cycling race is pushing up against its own limits, whether increasingly intense European summers are making the competition dangerously extreme.

The race has long been a point of pride for the French, highlighting some of their most stunning landscapes. And yet over the past few weeks it has also showcased some of the most alarming impacts of climate change, taking cyclists through farmland parched by drought, past melting glaciers, in proximity to raging wildfires and in direct collision with a historic heat wave that saw temperatures approach 104 degrees Fahrenheit.





Note: Temperatures are for stage destinations.

Source: Terre-Net, Weather Channel, Copernicus

JANICE KAI CHEN/THE WASHINGTON POST

It's probably safe to say that's hotter than most early Tour riders could have even imagined. Consider: the original yellow jersey, introduced in the more temperate climate of 1919, was made of wool.

At times the temperatures were so high during this year's Tour that organizers sprayed water to keep the roads from "melting." Officials agreed to ease rules that usually prevent riders from rehydrating in the first miles of the race. But they stuck to the schedule, conducting each stage in the oppressive heat of the afternoon.

"It's already possible to get the stage shortened, or to cancel," said Samuel Bellenoue, director of performance for French cycling team Cofidis. Race organizers, though, have not been inclined to invoke those rules.

"It's the most important race in the world," Bellenoue said.

The only disruptions to this year's competition came when

climate protesters chained themselves together and blocked the road, temporarily halting the race on two different days. “The world toward which politicians are sending us is a world in which the Tour de France will no longer exist,” said a statement from the group, Dernière Rénovation.

Some of the cyclists were disgruntled by the protesters. But many agree that key aspects of the Tour de France need a rethink, while Europe grapples with the new reality of summer.

“One of the appeals of endurance sports is that we mythologize suffering: It’s about pushing the limits of human capabilities,” said Stephen S. Cheung, a competitive cyclist and professor of kinesiology at Brock University, where he researches the effects of environmental stress.

“The question we as a society have to ask is: Are we putting athletes into undue harm’s way in the quest for that kind of athletic spectacle?” he said. “How much is enough?”

Roasting on bicycles

French cyclist Romain Bardet, riding in his 10th Tour de France, told reporters that this year’s heat was unlike anything he’d experienced.

“Sometimes you could really feel it on the tarmac. At the start I said, yeah, it’s warm, it’s pretty okay,” he said to French television network Eurosport. “But when we reached downhill it was like, whoa! Crazy hot!”

Four days later, he blamed the heat when he fell behind in a critical stage, saying he had been “roasted” on his bike.

Fellow rider Alexis Vuillermoz had an even tougher time. After he started vomiting and collapsed in the Alps, he was treated on-site for heatstroke and then taken to a hospital, his TotalEnergies team said. He dropped out the next day, with the team saying he had a fever and a skin infection that required surgery.

Spectator Evelyn Brunet, 67, said she worried for the athletes as she watched the peloton whiz through a Pyrenees mountain village this past week.

“They’re white and green in their face,” Brunet said, resting in a camping chair after hours of waiting in the intense heat, her arms covered with unabsorbed sunscreen. “And then —

those eyes! When they take those long turns up the mountains, when they look at the water.”

“It’s horrible,” she said.

Cheung explains what happens in the sorts of extreme conditions France has seen during this Tour. “When the outside air temperature is higher than your body temperature,” he said, “there is no capacity to lose heat to the environment through blood flow going out to your skin.”

The body can cool itself through sweating, he said, but when the weather is both hot and humid, “it becomes a challenge.”

While spraying water on hot tarmac may make the roads safer, he noted, it also increases humidity, putting further strain on riders. “You are solving one problem, but you’re adding to another,” he said.

When Guillaume Martin, one of France’s leading cyclists, struggled with the weather, his Cofidis team conducted tests to measure the quantity of liquids and minerals he loses while cycling at temperatures of 95 degrees Fahrenheit.

“You can manage this difference by adjusting the intake of minerals in the water,” said Bellenoue, the performance director.

Teams in the Tour de France have begun to borrow strategies from competitions in places such as Australia and the United Arab Emirates.

Before the beginning of a stage, cyclists spend as much time as possible in the shade, wearing vests of ice packs. When racing, they try to maximize the cooling power of the wind with jerseys that let the air flow through more freely and helmets that have more openings. Afterward, they bring their body temperatures down with foot baths as cold as 53 degrees Fahrenheit.

But the athletes and their teams say there is only so much they can do to make racing in a heat wave bearable. The changes that would provide the most relief are in the hands of the organizers: routing the course away from the heat islands of big cities, cutting the length of races, canceling stages when temperatures are too high and moving the racing into the morning.

Tour de France organizers did not respond to questions for this article.

“We’re going to have to change the way the Tour de France is designed in the next few years,” said Matthieu Sorel, a climate change expert at France’s meteorological service who was among the spectators watching the race in the Pyrenees this week. “It won’t be possible to ride with such temperatures during the afternoon.”

The current race schedule is not just about tradition, said researchers and cycling professionals. It’s influenced by the rhythms of television, with afternoons in July being lucrative because they coincide with school vacations and hours when TV viewership picks up in Europe and North America. Any decision to move the timing of the race would upend existing calculations.

Some cyclists, team managers and scientists anticipate the race will only change in a meaningful way when it finds itself in a full crisis.

“Other sports would be canceled if it’s that warm,” Bob Jungels, a Tour de France rider from Luxembourg, told Cyclingnews on a day that was 104 degrees Fahrenheit. “But I think mostly in cycling we learn if something bad happens, which is very unfortunate.”

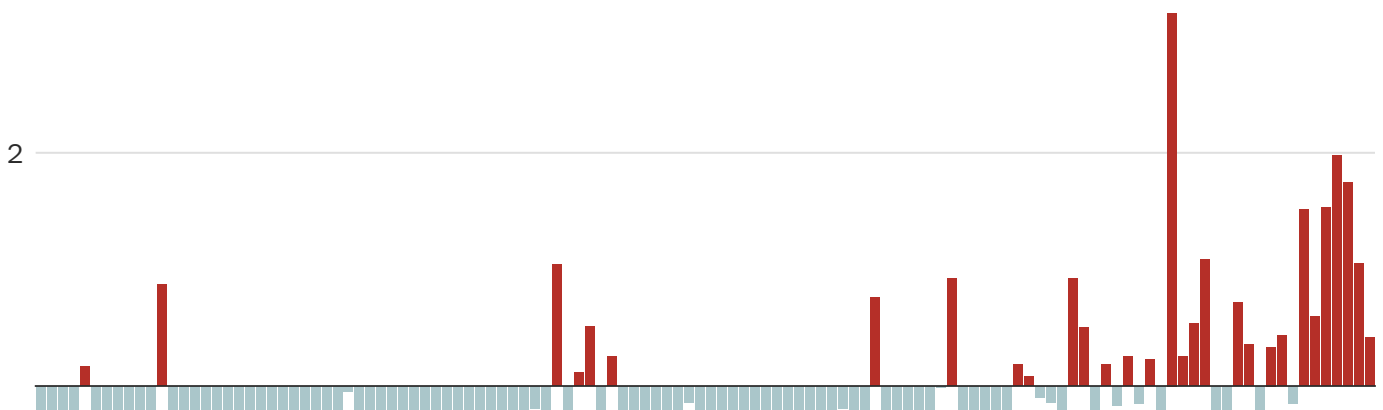
Rethinking summer in France

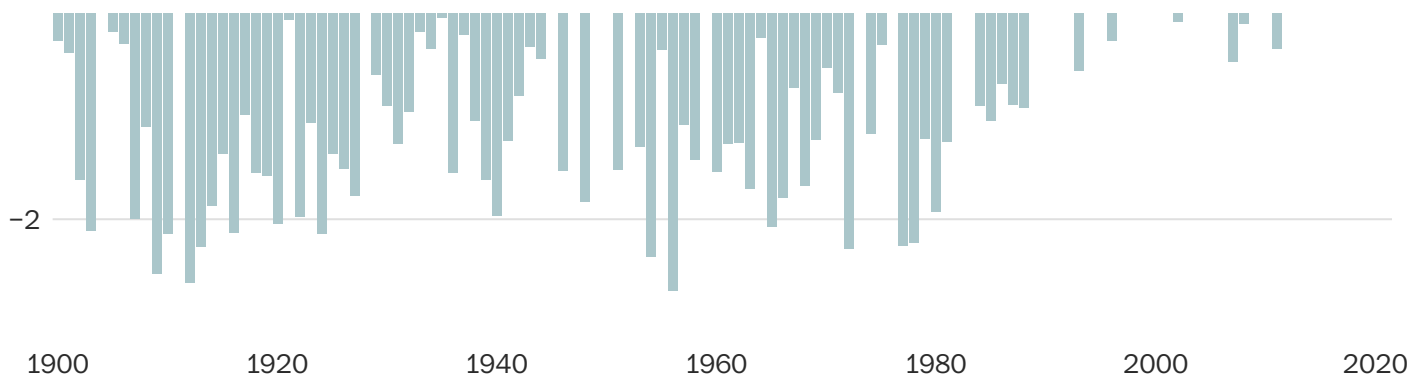
What the Tour de France has experienced this summer is no passing hardship. For parts of a continent long used to more temperate norms, it is a sign of a superheated new normal.

France has seen three times more heat waves in the past 30 years compared to the four decades before that.

French summers are getting hotter

Temperature deviation from the 1981 - 2010 seasonal average in degrees Celsius





Source: Meteo France

RICK NOACK / THE WASHINGTON POST

A study published in *Nature Communications* this month identified Europe as a “heat wave hot spot,” with the frequency and intensity of heat waves increasing three to four times faster than in the rest of northern midlatitudes, including the hard-hit American West.

More frequent heat waves are an expected result of human-driven climate change. But the study authors say Western Europe is particularly prone because of a change in atmospheric dynamics and a trend toward temporary but persistent double jet streams — periods when the fast-moving air current that flows west to east around the Northern Hemisphere splits into two.

For Europeans, it all means a reevaluation of what summer means.

“What we already see is a shift in perception,” said Kai Kornhuber, a scientist with Columbia University’s Climate School. “That summer is not only a beautiful day at the beach and fun at water parks, but it’s also associated with wildfires, power failures and excess mortality.”

In the town of Igon, at the foot of the Pyrenees, spectators hid from the sun in the shade of hedges, a gas station and a street sign pointing the way to a ski resort this week, as they waited for the cyclists to zip through the windless valley.

When a Tour de France support car stopped in the village, locals crowded around the open door. “Enjoy our air conditioning!” a man said from inside the car. (Air conditioning in French homes remains relatively uncommon. Only about 25 percent of people in France have it.)

Niall Turnbull, his 8-year-old daughter and 5-year-old son were equipped with a parasol, hats, ice cubes and ginger beer.

He said he expected life in France to increasingly feel like

he said he expected me in France to increasingly feel like Australia, where Turnbull, 38, previously lived.

“Here, people are still used to doing stuff in the middle of the day. That might start to change,” he said, sitting almost motionless in his chair just after noon.

Marie Jo Baradat, 65, agreed the French may need to give up their centuries-old rhythm of life and start “going to bed very late in the evening, to enjoy the evening” in moderate temperatures.

After hour of waiting, it took seconds for the Tour cyclists to pass the spectators in Igon, and only minutes afterward for the road to empty, as the crowds rushed home.

Heritage under threat

Firefighters have long been a part of the Tour de France caravan — the parade that winds through towns ahead of the peloton. But this year, when the firefighters went by, bystanders erupted in a particularly long round of applause.

France this summer has experienced some of the worst wildfires in its recent history, with blazes burning over 80 square miles in the country’s southwest, forcing the evacuation of more than 36,000 people.

The Tour de France took riders through the affected region, Gironde. They came within 70 miles of the fires. It was only by chance that organizers didn’t have to reroute the course — determined more than eight months earlier, after towns competed in an extensive application process.

In future years, as climate change increases the frequency of wildfires, the organizers may not be so fortunate.

In fact, the town of Villandraut — part of one of the final stages of last year’s Tour de France — is among those that have been evacuated.

On the road where the cyclists had raced exactly a year earlier, the smell of burning wood filled the air. Electronic road signs blinked warnings to drivers. Gas stations, shops and restaurants were all shuttered and dark.

Just outside of town, firefighting planes descended until they were meters above the trees, and columns of firetrucks rushed toward the flames.

Cathy Cerami-dhu, 58, and her mother, Ida Cerami, 82, sat at a rest stop just outside the evacuation zone. Both had to leave their homes, which so far appeared to be safe from the fires, they said.

One year ago, they had cheered the riders as the race passed their neighborhood, covered with posters and Tour de France flags.

Now, their streets were covered with banners to motivate firefighters.

Nearby, in a fire-ravaged forest, smoke was rising from the burned grass and tree stumps, and Theo Hernandez was pumping water out of a basin to support firefighters.

A winegrower who has seen the impact of climate change in his daily life, he was among the volunteers who had traveled from across the region to help.

Even if the Tour de France were to pass right in front of him, Hernandez said, “I wouldn’t at all care about it.”

But he surveyed the scorched landscape with a pained expression. “This is our heritage that’s burning.”

Anthony Faiola in Miami contributed to this report.