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In Spain, Water Is a New Battleground

By [ELISABETH ROSENTHAL](#)

FORTUNA, Spain — Lush fields of lettuce and hothouses of tomatoes line the roads. Verdant new developments of plush pastel vacation homes beckon buyers from Britain and Germany. Golf courses — dozens of them, all recently built — give way to the beach. At last, this hardscrabble corner of southeast Spain is thriving.

There is only one problem with the picture of bounty: this province, Murcia, is running out of water. Swaths of southeast Spain are steadily turning into desert, a process spurred on by [global warming](#) and poorly planned development.

Murcia, traditionally a poor farming region, has undergone a resort-building boom in recent years, even as many of its farmers have switched to more thirsty crops, encouraged by water transfer plans, which have become increasingly untenable. The combination has put new pressures on the land and its dwindling supply of water.

This year, farmers are fighting developers over water rights. They are fighting one another over who gets to water their crops. And in a sign of their mounting desperation, they are buying and selling water like gold on a rapidly growing black market, mostly from illegal wells.

Southern Spain has long been plagued by cyclical droughts, but the current crisis, scientists say, probably reflects a more permanent climate change brought on by global warming. And it is a harbinger of a new kind of conflict.

The battles of yesterday were fought over land, they warn. Those of the present center on oil. But those of the future — a future made hotter and drier by climate change in much of the world — seem likely to focus on water, they say.

“Water will be the environmental issue this year — the problem is urgent and immediate,” said Barbara Helferrich, a spokeswoman for the [European Union](#)’s Environment Directorate. “If you already have water shortages in spring, you know it’s going to be a really bad summer.”

Dozens of world leaders will be meeting at the [United Nations](#) Food and Agriculture Organization headquarters in Rome starting Tuesday to address a global food crisis caused in part by water shortages in Africa, Australia and here in southern Spain.

Climate change means that creeping deserts may eventually drive 135 million people off their land, the United Nations estimates. Most of them are in the developing world. But Southern Europe is experiencing the problem now, its climate drying to the point that it is becoming more like Africa’s, scientists say.

For Murcia, the arrival of the water crisis has been accelerated by developers and farmers who have hewed to water-hungry ventures highly unsuited to a drier, warmer climate: crops like lettuce that need ample irrigation, resorts that promise a swimming pool in the yard, acres of freshly sodded golf courses that sop up millions of gallons a day.

“I come under a lot of pressure to release water from farmers and also from developers,” said Antonio Pérez Gracia, the water manager here in Fortuna, sipping coffee with farmers in a bar in the town’s dusty square. He rued the fact that he could provide each property owner with only 30 percent of its government-determined water allotment.

“I’m not sure what we’ll do this summer,” he added, noting that the local aquifer was sinking so quickly that the pumps would not reach it soon. “I come under a lot of pressure to release water, from farmers and also from developers. They can complain as much as they want, but if there’s no more water, there’s no more water.”

Rubén Vives, a farmer who relies on Mr. Pérez Gracia’s largess, said he could not afford the black market water prices. “This year, my livelihood is in danger,” said Mr. Vives, who has farmed low-water crops like lemons here for nearly two decades.

The hundreds of thousands of wells — most of them illegal — that have in the past provided a temporary reprieve from thirst have depleted underground water to the point of no return. Water from northern Spain that was once transferred here has also slowed to a trickle, as wetter northern provinces are drying up, too.

The scramble for water has set off scandals. Local officials are in prison for taking payoffs to grant building permits in places where there is not adequate water. Chema Gil, a journalist who exposed one such scheme, has been subject to death threats, carries pepper spray and is guarded day and night by the Guardia Civil, a police force with military and civilian functions.

“The model of Murcia is completely unsustainable,” Mr. Gil said. “We consume two and a half times more water than the system can recover. So where do you get it? Import it from elsewhere? Dry up the aquifer? With climate change we’re heading into a cul-de-sac. All the water we’re using to water lettuce and golf courses will be needed just to drink.”

Facing a national crisis, Spain has become something of an unwitting laboratory, sponsoring a European conference on water issues this summer and announcing a national action plan this year to fight desertification. That plan includes a shift to more efficient methods of irrigation, as well as an extensive program of desalinization plants to provide the fresh water that nature does not.

The Spanish Environment Ministry estimates that one-third of the country is at risk of turning into desert from a combination of climate change and poor land use.

Still, national officials visibly stiffen when asked about the “Africanization” of Spain’s climate — a term now common among scientists.

“We are in much better shape than Africa, but within the E.U. our situation is serious,” said Antonio Serrano Rodríguez, the secretary general for land and biodiversity at Spain’s Environment Ministry.

Still, Mr. Serrano and others acknowledge the broad outlines of the problem. “There will be places that can’t be farmed any more, that were marginal and are now useless,” Mr. Serrano said. “We have parts of the country that are close to the limit.”

While southern Spain has always been dry and plagued by cyclical droughts, the average surface temperature in Spain has risen 2.7 degrees compared with about 1.4 degrees globally since 1880, records show.

Rainfall here is predicted to fall 20 percent from this year to 2020, and 40 percent by 2070, according to United Nations projections.

The changes on the Almarcha family farm in Albanilla over the past three decades are a testament to that hotter, drier climate here. Until two decades ago, the farm grew wheat and barley, watered only by rain. As rainfall dropped, Carlo Almarcha, 51, switched to growing almonds.

About 10 years ago, he quit almonds and changed to organic peaches and pears, “since they need less water,” he explained. Recently he took up olives and figs, “which resist drought and are less sensitive to weather.”

Mr. Almarcha participates in a government water trading system, started last year, in which farmers pay three times the normal price — 33 cents instead of 12 per cubic meter — to get extra water. The black market rate is even higher. Still, his outlook is bleak.

“You used to know that this week in spring there will be rain,” he said, standing in his work boots on parched soil of an olive grove that was once a wheat field. “Now you never know when or if it will come. Also, there’s no winter any more and plants need cold to rest. So there’s less growth. Sometimes none. Even plants all seem confused.”

While Mr. Almarcha has gradually moved toward less thirsty crops, the government’s previous water transfer plans have moved many farmers in the opposite direction. The farmers have shifted to producing a wide range of water-hungry fruits and vegetables that had never been grown in the south. Murcia is traditionally known for figs and date palms.

“You can’t grow strawberries naturally in Huelva — it’s too hot,” said Raquel Montón, a climate specialist at [Greenpeace](#) in Madrid, referring to the nearby strawberry capital of Spain. “In Sarragosa, which is a desert, we grow corn, the most water-thirsty crop. It’s insane. The only thing that would be more insane is putting up casinos and golf courses.” Which, of course, Murcia has.

In 2001, a new land use law in Murcia made it far easier for residents to sell land for resort development. Though southern Spain has long had elaborate systems for managing its relatively scarce water, today everyone, it seems, has found ways to get around them.

Grass on golf courses or surrounding villas is sometimes labeled a “crop,” making owners eligible for water that would not be allocated to keep leisure space green. Foreign investors plant a few trees and call their vacation homes “farms” so they are eligible for irrigation water, Mr. Pérez Gracia said.

“Once a property owner’s got a water allotment, he asks for a change of land use,” he explained. “Then he’s got his property and he’s got his water. It’s supposed to be for irrigation, but people use it for what they want. No one knows if it goes to a swimming pool.”

While he said his “heart goes out to the real farmers,” he did not have the personnel to monitor how people use their allotments.

With so much money to be made, officials set aside laws and policies that might encourage sustainable development, Mr. Gil, the journalist, said. At first, he was vilified in the community when he wrote articles critical of the developments. Recently, as people are discovering that the water is running out, the attitude is shifting.

But even so, people and politicians tend to regard water as a limitless resource. “Politicians think in four-year blocks, so it’s O.K. as long as it doesn’t run out on their watch,” said Ms. Montón of Greenpeace. “People think about it, but they don’t really think about what happens tomorrow. They don’t worry until they turn on the tap and nothing flows.”

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