

# Scientists warn Spain could see mass spread of deserts

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Several recent scientific reports have warned of the enormous environmental problems that Spain faces as a result of pollution, coastline development, and global warming.

One report says that nearly 90 percent of Spanish cities exceed the legal air pollution limits, which are responsible for up to 16,000 deaths each year. Greenhouse gas emissions have risen by 52 percent since 1990, making Spain the most polluting country in Europe. Another report shows how unrestricted development along Spain's coastline—one third of it has been built up in the last 20 years—has destroyed some of the country's most important natural habitats.

One issue not widely recognised but equally important is the risk that a large part of Spain could become a desert. Scientists at the United Nations Convention to Combat Desertification (UNCCD), which is holding its annual conference in Madrid in September, warn that the country could see a massive spread of deserts as a result of continuing disregard for the environment—a phenomenon made worse by global warming. One third of Spain is in danger of turning into desert, and a further third is under threat.

Research suggests that more than 90 percent of the Canary Islands, and land bordering the Mediterranean are at high risk, but that rises to almost 100 percent in Alicante and Murcia. Other regions at risk are Castilla La Mancha (44 percent at high risk of desertification), Catalonia (42 percent), Madrid (37 percent), Aragón (29 percent), the Balearic Islands (25 percent) and Andalucía (22 percent).

Desertification usually begins by heavy grazing and woodcutting or forest fires, followed by wind and water erosion on cultivated land. It is made worse by drought and the scarcity of water arising from the demands of tourism, urbanisation, and, above all, intensive irrigated agriculture.

Spain, which is only separated from North Africa's deserts by the narrow Straits of the Gibraltar sea channel, is often affected by drought, with over half the years between 1880 and 1980 classified as dry or very dry. The period from 1992 to 1995 was one of the driest in the century, with resulting crop losses of 30-50 percent. However, this was surpassed by the drought of 2005-2006, which the government described as one of the "worst ever" and was only recently declared at an end by Environment Minister Cristina Narbona.

Over the last decade Spain has witnessed high growth based on its construction industry, centred in those areas most affected by lack of water, such as the Costa Brava and Alicante. The engine of

this growth came from European Union subsidies, cheap credit supplied by national banks and construction companies relying on cheap labour from Spain's other regions and North Africa. New tourist areas with vast hotels, golf courses, theme parks and leisure complexes mushroomed, catering to an estimated 50 million foreign visitors and consuming vast amounts of water in areas with limited water resources.

Each new golf course built is estimated to use the equivalent of what a town of around 8,000 to 10,000 people would normally use. An estimated 180,000 holiday homes are built along Spain's coast every year, prompting Javier Pedraza of Madrid's Complutense University to comment, "We have grown too quickly without protecting areas of nature."

Corporations have seen the construction boom as a lucrative source of profit with very little concern for its environmental impact. The whole process has been riddled with corruption and profit gouging by politicians, officials and real estate developers. An ongoing judicial investigation has indicted 86 such individuals who made huge profits from land deals in Marbella.

As important as tourism is, over 80 percent of water in Spain is used by agriculture, and this rises to nearly 90 percent in southern Spain, which has become the garden of Europe. Scientists estimate that 115 litres (30 gallons) of water are used to produce just one kilo (two pounds) of strawberries. The World Wildlife Fund's (WWF) Alberto Fernandez alerts those who think they can make a quick profit warning, "We are losing natural treasures. We're losing the ability to make good agricultural products and we are severely damaging water quality."

Both holiday and agricultural developments rely for their water on over half a million illegal boreholes—holes drilled into the ground for water extraction—which form the basis of a profitable black market. According to Guido Schmidt, head of the WWF's Freshwater Programme in Spain, there are so many speculators involved that whole networks of large and small pipes cover dozens of kilometres, linking the boreholes to remote farms and homes. "It's like the underground of a big city," Schmidt said adding "Many developments are based on the illegal use of water ... You just plan a golf course and you don't care about permits to supply it with water because you know you will be able to get it from the black market."

The Matutes family, which dominates the island of Ibiza and numbers former Popular Party Foreign Minister Abel Matutes amongst its members, currently faces corruption charges relating

to numerous land deals, including a proposed golf course at En Bossa beach that would have received subsidized water meant for farming.

In Andalusia, in 2005, many rivers completely dried up, including the world famous Doñana, which flows through the national park of the same name—the last refuge of certain European species such as the lynx—and is surrounded by an estimated 1,000 illegal boreholes. Reservoir water levels were half the previous year. Since records began in 1930, the rainfall has been reduced by a third of the average, causing the fishing industry and surrounding farmland to lose more than one billion euros.

At the same time, a “water war” almost broke out between the regions of Murcia and Castilla La Mancha, stoked up by regionalist politicians because the Segura river does not supply enough for Murcia’s needs. The Tajo river in central Spain has been diverted into the region for the last 30 years.

During this drought, the Castilla La Mancha government stopped the Tajo supply and even sent spy planes into Murcia to see what they were doing with the water they had. They discovered over 14,000 secret water reservoirs that no one was aware of.

Also in 2005, Portugal demanded compensation of six million euros from Spain after water levels from the Douro river fell below the limits set in a bilateral agreement which acknowledges Spain as the source of many of Portugal’s big rivers.

To make matters worse, scientists estimate that due to global warming, average temperatures in inland Spain could rise by between 5 and 8 degrees Centigrade (8-12 degrees Fahrenheit) and coastal areas by 4 degrees Centigrade by 2071-2100. This means the temperature of inland Madrid could soar to as high as 50 degrees Centigrade (122 Fahrenheit) by the end of the century. Rainfall in southern Spain could also fall by as much as 40 percent, although the northern half of the country would generally get more rain in most months of the year. Scientists have discovered that bears have stopped hibernating in the mountains of northern Spain, which may already signal changes due to global warming.

Spain has the highest density of reservoirs of any country in the world, many of which originated during the fascist regime of General Franco, which tried to achieve economic growth based on national autarky. A breakneck programme of canal building and hydroelectric power plant construction, particularly in the 1950s and 1960s, led to a dramatic increase in Spain’s water supply, which became available to satisfy powerful agricultural interests.

With the death of Franco, the Constitution of 1978 was not only a political compromise in terms of Franco’s heirs, but also promoted regional governmental administrations beset with growing antagonisms over the use and control of water and waterways—particularly between the richer wet north and the poorer dry south.

This was the driving force for a new water policy promoted by the Popular Party government in 2001. The Hydrological Plan (NHP) was supposed to use the well-supplied northern water systems to supply the southern regions, but it met with huge resistance from a coalition of northern regionalists, who want the water for their own economic development, and environmentalists, who said the plan overlooked the environmental costs as well as

the large displacements of people that would be necessary.

Under pressure from these forces and with a manifesto commitment to “reform” the NHP, José Luis Zapatero’s Spanish Socialist Workers Party (PSOE) government came to power in 2004. The main result was the cancellation of a plan to divert the Ebro, one of the biggest rivers in the north, to the south, and instead build a large number of desalination facilities turning seawater into drinkable water.

Scientists say the multi-billion euro outlay on the desalination plants is a short-sighted measure that could lead to even bigger tourist complexes and golf courses in areas of the greatest risk for drought and desertification. The WWF says desalination is an extremely expensive and energy intensive method of producing freshwater that “may have a place in the world’s future freshwater supplies,” but the group adds, “Regions still have cheaper, better and complementary ways to supply water that are less risky to the environment.”

The organisation explains how the impacts of desalination include increased saltiness around the plants, more greenhouse gas emissions, destruction of coastal areas and reduced emphasis on conservation of rivers and wetlands.

There should be no reason why development in such a beautiful and hospitable part of the world as Spain cannot be achieved without the environmental degradation that is being carried out now. With most of Spain naturally dry and suffering from periodic droughts and forest fires, commercial and social needs demand that a rational, scientifically sustainable system be put in place.

The development of the productive forces throughout human history—and, specifically, under capitalism—has already led to an extraordinary growth in the ability of mankind to master the natural environment and use its resources to meet human needs. But planning the supply and preservation of such a truly essential item as water is instead proving increasingly problematic. Again and again it falls foul of corporate vested interests, regional and national tensions and the anarchy of the market, of which the growth of the so-called “black market” is only the worst expression. It is this that is at the root of Spain’s water crisis, just as it is with the more generalised disaster posed by global warming.



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