
Combating climate changes

The planet's climate has constantly been changing over geological time. Climate change is a change in the typical or average weather of a region or city. This could be a change in a region's average annual rainfall, for example. Or it could be a change in a city's average temperature for a given month or season. The Federal Republic of Germany, also called Germany, is a country in Central Europe. The country's full name is sometimes shortened to the FRG (or the BRD, in German). To the north of Germany are the North Sea, the Baltic Sea, and the country of Denmark. To the east of Germany are the countries of Poland and the Czech Republic. To the south of Germany are the countries of Austria and Switzerland. To the west of Germany are the countries of France, Luxembourg, Belgium, and the Netherlands. The total area of Germany is 357,021 square kilometers (137,847 square miles).

The large majority of Germany has warm summers and cool or cold winters. In June 2013, Germany had a population of 80.6 million people. After the United States, Germany is the second most popular country for migration in the world. Air supply is the main reason for that difference. Also, an exponential increase in the number of buildings and streets means that there is simply much more surface area to absorb and store more heat. The theory of climate change is certainly present in people's minds: Numerous German cities, such as Cologne, have begun to develop climate adaptation concepts over the last several years. They have tasked experts with developing improved measures for dealing with storms and heavy rain in the future. Angela Merkel, the prime minister of Germany hasn't come close to earning her reputation for leadership on climate change. The latest round of the United Nations Climate Change Conference, which runs from Nov. 6 to 17, is loaded with symbolism. The conference is being chaired by the island nation of Fiji, which is severely affected by rising seas and desertification caused by climate change. The location of the meeting in Bonn, Germany, meanwhile, was intended to underscore the cooperation between those responsible for global warming and those in the path of its destruction. Of all the cities of the industrial world, Bonn was selected not just because it is the seat of the U.N. Climate Change Secretariat, but also because it is in Germany, the industrial giant that has an international reputation as a pioneer and righteous leader in climate protection.

Yet Germany's image as a selfless defender of the climate, which was once largely deserved, is now a transparent fiction. Germany has fallen badly behind on its pledges to sink its own greenhouse gas pollutants. In fact, Germany's carbon emissions haven't declined for nearly a decade and the German Environment Agency calculated that Germany emitted 906 million tons of CO₂ in 2016 — the highest in Europe — compared to 902 million in 2015. And 2017's interim numbers suggest emissions are going to tick up again this year. Germany is Europe's largest producer and burner of coal, which accounted for 40.3 percent of net power production in 2017: 15.5 percent from hard coal and 24.8 percent from lignite, also known as brown coal, among the dirtiest of fossil fuels, which Germany mines more of than any other country in the world. Germany's electricity sector itself is responsible for more than a third of the country's CO₂ emissions. Even more damning: Germany is still digging new open-cast mine pits — as well as subsidizing the industry as a whole, although it has promised to phase out coal in the indefinite future (hard coal use will end in 2018). Among Europe's power plants, Germany's brown coal stations constitute six out of 10 of the worst polluters. The lignite power plants, which run 24/7

year-in, year-out, produce so much power that German utilities sell the surplus abroad.

What is Germany doing?

The final version of the German Environment Ministry's Climate Action Plan has been published. But concrete targets included in previous drafts have been removed, prompting the Green Party to describe the document as an "admission of government failure". The Climate Action Plan was announced at the Paris Climate Summit as a framework for how Germany was to reach its goal of cutting greenhouse gas emissions by 80 to 95 percent by 2050. Germany is already struggling to meet its 2020 climate targets and is under additional pressure after Chancellor Angela Merkel repeatedly said she would make climate policy a priority of Germany's G20 presidency next year. Germany could be a model for how we'll get power in the future. The European nation's energy revolution has made it a leader in replacing nukes and fossil fuels with wind and solar technology. Wind turbines surround a coal-fired power plant near Garzweiler in western Germany. Renewables now generate 27 percent of the country's electricity, up from 9 percent a decade ago. Eventually, they'll crowd out coal—although Germany is switching off its nuclear plants first. Germany, the world's fourth-largest economy, has promised some of the most aggressive emission cuts—by 2020, a 40 percent cut from 1990 levels, and by 2050, at least 80 percent.