

Experts: Europe floods show need to curb emissions, adapt

July 17 2021, by Raf Casert



People use rubber rafts in floodwaters after the Meuse River broke its banks during heavy flooding in Liege, Belgium, Thursday, July 15, 2021. Heavy rainfall is causing flooding in several provinces in Belgium with rain expected to last until Friday. Credit: AP Photo/Valentin Bianchi

Just as the European Union was announcing plans to spend billions of

euro to contain climate change, massive clouds gathered over Germany and nearby nations to unleash an unprecedented storm that left death and destruction in its wake.

Despite ample warnings, politicians and weather forecasters were shocked at the ferocity of the precipitation that caused flash flooding that claimed more than 150 lives this week in the lush rolling hills of Western Europe.

Climate scientists say the link between extreme weather and global warming is unmistakable and the urgency to do something about climate change undeniable.

Scientists can't yet say for sure whether climate change caused the flooding, but they insist that it certainly exacerbates the extreme weather that has been on show from the western U.S. and Canada to Siberia to Europe's Rhine region.

"There is a clear link between extreme precipitation occurring and climate change," Wim Thiery, a professor at Brussels University, said Friday.

Stefan Rahmstorf, a professor of ocean physics at the University of Potsdam, referring to the recent heat records set in the U.S. and Canada, said "some are so extreme that they would be virtually impossible without global warming.."

Taking them all together, said Sir David King, chair of the Climate Crisis Advisory Group, "these are casualties of the climate crisis: we will only see these extreme weather events become more frequent."



A woman walks up the stairs in her damaged house after flooding in Ensival, Vervier, Belgium, Friday July 16, 2021. Severe flooding in Germany and Belgium has turned streams and streets into raging torrents that have swept away cars and caused houses to collapse. Credit: AP Photo/Francisco Seco

For Diederik Samsom, the European Commission's Cabinet chief behind this week's massive proposals to spend billions and force industry into drastic reforms to help cut the bloc's emissions of the gases that cause global warming by 55% this decade, this week's disaster was a cautionary tale.

"People are washed away in Germany ... and Belgium and the Netherlands, too. We are experiencing climate change," he said on a conference call of the European Policy Centre think tank. "A few years

ago, you had to point to a point in the future or far away on the planet to talk about climate change. It's happening now—here."

And climate scientists point toward two specific things that have contributed to this week's calamity.

First, with every 1 degree Celsius (1.8 degrees Fahrenheit) rise in temperature, the air can take in 7% more humidity. It can hold the water longer, leading to drought, but it also leads to an increase in dense, massive rainfall once it releases it.



A man rows a boat down a residential street after flooding in Angleur, Province of Liege, Belgium, Friday July 16, 2021. Severe flooding in Germany and Belgium has turned streams and streets into raging torrents that have swept away cars and caused houses to collapse. Credit: AP Photo/Valentin Bianchi

Another defining factor is the tendency for storms to hover over one place for far longer than usual, thus dumping increasing amounts of rain on a smaller patch of the world. Scientists say warming is a contributing factor there, too. A jet stream of high winds six miles (nearly 10 kilometers) high helps determine the weather over Europe and is fed by temperature differences between the tropics and the Arctic.

Yet as Europe warms—with Scandinavia currently experiencing an unusual heat wave—the jet stream is weakened, causing its meandering course to stop, sometimes for days, Thiery said.

He said such a phenomenon was visible in Canada too, where it helped cause a "heat dome" in which temperatures rose to 50 C (122 F).

"And it is causing the heavy rain that we have seen in Western Europe," he said.



People carry their belongings past a broken road in Schuld, Germany, Friday, July 16, 2021. Two days before the Ahr river went over the banks after strong rain falls causing several deaths and hundreds of people missing. Credit: AP Photo/Michael Probst



This image provided on Friday, July 16, 2021 by the Cologne district government shows the Blessem district of Erftstadt in Germany. Rescuers were rushing Friday to help people trapped in their homes in the town of Erftstadt, southwest of Cologne. Regional authorities said several people had died after their houses collapsed due to subsidence, and aerial pictures showed what appeared to be a massive sinkhole. Credit: Rhein-Erft-Kreis via AP



A regional train sits in the flood waters at the local station in Kordel, Germany, Thursday July 15, 2021 after it was flooded by the high waters of the Kyll river. Credit: Sebastian Schmitt/dpa via AP



Rescue workers look down from a balcony as floodwaters run down a main street in Pepinster, Belgium, Thursday, July 15, 2021. Heavy rainfall is causing flooding in several provinces in Belgium with rain expected to last until Friday. Credit: AP Photo/Olivier Matthys



The Ahr river floats past destroyed houses in Insul, Germany, Thursday, July 15, 2021. Due to heavy rain falls the Ahr river dramatically went over the banks the evening before. Credit: AP Photo/Michael Probst



A car floats in the Meuse River during heavy flooding in Liege, Belgium, Thursday, July 15, 2021. Heavy rainfall is causing flooding in several provinces in Belgium with rain expected to last until Friday. Credit: AP Photo/Valentin Bianchi



Light posts along a pathway of the Meuse river as it rises during flooding in Liege, Belgium, Thursday, July 15, 2021. Heavy rainfall is causing flooding in several provinces in Belgium with rain expected to last until Friday. Credit: AP Photo/Valentin Bianchi

Even if greenhouse gas emissions are drastically curbed in the coming decades, the amount of carbon dioxide and other planet-heating gases already in the atmosphere means extreme weather is going to become more likely.

Experts say such phenomena will hit those areas that aren't prepared for it particularly hard.

"We need to make our built environment—buildings, outdoor spaces,

cities—more resilient to climate change," said Lamia Messari-Becker, a professor of engineering at the University of Siegen.

Those that don't adapt will risk greater loss of life and damage to property, said Ernst Rauch, chief climate and geoscientist at the reinsurance giant Munich Re.

"The events of today and yesterday or so give us a hint that we need to do better with respect to being ready for these these type of events," he said. "The events themselves are not really unexpected, but the order of magnitude probably has surprised some."

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