Summary

The famous Danube River is now only nine inches deep in places. Meanwhile, the Colorado is in the worst drought in 1200 years. There's good reason to think that the Colorado is going to get drier over time. We need to plan for a riskier future.

The Colorado River is suffering from the worst drought in at least 1200 years, raising fears about the fate of its shrinking reservoirs. According to the Wall Street Journal, if the drought continues through the winter, the entire system of managing water along the river may break down. This may not be the worst case scenario.

Across the Atlantic, the situation on the Danube is truly dire. The “Blue Danube” memorialized by the Strauss waltz is now only nine inches deep in Budapest. Cargo ships have come to a halt. Nuclear reactors have shut down for lack of cooling water. An AP photo vividly captures the situation, with a man in a horse-drawn cart riding down a broad dry area of riverbed. The Rhine is now equally low in Frankfurt and slipping lower.

The Danube and the Colorado are in very different climates, but they’re not altogether dissimilar. The Danube is a much bigger river, with several times the flow of the Colorado. Average annual rainfall is much larger in the Danube basin. Variability of rainfall and other precipitation are similar. It would be crazy to say that what’s happened to the Danube will necessarily happen to the Colorado. It’s not crazy, however, to worry that the Colorado river crisis could get worse and that even worse could await us later in the century.

One reason to think that today’s drought isn’t the worst-case scenario is that the Colorado has probably seen worse already. In the second century A.D., the streamflow in the river may have been 20% lower than it is today, and drought conditions seem to have lingered for many years. And that was before climate change.

If you think about it, out of the 175 years or so that humans have been warming the planet, about twenty of those years have included the worst drought on the Colorado in over a millennium. This could be a coincidence — an extremely unusual natural fluctuation that just happened to pop up in the climate-change era.

Climate modelers have suggested that further global warming, due to our continued use of fossil fuels, is likely to make things worse for the Colorado. A review of

multiple models concludes:

> “Continued warming of the basin’s climate will further impact the surface water balance and hydrology, leading to chronic drought conditions by today’s standards … Long-term declines in annual precipitation are possible, and more likely in the Lower Basin.”

Not all the models agree on Western precipitation trends, however, and those predictions are inherently tricky. Still, there’s plenty of reason to worry about future rainfall trends.

Even if average precipitation doesn’t decrease, increased variability means that we could be seeing more droughts as well as more floods. And rising temperatures will also mean that soil dries out more quickly and plants will need to more water.

The point is that we can’t assume the current Colorado drought is just a fluke that we can wait out, or that it represents the worst case scenario. As the Danube shows, even worse things are possible, if not for the Colorado then perhaps for other U.S. rivers. We’ve built a lot of infrastructure based on assumptions about the weather that may not hold true in the future, and we may yet pay a heavy price for that.