Climate change already under way in Texas

Region expected to get drier.

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Asher Price - Texas is already feeling the heat from global climate change and will only continue to do so, experts said Friday, on the heels of a United Nations climate change report that detailed how regions will be affected.

Even if humans reduce emissions of greenhouse gases, Texas and other regions seem likely to suffer from pollutants already in the atmosphere.

The drought conditions that have dogged Central Texas in the past couple of years will become closer to the norm, Columbia University scientists concluded in a report published this week in the journal Science.

Between now and the end of the century, rainfall will drop by as much as 20 percent, said Yochanan Kushnir, a climate scientist at Columbia who helped author the report. Droughts will continue to come in cycles, but overall temperature and aridity will rise, he said. Conditions will resemble the Dust Bowl and 1950s droughts, he said.

Agriculture yield, in turn, could decline 40 percent, said Bruce McCarl, an agricultural economist at Texas A&M University, who has written about climate change.

"Texas is going to get squeezed," he said, adding that College Station will look more like Austin, and Austin will look more like San Angelo.

Well water and surface water seem to be at risk, too.

McCarl said pumping of the Edwards Aquifer, which provides water to 1.7 million people in Central Texas, must be cut by about a quarter if Comal Springs and San Marcos Springs, which feed the Comal and San Marcos rivers, are to continue to flow.

So far, the state has shrugged off climate change as a major factor in water planning.

"When considering the uncertainties of population and water demand projections, the effect of climate change on the state's water resources over the next 50 years is probably small enough that it is unnecessary to plan for it specifically," says a statewide water plan that sets goals for conservation and water use in the next half-century.

Meanwhile, air quality, which city and state officials have been struggling to manage, is expected to continue to decline.

Preliminary results from a University of Texas study suggest that lung-damaging ozone will creep up by two to three parts per billion in the next 50 years, according to Zong-Liang Yang, a University of Texas professor who builds models that translate climate phenomena from the global to local scale.

A federal threshold for the pollutant is 85 parts per billion; Austin's ozone level is frequently 83 parts per billion. (If the city exceeds the threshold, it might be forced to forfeit federal highway money, and its businesses might have to add emissions controls.)

The same models showed that temperatures in the Austin area will increase by about 4 degrees in the next 50 years, Yang said.

If Texas were a country, it would be the seventh leading carbon dioxide emitter in the world. A bill in the Legislature, filed by Sen. Kirk Watson, D-Austin, would require the state environmental commission to regulate carbon dioxide emissions, a contributor to climate change.

Across the globe, species are moving toward the poles and climbing to the hills, according to the U.N. report.

In Texas, tropical species have taken full-time residency in Central Texas, University of Texas biologist Camille Parmesan said.

That in itself might not be a problem, but the migration of the animals is a bit like canaries in a mine shaft.

"As tropical birds and butterflies move into Texas," Parmesan said, "you can be darn sure the tropical diseases will follow."

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