How Climate Change Might Make Some Cities 'Uninhabitable'

By Krisanne Alcantara | Posted Apr 22nd 2013

House hunters are perpetually bombarded with lists of the next "hottest" neighborhoods: The next best areas to buy a home, where to invest in the future. But environmentally speaking, it can mean: Where not to live in the future, as a result of climate change. Environmentalists warn that some areas of the United States are not only especially vulnerable to the negative effects of climate change -- but are well on their way to becoming dangerous and downright uninhabitable.

As we observe Earth Day, it's important to note that climate change experts predict that in as early as the next 50 years, substantial portions of the United States could exceed the threshold for human survival. According to Frank Lowenstein, Climate Adaptation Strategy Leader at The Nature Conservancy, certain areas have already reached that point: many low-lying coastal areas are battered continuously by violent storms and floods, while desert communities are vulnerable to drought and unbearable heat. Lowenstein says that desert cities like Phoenix have already experienced an increase in average temperatures by three degrees (compared to around 1.5 degrees across the rest of the country). In 2011, Phoenix set a new record with an alarming 33 days of temperatures above 110 degrees Fahrenheit.

"The desert Southwest is, in many ways, the canary in the coal mine for the United States as a whole," Lowenstein told AOL Real Estate. "In the Southwest, extremes are taking the form of heat waves, drought and mega-fires. These impact people, nature, infrastructure and water availability."

Lowenstein predicts, on the basis of a recent scientific study, that there is even a 50/50 chance that Lake Mead -- the enormous reservoir of Colorado River water that hydrates the state of Arizona -- will go dry by the end of this decade. His thoughts are echoed by a recent article in Salon headlined "Phoenix May Not Survive Climate Change," which argues that the aptly-named Valley of the Sun already has exhausted all its local natural resources and is dependent on an "improbable infrastructure to suck water from a distant, dwindling Colorado River." Throw into the mix dropping water tables and increased water salinization, and Phoenix residents are merely "living on borrowed time," some experts have said.

While Phoenix pulls back the curtain on a shaky future for desert communities, Sandy and Katrina offer insights into how low-lying coastal cities can expect to fare from increasingly aggressive storms and steadily rising sea levels. Already, sea levels have risen 8 inches in the past century and are predicted to rise another 6.5 feet by the end of this century. (Some studies also suggest that global sea levels are rising 60 percent faster than the computer projections issued only a few years ago by the United Nations' Intergovernmental Panel on Climate Change.) According to a report by the Natural Resources Defense Council, climate change, coupled with local subsidence, could result in the waters of the Gulf of Mexico rising relative to land in New Orleans by as much as 4.6 feet in less than 100 years. In fact, if the impacts of the sea-level rise on wetlands remain unchecked, metropolitan New Orleans might become an island in the Gulf of Mexico.

And it's not just New Orleans that's threatened. "From Miami to Boston to San Francisco, sea level rise is a major threat to countless U.S. communities," Tara DePorte, the executive director of The Human Impacts Institute, told AOL Real Estate. Her thoughts are echoed by Carl Safina, marine biologist and host of the PBS Series "Saving the Ocean," who said that major coastal cities such as Los

Angeles (depicted in the photo illustration above), Miami, Seattle and New York are at high risk. ("New York is just getting more frequent and severe storms that bring high water and flooding," said Safina. "Hurricane Sandy was climate change knocking -- and she has friends coming.") Safina said that cities are slowly beginning to realize the perils that they could face in the near future: Even cities that for years dismissed reports of climate change, or lagged in preparation for rising sea levels, are now making plans to fortify their beaches, harbors and waterfronts.

He is quick to add, however, that it's not just coastal or desert cities that need to worry: No city or neighborhood in the United States is truly safe from the effects of climate change. "Warm places will get warmer, cool places will also get warmer, wet places will get wetter and dry places will get drier," Dr. Safina told AOL Real Estate. "In broad sweep that's what's happening and will likely happen. There is nowhere immune to climate change." This story continues after the gallery below. Note: The gallery shows what coastal cities could look like if projections in sea level rises remain on track, according to Climate Central. Each set of photos shows what the area could look like in 2100, when sea levels are projected to be five feet higher than they are now, and in 2600, when they're projected to be 25 feet higher.

What You Can Do

For residents of areas that are at high risk of becoming uninhabitable due to climate change, there are measures that can be taken to curb those effects. DePorte suggests that homeowners in "red flag" communities should incorporate sustainable features into their homes in the form of solar panels, greywater systems, waste composting, Energy Star appliances and rainwater catchment systems. Her thoughts are echoed by Safina, who added that the best thing residents, particularly in desert communities such as Phoenix, can do is to equip their homes with solar cells on roofs and make the most of geothermal energy.

On a wider scale, experts advise that all cities -- coastal or otherwise -- should be retrofitted for a low-carbon future through championing renewable energy sources in commercial buildings, ecologically responsible urban planning (fewer roads, more walking and bicycle routes), zero waste, water conservation measures and intensive urban agriculture. "Each city has different needs depending on the local impacts of climate change," admitted DePorte. "But a 'climate smart' city would incorporate those elements into their planning and retrofitting."

According to Safina, however, cities like Phoenix are simply in over their heads and require more drastic measures in order to survive the coming decades. "Depopulate," Safina advised residents of Sun Valley and other arid desert cities in America's Southwest. "There are too many people there for the water available." Instead, he and other experts suggest moving to areas that are "cool, high and have very abundant water."