Sadly, the Paris Agreement Isn't Nearly Enough

MICHAEL B. GERRARD

limate change is a major contributor to migration and displacement. Persistent drought forced as many as 1.5 million Syrian farmers to move to overcrowded cities, contributing to social turmoil and ultimately a civil war that drove hundreds of thousands of people to attempt to cross the Mediterranean into Europe. Drought also worsened refugee crises in the Sahel, the Horn of Africa, and other parts of the continent.

Climate change can cause displacement in multiple ways. The most prominent are water shortages and desertification that threaten food supplies and livelihoods, extreme weather events, sea-level rise, and loss of Arctic sea ice. Often these conditions combine with existing poverty and political instability and make those worse.

No reliable estimates exist of the number of people who will be displaced partly or wholly by climate change, due to uncertainties concerning the rate of change, the ability of different societies to cope, and other factors. However, several estimates put the number of people in the hundreds of millions in the latter part of this century.

According to the UN Refugee Agency, as of mid-2016 approximately 65 million people were already displaced from their homes as a result of natural disasters, conflict, and other factors — the largest number since World War II. Climate change could displace several times that number. Unless there are advance planning and preparations, we can expect to see further international crises over where people fleeing uninhabitable areas will go, as well as degrading and dangerous

conditions in the inevitable refugee camps.

Adding to the horrors, displacement leads to a considerable increase in human trafficking. The UN Environment Programme has indicated that trafficking may increase by 20-30 percent during disasters, and INTERPOL has warned that disasters or conflict may increase the exposure of women to trafficking, as families are disrupted and livelihoods are lost. There are multiple instances in which trafficking has been shown to increase in the aftermath of cyclones, flooding, earthquakes, and tsunamis. Some of this is for sex trafficking, some for forced labor, some is the demanding of money on false promises of safe passage.

The Paris Agreement requested the Executive Committee of the Warsaw International Mechanism for Loss and Damage "to develop recommendations for integrated approaches to avert, minimize, and address displacement related to the adverse impacts of climate change." However, nothing in this agreement addresses the crucial question of which countries will take in the very large number of people who will be displaced. The anti-refugee sentiment of some prominent politicians in the United States, Europe, and Australia does not fill one with confidence that the affluent countries will step up to the plate when the time comes.

Paris also saw a strengthening of the temperature goal — the maximum tolerable increase in global average temperatures. It became "well below" 2 degrees Celsius above pre-industrial levels, with a goal "to pursue efforts to limit the temperature increase to 1.5 degrees."

Regrettably, the Paris conference did not lead to agreements that will in fact achieve that objective. Almost all countries put forward their own nonbinding, unenforceable pledges for reducing their emissions. However, when they are all added up, these pledges if fully carried out would lead to a world in 2100 that is

around 3.5 degrees above pre-industrial conditions.

Such a world would be utterly catastrophic. An increase of 3.5 degrees would not only drown the small island nations. It would also submerge significant portions of Bangladesh, the Nile Delta, the Mekong Delta, and other low-lying areas of the world, and would lead to melting of the Antarctic and Greenland ice sheets that would endanger many of the world's coastal cities, from New York to Shanghai. There appear to be no estimates of the number of people who would be displaced in such a situation, but it would no doubt be in the billions. This would, in turn, lead to a massive amount of conflict and trafficking.

The negotiators in Paris fully understood that the pledges made there would not be sufficient, and thus decided that every five years, countries will make new and stronger pledges. However, we are running out of time. Greenhouse gases like carbon dioxide stay in the atmosphere for a century or longer, and every year their level in the atmosphere is higher. Already we know that meeting the temperature objectives will require "negative emissions" by the latter part of this century, meaning more greenhouse gases would have to be removed from the air than are emitted into it; no one knows just how this will be achieved.

All this adds up to two essential agenda items for the nations of the world. First, they must accelerate the transition away from fossil fuels in order to minimize global temperature increases as much as possible. Second, they must begin making plans to accommodate the multitudes who will be displaced from their homes by the climate change that will occur regardless of our best efforts.

Michael B. Gerrard is a professor and director of the Sabin Center for Climate Change Law at Columbia Law School, and chair of the faculty of The Earth Institute.