Improving Climate Resiliency

As climate change continues to redefine the planet's weather systems and geography, people everywhere face new and unprecedented obstacles in mitigating the effects of climate change on their day- to-day lives. "Climate resiliency" means taking proactive steps to prepare for the consequences of climate change as they occur. While popular discussions of climate change often focus on reducing carbon emissions or other efforts to solve the problem at the source, climate resiliency acknowledges that the effects of climate change are already here. Adopting climate resiliency will involve action from individuals and governments to prepare for shifts in social structures, disaster relief, public health, and other aspects that concern people everywhere.

Climate migrants

Many of the consequences of climate change are particularly destructive because they make areas less hospitable for the people living there. As climate change continues, more and more people will find themselves living in places that can no longer sustain human life. Climate-related stresses like drought and flooding exacerbate other societal stressors and put pressure on people to leave their homes and seek refuge elsewhere. By 2050, more than 200 million people worldwide will have been displaced by climate change. Most climate migrants will be displaced within their home country's borders, but some countries face the displacement of their entire populations. South Pacific island nations like Kiribati and Tuvalu may be entirely submerged by rising sea levels in the coming decades. Climate migrants face not only the stresses of migration, but the challenges of dwindling resources that must be allocated among a larger population.

Poor urban planning

"Urban planning" is the way that cities are designed as an entire system, including both infrastructure and the regulations that govern how that infrastructure is used. Urban planning practices vary significantly from city to city, and often within cities themselves, and make a significant impact on how people within these areas live. Cities' resistance to climate effects, or lack thereof, is an increasingly important aspect of urban planning. Cities all over the world are rapidly growing as a result of both population growth and an overall movement from rural to urban areas. As a result, many of these cities are struggling to adapt quickly enough to keep up with the needs of their residents, and climate change complicates these struggles even further. Cities must contend with problems including new weather extremes, polluted water and air, waste management, and rising temperatures.

Extreme weather events

The overall rise in global temperature has triggered changes in the world's weather systems. A warmer world doesn't simply mean that the world, as a whole, grows warmer. In fact, climate change has led to an increase in "extreme weather events," like heat waves, hurricanes, polar vortexes, and tornadoes. Extreme weather has become more common in recent years, and communities all over the world are facing a future where extreme weather is not a once-in-a-while event, but a regular occurrence. This weather stretches infrastructure, ecosystems, and response systems to their limits; initial failures can have cascading effects that cause instability in a region long after the flashpoint effects of weather have gone away.

Agricultural productivity

Food is strongly tied to the region of its origin. Not all food grows everywhere, and not all areas are amenable to cultivating livestock. Global temperature increase is complicating agriculture by changing climates where food is produced. Crops that once were both sustainable and high yield may suddenly become ill-suited for these new changes in weather, and dwindling water supplies struggle to meet the needs of farms. At the same time, global demand for food is rising, leading, in part, to unsustainable farming practices that may increase production in the short term, but harm the ability for land to produce food long term. Adverse weather events, especially droughts and flooding, may destroy crop yields. Agriculture produces more than enough food to feed the current world's population, but people are nevertheless gripped by food insecurity all around the world; declining agricultural productivity is poised to make this problem even worse.

Disease evolution

Even small changes in global temperature can have enormous impacts on the extent to which a disease thrives. The mosquitoes that spread malaria, for instance, thrive in warm climates; as more of the world experiences higher temperatures, malaria can survive in more places and consequently infect more people. Many of the consequences of climate change create environments conducive to the spread of any number of diseases. Diseases including malaria, West Nile virus, dengue fever, Lyme disease, cholera, and red tide all stand to greatly expand their reach in the coming years. Communities that previously did not have to contend with many of these diseases will now have to prepare for both preventative measures and treatment, placing further burdens on healthcare systems that may already struggle to meet people's needs.

Global inequality in climate adaptation

Climate change will not affect all people equally. The nations that have contributed the most to climate change through greenhouse gas emissions will actually be the least affected by it and the countries worst hit by climate change will overwhelming be equatorial, part of the Global South. At the same time, fighting climate change is an expensive proposition. New technologies, infrastructure, public health initiatives, and other tools to mitigate climate-related problems all require significant investment. The countries that are most likely to need these tools are the least likely to be able to afford them, and are the most likely to have their economies negatively affected by the results of climate change. In an interconnected world, true climate resiliency requires global solutions.

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