

How 2017 Natural Hazards Affected Food Security

by Rachel Boyle

“Water, water, every where / nor any drop to drink.” *The Rime of the Ancient Mariner* captures the irony that haunts flood victims. News statistics focus mainly on deaths, but many, many times that number face losses of all kinds, including deprivation of food and water.

The most obvious cause of food insecurity from flooding is the destruction of farmland and contamination of stored food. For example, the Cable News Network (CNN) reported that Bangladesh, which invests almost half its labor force in agriculture, was a third underwater at the peak of the 2017 floods. According to the *Dhaka Tribune*, Bangladesh faced a shortfall of 1.5 million tons of rice, and, as a result, resorted to importing rice from India for the first time in years.

Accessing available food can be problematic as well. Flood damage can cause people to become stranded. Telephone and electrical lines are down, roads are underwater and bridges are washed away. Emergency vehicles can't reach their targets, whether to bring people out or food relief in. *Al Jazeera* reported that, when Mumbai flooded in summer 2017, even rescue teams were stranded. Those who are stranded have only the food supplies that they can rescue or forage.

An even more insidious obstacle emerges when food is present, but those in need can't afford it. In Mumbai, for example, 60 percent of the population lives in slums, and many are daily-wage laborers. At the end of August, public transit shut down and Mumbaikars had to wade through hip-deep water to get anywhere. Those laborers who can't earn daily wages can't buy food, even if there is food to be had. The homeless face an additional problem, as *The Guardian* revealed in an interview with a Mumbaikar: a lack

of dry places to cook food. Illnesses exacerbate the monetary issues. Some waterborne diseases come from floodwaters polluted by heavy metals and bacteria, while others come from breeding mosquitos. Walking in opaque water risks foot-cuts and tetanus. Snakes, driven to the same dry areas humans are, bite more people than usual. People handling human remains risk tuberculosis and more. Medicines cost money, and poorer victims may have to choose between medicine and food. Those who are ill may or may not be physically able to feed themselves. Children can become vulnerable if their caretakers die, because of youth or illness or monetary deficiency.

“Nor any drop to drink” can become, all too easily, “nor any crumb to eat.”

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The longer-term challenge here is going to be food security, as so many of the farms experienced crop damage. This food shortage is already felt here in Matanzas [Cuba], as there are very few food vendors in the street (in the past they were on every other corner), and the bodegas and stores don't have eggs, chicken, and other staples. They expect this problem to worsen before it gets better, with another crop season.

— Stan Dotson, at the Ecumenical Theological Seminary in Matanzas, Cuba, where Hurricane Maria hit

This scenario is, sadly, far from uncommon after a disaster caused by natural hazards. A Food and Agriculture Organisation (FAO) of the United Nations (UN) report

says, “indirect losses experienced by the agriculture sector in the seasons after a disaster are twice as high as the direct damage to agricultural assets.” These losses come in many forms: lost future product of livestock; collapse of buildings meant to shelter such livestock; lost cultivation tools; irrigation damage; and redirection of the labor pool towards more immediate needs. Farms themselves might be destroyed, as happened in Nepal in 2015. According to *ABC News*, between the earthquakes and rain, farming terraces and even entire villages were “swept away” by landslides.

Timing is another factor in damage caused by natural hazards. Case studies conducted by Dartmouth College found that the 2015 Nepal earthquakes were so terrible because they struck just before rice planting, meaning that both rice reserves and rice about to be planted were lost.

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