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*A pregnant woman is carried out of an area flooded by water brought by Hurricane Eta. Planeta, Honduras. November 5, 2020. Alex Gakos, Shutterstock.*

## WAVES OF POLLUTION IN HONDURAS: UNDERSTANDING POOR WASTE MANAGEMENT AND NATURAL DISASTER

BY GINA KAWAS

As the fury of tropical depression Eta and hurricane Iota lash Central America, attention has rightly focused on the loss of lives, homes, infrastructures, and livelihoods due to high winds and catastrophic flooding. But the storms also highlight a long-standing and lesser known challenge—waste management—made even more complicated as storm surges carry trash and other health risks into vulnerable communities. Throughout Central America, the inadequate management of solid waste leads to a host of negative environmental impacts, affecting the quality of soil, air, oceans, surface waters, and underground aquifers. Improper disposal of waste generates harmful consequences for human health and contributes to the loss of marine life, in addition to being aesthetically unpleasant.

The COVID-19 pandemic has resulted in nearly nine months of lockdown and a dire economic situation for Honduras, Central America's second-most populous country. While the pandemic has indeed made life difficult for the country's 9.5 million citizens, climate change, including longer and more violent hurricane seasons, is exacerbating existing challenges. Honduras is one of the world's most [vulnerable countries](#) to climate change; and natural disasters are becoming more extreme and much too frequent for Honduras, along with the rest of Central America.

Climate-related hazards such as hurricanes and tropical storms lead to extreme flooding and storm surges, destroying major crops, bridges, and homes in Honduras. When such storms hit, usually peaking between October and November, the tragic story of floods, landslides, and the destruction of critical infrastructure repeats itself. The COVID-19 pandemic has created its own health and economic crises, while adding tons of disposable masks and protective gear to landfills. This has created a recipe for disaster.

Flood conditions also facilitate the proliferation of disease-transmitting vectors, such as the *aedes aegypti* mosquito, which can transmit dengue fever and the Zika virus. Such public health challenges associated with disease outbreaks may occur against the current backdrop of the global pandemic, which has already claimed almost 3,000 Honduran lives. New waves of pollution only make the situation more dire.

Of Honduras' 298 municipalities, six cities account for the bulk of solid waste generation: San Pedro Sula, Tegucigalpa, Choloma, La Ceiba, Choluteca, and El Progreso. According to the Honduran Ministry of Natural Resources and Environment, these six cities account for 54 percent of the total volume of waste production in the country. However, only 30 municipalities have appropriate disposal sites, meaning 268 municipalities have open landfills where trash is incinerated.

Most of these open landfills are also close to rivers, in violation of legislation that prohibits this (through zoning laws), making river pollution commonplace. Across many cities in Honduras, large groups of low-income, vulnerable people have set up makeshift settlements in close proximity to rivers. This creates a significant problem during hurricane season, as these homes easily wash away.

## **A Trail of Destruction: The Impact of Tropical Storm Eta and Hurricane Iota on Hondurans**

Even though the tropical depression weakened and passed through the region, its effects are still ravaging Central America. Eta has been catalogued as the worst meteorological phenomenon since Hurricane Mitch, which battered Honduras in 1998, leaving 15,000 dead and one million displaced people in its aftermath. While Hurricane Mitch influenced some level of Honduran migration to the United States, far more residents rebuilt their homes, which twenty-two years later, remain vulnerable to flooding and landslides.

About 2.9 million people in Honduras were affected by Eta, according to the country's emergency response unit. That number has doubled with Iota. The damage inflicted by both storms amounts to 250 billion Honduran lempiras (local currency), equivalent to more than US\$10 billion. This amount equals the entire national budget for 2021. The pandemic and both

hurricanes have left almost 860,000 people unemployed in a country of 9 million. And according to the Economic Commission for Latin America and the Caribbean (ECLAC), 6.9 million of Hondurans are expected to fall back into extreme poverty. GDP growth is expected to decline by 10 percent, something the country has never experienced.

Torrential downpours and flash floods represent two of the many signs of climate change that have become more common in the region. Non-stop rain over the course of three days with Eta and two days with Iota, have caused at least 100 deaths and resulted in more than 500,000 displaced Hondurans, as well as the destruction of countless homes and roads. The Honduran government has ordered the total evacuation of the flooded Sula Valley near the Atlantic Coast, one of the country's major economic engines that includes the industrial capital of San Pedro Sula and the important commercial port of Puerto Cortés.

These tragic outcomes were made worse by the Honduran government's slow call to action and initial response; officials were reluctant and outright irresponsible in failing to cancel a national holiday scheduled to begin on November 4. After months of lockdown and a depressed economy, the private sector and tourism industry pressured the government to encourage internal travel. These actions drew heavy criticism; as a result, as Iota approached, authorities ordered the evacuation of at-risk areas several days in advance. Nonetheless, Honduras and other Central American countries continue to respond with reactive policies and even negligence, rather than with preventive infrastructure and alert systems.

Even though officials had ample warning of the hurricane, the government did very little to prepare properly. The consequences have been dire. The current response continues to be inadequate given the magnitude of the crisis. This has created additional challenges for thousands of vulnerable families who have nowhere to go. Public schools, universities, and churches are being converted into temporary shelters to house the displaced. A week after Iota, these overcrowded shelters continue to function without electricity, potable water, or hygiene supplies.

The Honduran government has approached several international organizations for aid donations. But given the magnitude of the disaster and the fact that the international community has oriented most resources towards the fight against COVID-19, loans as opposed to grants could lead to an increase in the country's already high public debt. Looking toward the future, and in order to be eligible for green funding that supports the efforts of developing countries to respond

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to climate change, the Honduran government needs to make ambitious commitments to invest in low-emission and climate-resilient development. Many emergency relief funds, however, have been approved in the forms of donations and grants aimed towards supporting economic recovery plans.

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Along Honduras’ northern coast, most communications and electric infrastructure have been knocked out. Hundreds of families are currently experiencing squalid living conditions, without mattresses or cots, lacking food and masks, and with many packed closely together, making the spread of COVID-19 all the more likely. Hundreds have also been declared missing; with communications down in a significant part of the country, it may take weeks to find them.

### **The Risks of Climate Change and Plastics Pollution Keep Growing**

As the oceans warm, hurricanes are becoming more powerful, carrying more water, packing higher winds and posing an increasing threat to the world’s coastal communities. Adaptation

and mitigation efforts are crucial, as storm surges amplified by rising seas can be especially devastating—even more so in light of ocean pollution. According to the World Wildlife Fund, more than 90 percent of global marine pollution is the product of human activities carried out on land, as pollution reaches the oceans mainly through rivers. One of the main contributors to marine pollution is inappropriate waste management.

According to the United Nations Environment Program, more than three-quarters of marine litter consists of plastic. Between 4.8 and 12.7 million tons of plastic waste enter the ocean because many countries, particularly developing nations, have poor policy planning and recycling



*Four women walking as Eta storm approaches. Tegucigalpa, Honduras. November 4 2020. Marco Vasquez, Shutterstock*

programs. Although plastic is not the only material that is discharged into the ocean, it is the most challenging because it degrades very slowly and can travel long distances.

Also, due to marine currents, waste gets concentrated in specific areas that eventually form what have been called “garbage islands.” A principal concern for both Honduras and Guatemala is the Motagua River which borders both countries. The Honduran government has consistently demanded action from Guatemala (including by threatening international litigation) to stem the flow of plastic pollution from Guatemala into the Motagua River. The plastic tide comes from poorly managed landfills. In addition to entering rivers and streams, plastic washes into the Caribbean Sea, affecting the biodiverse Mesoamerican reef and making river flooding catastrophic when hurricanes or storms such as Eta and Iota hit the region. Continued plastics pollution also poses a problem for the local economy, because popular beaches that rely on tourism become less attractive destinations for international visitors.

## **The Tragic Response of the Honduran Government**

The Honduran government still does not prioritize climate change and its impacts, even though the country continues to experience its harsh consequences. The portion of the national budget allocated towards the Ministry of Natural Resources and Environment decreases every year; and the explanations for extreme and abrupt weather events are often oversimplified, blamed on the country’s high incidence of poverty and low economic development, rather than on regional and global climate trends.

Indeed, economic difficulties and scarce environmental education in Honduras, together with a lack of political will on the part of local, regional, and national governments, are the main drivers of this current crisis. Needless to say, there are virtually no mitigation or adaptation efforts that, coupled with decades of corruption and incompetence, further aggravate the effects of extreme weather.

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Today, a changing climate is transforming Honduras, and its devastating effects will worsen if no action is taken soon. Over the next decade, climate models predict that temperatures will continue to rise, water will become scarce in certain regions, and weather patterns will become even more unpredictable. Without monumental shifts in resiliency efforts to mitigate extreme weather, the patterns of disaster and destruction in Honduras will continue to worsen, erasing entire villages and displacing millions, turning far too many Hondurans into desperate climate refugees.

The symptoms of systemic problems require transformational solutions. Many countries have an unbalanced relationship with nature. Societies continuously consume and discard far too much, practices that are unsustainable for the natural world. Developing countries need to completely recalibrate their relationship to nature, channeling long-term financing and investment toward environmental health and climate resilience. The vision of a sustainable, circular economy—in which resources are used

sparingly and recycled endlessly—should become the model. The year 2020 has been a devastating one for Honduras on multiple health, economic, and climate-related fronts. Overcoming these challenges requires that Honduras pay far more attention to environmental sustainability and take steps to mitigate and better cope with the effects of natural disasters.

*Gina Kawas is a Wilson Center - Vidanta Foundation Fellow, researching waste management and sustainability practices in her native Honduras. This is the first in a series of written posts for the Wilson Center’s Latin American Program. The views expressed are those of the author.*