Commentary: Natural disasters are becoming man-made catastrophes

Deadly floods in Libya show how human activity has intensified both the threat and our weaknesses when it comes to climate disaster, says Lara Williams for Bloomberg Opinion.

Rescue teams and members of Libyan Red Crescent carry a dead bodies at a beach, in the aftermath of the floods in Derna, Libya, Sep 16, 2023. (Reuters/Ayman Al-Sahili)

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LONDON: At the start of September, torrential rain in the Mediterranean led to severe flooding, infrastructure damage and deaths in multiple countries. As climate change expedites more extreme weather events like this, we need to consider how they're framed.

A low pressure system, named Storm Daniel by the Hellenic National Meteorological Service, dumped downpours over 10 days across several nations, including Spain, Greece, Bulgaria, Turkey and Libya. The rain in Spain fell over just a few hours, yet major flooding still led to five fatalities.

Greece, Bulgaria and Turkey had precipitation for four days, submerging Greece's agricultural center, the Thessalian plain. The storm then strengthened into a "medicane," a Mediterranean hurricane, dropping record-high amounts of water on Libya over 24 hours on Sep 10 and Sep 11.

Many areas were reported to have received between 150mm and 240mm of precipitation, with the town of Al-Bayda getting 414.1mm. By comparison, in an average year, the coastal city of Derna - the epicentre of Libya's resulting crisis - gets just 274mm of rain.

CLIMATE CHANGE MAKE EXTREME WEATHER MORE LIKELY

Libya's experience has been especially catastrophic. Rain is one thing, but the collapse of two huge dams is another.

At around 3am on Sep 11, the water broke through the barriers, unleashing a tsunami-size torrent on top of Derna. About 4,000 people are confirmed dead, with more than 8,000 still missing as of Sep 21.

A rapid attribution study found that climate change played a role in the events. In Greece, Bulgaria and Turkey, global warming made the heavy precipitation up to 10 times more likely, with as much as 40 per cent more rain.

In Libya, scientists found that it was made up to 50 times more likely by fossil fuel emissions, with as much as 50 per cent more rain - though the weather event was still extremely unusual. Friederike Otto, climatologist and co-founder of the World Weather Attribution initiative, told me the rainfall was far outside the realm of anything seen before.

After extreme events, weather attribution studies have become an important contributor to making human-caused global warming part of the conversation. By comparing what exactly happened with models of a world not warmed by greenhouse gas emissions, researchers are able to calculate whether and how the climate crisis influenced a specific meteorological situation.

HUMANS HAVE AGENCY

It's also important in order to add human agency. Our collective burning of fossil fuels is intensifying and increasing the frequency of storms and droughts, heat waves and wildfires.

But that's not all. As Otto likes to make clear, disasters happen when hazards collide with vulnerability.

Libya is the perfect example. Reeling from years of civil war, corruption and neglect, the country was already fragile.

Split between two governments, the critical maintenance on the destroyed dams simply didn't happen despite repeated warnings from experts. The structures, designed to protect against flash flooding, were damaged in a storm in 1986. More than a decade later, a study commissioned by the Libyan government revealed cracks and fissures in their structures.

In 2021, a report said the dams hadn't been maintained despite the allocation of more than US$2 million in 2012 and 2013. There will now be an investigation to find out where the money went.

CORE PROBLEM OF BAD GOVERNANCE AND GREED

For years, discussion around how to adapt to a rapidly changing climate was hindered by many who argued that it would reduce pressure to cut emissions.

That attitude has arguably lingered in news reporting of some events and risks letting governments get away with not doing enough to protect their citizens. A prolonged food shortage in Madagascar, for example, was roundly portrayed in the media as the world's first climate-driven famine, resulting from years of drought.

Those stories missed the core problem, though: Bad governance and greed. Corporate land grabs have taken up much of the agricultural terrain while communities slip further into poverty. Indeed, an attribution study found that climate change wasn't a significant driver of the food insecurity in Madagascar at all.

Elsewhere, land management decisions have transformed absorbent wetlands into slick concrete - a factor behind the 2021 floods in Germany - and societal structures have made certain groups more exposed, such as in India where caste-based discrimination prevented some from entering evacuation shelters during cyclones.

Discussion Questions

What are some natural disasters occuring closer to home in Southeast Asia? Which of these disasters are caused by climate change?

Do you think some of these disasters will come to occur in Singapore in the next century? Why or why not?