U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Opening Statement

Chairwoman Mikie Sherrill (D-NJ)

Subcommittee on Environment Hearing:
Silent Killer: The Rising Problem of Extreme Heat in the U.S.
July 21, 2021

Good morning, and welcome to today's Environment Subcommittee hearing to discuss the rising problem of extreme heat in the U.S. I would like to welcome and thank our esteemed witnesses for participating in this very timely and important hearing.

Almost exactly a year ago, this Committee held a hearing on the intersections of extreme heat, COVID-19, and environmental justice. I wish I could say things have gotten better since then. While we can credit science for the rapid development of multiple effective vaccines to combat COVID-19, extreme heat has only worsened, and vulnerable populations continue to be disproportionately impacted by both.

The recent record-breaking heat dome that devastated the Pacific Northwest shattered our expectations of the severity of extreme heat. Temperatures reached 40 degrees above average in some places, causing pavement to buckle, streetcar cables to melt, and at least 193 deaths across the region. One of our witnesses, Dr. Vivek Shandas, went out and measured temperatures during the heat dome. He found that in affluent neighborhoods they reached 99 degrees, compared to 120 degrees in the poorest neighborhoods in Portland, where the highest number of deaths occurred. Most of these deaths were homeless, elderly, outdoor workers, and those with underlying health issues.

A rapid analysis by a global team of researchers found that the Pacific Northwest heat dome would have been nearly impossible without warming from greenhouse gases. This analysis also showed that 2 degrees Celsius of warming would likely cause severe heat events like this one to occur every five to 10 years instead of once every 1000 years. NOAA research also predicts that generational heat waves could become annual events.

Extreme heat is one of the clearest signals of global warming, with climate change making heat waves longer, more frequent, and more intense. Extreme heat often occurs alongside drought, wildfires, and other climate-fueled disasters. We are seeing this firsthand in the West, which is currently suffering from a historic drought period, and an early and brutal wildfire season.

In addition to extreme heat events worsening, average temperatures are also on the rise across the U.S., with some regions warming faster than others. Close to my district, in New York City, temperatures have gone up 3.3 degrees Fahrenheit on average since the advent of satellite

observations in the 1960s. The number of days per year in New York City with a heat index of 90 degrees is predicted to increase from 16 to 51 by midcentury with no action to combat greenhouse gas emissions, according to a report by the Union of Concerned Scientists.

Climate change is causing nights to warm even faster than days across most of the U.S. This is particularly alarming for human health risks, as cooler nighttime conditions usually provide relief from a hot day, especially for those without air conditioning.

We need to also consider that cities are even more susceptible to extreme heat and hot nights than rural areas because of the built environment and lack of vegetation. Surfaces like pavement, asphalt, and rooftops absorb and reemit heat. This creates urban heat islands and causes temperatures to be up to 10 degrees higher than surrounding areas.

As extreme heat ramps up in the U.S., so too will heat-related illnesses and deaths. Extreme heat is the deadliest natural disaster, killing more people than floods, tornadoes, and other extreme weather events combined. The CDC officially reports that heat kills more than 600 Americans a year, but other studies point to this being a severe undercount. The number maybe be as high as 12,000 heat-related deaths in the U.S., with communities of color and low-income communities most at risk.

The harmful effects of extreme heat to human health stresses our public health system. It also widens gaps in equity, and leads to losses in worker productivity, costing our economy billions. Sectors such as agriculture and utilities are also vulnerable.

In 2015, NOAA, alongside the CDC, launched the National Integrated Heat Health Information System, or NIHHIS. NIHHIS works to reduce U.S. heat risks by developing science-based products and services and building capacity, communication, and public understanding of extreme heat. NIHHIS also collaborates with other federal agencies and with city and state decision makers to co-produce actionable information needed to inform their planning processes.

Additionally, the National Weather Service has updated its heat indices and heat watches, warnings, and advisories. NWS has also developed a prototype HeatRisk forecast to better communicate heat risk for specific locations and identify the most at-risk groups. The EPA publishes an Excessive Heat Events Guidebook. While some progress has been made in recent years, so much more remains to be done on the federal, state, and local levels.

I look forward to hearing from our expert witnesses today who are at the leading edge of extreme heat research and solutions, about the major research and coordination gaps that remain and how additional investments and resources can help fill them.