

Natural disaster preparations may aid businesses' pandemic response

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A local resident surveys building damage after Tropical Storm Isaias swept through Suffolk, Virginia, on Aug. 4, 2020. Credit: Virginia Sea Grant

The social and economic impacts of COVID-19 have battered small- and medium-sized enterprises, putting millions of jobs in the U.S. at risk. And a year rife with natural disasters has not done many struggling businesses any favors.

To learn about the strategies and experiences of businesses managing this double threat, researchers at the National Institute of Standards and Technology (NIST), in collaboration with the National Oceanic and Atmospheric Administration (NOAA), surveyed small- and medium-sized enterprises across the country. In a new report of [survey results](#), nearly a quarter of businesses felt natural disaster preparations helped them address COVID-19. They tended to find preparations of broad applicability during [natural disasters](#), such as telework readiness, more useful than hazard-specific measures. The survey also identified areas of hardship for businesses, including uncertainty and a lack of guidance and resources.

"The survey results can help by drawing attention to how small- and medium-sized businesses are thriving or suffering and showing where natural disaster planning and preparation helped," said Ariela Zycherman, NOAA [social scientist](#) and co-author of the report. "The results will also help us identify places where there are needs and opportunities to build social and economic resilience to multiple types of disasters."

The NIST and NOAA researchers conducted the survey from July 8 to Aug. 8, reaching businesses with fewer than 10 to more than 100 employees from a wide array of industries, including construction, manufacturing and retail. With help from other entities, such as the Minority Business Development Agency and the Small Business Administration, the authors promoted the survey via email, newsletter and social media, obtaining more than 1,300 responses.

In the survey, the team asked businesses about challenges presented by COVID-19 and measures taken to manage them. The researchers also inquired about experiences with sudden, high-impact disasters, such as hurricanes, earthquakes and wildfires, as well as longer-lasting, slower-onset events, including droughts and winter storms.

Twenty-nine percent of respondents said they had experienced natural disasters since March 13, when the federal government declared the pandemic a national emergency. The researchers expect this figure would be much higher had the survey been distributed later, however, as events such as the wildfires along the West Coast surged after the survey closed.

Some 24% of survey respondents said experience preparing for natural disasters in the past helped them during the COVID-19 pandemic. Through the survey's open-ended responses, the researchers were able to glean insights into which types of preparation businesses found most beneficial.

Practices with broad applicability shone through over those specific to one kind of disaster. Two notable examples from the responses were having rainy-day funds for when income streams dry up and the ability to operate a business remotely, said Jennifer Helgeson, a NIST research economist and lead author of the report.

One respondent wrote, "We have dealt with many weather emergencies in the past as well [as] a bad flu pandemic, all of which prepared us for something like COVID-19, especially as it relates to teleworking. Our employees have been used to teleworking during emergencies."

Many businesses have not made a smooth transition, however. Smaller operations that rely on in-person customers, such as in the service industry, face a particularly grave threat in COVID-19, which has eaten away at customer bases for lengths of time these businesses were not prepared for.

The outlook for many of the surveyed businesses is currently worrisome, as 72% are concerned about heading into another distressing scenario on top of the pandemic. Almost a third of these businesses are wary of

natural [disasters](#) specifically. A strong sense of uncertainty also looms over numerous businesses—a sense that may be compounded by a lack of resources, a situation reported by 37% of respondents.

The researchers found that businesses are commonly struggling to obtain guidance on prioritizing their actions amid the strains of the pandemic, personal protective equipment, and training on how to receive support from financial institutions and lending personnel.

A large portion of businesses anticipate that they are in for the long haul before returning to pre-COVID operating capacity. While 39% said they believe recovery will take less than 18 months, 23% estimate the process will go on for longer. And nearly a fifth of respondents indicated full recovery as an unlikely outcome, no matter the time frame, with many indicating they are now considering early retirement.

The researchers plan to complement the data from this initial report by distributing another survey in the winter to both previously contacted and new businesses. With a [second wave](#), the team plans to collect information about how businesses operating in a pandemic respond to events expected in the near future, including winter storms and the flu season, Helgeson said. Further study might also identify where and how businesses are currently receiving aid.

"I do think there will be more of a focus on understanding if there are certain attributes of the business, whether it be employee size or ownership demographics, that can correlate loosely with the kinds of support they've received or the places they're asking for support," Helgeson said. "Is it more about friends and family or is it more about small-[business](#) loans? And how might this change if they experience a natural disaster during the pandemic?"

For agencies and institutions committed to supporting small- and

medium-sized enterprises for resilience planning and adaptation, the data from this and any subsequent reports could enhance strategies to reach vulnerable populations and deliver some certainty during a deeply uncertain time.

More information: Jennifer F Helgeson et al, Complex event resilience of small- and medium-sized enterprises:, (2020). [DOI: 10.6028/NIST.SP.1258](https://doi.org/10.6028/NIST.SP.1258) www.nist.gov/publications/complex-event-resilience-of-small-and-medium-sized-enterprises

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