"When troubles come, they comes not as single spies but as battalions." That wisdom goes back to Shakespeare. Yet our disaster response system is keyed to handling single disasters, not clusters of major disasters. That needs to change.

This week is a good illustration. We have fires in California that may set records. We have a major heat wave across the American West. And as Daniel Melling <u>posted</u> on this site last week, heat waves kill more Americans than any other weather event. We also have a stormy season in the Gulf ahead of us. This week, it's possible that two hurricanes will hit the Gulf Coast within a few days. All this is made worse, of course, by the ongoing pandemic (which Trump has used FEMA funds to address).

Apart from the coronavirus, each of these disasters was made more likely by climate change. As the *Washington Post* reported on Friday, "scientists say there is no doubt that climate change is driving the extreme weather, increasing the threats to property and life." Higher temperatures provide the energy that drives all these weather events.

One thing that gets missed in discussing these issues is how climate change impacts the odds of disaster clusters. When the chances of an event go up, the likelihood of having it happen twice in a row goes up even faster even if the occurrences are unrelated. If we double the chance of a single event, we quadruple the chances of two in a row. So as events become more likely, clustering starts happening a lot more often than it used to even for unrelated occurrences.

We saw a few years ago how overstretched FEMA was when the country was hit in rapid succession by Hurricanes Harvey, Irma, and Maria. We're going to see more and more of those clustered events. FEMA needs a lot more capacity to handle those clusters.

In *Jaws*, there's a memorable moment when Roy Scheider's Sheriff Brody gets his first good, up close and personal look at the giant killer shark. "You're going to need a bigger boat," he deadpans. We're going to need a bigger boat, too — or rather, a bigger FEMA.