

## Stop blaming the climate for disasters

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Disasters occur when hazards meet vulnerability. We must acknowledge the human-made components of both vulnerability and hazard and emphasize human agency in order to proactively reduce disaster impacts.

Natural hazards such as floods, droughts and heatwaves become disasters as a result of societal vulnerability, that is, a propensity of people, societies and ecosystems to be harmed. Often, people's social, political and economic status determines the nature of differential and disproportionate impacts<sup>1</sup>. In addition, many natural hazards are not just natural processes, but have been made more likely and more intense by human-caused climate change<sup>2</sup>. This has long been recognized<sup>3–5</sup>, yet disasters continue to be construed as an 'Act of God' or described as 'natural'.

Here we argue that a discourse in which the role of human activity in disasters is clearly communicated—as opposed to blaming Nature or the Climate—will be more conducive to a proactive, equitable and ultimately successful approach to reducing impacts of disasters.

### From hazard to disaster

References to climate-related hazards such as floods, droughts and heatwaves as 'climate' or 'natural' disasters suggest that disasters are independent of vulnerability. They are not. And vulnerability is often constructed; examples include unplanned urbanization processes, systemic injustice (such as some people being denied access to resources), and marginalization due to religion, caste, class, ethnicity, gender or age<sup>1,4</sup>. Vulnerability is therefore a product of social and political processes that include elements of power and (poor) governance. These structural inequalities are created in ways that are often deliberate and anchored in social and political structures<sup>6</sup>.

For example, in urban areas, natural hazards become disasters due to poor urban planning processes that are not risk-informed. The results are inadequate infrastructure, a lack of social support systems that could reduce impacts or help with recovery from past disasters, and processes that push the most vulnerable groups of people to live in hazardous areas. This causes disproportionate impacts (visible and invisible loss and damage)<sup>7</sup>, especially where there are multiple hazards at the same time. These kinds of impacts have been seen during the ongoing COVID-19 pandemic<sup>8</sup>: the COVID-19 pandemic in combination with other natural hazards in many parts of the world may have pushed already vulnerable populations into further vulnerability, which is being referred to as compounded vulnerabilities. For example, during the pandemic, lack of access to health care systems in many settings compounded with the lack of other social protection systems, and poor disaster risk reduction measures and governance has exacerbated the impacts of these hazards.

“Pointing the finger at natural causes creates a politically convenient crisis narrative that is used to justify reactive disaster laws and policies”

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### Accept responsibility

Blaming nature or the climate for disasters deflects responsibility. It is largely human influence that produces vulnerability. Pointing the finger at natural causes creates a politically convenient crisis narrative that is used to justify reactive disaster laws and policies<sup>9</sup>. For example, it is easier for city governments to blame nature instead of addressing human-caused social and physical vulnerability. A deflection of responsibility also leads to a continuation of an inequitable status quo where the most vulnerable people in society are worst affected repeatedly in every disaster. A discourse that attributes disasters to nature paves a subtle exit path for those responsible for creating vulnerability.

### Towards a change of perspective

Assessments of climate-related hazards too often focus on indicators on spatial scales that are based on climate model grid points, such as the hottest day of the year to indicate change in extreme heat<sup>10</sup> or the meteorologically most extreme events<sup>11</sup>. Instead, to help with reducing disaster impacts, it would be more informative to assess hazards at the temporal and spatial scales that are relevant from a risk and vulnerability point of view, such as looking at heatwaves that cross a particular temperature threshold in cities, on a day or a few days, rather than estimating country scale heat extremes. Spatial scales of assessment can make a big difference: the 2018 European heatwave has been estimated to have become 30 times more likely as a result of climate change – but the extreme heat over the 3 days when mortality was highest only became 2–5 times more likely in individual European cities<sup>12</sup>.

Climate science and attribution has an important role to play<sup>13</sup>, for example, in disentangling where human-induced climate change is a key driver of hazards<sup>14</sup>. This is important: where climate change has exacerbated risk, it is likely that the hazard will worsen over time, and past observations become increasingly less relevant. Climate change attribution must also be used to communicate which disasters today are partially or wholly a result of human-induced climate change.

In the wake of the 6th Assessment Report from Working Group I of the Intergovernmental Panel on Climate Change, there is opportunity to reflect and act. Disaster impacts can be reduced drastically. We must stop blaming Nature or the Climate for disasters, and put vulnerability and equity<sup>15</sup> at the centre of proactive and engaging disaster laws and policies<sup>9</sup>. Such a basic conceptual re-orientation is a necessary starting point to identify and leverage structural, systemic and enabling solutions that transform societies to be more equitable and resilient in the long term.

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### Author contributions

E.R.—conceptualization. E.R., E.B. and F.O. contributed equally to the writing and revision of this manuscript.

### Competing interests

The authors declare no competing interests.

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