Headline: Drought! Is this global warming?

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The answer is more complex. While climate change is projected to lead to more extreme events such as droughts, the scientific understanding of how climate change can affect the occurrence of such events is still murky.

In the Philippines, droughts are usually associated with El Niño or the warm phase of the Enso (El Niño-Southern Oscillation). Enso refers to conditions of above average sea surface temperatures in the Pacific that cause major shifts in weather patterns globally. It should be noted that Enso is a naturally occurring phenomenon that happens approximately every two to seven years. El Niño often results in drought in the Philippines, while the cold phase, La Niña, is associated with heavy rains and flooding in the country.

The question, then, is how this weather phenomenon will be affected by a warming planet, if at all.

After assessing the most recent scientific literature, the Intergovernmental Panel on Climate Change (IPCC) Special Report on “Managing the Risks of Extreme Events” concluded that “model projections of changes in Enso variability and the frequency of El Niño episodes as a consequence of increased greenhouse gas concentrations are not consistent, and so there is low confidence in [the] projections.” At the same time, the IPCC Fifth Assessment Report indicated that “natural variations of the… pattern of Enso are so large that confidence in any projected change for the 21st century remains low.”

Simply put, we are not sure how global warming influences the occurrence of Enso events.

The state of science on Enso and climate change has a few implications. First, we must not be too forward in blaming climate change for specific Enso events. Some politicians and observers are quick to attribute El Niño events to global warming. Such statements lack scientific basis and may backfire in the form of greater skepticism about future scientific findings. We must emphasize that climate has a natural variability and extreme events may happen occasionally, even without climate change.

This is not to say that climate change is not happening. Ninety-nine percent of scientists around the world agree that the planet is warming, and this is no longer a debate.

Second, we must recognize the limits of science. It should be obvious that scientists do not have all the answers. By its very nature, science demands rigor before drawing conclusions. As such, science may appear slow since its systematic methods take time to unfold. Policymakers and ordinary citizens may become impatient and jump to premature conclusions to support their preconceived notions.

Compared to other sciences, the study of climate is fairly recent, and this is especially true for global warming. There is little precedent, and scientists cannot exactly experiment with Planet Earth. Thus, our knowledge on future planet warming is mainly from the results of computer modeling with its inherent uncertainty.

Third, if we want to have greater certainty on how climate change can affect the country, we must make significant investments in climate science. The Philippines is one of the most vulnerable countries in the world, so this should be a no-brainer. It is a matter of national security that we become a leading scientific power on the science of climate and small islands.

Much of the research on global climate do not necessarily apply to an archipelagic country like ours. We therefore cannot rely on other (developed) countries to supply us with the information we need.

Finally, we need to translate whatever knowledge we have and will have to action on the ground. Climate resilience is a community endeavor that requires the participation of all sectors. Without such action, no amount of scientific rigor can prepare our people for what is about to come.

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