

Climate assessment must be relevant and useful to policymakers

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Climate change assessments must be more relevant to policymakers' needs, say Carnegie's Katharine Mach and Stéphane Hallegatte of the World Bank's Climate Change Policy Team.

In a commentary published by *Nature* and signed by colleagues, Mach and Hallegatte argue that coming off the Paris agreement late last year, ambition for fighting climate change is high. The authors assert that groups like the Intergovernmental Panel on Climate Change (IPCC) should capitalize on this increased enthusiasm by integrating studies and presenting their results in ways that are useful to policymakers.

"In the IPCCs sixth cycle of assessment, the climate-science community needs to supply the right sorts of information to help decision-makers construct policies from myriad mitigation and adaptation options," they write, outlining four broad steps that will be necessary to accomplishing this goal.

Their primary advice is to take a multidisciplinary approach to climate assessments from the get-go, rather than adding social science components in later. This will allow assessors to best explain how the hazards created by a changing climate play out across different societal futures.

Related to this recommendation, Mach and Hallegatte say that those undertaking climate assessments must recognize that both climate risks and efforts to mitigate these risks are going to vary by location. For



example, a small island nation is going to have less time to deal with sea level rises than a larger country with limited coastline.

To address this reality, they recommend that rather than offering one or two possible future scenarios, climate assessors weigh up risks and benefits across a ladder of possible targets ranging from 1.5 degrees Celsius to above 2.5 degrees Celsius. Then decision-makers with different goals could select portfolios of responses that are tailored to protect different communities depending on their degree and type of risk.

"More research is needed on regional challenges and opportunities that go beyond the use of a single metric," they write.

Decision-makers also need to be given a crisp understanding of the uncertainty inherent in global climate research and policy recommendations, they underscore. There are elements of uncertainty that are directly related to the processes underlying Earth's interrelated systems. There are also elements of uncertainty that are related to human choices.

Uncertainty can be a very difficult concept to grasp for non-scientists. Making sure that decision-makers understand that policies might need to be revised as more information is revealed will be crucial to effectively moving forward on many climate mitigation strategies, they say.

Lastly, Mach and Hallegatte recommend a "holistic approach" to <u>climate</u> <u>change</u> solutions that better accounts for sustainable development goals, especially as they relate to land and water usage.

"Climate action and protection will never be the sole priorities for decision-makers," they acknowledge. But tailoring mitigation recommendations to policymakers' realities should make it easier for



them to incorporate climate science into the overall mix of their goals and responsibilities.

More information: Stéphane Hallegatte et al. Make climate-change assessments more relevant, *Nature* (2016). DOI: 10.1038/534613a

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