

Transforming our climate strategy

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"This isn't about the future anymore—this is about now," says Feinsein Center researcher Erin Coughlan de Perez, a lead author of a report by the Intergovernmental Panel on Climate Change. Credit: Alonso Nichols

The climate crisis is here, and it's worse than we predicted, according to Erin Coughlan de Perez, a Feinsein International Center scientist, and hundreds of experts from around the world.

A [climate](#) risk management researcher and Dignitas associate professor, Coughlan de Perez is a lead author of an installment in the sixth report by the United Nation's Intergovernmental Panel on Climate Change (IPCC), which was released today.

Tasked with assessing the science related to climate change, the IPCC issued its first report in 1990 and now includes 270 scientists from all over the world.

Based on peer-reviewed literature from the past several years, this newest report details how our changing climate is affecting families, businesses, and cities in countries both vulnerable and powerful—and the steps we can and must take together to adapt and avert disaster.

Besides her work at the Feinstein Center, which is part of the Friedman School and The Fletcher School, Coughlan de Perez is also a senior advisor at the Red Cross Red Crescent Climate Centre, where she worked for 11 years before coming to Tufts last year.

"Our risk from [extreme events](#), and our prognosis for what climate change will bring in the future, is more severe than we thought it was in the past," said Coughlan de Perez. "We need urgent, ambitious, transformative changes to society if we're going to be successful at reducing the impacts of climate change."

She spoke with Tufts Now about the main takeaways from the IPCC report and her research in climate risk management.

Tufts Now: What's the scope of this most recent IPCC report?

Erin Coughlan de Perez: Essentially, it assesses everything that's out

there and gives a comprehensive answer to society on the question of, "What's going on with climate change?" We primarily looked at peer-reviewed literature, but there was also an effort to include indigenous and local knowledge.

The first report was on the climate science—what's going on in our atmosphere. The one released today is on how this impacts people—that's what I'm working on. And then the third piece is on how we reduce our emissions to prevent climate change from getting worse.

In other words, it says, "Here's what we know. Here's how climate is going to affect people. Here's what we can do about it."

What does the report say about the state of climate change today?

We live in a changed climate. This isn't about the future anymore—this is about now. We are about 1.1 degrees Celsius [2 degrees Fahrenheit] warmer than the pre-industrial time period.

The impacts are being felt sooner and harder than we previously expected.

If you compare the situation today with the last report in 2014, the results are absolutely much more dire. Our risk from extreme events, and our prognosis for what climate change will bring in the future, is more severe than we thought it was in the past.

There were some pretty stark facts showing that the people who are least able to cope are the hardest hit. The total population of the places classified as highly or very highly vulnerable is 3.3 billion people, which is a concerning number.

Deaths from floods, droughts, and storms have been up to 15 times higher in these areas in the last decade than in places with more resilience. The UN goals of zero hunger and water for all, which were goals for 2030, are now at risk because of climate change.

But also, this is affecting everyone. We found that literally everybody, billions of people, in every single region of the world—including the United States—are seeing their lives, livelihoods, and health affected by climate change.

This includes deaths from heat waves, people displaced from fires, and food and water shortages. People shouldn't think, "Oh, climate change is somebody else's problem. It's a problem over there in Africa." We're all vulnerable, and this is everybody's problem.

Is there anything we can do?

We did a lot of work on the solution space, and the actions that we can take to adapt to this change in climate and reduce these escalating risks. The good news is, there are so many actions we can take. The report uses the term "climate resilient development pathways," which means in any particular location, we should be thinking holistically about creating a future that is both low carbon and resilient to the impacts of climate change.

Besides disaster early warning, we talk about resilient food systems, which is a big area where Tufts has expertise. Then there's resilient infrastructure, a very timely one here in the U.S., which covers how we build things like roads, dams, and power lines. We also covered spatial planning—in other words, where do we build cities? Where do we encourage development, and how do we do that?

But it's not just about what we do—it's also about how we do it, which is

one of the big additions to the conversation. There's quite a bit of discussion of this concept of maladaptation. In other words, certain choices we make to adjust to climate change could end up hurting people or making them more vulnerable as a result.

For example, relocation can be an important strategy, but there have been many instances in which marginalized groups are disenfranchised in the decision to relocate. Planting new crops can help adapt, but can also create extra work for female farmers. Early warning systems are important, but if you don't pay attention to the distribution of information, you might miss people who don't have cell phones or who aren't well connected.

It's going to be critical to pay attention to the diversity of impacts, and to support people who are marginalized, particularly vulnerable, or in situations of conflict or violence where they don't have a lot of choices.

What are some misconceptions about climate change that this report corrects?

One misconception is that we can tackle this problem individually. There's a lot of language and evidence in this report about the need to have everybody at the table, including marginalized people's voices that are not usually heard. If people aren't included in the planning and the decisions to invest in adaptation, we are not expecting to see as much success.

Another misconception is that climate risks are single and specific. People think, "We could see some more [heat waves](#), so we need to make sure that elderly people have a place to be cool."

That is not wrong, but it is way too little. What if there's a heat wave

followed by drought, or drought followed by flood? If there are multiple breadbasket failures at the same time around the world, what would happen? Climate risks are compounding and cascading, and they don't respect boundaries.

We need to be thinking much more broadly about the impact of all of these things put together, and making bigger changes in our system, which might mean new livelihoods, or better access to health-care systems—especially for marginalized populations have better access to resources and choices. We need to go way beyond tiny risks and tiny solutions, and think about transformation.

What change do you hope results from this report?

These reports inform global negotiations on climate change, as well as national policy and local policy. As the report authors, we're not supposed to be policy prescriptive, but policy relevant—we're not telling anybody what to do, but we're giving them the material that they need to make choices that will help them be successful.

I hope these reports can keep climate change in our field of attention, and make us recognize that this is a limited time opportunity. I hope people start to look at, "Well, which solutions are appropriate in my life? Do I run a business? Do I need to look at what's going on in my supply chain? Where do I live? Do I live near a river?" It is everything from high level investment in health systems to individual level actions.

We have a window of opportunity right now, and it is closing rapidly. We need urgent, ambitious, transformative changes to society if we're going to be successful at reducing the impacts of climate change.

What brought you to climate risk management?

The humanitarian sector is faced with increasing severity and frequency of extreme events, including compound cascading risks—for example, massive super typhoons on top of COVID. The Red Cross are the ones who are looking people in the eyes and seeing the devastation that this is wreaking on people's lives and livelihoods.

For me, that was my motivation to properly understand the risk of unforeseen extreme events, which have never before happened but are now possible, and also the question of longer-term adaptation, and how to make transformative decisions in order to avoid these impacts in the future.

What are your research goals?

I've spent a lot of my career working on how to make sure we have timely warnings before the disasters happen, and that we have plans in place to help people take early action, to get out of the way, to protect their livelihoods.

These [early warning](#) systems can be rolled out globally for many different things, and have been successful in getting people out of harm's way—helping them to do early harvesting of crops so that people don't lose their livelihoods, for example. These systems enable all sorts of early actions, so that people can live through these extreme events, and develop climate resilience.

My background is climate science, working with data and models. But what I really want are solutions in society. And the Feinstein International Center is a place where I can bring all of that together, and knit together policy, practice, and science in my research to look at the transformations that might be needed in society.

Provided by Tufts University

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