Weighing up risk: Making decisions about home insurance in a changing climate

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A UNSW Sydney scientist explains some of the psychological processes that influence our decision making around home insurance and climate change.

The world is rapidly changing in the face of global warming. While climate risk was once seen as a problem that existed in the physical sciences, it has since evolved into something that affects almost every economic sector.

Professor Ben Newell from the School of Psychology and Director of the Institute for Climate Risk and Response (ICRR) is an established advocate of partnering with government and industry to guarantee an integrated approach to climate risk. Prof. Newell focuses on the need for clear communication and behavior change to drive effective responses.

He says a large part of the psychology of decision making around risk depends on the way the risk is being communicated.

"Buying insurance is essentially an exercise in managing risk. If I'm making a decision as a consumer and the probabilities and the uncertainties around the risk of various climate events are difficult to understand, then the way risk is communicated is going to play a big role in how I make a cost-benefit trade-off."

In an already challenging situation, a report published by The Actuaries Institute last month revealed that for high-risk locations, including those living in flood-prone areas, home insurance premiums had increased by 50 percent, the largest rise in two decades.

The figures are raising concerns that households might consider dropping home insurance completely.

"The worry is that we'll end up with situations where insurers are not going to offer insurance anymore because places become too prone to these kinds of disasters," Prof. Newell says.

"We're getting to the point of having those discussions with residents

about rebuilding, relocating or building defenses against future disasters."

Changing perceptions of climate change

At the heart of the conversation around home insurance and climate change is, of course, how people perceive climate change.

"One of the challenges in thinking about people's reactions to climate change for years now has been that it's hard to distinguish changes in the climate from everyday changes in weather patterns," says Prof. Newell.

"With the way our memory works, and the impact that recent experience has on our judgment, people find it hard to dissociate weather change from climate change."

"Increasingly, we're tragically seeing very significant numbers of major weather events attributed to climate change, so more people are now being exposed to these kinds of severe conditions in Australia."

Despite increasing frequency of these events, recent research suggests that while exposure to extreme weather might change some people's opinions, it's not causing universal change and overall, the evidence is mixed.

This leaves us with a somewhat blurry picture.

"To really understand what's going on we need more research measuring people's opinions and attitudes to climate change and then linking that directly with exposure to events that can be attributed to climate change," Prof. Newell says.

Human judgment on risk and climate change

Perceptions of climate change aside, how humans think about risk and probability is extremely complicated.

"One place to start is noting the distinction between what we call mechanical and intuitive methods for making risk judgements. This is a key framework within the psychology of judgment," says Prof. Newell.

Mechanical methods rely on sophisticated algorithms and models to make a prediction, whereas intuitive methods use your own expertise and understanding of the situation to make a judgment call.

"Often what you find is that the algorithmic judgment is better if you can find the right sources of information to put into a model in the first place," says Prof Newell.

"This makes the human judge good for selecting the relevant pieces of information, for example for predicting flood insurance.

"But the way that the algorithm then weights those pieces of information and puts them together is more effective than relying on our brains to work it out."

That's because when we're relying on our own intuitive processes, humans may over-weigh certain pieces of information, such as events that have happened recently, or things that come to mind more readily, rather than things that have a better statistical relationship with the outcome that we're interested in.

"The conclusion that comes out from a long history of working on the comparison of those two methods is that human judgment is important, but we need to recognize the places where it has its limits, and where we

can be aided by these mechanical algorithms," says Prof Newell.

This means that relying on your memory as a perfect record of what has happened, such as past weather events, or even your prospective memory as an indication of what's going to happen, is not necessarily going to be the best way to make a prediction about something.

"The difficulty is reconciling that experience with the data that's out there," says Prof. Newell. "And that's as much an issue for the insurer determining the policy as it is for the person taking out the insurance."

Clear communication and the 100-year floodplain

As Prof. Newell highlights, a key factor when it comes to a property owner deciding about insurance is how the risk is communicated.

"There's a whole literature in psychology on the framing of information," says Prof. Newell.

For example, whether you frame something in terms of a loss or a gain can have a big impact in how that information is perceived, even if numerically, those things are identical.

"So if you say someone has a 95 percent chance of survival versus a five percent chance of dying, that means the same thing, but it's emphasizing a different outcome," says Prof. Newell.

A classic case study in communicating risk in insurance is the 100-year floodplain. Someone buying a property in the 100-year floodplain may easily believe that their home would only be impacted by flooding once every century. And, coupling this with the extreme flood events we've seen in the last few years, you would be forgiven for believing it wouldn't happen again for at least 100 years.

"Believing that if you had a flood last year, you won't get another one, is an intuitive way to think about it," says Prof Newell. "But that's not how the probabilistic information is actually being communicated, or the intention behind the way that it's being communicated."

Instead, the 100-year floodplain represents the small probability that such an event could occur every year—so in reality, there is a one percent chance of flooding in the 100-year floodplain, in any given year.

However, most importantly, these probabilities aggregate over years. This means that living in the 100-year floodplain exposes your property to a one in four chance of flooding over the lifetime of a typical 30-year mortgage .

"It becomes crucial to realize that when someone says one in 100-year chance of flooding, or one percent chance of flooding in this area, that that people are really understanding what that means, and not thinking that they have 99 years before they need to worry again."

Making decisions in a rapidly changing world

The reality is that climate change will also alter the frequency and intensity of extreme events. "We know that insurance against climate change is going to have increasing costs. But people will have to ask 'how much of that cost am I willing to bear up front against the uncertainty of what is still communicated as a low probability event, but that all the models are suggesting is going to get higher?'"

"Now you have to ask how much higher? And if you say it's a one in 100, versus a one in 50? You've doubled it, but how does that change people's perception of whether or not they want to take the risk?"

"While there's recent work in this area, more needs to be done to see

how those psychological factors are really going to play out in helping people make what are increasingly difficult decisions."

Prof. Newell says that it's important to reflect on your own perception of the risks that are involved, but ultimately the onus is on the provider to present it in a way that is understandable and communicated clearly.

"There's also no reason why the consumer shouldn't be questioning what exactly is being said as a way of understanding the risks you are exposed to, and what you're being covered for."

In such a rapidly changing world, Prof. Newell highlights the role of the newly established ICRR to catalyze research uniting climate science, with behavioral science and economics, to provide a pathway for navigating the increasing climate risks across society and the ways to respond.

"In light of the many challenges posed by climate change in relation to insurance, the ICRR can help both industry and consumers by conducting research that helps bridge the gap between the perception and the reality of current and future climate risks."

Provided by University of New South Wales

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