



FIVE QUESTIONS

ON THE COSTS OF CLIMATE CHANGE

FOR TOBIAS GRIMM

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As a reinsurer, Munich Re assumes peak risks for its customers, the primary insurers. Floods, storms, and heat waves cause damage that natural hazard insurance alone cannot offset. It is part of Munich Re's core business to understand and counteract the consequences of climate change.

Can natural disasters increasingly be attributed to climate change?

TOBIAS GRIMM I would be careful with blanket statements. Our job is to insure extreme weather events. It is difficult to prove whether individual cases are attributable to climate change. "Attribution research" deals with this question, but there are uncertainties there as well. For example, the probability of extreme rainfall, as in the Ahr Valley in 2021, has increased by a factor of between 1.2 and 9. What we are sure of is that we have recorded more natural disasters and higher damages in recent years. Economic damages worldwide totaled 270 billion US dollars last year, of which 120 billion were insured. Damages worldwide exceeded the threshold of 100 billion US dollars three times in the past six years.

What could account for this dramatic cost increase?

Insured values are increasing, and construction is on the rise. What used to be a small settlement is now a city. The disaster in the

Ahr Valley caused around 40 billion US dollars in economic damage, making it roughly four times costlier than the costliest flood disaster in Central Europe prior to that, and far more expensive than the floods this spring in Italy. However, the increase in damage cannot be explained solely in terms of the increase in value. There are many reasons to think that climate change plays an increasing role in natural catastrophes caused by weather.

Is it possible to factor out the increase in value and determine the pure effect of climate change?

It is hardly possible to calculate in practice. Climate change affects natural hazards differently from region to region. And you would also have to account for adaptive measures, whose effectiveness varies greatly.

The approach at Munich Re is to stop reacting and start monitoring the change actively. How does that work in relation to the climate crisis? The global climate report speaks unequivocally.

In the reinsurance business we adjust our risk management annually, factoring in prognoses from climate models. Both avoidance and adaptation are needed in the long term, however. We have to minimize risks, and that includes avoiding further greenhouse gas emissions. In addition, we help renewable energies catch on by insuring them

and covering outage risks. We provide incentives to our customers and want to become a climate-neutral operation ourselves by 2050.

How much will an adequate supply from renewable energies cost? By comparison, the cost of damage directly attributable to climate change could total between 280 and 900 billion euros by 2050, according to the Ministry of Climate Action and Energy.

A comparison like that is hard to make and very easy to misinterpret. According to the International Energy Agency, 1.6 billion US dollars would have to be invested in renewable energies each year until 2030 to avoid exceeding the 1.5 degree mark. Current investments are a third of that. These are global numbers, whereas the total damage you cited applies to Germany and includes both consequential and immaterial damage. Conversion to a carbon-free economy is essential, but society has to accept it and it has to happen fast enough. At the same time, we have to adapt ourselves to the transformations resulting from climate change, which are already evident today.

Interview: Tobias Beuchert

Tobias Grimm heads the Climate Advisory and NatCat Data unit at Munich Reinsurance (Munich Re).