

What Are the Best Ways to Prevent Global Catastrophe?

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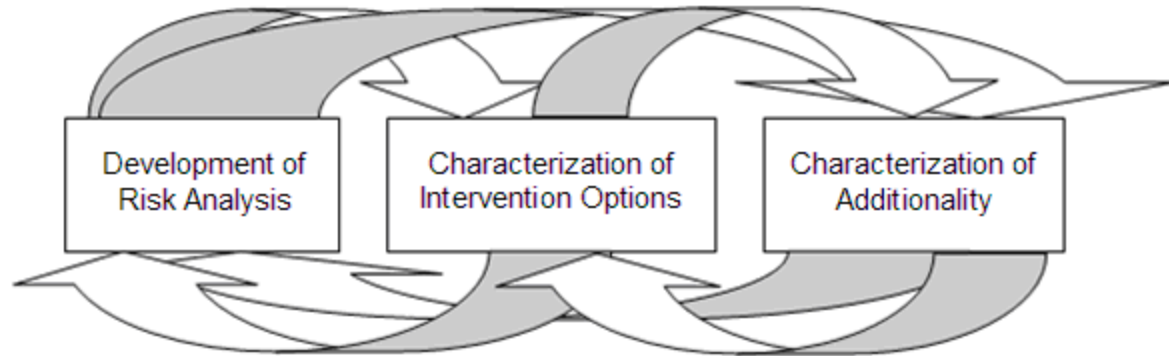
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Reducing the risk of major, permanent global catastrophe is arguably the most important priority for humanity today. The reason is simple: Such a catastrophe threatens countless members of future generations. Indeed, it is the difference between success or failure for human civilization. If humanity succeeds at avoid catastrophe, it can go on to achieve amazing things across the universe. If humanity fails, everyone could all die. Clearly, reducing the risk of such global catastrophe is a worthy goal. But, in practical terms, what are the best ways to reduce the risk?

Answering this question is at the heart of the Global Catastrophic Risk Institute's new flagship [integrated assessment project](#). Our project puts all the global catastrophic risks (GCRs) into one integrated study. That lets us evaluate risk-reducing actions in terms of how much they reduce the totality of the risk. That means we can learn how best to reduce GCR, not just for specific GCRs, but for the full set of them.

Here's an example of what the integrated assessment can accomplish. A lot of people believe that the biggest risks are from emerging technologies like synthetic biology and artificial intelligence (AI). There are even some ideas on the best ways to reduce these risks, such as studying Friendly AI. Meanwhile, some other people believe that the biggest risk is global warming. Some of them believe that the best way to reduce the risk is from policies like a carbon tax or cap-and-trade system. Is one of them right? Our integrated assessment could shed some light on this question. I don't yet have an answer. It would be rather poor form to prejudge the results before doing the research.

How do we plan to do this? We have three steps to our research. First, we analyze the risks. How likely are they to happen, and at what times? How severe would the impacts be? How do they interact with each other? Second, we evaluate the actions (we call them interventions) to reduce the risk. How much do they reduce the risk? At what cost? What moral and legal issues do they raise? Third, we compare these actions to what's already being done (we call this additionality). Which actions could use more support? What synergies exist with existing actions? Where are the biggest untapped opportunities for additional risk reduction? These three steps take us from the risks themselves to the specific things people can do to reduce them—and then back to the risks themselves. We'll iterate back and forth between the steps as needed to fill in the missing pieces.



That is how the integrated assessment research works. But the integrated assessment project is about more than just research. The other part of it is what we call stakeholder engagement. That means reaching out to the people who can turn ideas into action. We're talking with people in government, industry, academia, the media, and of course the public. Everyone has a role to play. And it's a two-way conversation. We tell them what we're learning from our research. They tell us whether our ideas make any sense to them. In order to keep our research practical and not "merely academic", it's vital that we hear from people what actions they can reasonably take.

This integrated assessment project is a big one. There are many GCRs and many more actions to reduce the GCRs. A lot of them are quite complicated. We strive for careful, rigorous research, and we're not a very large group. So we won't finish the integrated assessment overnight. But we do expect to make steady progress. Indeed, our work has already begun.

The best example of what our integrated assessment looks like is our work on nuclear war. This is just one GCR, so we can't compare to other GCRs. But it does show the full cycle of work. In 2013, we published a [study](#) on the probability of one type of nuclear war scenario. Last year we [developed ideas](#) for how to survive nuclear winter. We're actively filling in more parts of the research. Meanwhile we're sharing our ideas at the United Nations, the US national laboratories, the *Bulletin of the Atomic Scientists*, and other key venues. That in turn gives us feedback for our future work.

One basic insight that's already clear is that the best actions to reduce GCR will vary from person to person. To an extent, this is just common sense. Everyone has unique abilities and opportunities. This means that there may not be one single most important GCR or action to reduce GCR. There may not be a correct answer to questions like the one like the one posed above comparing emerging technologies to global warming. It can be better for some people to work on emerging technologies while other people work on global warming.

That still leaves open the question of who does what. We hope our integrated assessment will help people answer this question for themselves and for each other. With the fate of humanity at stake, it's important that we get these questions right.