

BRIEFER

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Message to Davos: Climate Change Risk Assessments Need to Go Big

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Climate change is on the agenda at the World Economic Forum (WEF) in Davos this year. This is good news for those concerned about the unprecedented risks climate change poses to society. In anticipation of the forum, the WEF released the results of its survey “[Global Risks 2014](#),” which measured perceptions of global risks among its “multi-stakeholder community” of global leaders in the business, government and non-profit sectors. Significantly, the results demonstrated that climate change is ranked in the top five of perceived global risks, and three of the other top ten risks have explicit relationships with climate change (those being food and water crises and extreme weather events).

But while these results show that the issue is at the forefront of concern among world leaders, the categorization of risks in the survey suggests that the way we understand and communicate climate change is still too narrow. This has consequences for how we as a society address this unprecedented challenge.

Climate change as an “environmental” risk

The [report](#) breaks down “global risks” into five categories: economic, environmental, geopolitical,

societal and technological. Within this framework, climate change is listed under the “environmental” heading, separated from related risks such as food and water crises, and defined as a problem of policy failure (specifically, “failure of climate change mitigation and adaptation”). While concern about climate change ultimately registered quite high among respondents, the categorization of the risk as “environmental,” rather than as “societal,” “geopolitical” or “economic,” and its separation from other correlated risks in the final results, may obscure the broader implications of a changing climate, and lessen the overall perception of the risk as a result.

Climate change as a multiplier of many risks

Risk analysts in the security community often describe climate change as a “[threat multiplier](#)” or an “[accelerant of instability](#),” which essentially means that it has the potential to exacerbate other drivers of insecurity. This includes factors such as water, food and energy insecurity. In this context, climate change is unique in that the risk emanates not from climate change *per se*, but from how climate change interacts with these other environmental, economic, social and political factors. As such, a “failure of climate change mitigation and adaptation,” as the risk is characterized in the report, could have far-reaching consequences across multiple sectors of society.

Climate change as an economic, geopolitical, and societal risk

To further illustrate the degree to which climate change cannot be confined to the environmental box, take three of the other categories of risk as defined in the report.

First, we have “economic” risk, which includes in its definition: “... failure of physical infrastructure on which economic activity depends.” The threat that climate change impacts, such as sea level rise and an increase in the frequency and intensity of extreme weather events, pose to physical infrastructure (especially in coastal areas, from the [United States](#) to [Bangladesh](#)) could very easily qualify it as an “economic” risk, even within the scope of this report.

Second, we have “geopolitical risk,” which according to the report includes risks such as “disputes over resources.” Within this framework, the dramatic changes to sea ice cover in the Arctic, driven in large part by climate change, may have a significant impact on such resource disputes, particularly given a petroleum-rich sea bed and [hazy territorial boundaries](#).

Third is “societal risk,” broadly defined as “risks related to social stability.” There is a growing body of research, including in peer-reviewed literature such as the Journal of Peace Research’s “[Special Issue: Climate Change and Conflict](#),” security and intelligence reports such as the U.S. National Intelligence Council’s “[Global Trends 2030: Alternative Worlds](#)” and the U.S. National Research Council’s “[Climate and Social Stress: Implications for Security Analysis](#),” and think tank products such as our “[The Arab Spring and Climate Change](#),” demonstrating that the effects of climate change on food and water can have significant implications for social stability, including through increasing the likelihood of unrest and conflict.

Why it’s difficult to separate climate risks from other risks

Global Risks 2014 does an admirable job of assessing perceptions of correlations between the various risks identified (see [here](#) for an insightful perspective on this from the water community). But the topline results of the survey, which sepa-

rate climate change from risk factors it is very closely associated with, such as water and food crises, do not fully reflect those correlations – which may inappropriately skew the way the results are digested and reported on (see “[World Economic Forum puts water risks ahead of climate change](#)”). Indeed, if one were to combine “climate change” with correlated risks in other areas, to get a more holistic assessment of concern over climate change and its impacts, you might see a discernable shift in the results. For example, the four top risks from the report below are significantly influenced by a changing climate, and there’s little logic in pitting them against each other.

Water crises: The report results show that global leaders place “water crises” near the top of their concerns. However, it is certainly artificial to separate “water crises” from climate change, as the latter is projected to greatly exacerbate such crises (see, for example, the 2012 Intelligence Community Assessment “[Global Water Security](#)”). Indeed, climate change primarily manifests itself through the hydrological cycle. This means rainfall variability (too little water, too much water or water at unexpected times), glacial melt (contributing to both flooding and a decrease in water supply) and sea level rise (resulting in the multi-faceted disruption of coastal communities, the exacerbation of storm surges, the opening of previously inaccessible sea lanes, and salt-water intrusion into coastal freshwater aquifers). And this is not a risk that is far off in the distance. There is [compelling evidence](#) that certain regions of the world, such as Southern Europe, North Africa and the Middle East, are already experiencing a marked decrease in winter precipitation as a result of climate change.

Extreme weather events and natural catastrophes: Another top risk identified in the report is the “greater incidence of extreme weather events (e.g. floods, storms, fires).” Given [strong evidence](#) that climate change will likely increase the frequency and severity of such extreme weather events, it is nearly impossible to disentangle this factor from climate change, and probably counterproductive to do so. Furthermore, the risk of “greater incidence of natural catastrophes” includes “tsunamis,” phenomena that could [possibly](#) be influenced by changes in the climate.

Food crises: The “food crises” risk is listed in the report under the “societal” category, and defined as “access to appropriate quantities and quality of food and nutrition becomes inadequate or unreliable.” There is growing evidence that climate change can have a significant influence on food security. For example, [two recent peer-reviewed studies](#) assert a 70 and 80% likelihood (respectively) that the Russian heat wave of 2010 was attributable to climate change. According to a journal article by Oxford University’s [Troy Stremberg](#) in *Nature* magazine, this event “reduced the wheat harvest by 32.7%,” while the 2010 drought in China had a [marked impact on global food prices](#) and food security in North Africa and the Middle East. According to our own research, a prolonged drought in Syria from 2006-2011, part of a drying trend [likely associated with climate change](#), contributed to the decimation of nearly 75% of Syria’s crops.

It’s the people, stupid

In conclusion, the [Global Risks 2014](#) report represents an important step forward in understanding

and addressing systemic global risks such as climate change. But continuing to view climate change as an environmental risk, rather than as a broader societal, economic and geopolitical risk, and disaggregating it from other stresses, like water and food security, means that we may be severely underestimating the risks we face. Of course, the nature of survey research dictates that complexities must sometimes be ironed out, and arbitrary dividing lines created for clarity. But unpacking climate change from its environmental box, and distributing it across other categories of global risk, would better capture its true nature, and provide the impetus for fully confronting the challenge. As former U.S. Navy Rear Admiral David W. Titley [put it](#): “It’s not about polar bears...it’s about us.” In the context of this report, climate change is not just about the environment. It’s about the economy, geopolitics, and society as a whole.

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