

# BRIEFER

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## Climate Change as Threat Multiplier: Understanding the Broader Nature of the Risk

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The 2014 Quadrennial Defense Review, issued by the U.S. Department of Defense, succinctly describes climate change as a “threat multiplier,” meaning that it may exacerbate other threats to security (DOD, 2014). Despite this recognition by the U.S. military, risk assessments that examine global, regional, national and subnational risks often fail to capture the “multiplier” effect of climate change. The climate change phenomenon is often either treated as an “environmental” factor, with little to no connection to other risk factors in the socio-political, economic and security spheres, or in some cases, as in the Fragile States Index (formerly the Failed State Index), not directly addressed (Fund for Peace, 2014).

This essay looks specifically at the World Economic Forum’s “Global Risks 2014” and “Global Risks 2015” reports to illuminate what’s missing in how influential risk assessments tend to treat climate change risks. These reports were chosen because they are illustrative of how climate change, a highly complex phenomenon that interacts with a range of other global risks, is often artificially narrowed in high-profile assessments of risk. The reports, given that they deal primarily with “perceptions of risk” among global elites, are also an interesting case because through their very design (and in the presentation of their results) they may shape global perceptions of risk, which could have far-reaching consequences for governments and societies.

In the case of climate change, the reports limit the scope of the climate change risk, effectively “downscaling” its risk profile. In this essay, through an analysis of climate change in the Global Risks 2014 and 2015 reports, the case is made that risk assessments of climate change need to be “upscaled.” That is, climate change interactions with a range of other risk factors must be fully accounted for in such assessments, in order to ensure that policy responses are commensurate to the actual risks involved. If not, these assessments could present a seemingly authoritative, yet false, sense of security.

### Climate change in the “Global Risks” reports

The World Economic Forum (WEF) annually produces a report measuring perceptions of global risks among its “multi-stakeholder community” of global leaders in the business, government and non-profit sectors.

The past two reports, “Global Risks 2014” and “Global Risks 2015,” have both identified climate change as a “perceived risk” among this community. In both reports, climate change ranked among the “top five” perceived global risks, in terms of “impact.” Three of the other top ten risks have explicit relationships with climate change: food crises, water crises and extreme weather events. While the results show that the issue has been at the forefront of concern among world leaders, the categorization of risks in the surveys suggest that the way the WEF understands and communicates

climate change is still too narrow – a problem that persists in many other areas of the risk analysis space.

### **Climate change as an “environmental” risk**

Both the 2014 and 2015 Global Risks reports breaks down “global risks” into five categories: economic, environmental, geopolitical, societal and technological. Within this framework, climate change is listed under the “environmental” category, separated from related risks such as food and water crises that are listed in the “societal” category, and defined as a problem of policy failure (specifically, “failure of climate change mitigation and adaptation” in 2014, and “failure of climate change adaptation” in 2015). While concern about climate change ultimately registered quite high among respondents, the categorization of the risk as “environmental” in both reports, rather than as “societal,” “geopolitical” or “economic,” and its separation from other “interconnected” risks in the final results, obscures the broader implications of a changing climate, and lessens the overall perception of the risk.

### **Climate change as a multiplier**

National security practitioners have described climate change as a “[threat multiplier](#)” (CNA, 2007; DOD, 2014) or an “[accelerant of instability](#),” (DoD, 2010) 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 Global Risk 2014 report, could have far-reaching consequences across multiple sectors of society. Despite this characteristic, however, climate change is in both reports categorized as an “environmental” risk.

### **Climate change as an economic, geopolitical, and societal risk**

To illustrate why confining climate change to the environmental box is limiting, three of the other categories of risk as defined in the Global Risks

reports are worth examining.

*Economic risk:* In its definition of “economic risk” the 2014 report includes: “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](#) (Burkett and Davidson, 2012) to [Bangladesh](#) (World Bank, 2015) - could very easily qualify it as an “economic” risk, even within the scope of this report.

*Geopolitical risk:* According to the 2014 report, “geopolitical risk” 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](#) (Isted, 2009). Declining winter precipitation in the Middle East and North Africa (Horerling et al, 2011), and the northward movement of fish stocks due to a warming ocean in the South China Sea (Rogers, 2012), which is home to geopolitical disputes between China, its neighbors, and the United States, are other examples of how climate change can act as a geopolitical multiplier of risk.

*Societal risk:* Societal risk is broadly defined in the 2014 report 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 The Center for Climate and Security’s “[The Arab Spring and Climate Change](#),” (Werrell and Femia, 2012), demonstrating that the effects of climate change on food and water can have significant implications for social stability, including through potentially increasing the likelihood of internal unrest and conflict.

### **The difficulty of separating climate risks from other risks**

Global Risks 2014 and 2015 comprehensively as-

sess perceptions of interconnections between the various risks identified (see Walton, 2014, for an insightful perspective on this from the water sector). But the topline results of the surveys, which separate climate change from risk factors it is very closely associated with, such as water and food crises, do not fully reflect those interconnections – which may inappropriately skew the way the results are digested and reported on (see “[World Economic Forum puts water risks ahead of climate change](#)”(Water Briefing, 2014). Indeed, if one were to combine “climate change” with interconnected risks in other areas, to get a more holistic assessment of concern over climate change and its impacts, one might see a discernable shift in the results. For example, the four top risks from the reports highlighted below are significantly influenced by a changing climate, and there is little logic in pitting them against each other.

*Water crises:* The reports show that global leaders placed “water crises” near the top of their concerns in both 2014 and 2015. 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). Furthermore, this is not a distant risk. 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 (Hoerling, 2011).

*Extreme weather events:* Another top risk identified in the reports is “extreme weather events” (floods, storms, etc). 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 (IPCC, 2013). The reports also identify “natural catastrophes” as a risk, a category that in-

cludes “tsunamis,” phenomena that could [possibly](#) be influenced by changes in the climate (McGuire, 2013).

*Food crises:* The “food crises” risk is listed in both reports under the “societal” category, and defined in generally the same way. The 2015 report defines the risk as “access to appropriate quantities and quality of food and nutrition becomes inadequate, unaffordable or unreliable on a major scale.” 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 (Otto et al, 2012; Rahmstorf and Coumou, 2011). According to an article by Oxford University’s Dr. [Troy Sternberg](#) 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 (Sternberg, 2011). Other research has shown that 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 (Femia and Werrell, 2012).

### Upscaling the risk

In conclusion, the [Global Risks 2014](#) and [Global Risks 2015](#) reports represent an important step forward in understanding and addressing systemic global risks such as climate change. However, 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, such as water, food security and extreme weather events, means that societies and governments may be severely underestimating the scope and scale of the risks. Of course, the nature of survey research dictates that complexities must sometimes be ironed out, and arbitrary dividing lines created for clarity. A perfect risk assessment of climate change is unattainable, but one that frees climate change from its environmental box, and better captures the “multiplier” nature of the threat, is overdue. As former U.S. Navy Rear Admiral David W. Titley put it: “It’s not about polar bears...it’s about us” (Cawley, 2013). In the context of these reports and other risk assessments, climate change is not just about the environment. It’s about the economy, security, geopolitics, and society as a whole.

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