

**A CRITIQUE OF THE REPORT ON
“A SECURITY THREAT ASSESSMENT OF GLOBAL CLIMATE CHANGE: HOW
LIKELY WARMING SCENARIOS INDICATE A CATASTROPHIC SECURITY
FUTURE.”**

Kate Guy et al, Product of the National Security, Military, and Intelligence Panel on Climate Change, eds. Francesco Femia and Caitlin Werell. (Washington, DC: The Centre for Climate and Security, an Institute of the Council on Strategic Risks, 2020)

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The February 2020 report by Kate Guy *et al*, entitled “A Security Threat Assessment of Global Climate Change: How Likely Warming Scenarios Indicate a Catastrophic Security Future,” was produced by the National Security, Military, and Intelligence Panel on Climate Change, comprising senior officials from the three sectors in the United States of America, under an initiative of the Centre for Climate and Security, an institute of the Council on Strategic Risks, based in Washington, DC, USA. The report provides a comprehensive overview of the impacts of climate change in different regions of the world under near-term (1-2° C above pre-industrial) and medium-to-long-term (2-4°+ C above pre-industrial) global-warming scenarios and the manner in which these scenarios would affect national, regional, and global security. While the primary focus of the report is the USA, the analyses and conclusions of the report are of great significance to all nations.

Following a relentlessly rising and accelerating trend in global warming, the global average temperature in 2020 was recorded at about 1.2° C above pre-industrial period (1850-1900 average).¹ Even though this may seem like a small number, at the planetary scale this temperature rise corresponds to an incredible amount of energy that has been absorbed by the land, ocean, and the atmosphere, owing primarily to the increase in greenhouse gases in the atmosphere. This excess energy is fuelling more intense heat-waves, both on land and in the ocean, more powerful storms, worsening droughts and extreme precipitation events, and, causing disruptions in the historically stable atmospheric and ocean circulation patterns.² We are fast approaching the 1.5° C global

¹ External Press Release, “2020 Was One of Three Warmest Years on Record,” *United Nations Climate Change*, 14 January 2021, <https://unfccc.int/news/2020-was-one-of-three-warmest-years-on-record>.

² Myles R. Allen et al, “Summary for Policymakers”, in *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to*

warming target that was collectively agreed upon by the international community under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) in 2015. Considering the ever-growing trends in global greenhouse gas emissions and the continuing destruction of the global carbon sinks, it is safe to assume that we will blaze past the 1.5° C target within this decade if not the next five years. We are heading for a scorching 3-5° C of temperature rise by the end of the century. This report attempts to put these numbers into perspective by laying out the impacts of climate change and the associated security threats at increasing warming levels in the near- and medium-long-term future.

Highlights of the Report

The report is divided into six main chapters/ sections, including an introduction and a conclusion section. The first chapter after the introduction provides a detailed description of the “*climate security nexus*” corresponding to the “*negative relationships between adverse environmental effects and the triggers that lead to increased conflict and violence.*” Through a brief literature review the chapter highlights the correlations between climate change impacts such as growing resource-scarcity, extreme weather, and sea level rise, and the social tensions such as human migration, health crises, and socio-political fragility of States, all of which would be worsened by these changes. The next chapter comprises the main analysis of the report, involving a region-wise assessment of the security threats arising from climate change at different levels of global warming by the middle of the century and extending up to the end of the century. The authors divide the world into six regions which form the six subsections of the chapter: Africa, Middle East (or West Asia) and Central Asia, Europe and Russia, Indo-Asia-Pacific, North American and the Polar Regions, and, South and Central America and Caribbean. The regions were chosen so as to coincide with the US military’s Geographic Combatant Command (GCC) Areas of Responsibility (AOR): AFRICOM, CENTCOM, EUCOM, INDOPACOM, NORTHCOM, and SOUTHCOM.

For each regional assessment, the security threats are categorised into three main categories, ‘*risks to security environment*’, ‘*risks to security infrastructure*’, and ‘*risks to security institutions*’. The level of risk determined from the three categories is divided into five levels, ‘*Low*’ (some material risk to human social and security systems), ‘*Medium*’ (consequential risk), ‘*High*’ (severe risk), ‘*Very High*’ (severe and systemic risk), and ‘*Catastrophic*’ (calamitous risk). For Africa, the report identifies ‘*High*’-‘*Very High*’ threat level at 1-2° C of warming, primarily due to projected loss of rural livelihoods, increase in spread of disease, resource stress, and forced migration. Similarly, in the Middle East (aka West Asia) and Central Asia, the report highlights that 1-2° C of global warming will be accompanied with ‘*dangerous levels*’ of temperature rise, droughts, and increasing resource-scarcity. These climate stressors would likely exacerbate the already existing socio-political instability in parts of these regions, which could create conducive conditions for violent extremist groups to expand

their influence and recruit new members in these regions, as has been speculated by other independent analyses as well.³ In Europe and Russia, climate change impacts such as intensifying extreme weather events, sea level rise, and thawing permafrost (particularly in the northern parts of Russia) pose significant threats to civil and military infrastructure. This region could also witness increasing intra-State and inter-State migration from neighbouring areas. At 1-2° C of global warming, the threat level in this region is assessed to be *Medium* to *High*.

In the Indo-Asia-Pacific region, the main challenges arise from resource scarcity, particularly water scarcity, changing rainfall patterns, and sea level rise. Recent studies have shown that climate change is altering the Asian monsoon pattern making it more erratic and unpredictable.⁴ Since most of the agricultural practices within the region still rely on natural rainfall for irrigation, most of which is received during the monsoon months, this would have huge consequences. Moreover, the region is home to some of the most densely populated coastal megacities in the world and the Indian Ocean — the Bay of Bengal in particular — is experiencing much faster sea-level rise than the global average. This puts the region in the *High* to *Very High* threat-level, even in the short-term (at 1-2° C of warming). The report points out that, *“tension between regional powers will increase against a backdrop of competitive resource and territorial claims.”* In the “North America and Polar Regions”, the report warns of a *Medium* to *High* level of security threat in the short term, citing more intense extreme weather events such as storms and wildfires. The recent (late-June 2021), freakish, weeks-long heat wave in the Pacific North-West, is a stark example of the kind of extreme heat events that can be expected in the short- to medium-term future.⁵ Such prolonged heat waves also increase the risk of subsequent wildfires as they dry up the vegetation making it more susceptible to fire. Extreme heat simultaneously leads to an increase in lightning strikes which, too, can act as the ignition. Finally, in the “South and Central America and the Caribbean” region, there is *High* to *Very High* threat in the short-term, from changing rainfall patterns, droughts, and increasing water shortages, which would result in growing numbers of people deciding to move to more hospitable locations. The report points out that the growing destabilisation of socio-economic conditions could increase the likelihood of already persistent crime, such as narcotics- and human-trafficking.

If climate change continues unabated and the global average temperature rises to 2-4°+ C, relative to pre-industrial levels, in the second half of this century, the report projects that all the aforementioned regions will experience *Very High* to *Catastrophic* threats as a result of amplifying

³ Katharina Nett and Lukas Rüttinger, *Insurgency, Terrorism and Organised Crime in a Warming Climate: Analysing the Links Between Climate Change and Non-State Armed Groups*, Climate Diplomacy Initiative of Adelphi and the Federal Foreign Office, (Berlin: October 2016).

Also see: Jessica Claus, “Climate-driven Recruitment into Armed Groups in Nigeria,” *MEAC Findings Report 1*, (New York: United Nations University, 2021).

⁴ Pushp Bajaj, “Monsoon Likely to Get More Extreme and Unreliable due to Global Warming, Predicts New Study,” *The Print*, 19 November 2019, <https://theprint.in/science/monsoon-likely-to-get-more-extreme-unreliable-due-to-global-warming-predicts-new-study/322500/>.

⁵ Kathryn Proxiv, “Pacific Northwest is in One of the Most Intense Heat Waves Ever, with the Worst Still to Come,” *NBC News*, 28 June 2021, <https://www.nbcnews.com/news/weather/pacific-northwest-one-most-intense-heat-waves-ever-worst-still-n1272520>.

climate-change impacts. In this context, sea-level rise, in particular, will become an insurmountable challenge for almost all parts of the world. As it picks up momentum towards the end of the century, it would most present an existential crisis for several developing and least-developed countries, especially when combined with bouts of extreme-weather events such as cyclones and storm surges.

The following two chapters provide the “*Global Climate Security Threat Assessment*” and “*Global Climate Security Threat Profile*,” by aggregating the regional-level risk assessments from the previous chapter and incorporating cross-linkages between the sectors. As the report importantly points out, “*climate change knows no boundaries, and risks can compound across those boundaries, particularly in the context of global disaster trends.*” For instance, it is inevitable that more and more parts of the world will become uninhabitable due to extreme heat or inundation by sea level rise or extreme food and water stress, in the near- and long-term future. Consequently, we can expect major redistributions of populations from the worst-affected areas. This redistribution could mean intra-State movement or inter-State migration, both of which would have significant and adverse implications across a variety of boundaries. As nations in all regions of the world experience growing threats from extreme weather shocks and resource scarcity, the critical question will be whether they will band together and counter the threats in a cooperative manner or whether internal chaos will spill-over to inter-State conflicts over competition for resources.

A Wake-Up Call

We have just entered a defining decade in the human era. According to the 2018 Special Report on Global Warming of 1.5° C by the United Nations’ Intergovernmental Panel on Climate Change (IPCC), we must cut the global anthropogenic carbon emissions by nearly half by the year 2030 and achieve ‘net-zero’ by the year 2050 in order to have any chance of limiting global warming to below 1.5° C and avoiding the worst-case scenarios. This decade will, therefore, determine whether we will have a future with some semblance of a stable climate or whether we will start rolling down a steep hill towards the valley of climate chaos. Considering this, this report is particularly timely and does a commendable job of putting into perspective the magnitude and seriousness of the impacts of climate change that are expected to occur in the short-, medium-, and long-term future, if we do not take urgent and drastic measures to mitigate climate change. The scope of the report is quite comprehensive in that it provides detailed climate security analyses at the regional scale under different global warming scenarios and then aggregates the regional analyses to provide a holistic global picture. Of course, this broad scope prevents the report from going into some of the nuances of sub-regional- and national-level challenges and recommend appropriate interventions at those levels.

The report should serve as a wake-up call for other countries to acknowledge the urgency and the extremely high stakes of the climate crisis and conduct similar security-threat assessments

for themselves at the national- and/ or regional-level and devise commensurate mitigation and adaptation strategies. In this context, India will have an important role to play in the Indian Ocean Region. The region is highly vulnerable to climate change, primarily due to the high population density and lack of economic and technological capacities to adapt to the changing climatic conditions. The responsibility will be on India, as a major power in the region, to ensure security and stability by facilitating and mediating dialogues and cooperative mechanisms to stitch together this vast region and pool its resources to meet the climate challenge. This would have to be accomplished while simultaneously managing the climate risks at the national level.

Expectedly, however, whenever the report makes comments about accountability and responsibility for action, these are addressed to all *'humans'* or *'human systems'* or *'the world'*. In the Executive Summary, the report states that “[*climate change*] is caused by no single actor, but perpetuated by current human systems of energy, transportation, agriculture, and resource use.” While this is technically true, long-term records of cumulative carbon emissions and current trends of per capita emissions make it abundantly clear that certain developed countries, including the USA, have contributed and continue to contribute significantly more to creating and perpetuating the climate crisis, rather than the developing and least-developed countries. The same developed countries also possess the economic and technological capacity and capability to take much more aggressive and meaningful action not only at the national level but at the regional and global levels as well. However, as several studies have shown, their efforts continue to be significantly insufficient to mitigate their own carbon emissions, let alone facilitate mitigation measures by other countries.⁶ The report completely avoids this distinction and instead calls for *“the world to achieve net-zero global emissions in a manner that is ambitious, safe, equitable, and well-governed.”* This convenient phraseology, which allows the USA to duck its responsibility while continuing to pontificate to the world from a pulpit located on entirely imaginary high ground is, regrettably, a common occurrence and emblematic of much of Western literature on the subject of climate change.

Conclusion

The report stresses unequivocally that even the low-warming levels that are expected to be breached in the next three decades pose *'High'* to *'Very High'* security threats to all parts of the world. These threats are magnified to *'Very High'* and *'Catastrophic'* levels in the high-warming scenarios, that are expected to be reached towards the end of this century. According to the report, at 2-4°+ C of global warming, the climate security threats *“could lead to a breakdown of security and civilian infrastructure, economic and resource stability, and political institutions at large.”* Crucially, the report also highlights that, *“more extreme or more rapid warming scenarios than those used by the IPCC-affiliated scientists whose work is summarized in this report are possible,”* while citing a 2018 study which imagined various ‘Hothouse Earth’ scenarios in which successive climatic tipping points could be crossed in a falling-dominoes

⁶ “Countries: Overview,” Climate Action Tracker, accessed 09 July 2021, <https://climateactiontracker.org/countries/>.

type of effect and lead to significantly greater, faster, and irreversible global heating.⁷ Considering this, we urgently need to adopt a concerted and holistic strategy — one that incorporates drastic cuts to global carbon emissions in every sector, initiates and sustains proactive climate adaptation, and promotes the expansion of natural carbon sinks and the creation of technological carbon-capture and sequestration techniques, to tackle the monumental challenge of accelerating climate change.

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⁷ Will Steffen et al, "Trajectories of the Earth System in the Anthropocene," *Proceedings of the National Academy of Sciences* 115, No 33 (2018):8252-8259, <https://doi.org/10.1073/pnas.1810141115>.