CENTER FOR CLIMATE & SECURITY
COUNCIL ON STRATEGIC RISKS

BRIEFER

No. 38 | January 3, 2023

CLIMATE CHANGE AS A "THREAT MULTIPLIER": HISTORY, USES AND FUTURE OF THE CONCEPT

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"Threat multiplier" has become a widely used term by scholars and practitioners to describe climate change implications for security in both the policy realm and climate-security literature.[1] The term was coined in 2007 by the CNA (Center for Naval Analyses) Military Advisory Board under the leadership of Sherri Goodman.[2] It captures how climate change effects interact with and have the potential to exacerbate pre-existing threats and other drivers of instability to contribute to security risks. The concept has been characterized as "definitional" in having "set a baseline for how to talk about the issue"[3] and having shaped "the way in which people studying

1 See for example: Amar Causevic, "Facing an Unpredictable Threat: Is NATO Ideally Placed to Manage Climate Change as a Non-Traditional Threat Multiplier?" *Connections*, vol. 16, no. 2, 2017, pp. 59–80. *JSTOR*, http://www.jstor.org/stable/26326481; Jenna C. Dodson et al., "Population growth and climate change: Addressing the overlooked threat multiplier", in *Science of The Total Environment*, Volume 748, 2020, 141346, https://doi.org/10.1016/j.scitotenv.2020.141346; Stephane Hallegatte et al., *"Threat Multiplier: Climate Change, Disasters, and Poor People"*, World Bank Group, November 2015, https://elibrary.worldbank.org/doi/epdf/10.1596/978-1-4648-0673-5_ch3; "Climate change recognized as 'threat multiplier', UN Security Council debates its impact on peace", UN News, 25 January 2019, https://news.un.org/en/story/2019/01/1031322; Caitlin E. Werrell and Francesco Femia, "Climate Change as Threat Multiplier: Understanding the Broader Nature of the Risk", The Center for Climate and Security, 12 February 2015, https://climateandsecurity.org/wp-content/uploads/2012/04/climate-change-as-threat-multiplier_understanding-the-broader-nature-of-the-risk_briefer-252.pdf

2 Sherri Goodman et al., "National Security and the Threat of Climate Change," The CNA Corporation, 2007, https://www.cna.org/archive/CNA_Files/pdf/national%20security%20and%20the%20threat%20of%20climate%20change.pdf

3 Sharon Burke in Scott, Jared P., director. *The Age of Consequences*. 2016; PF Pictures, 2016. 1h20min. https://theflixer.tv/watch-movie/watch-the-age-of-consequences-full-58666.5415436

climate policy think about risks."[4] Its use has also been described as "one of the most prominent ways in which the security implications of climate change have been understood."[5]

This briefer provides an account of the history of the "threat multiplier" term from its creation in the context of the environmental security era in 2007 to its progressive adoption by military, policy, and academic circles in the United States and abroad. It then examines the different conceptual ramifications that have derived from the term and its evolutions in capturing changing climate security realities.

1. ORIGIN OF THE TERM: FROM ENVIRONMENTAL SECURITY TO CLIMATE SECURITY

THE ENVIRONMENTAL SECURITY ERA

The 1990s saw the emergence of environmental security as a central research and policy issue in national and regional security agendas.[6] Although the integration of environmental considerations into security thinking started as early as in the 1970s, the concept gained increased importance after the publication of the UN World Commission on Environment and Development report in 1987.[7] This convergence was in part due to the end of the Cold War which, along with increased global interdependencies, opened space for new ways of considering security interactions. It was also connected to the growing global awareness of the seriousness of environmental change.[8]

Environmental security can be understood as the interactions between security and environmental degradation. It includes preventing or repairing military damage to the environment as well as assessing the risk of instability[9] due

4 John Sutter, host. "The Godmother of Climate Security". Heat of the Moment (podcast). *Foreign Policy*. 2 December 2021. https://foreignpolicy.com/podcasts/heat-of-the-moment-climate-change/the-godmother-of-climate-security/

5 Will Greaves in "Every Region of Canada is Vulnerable to Climate Insecurity - An Interview with Will Greaves", CDA Institute, October 2022, https://cdainstitute.ca/will-greaves-every-region-of-canada-is-vulnerable-to-climate-insecurity/

6 See for example: Major John T. Ackerman. Lt Col Jim Forsyth (Advisor), "*Environmental Security: Evolution of a New Concept in Security Studies*", Air Command and Staff College of Air University, April 1999; Keith Schneider, "What Has 5 Sides and is Turning Green?," *The New York Times,* 22 February 1995, https://www.nytimes.com/1995/02/22/us/what-has-5-sides-and-is-turning-green.html; Gary D. Vest, "DOD International Environmental Activities," in *Federal Facilities Environmental Journal*, Volume8, Issue1 Spring 1997 pp 7-18, 10 January 2007, https://doi.org/10.1002/ffej.3330080103; William K. Stevens, "Wildlife Finds Odd Sanctuary on Military Bases", *The New York Times,* 2 January 1996, https://www.nytimes.com/1996/01/02/science/wildlife-finds-odd-sanctuary-on-military-bases.html

7 Philippe Bonditti and Sofia Kabbej, "Climat, défense et sécurité : la pensée de l'équilibre face à l'urgence « climato-environnementale » *Les Champs de Mars*, 2020/2 (N° 35), p. 151-177. DOI : 10.3917/lcdm.035.0151

8 J. Barnett, "Environmental Security", in International Encyclopedia of Human Geography, 2009, https://www.sciencedirect.com/topics/earth-and-planetary-sciences/environmental-security

9 UN Environment Programme, "Environmental Security", https://leap.unep.org/knowledge/glossary/environmental-security

to resource scarcities, environmental degradation or biological threats.[10] In the 1990s, the integration of these concerns was closely associated with the cleanup of closed Cold War military bases and nuclear weapons complexes.

Technology innovation in the U.S. military facilitated early action on global environmental problems. For example, the 1987 Montreal Protocol signed by 198 nations called for protecting the ozone layer by phasing out harmful chemicals, like Halon, used in firefighting. Research and innovation led by the U.S. Air Force helped identify ways to reduce the use of ozone-depleting substances and ultimately find substitutes for most uses. The U.S. even sent a military officer to the Montreal Protocol negotiations to describe DOD research investments in technologies to find alternatives and reduce emissions.[11] [12]

Environmental security concerns were officially identified by the U.S. government in the 1991 National Security Strategy. The Pentagon started establishing defense-environmental relationships in 1994. In 1996, an Environmental Security Initiative framework was formed among the Department of Defense, the Department of Energy, and the Environmental Protection Agency,[13] leading to further integration of environmental considerations in U.S. military policies and practices. In 2001, the U.S. Department of State released a report describing the environmental security threat as "environmental risks and related stresses that directly contribute to political and economic instability or conflict in foreign countries or regions of importance to the U.S." Importantly, the report, at that time, concluded that such threats "may not necessarily directly harm U.S. territory" and rather highlighted indirect effects on strategic interests or the global economy.[14]

Regarding the integration of climate change into defense considerations, the U.S. Department of Defense first considered reducing greenhouse gas emissions when the U.S. was preparing for the 1997 Kyoto Protocol negotiations. At that time, the Department of Defense distinguished emissions from military operations from those generated by military bases and non-tactical vehicles (cars and smaller trucks). DOD was willing to limit emissions from the latter, but not from military operations. In the era when the promise of renewable technologies had not yet been seized, the reasoning was that militaries should not be constrained from defending freedom or territory by emissions limits. U.S. senior officials, including Secretary of State Madeleine Albright, supported this position. Importantly, however, the U.S. was the only delegation that sent two military officers

10 Giovanni Zurlini and Felix Müller, "Environmental Security," in: Encyclopedia of Ecology, Vol. 4 System Ecology (pp.1350-1356), Oxford: Elsevier, December 2008

11 E T Morehouse, "Overview--Air Force policy on halons," *Toxicology Letters* 68 (1-2): 11-9, May 1993, https://pubmed.ncbi.nlm.nih.gov/8516757/.

12 Stephen O. Andersen, E. Thomas, J.R. Moorehouse, and Alan Millller, The Military's Role in Protection of the Ozone Layer, *Environmental Science & Technology* 1994 28 (13), 586A-589A. DOI: 10.1021/es00062a719

13 "The Environment and National Security" Remarks as Prepared for Delivery by Sherri Wasserman Goodman, Deputy Under Secretary of Defense (Environmental Security), National Defense University, August 8, 1996, https://evergreen.loyola.edu/khula/www/strategic-intelligence/intel/goodman.html

14 U.S. Department of State, "Environmental Security Threat Report", October 2001, https://2001-2009.state.gov/p/eur/rls/rpt/2001/5882.htm

to the Kyoto climate negotiations. The U.S. Senate rejected the Kyoto Protocol in the Byrd-Hagel amendment and the agreement did not come into force.[15]

Additionally, the U.S. military considered the threat posed by climate change to national security as far back as 1990, when the Naval War College produced a report flagging the impacts of climate change on naval operations.[16] Later in 2003, the DOD's Office of Net Assessment commissioned a report[17] on how rising temperatures could affect U.S. national security.

COINING "THREAT MULTIPLIER": SHERRI GOODMAN AND THE CNA

In 2006, the Center for Naval Analyses' (CNA) Military Advisory Board on Climate Change and National Security was founded by Sherri Goodman, who served as the first Deputy Undersecretary of Defense for Environmental Security from 1993 to 2001. During this era, DOD developed its first global environmental assessments, its first environmental security metrics for cleanup and compliance, and engaged former Soviet militaries in cooperative efforts to reduce contaminants from the Cold War. The CNA Military Advisory Board was the first group of military leaders to address the national security implications of climate change. It consisted of eleven then-recently retired top generals and admirals from the U.S. Army, Navy, Air Force and Marine Corps who had, each in their own way, included environmental considerations in their military planning.

Within a year, the board received dozens of briefings from climate scientists and military experts, including the world-renowned British Meteorology Office. Each member of the board became responsible for briefing the entire group on the security implications of climate change in a specific region of the world. Listening to their stories, Sherri Goodman perceived the necessity to find a term conveying the impact of climate change to a broader audience, beyond the Pentagon and defense intellectuals, yet using the language familiar to military circles.

In April 2007, the CNA Military Advisory Board published the first-ever report by military leaders on the national security implications of climate change.[18] The goal was to reframe thinking within both the security community and broader public about the impact of climate change on national security. Until that point,

15 Burkely Hermann (editor), "Climate Change and the Military: Examining the Pentagon's Integration of National Security Interests and Environmental Goals under Clinton"in *National Security Archive*, 26 May 2022, https://nsarchive.gwu.edu/briefing-book/environmental-diplomacy/2022-05-26/climate-change-and-military-examining-pentagons

16 T. P. Kelly, "Global Climate Change Implications For The United States Navy, 1990," RG-37, Box: 6-35, Folder: 6. Center for Naval Warfare Studies records, RG-37. Naval War College Archives. https://www.usnwcarchives.org/repositories/2/archival_objects/151957. See also "Climate Change: An Escalating National Security Threat", Outrider, 1 October 2018, https://outrider.org/climate-change/articles/climate-change-national-security-threat

17 Peter Schwartz and Doug Randall, "An Abrupt Climate Change Scenario and Its Implications for United States National Security", October 2003, https://training.fema.gov/hiedu/docs/crr/catastrophe%20readiness%20and%20response%20-%20appendix%202%20-%20abrupt%20climate%20change.pdf

18 "National Security and the Threat of Climate Change," The CNA Corporation, 2007, https://www.cna.org/archive/CNA_Files/pdf/national%20security%20and%20the%20threat%20of%20climate%20change.pdf

climate change had been viewed primarily as an environmental issue, not a security concern. One goal was to provide guidance to the U.S. Congress and Administration in their key legislative and administrative capacities, such as the National Defense Authorization Act and the President's National Security Strategy. One early impact of the study's release was the inclusion of its findings and recommendations in the markup of the Senate's version of the National Defense Authorization Bill (the FY2008 *National Defense Authorization Act (NDAA)*)[19], which required "the first national security strategy, national defense strategy, and quadrennial defense review [...] to include guidance on the effect of projected climate change on current and future DOD missions, including preparedness for natural disasters from extreme weather events." In addition, the UN Security Council was holding its first session on climate security within a week of the report's publication.[20] The opening letter of the CNA report, signed by each member of the board, states that: "climate change can act as a **threat multiplier** for instability in some of the most volatile regions of the world, and it presents significant national security challenges for the United States."

"Threat multiplier" became the board's signature phrase and has become a key concept in the debate on climate change and its connections to national security, with substantial influence on U.S. and international security policy.

MAIN CONTRIBUTIONS OF THE TERM IN FRAMING CLIMATE SECURITY

The threat multiplier concept refers to the tendency of climate change to multiply existing threats to security. As defined by the authors of the CNA report in 2007:

> *"Projected climate change will seriously exacerbate already marginal living standards in many Asian, African, and Middle Eastern nations, causing widespread political instability and the likelihood of failed states. Unlike most conventional security threats that involve a single entity acting in specific ways and points in time, climate change has the potential to result in multiple chronic conditions, occurring globally within the same time frame. Economic and environmental conditions in already fragile areas will further erode as food production declines, diseases increase, clean water becomes increasingly scarce, and large populations move in search of resources. Weakened and failing governments, with an already thin margin for survival, foster the conditions for internal conflicts, extremism, and movement toward increased authoritarianism and radical ideologies."*

The use of the term "threat multiplier" led to three ways in which climate security risks were better understood. First, by framing risks as emanating not from climate change *per se* but from how it interacts with and

19 Congress.gov. "H.R.4986 - 110th Congress (2007-2008): National Defense Authorization Act for Fiscal Year 2008." January 28, 2008. http://www.congress.gov/.

20 "Security Council holds first-ever debate on impact of climate change on peace, security, hearing over 50 speakers", UN Press, 17 April 2007, https://press.un.org/en/2007/sc9000.doc.htm

aggravates other environmental, economic, social and political stressors that can threaten national stability,[21] the term helped explain the systemic nature of climate risks and move away from siloed-thinking. In doing so, it allowed for the rise of a broader and more comprehensive security approach to climate risks, with responses integrating defense, development, and diplomacy.

Second, by highlighting the role of and implications on the military, it emphasized the necessity to incorporate climate change in every aspect of military planning. It consequently brought together the climate and defense communities, and got multiple actors engaged in efforts toward increased climate resilience of communities and bases.

Third, by recognizing that climate change is not only an environmental issue, but also a national security concern, it helped broaden the bipartisan coalition of policymakers and practitioners in the U.S. interested in addressing climate change around military bases and infrastructure[22] and highlighted the transnational security aspects of climate risks requiring collective action.

2. ADOPTION: SHAPING PERSPECTIVES OF THE CLIMATE AND DEFENSE COMMUNITIES IN THE U.S. AND ABROAD

Since 2007, the threat multiplier term has gained considerable traction in national and international defense agendas as it became progressively adopted throughout the U.S. government as well as by international organizations,[23] [24] other national administrations[25] and in academic circles.[26]

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21 Isabella Caltabiano, "Sherri Goodman Talks "Threat Multiplier" on Yale Climate Connections", The Center for Climate and Security, 27 June 2019, https://climateandsecurity.org/2019/06/sherri-goodman-talks-threat-multiplier-on-yale-climate-connections/

22 On bipartisan support of climate-security legislation, see for example: "Backgrounder - Climate Change and the National Defense Authorization Act", The Center for Climate and Security, June 2022, https://councilonstrategicrisks.org/wp-content/uploads/2022/06/NDAA-CC-Backgrounder-2022.pdf; John Conger, "Mainstreaming Climate Security: The FY22 National Defense Authorization Act", Council on Strategic Risks, 3 January 2022, https://councilonstrategicrisks.org/2022/01/03/mainstreaming-climate-security-the-fy22-national-defense-authorization-act-ndaa/; and John Conger quoted in Caitlin Werrell and Francesco Femia (editors), "Defense Bill Passes with Climate Change and National Security Provision", The Center for Climate and Security, 22 November 2017, https://climateandsecurity.org/2017/11/defense-bill-passes-with-climate-change-and-national-security-provision/

23 "Climate change and its possible security implications Report of the Secretary-General", United Nations General Assembly, September 2009, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/sg%20report%202009.pdf

24 "NATO Climate Change and Security Action Plan", NATO, 14 June 2021, https://www.nato.int/cps/en/natohq/official_texts_185174.htm

25 See, for example, "The National Security Strategy of the United Kingdom: Update 2009 Security for the Next Generation", UK Cabinet Office, June 2009, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229001/7590.pdf

26 See, for example, Lisa Dickson and Indrani Ghosh, "Assessing the 'Threat Multiplier.'" *The Military Engineer* 106, no. 691 (2014): 69–71. http://www.jstor.org/stable/26354352 and Patrick Huntjens and Katharina Nachbar, "Climate Change as a Threat Multiplier for Human Disaster and Conflict", Working paper n°9, May 2015, The Hague Institute for Global Justice, https://static1.squarespace.com/static/61542ee0a87a394f7bc17b3a/t/61b8e67b32b0eb4c0fbb89a5/1639507580316/working-Paper-9-climate-change-threat-multiplier.pdf

MENTIONS IN U.S. LEGISLATION AND SECURITY POLICY DOCUMENTS

The year of its coinage, "threat multiplier" was explicitly mentioned in two milestone pieces of U.S. legislation on the impacts of climate change on security: the *Global Climate Change and Security Oversight Act 2007*[27] as well as the *Lieberman-Warner Climate Security Act 2007*.[28] Both specifically emphasized the role of changing precipitation patterns on global stability. In addition, as mentioned above, the FY2008 *National Defense Authorization Act (NDAA)*[29] included the recommendations of the CNA Advisory Military Board's 2007 study in requesting the strategic documents that would later be issued by DOD and the White House to include guidance on projected climate impacts on DOD missions. The following year, the *2009 America Clean Energy and Security Act*[30] mentioned climate change as a "potentially significant" threat multiplier, this time at both national and global levels.

Informed by the term, these landmark pieces of legislation in turn created relevant climate security policies within the U.S. Government, encouraging a growing systemic approach in connection to other risk factors. Answering the NDAA requirement, the *Quadrennial Defense Review 2010*[31] issued by the Department of Defense (DOD) included a strategic approach to climate and energy and mentioned the "significant geopolitical impacts" of climate change on security concerns such as migrations and the weakening of fragile states, and argued that climate change "may act as an accelerant of instability or conflict."

Following these developments, a new think tank, The Center for Climate and Security, was established in 2011 to conduct analysis on the intersection of climate and security, promote effective policies for addressing climate security threats, and create and sustain a U.S. community of practice on climate security including non-governmental and governmental actors (see, for example, the Climate and Security Advisory Group). This new think tank, which included Sherri Goodman on its founding Advisory Board, contributed to further uptake of issues surfaced by the threat multiplier concept.[32] Over the years, the work of the Center for Climate and Security and its affiliated organizations such as the International Military Council on Climate and Security,[33] has been instrumental in deepening the "threat multiplier" concept and expanding the climate security community of practice.

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27 Congress.gov. "S.1018 - 110th Congress (2007-2008): Global Climate Change Security Oversight Act." March 28, 2007. https://www.congress.gov/bill/110th-congress/senate-bill/1018?s=1&r=1

28 Congress.gov. "S.2191 - 110th Congress (2007-2008): Lieberman-Warner Climate Security Act of 2007." May 20, 2008. https://www.congress.gov/bill/110th-congress/senate-bill/3036.

29 Congress.gov. "H.R.4986 - 110th Congress (2007-2008): National Defense Authorization Act for Fiscal Year 2008." January 28, 2008. https://www.congress.gov/bill/110th-congress/house-bill/4986

30 Congress.gov. "H.R.2454 - 111th Congress (2009-2010): American Clean Energy and Security Act of 2009." July 7, 2009. https://www.congress.gov/bill/111th-congress/house-bill/2454.

31 "Quadrennial Defense Review Report 2010", U.S. Department of Defense, February 2010, https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2010.pdf?ver=vVJYRVwNdnGb_00ixF0UfQ%3d%3d

32 See: The Center for Climate and Security, https://climateandsecurity.org/about/, and its Climate and Security Advisory Group, https://climateandsecurity.org/policy/

33 See: The International Military Council on Climate and Security. https://imccs.org/

The next *2014 Quadrennial Defense Review*[34] was another turning point: in addition to characterizing climate effects as "threat multipliers," it described the phenomenon at length and detailed a number of other stressors or "global dynamics" aggravated by climate change, such as growing and urbanizing populations, poverty, environmental degradation and political instability.

The term was later included in DOD documents such as the *DOD Climate Change Adaptation Roadmap 2014*[35] and the *DOD Congressional report on the National Security Implications of Climate-Related Risks and a Changing Climate 2015*.[36] The same year, it was picked up by the White House, which mentioned the term in its report on *National Security Implications of a Changing Climate*.[37] As for the *U.S. National Security Strategy 2015*,[38] although not specifically referring to "threat multiplier," it mentioned climate change as "an urgent and growing threat to our national security." In September 2016, then President Obama stated in its *Memorandum on Climate Change and National Security*[39] that it was "not hard to see why the Pentagon ha[d] deemed climate change a 'threat-multiplier'." The term was also adopted by the broader security community, with then Assistant Secretary for Strategy, Plans, Analysis and Risk within the Department of Homeland Security (DHS), Thomas Smith, delivering a testimony at the House Committee on Homeland Security in 2015 in which he stated: "natural disasters, pandemics, and climate change and associated trends continue to present a major area of homeland security risk, and may indirectly act as "threat multipliers."[40]

During the Trump presidency, when climate change became an increasingly polarizing issue in the political sphere, individuals and organizations that approached the issue from a general "threat multiplier" framework helped shape a new bipartisan consensus in Congress to support climate measures in defense bills.[41] In 2017, bipartisan collaboration produced the National Defense Authorization Act (FY 2018)[42] which declared that "climate change is a direct threat to the national security of the United States and is impacting stability in areas of the world both where the

34 "Quadrennial Defense Review 2014", U.S. Department of Defense, March 2014, https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2014.pdf?ver=tXH94SVvSQLVw-ENZ-a2pQ%3d%3d

35 "2014 Climate Change Adaptation Roadmap", U.S. Department of Defense, June 2014, DOD Climate Change Adaptation Roadmap 2014

36 "National Security Implications of Climate-Related Risks and a Changing Climate", U.S. Department of Defense, July 2015, https://climateandsecurity.files.wordpress.com/2014/01/15_07_24-dod_gcc_congressional-report-on-national-security-implications-of-climate-change.pdf

37 "The National Security Implications of a Changing Climate", The White House, May 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/National_Security_Implications_of_Changing_Climate_Final_051915.pdf

38 "National Security Strategy", The White House, February 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy_2.pdf

39 "Memorandum on Climate Change and National Security", The White House Office - Administration of Barack Obama, September 2016, https://www.govinfo.gov/content/pkg/DCPD-201600621/pdf/DCPD-201600621.pdf

40 "Testimony for Acting Assistant Secretary Thomas P. Smith Office of Policy", U.S. Department of Homeland Security, 8 July 2015, https://docs.house.gov/meetings/HM/HM09/20150708/103703/HHRG-114-HM09-Wstate-SmithT-20150708.pdf

41 John Conger, "Climate Security in the 2021 U.S. National Defense Authorization Act", The Center for Climate and Security, 17 August 2020, https://climateandsecurity.org/2020/08/climate-security-in-the-2021-u-s-national-defense-authorization-act/

42 Congress.gov. "H.R.2810 - 115th Congress (2017-2018): National Defense Authorization Act for Fiscal Year 2018." December 12, 2017. http://www.congress.gov/.

United States Armed Forces are operating today, and where strategic implications for future conflict exist."[43] At the same time, "the Green New Deal" described climate change as constituting "a direct threat to the national security of the U.S. [...] by acting as a threat multiplier."[44] The same year, then-candidate Joe Biden's campaign *plan for a clean energy revolution and environmental justice,* informed by U.S. defense and intelligence leaders' warnings on the topic, identified climate change as a "threat multiplier that magnifies existing geopolitical and weather-related risks."[45]

When President Biden took office in January 2021, climate action was reinstated as a priority policy issue through the release of *Executive Order 14008 Tackling the Climate Crisis at Home and Abroad.*[46] The EO aimed at "putting the climate crisis at the center of United States Foreign Policy and National Security" and "taking a government-wide approach to the climate crisis." In this context, the White House released a series of policy documents on climate security in 2021, such as the *Department of Homeland Security Climate Action Plan*[47] and the *Department of Defense Climate Adaptation Plan*,[48] both mentioning the climate change's threat multiplier effect. As for the *Department of Defense Climate Risk Analysis,*[49] published in October 2021, it extensively describes climate change as "exacerbating existing risks," as well as "crises," "conflict," "insecurity" and "instability."

On the diplomatic scene, the term was also used by Special Presidential Envoy for Climate John Kerry in his closing remarks at both the UN Security Council Open Debate on 23 February 2021[50] and at the Leaders' Summit on Climate in April 2021[51]—the fact sheet of which also specifically mentioned that climate change had "been identified by the Department of Defense as a critical national security threat and threat multiplier."[52]

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43 See the NDAAs from FY 2018-2022; "Backgrounder - Climate Change and the National Defense Authorization Act", The Center for Climate and Security, June 2022, https://councilonstrategicrisks.org/wp-content/uploads/2022/06/NDAA-CC-Backgrounder-2022.pdf;

44 Congress.gov. "Text - H.Res.109 - 116th Congress (2019-2020): Recognizing the duty of the Federal Government to create a Green New Deal." February 12, 2019. http://www.congress.gov/.

45 "The Biden Plan for a Clean Energy Revolution and Environmental Justice", Biden-Harris Democrats, https://joebiden.com/climate-plan/#

46 Executive Order 14008: Tackling the Climate Crisis at Home and Abroad, Jan. 27, 2021, Federal Register /Vol. 86, No. 19 /Monday, February 1, 2021 / Presidential Documents. See also "The Center for Climate and Security Applauds the Biden Administration's Executive Actions on Climate Change", The Center for Climate and Security, 27 January 2021, https://climateandsecurity.org/2021/01/the-center-for-climate-and-security-applauds-the-biden-administrations-executive-actions-on-climate-change/

47 "Department of Homeland Security Climate Action Plan", DHS, September 2021, https://www.dhs.gov/sites/default/files/publications/21_1007_opa_climate-action-plan.pdf.

48 "Department of Defense Climate Adaptation Plan", U.S. DOD, September 2021, https://media.defense.gov/2021/Oct/07/2002869699/-1/-1/0/DEPARTMENT-OF-DEFENSE-CLIMATE-ADAPTATION-PLAN-2.PDF

49 "Department of Defense Climate Risk Analysis", U.S. DOD, October 2021, https://media.defense.gov/2021/Oct/21/2002877353/-1/-1/0/DOD-CLIMATE-RISK-ANALYSIS-FINAL.PDF

50 "Secretary Kerry Participates in the UN Security Council Open Debate on Climate and Security", U.S. Department of State, 23 February 2021, https://www.state.gov/secretary-kerry-participates-in-the-un-security-council-open-debate-on-climate-and-security/. See also the video recording of the remarks: https://www.youtube.com/watch?v=AlQ7A31oNNo&ab_channel=USMissiontotheUnitedNations%5BPress%5D

51 "Special Presidential Envoy for Climate John Kerry Delivers Closing Remarks on Day One of the Virtual Leaders Summit on Climate", U.S. Department of State, 22 April 2021, https://www.state.gov/john-kerry-virtual-leaders-summit-on-climate-day-one-closing-remarks/

52 Fact Sheet: President Biden's Leaders Summit on Climate, https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/23/fact-sheet-president-bidens-leaders-summit-on-climate/

BROADER INFLUENCE ON FOREIGN AND INTERNATIONAL POLICYMAKING

Following the release of the CNA Military Advisory Board report in 2007 and the work of other related organizations such as the Center for Climate and Security, "threat multiplier" became increasingly recognized by scientists, defense communities, political representatives and civil society across the world. In influencing global, regional and national decision-making levels, the work of the climate security community, often using the "threat multiplier" framework, encouraged a broad-based approach to climate security, beyond national borders.

As early as March 2008 -the year following the publication of the CNA report- the United Kingdom's Cabinet Office released its *National Security Strategy (NSS)* [53] stating that "climate change and related effects on water, energy and food security will multiply other threats and interact with other drivers of insecurity." In 2009, taking a more global approach on risks, the update to the NSS described climate change as a "threat multiplier exacerbating weakness and tensions around the world."[54] Influenced by this new way to assess climate risks, other European and NATO governments started integrating the security threat posed by climate change in their policy debates and strategic documents. In 2012, the French National Assembly debated an *"Information report submitted by the European Affairs Committee on the impact of climate change on security and defence"*[55] mentioning that "the effects of climate change on "intentional threats" are likely to amplify and intensify these threats ("multiplier effect")."[56] Since then, the French Ministry of Armed Forces has progressively been incorporating climate impacts in its risk assessments. In 2021, it issued a report on *"Armed Forces in the face of Climate Change"*[57] in the context of the Paris Peace Forum. In April 2022, it released its *Climate and Defense Strategy.*[58] Both documents describe climate change as an amplifier of risks and threats, with effects on international peace and security. As for Canada, although a specific climate security strategy has yet to be released, the Government of Canada's website includes a section on *Defense, Energy and Environment Strategy* mentioning that "climate change has emerged as a threat multiplier that knows no borders."[59]

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53 "The National Security Strategy of the United Kingdom Security in an interdependent world", UK Cabinet Office, March 2008, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228539/7291.pdf

54 "The National Security Strategy of the United Kingdom: Update 2009 Security for the Next Generation", UK Cabinet Office, June 2009, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229001/7590.pdf

55 "Information report submitted by the European Affairs Committee on the impact of climate change on security and defense", French National Assembly, February 2012, https://www.assemblee-nationale.fr/13/europe/rap-info/i4415.asp

56 Translated from French by the authors of this briefer.

57 Original title: "Les forces de l'ordre face au changement climatique", French Ministry of Armed Forces,—Paris Peace Forum, December 2021, https://www.defense.gouv.fr/sites/default/files/tronc_commun/11.12.2021%20Les%20forces%20arm%C3%A9es%20face%20au%20changement%20climatique.pdf

58 Original title: "Stratégie Climat & Défense". French Ministry of Armed Forces, April 2022, https://www.defense.gouv.fr/sites/default/files/tronc_commun/28.04.2022%20Strat%C3%A9gie%20climat%20et%20d%C3%A9fense.pdf

59 Government of Canada, official website - Defense, Energy and Environment Strategy: https://www.canada.ca/en/department-national-defence/corporate/reports-publications/dees/3-sustainable.html

The term has also been progressively adopted at a wider scale by the European Union and the United Nations. As early as March 2008, the European Commission's influential "*Climate Change and International Security Paper*"[60] declared that climate change was "best viewed as a threat multiplier which exacerbates existing trends, tensions and instability" and needed to be placed at the core of EU security policy. The term was again included in the *EU contribution to the UN Secretary General's Report on Climate Change and International Security*[61] the same year. Since then, this framing led to a series of climate, foreign and defense policy initiatives recognizing the climate impacts on EU security interests, as the EU aimed to become a stronger geopolitical and strategic power.[62] This included the European External Action Service (EEAS)'s 2016 *Global Strategy for the European Union's Foreign and Security Policy*,[63] the Council of the EU's *Conclusions on Climate Diplomacy 2020*,[64] the EEAS's *Climate Change and Defence Roadmap 2020*[65] and the European Union's *Climate Change and Defence Roadmap* 2022,[66] released as part of the EU's overall effort to address climate change under the European Green Deal.

In April 2007—the week following the release of the CNA report—the United Nations Security Council held its first-ever meeting examining the linkages between climate change, peace and security.[67] The meeting heard over 50 speakers, including the Foreign Secretary of the United Kingdom, who said that "climate change was as a threat multiplier" and "transforming the way the international community thought about security." That same year, the UN Secretary-General, in its formal report to the General Assembly on *"Climate change and its possible security implications,"*[68] noted that climate change acted as a "threat multiplier factor" exacerbating existing sources of conflict and insecurity through several channels. Interestingly, the report also introduced the term "threat minimizers," referring to policies and actions implemented to relieve these negative effects. In

60 "Climate Change and International Security - Paper from the High Representative and the European Commission to the European Council", European Commission, March 2008, https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/reports/99387.pdf

61 "EU contribution to the UN Secretary General's Report on Climate Change and International Security", European Council Secretariat and European Commission, 2009, https://www.un.org/esa/dsd/resources/res_pdfs/ga-64/cc-inputs/EU_CCIS.pdf

62 Olivia Lazard and Richard Youngs (editors), "The EU and Climate Security: Toward Ecological Diplomacy", Carnegie Europe, 2021, https://carnegieendowment.org/files/Youngs_and_Lazard_EU_Climate_FINAL_07.08.21.pdf

63 "A Global Strategy for the European Union's Foreign And Security Policy", European External Action Service, June 2016, https://www.eeas.europa.eu/sites/default/files/eugs_review_web_0.pdf

64 "Council conclusions on Climate Diplomacy", General Secretariat of the Council of the EU, January 2020, https://data.consilium.europa.eu/doc/document/ST-5033-2020-INIT/en/pdf

65 "Climate Change and Defence Roadmap", European External Action Service (EEAS), November 2020, https://data.consilium.europa.eu/doc/document/ST-12741-2020-INIT/en/pdf

66 "Climate Change and Defence Roadmap", European Union, March 2022, https://www.eeas.europa.eu/sites/default/files/documents/2022-03-28-ClimateDefence-new-Layout.pdf

67 "UNSC's first debate on impact of climate change on peace and security", UN Press, April 2007, https://press.un.org/en/2007/sc9000.doc.htm

68 "Climate change and its possible security implications Report of the Secretary-General", United Nations General Assembly, September 2009, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/sg%20report%202009.pdf

2015, the UNSC organized an open Arria-Formula meeting on "*Climate Change as a Threat Multiplier*."[69] The second of this UNSC climate meeting series, held in 2017,[70] included remarks by Caitlin Werrel, co-founder and then President of the Center for Climate and Security, that had been established in 2011 to address the security implications of climate change.[71] These debates, inspired by the threat-multiplier concept, spurred a series of climate-security initiatives from several UN agencies and inspired formal interventions from UN senior officials, including at sessions of the UN Security Council.[72] More recently in 2021, UN Secretary-General António Guterres delivered remarks at the UNSC's High-Level Climate Security Debate emphasizing that "climate disruption is a crisis amplifier and multiplier."[73]

Although NATO's Strategic Concept 2010[74] only included a single mention of climate change, the Alliance has since used the "threat multiplier" framing in its efforts to include the impacts of climate change in its risk assessments, foresight work and planning on the tactical, operational and strategic levels. The term appears in a substantial number of NATO's recent official publications, inspired by the work of the climate security community using this framework. In particular, NATO's *Climate Change and Security Action Plan,*[75] released in June 2021, states in its first paragraph that climate change is "a threat multiplier that impacts Allied security, both in the Euro-Atlantic area and in the Alliance's broader neighbourhood." The term consistently appeared in the *Brussels Summit Communiqué*[76] published the same day. In December 2021, the Allied Command Transformation's *Regional Perspectives Report on the Arctic*[77] featured an entire section titled: "Climate Change and Security: A Threat Multiplier in the Arctic." In June of this year, the Alliance published its new Strategic Concept 2022.[78] The document extensively mentions climate

69 "Arria-Formula Meeting on Climate Change as a Threat Multiplier", Security Council Report, 29 June 2015, https://www.securitycouncilreport.org/whatsinblue/2015/06/arria-formula-meeting-on-climate-change-as-a-threat-multiplier.php

70 "Arria-Formula Meeting on Climate Change: Preparing for security implications of rising temperatures", Security Council Report, 14 December 2017, https://www.securitycouncilreport.org/whatsinblue/2017/12/climate-change-arria-formula-meeting.php

71 See "VIDEO and Summary: UN Security Council Meeting on Climate and Security", The Center for Climate and Security", 19 December 2017, https://climateandsecurity.org/2017/12/video-and-summary-un-security-council-meeting-on-climate-and-security/

72 "Most important, for all of us, is the recognition that deeds must follow words. Major armies and businesses have long recognized the need to prepare for climate-related risks, rightfully assessing climate change as a threat multiplier,": UN Political Affairs Chief, quoted in "Climate change recognized as 'threat multiplier', UN Security Council debates its impact on peace", UN Security Council meeting, 25 January 2019, https://news.un.org/en/story/2019/01/1031322

73 "Secretary-General's remarks to the Security Council - on addressing climate-related security risks to international peace and security through mitigation and resilience building", UN Secretary General, 23 February 2021, https://www.un.org/sg/en/content/sg/statement/2021-02-23/secretary-generals-remarks-the-security-council-addressing-climate-related-security-risks-international-peace-and-security-through-mitigation-and-resilience-building

74 "Active Engagement, Modern Defence - Strategic Concept", NATO, November 2010, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_publications/20120214_strategic-concept-2010-eng.pdf

75 "NATO Climate Change and Security Action Plan", NATO, 14 June 2021, https://www.nato.int/cps/en/natohq/official_texts_185174.htm

76 "Brussels Summit Communiqué", NATO, 14 June 2021, https://www.nato.int/cps/en/natohq/news_185000.htm

77 "Regional Perspectives Report on the Arctic - Strategic Foresight Analysis", NATO Allied Command Transformation, December 2021, https://www.act.nato.int/application/files/8516/3236/7596/regional-perspectives-2021-04.pdf

78 "NATO 2022 Strategic Concept", NATO, June 2022, https://www.nato.int/strategic-concept/

change and describes it as a "crisis and threat multiplier." In its *Climate Change and Security Impact Assessment*,[79] published the same month under the Action Plan's framework, NATO's Secretary General mentions "threat multiplier" both in the foreword and the executive summary.

Ultimately, the "threat multiplier" concept become common in civil society[80] and academic work, with climate-security scholars and practitioners mostly referring to climate change as one serious variable among other drivers of conflict—a "threat multiplier," or "accelerant of instability."[81] As of the time of writing this briefer, "threat multiplier and climate change" yields 67,100 citations on Google Scholar. Importantly, think-tanks such as the Center for Climate and Security, along with the International Military Council on Climate and Security,[82] have been instrumental in advancing this framing since 2011 and informing policy-making, including by applying the concept to specific regional and strategically-significant contexts.[83]

3. CONCEPTUAL DEVELOPMENTS: THE FUTURE OF "THREAT MULTIPLIER" IN EVOLVING CLIMATE SECURITY REALITIES

A DEBATED TERM

Naturally, as "threat multiplier" got adopted in policy and academic circles in the U.S. and abroad, the term and the discourse around it have led to critiques in scholarly work on climate security.

Critical interventions about the term are often expressed as part of the broader skepticism surrounding the so-called "securitization of climate change" and the current state of debate on climate-security.[84] In particular, some academics

79 "Climate Change and Security Impact Assessment", NATO's Secretary General, June 2022, https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/280622-climate-impact-assessment.pdf

80 Indi Howeth, "Climate Change is a Threat Multiplier", Action for the Climate Emergency, 14 November 2020, https://acespace.org/2020/11/14/threat-multiplier/

81 Francesco Femia and Caitlin Werrell, "Climate-Security a Reality, Not a Narrative", The Center for Climate and Security, 21 February 2012, https://climateandsecurity.org/wp-content/uploads/2012/04/climate-security-a-reality-not-a-narrative_briefer-09.pdf

82 See the World and Climate Security Report 2020, 2021 and 2022

83 See Francesco Femia and Caitlin Werrell, "Syria: Climate Change, Drought and Social Unrest," The Center for Climate and Security, February 29, 2012, https://climateandsecurity.org/wp-content/uploads/2012/04/syria-climate-change-drought-and-social-unrest_briefer-11.pdf

84 See for example Jan Selby and Clemens Hoffmann, "Rethinking Climate Change, Conflict and Security", 30 October 2014, 19:4, 747-756, DOI: 10.1080/14650045.2014.964866; Jeroen Warner & Ingrid Boa (2019). "Securitization of climate change: How invoking global dangers for instrumental ends can backfire". *Environment and Planning C: Politics and Space*, *37*(8), 1471–1488. https://doi.org/10.1177/2399654419834018

are concerned that this framing, by concentrating too much on traditional security concepts,[85] might lead to unsound or irrelevant policy measures that may not put enough emphasis on emissions mitigation or societal resilience, thereby undermining appropriate climate responses.[86] The threat multiplier framing, in particular, has been described as "limiting"[87] due to focusing primarily on climate security impacts "through the lens of violence" and presenting the risk of obscuring the "other dimensions of human life and human society."[88] Other critiques express the concern that linking climate change with conflict might lead to an "arms race" between developed nations due to an over-investment in adapted military capabilities.[89] It has further been argued that the "securitization" of climate change does not consider other important risk factors and ignores specific contexts.[90]

On the other hand, it has been argued that "scholars should take the notion of climate change as a "threat multiplier" seriously and investigate the conditions under which climatic changes may accentuate the threat to societal stability and peace, and the mechanisms through which a destabilizing effect might materialize."[91] An article in *Defense One* called for a less qualified approach, claiming that climate change should be framed as "the central threat," instead of a "threat multiplier," in order to develop a "hyper-response strategy and reorient the defense sector to enable and support a whole-of-society effort."[92]

Despite these critiques and commentaries, the use of the "threat multiplier" term is often aimed at emphasizing the systemic nature of climate risks and at presenting climate effects as one contribution to a complex interaction of other stressors underlying human vulnerability, instability and conflict. Furthermore, users and advocates of the threat multiplier term have often highlighted the need to "climatize security," i.e. to incorporate relevant environmental factors into security thinking and risk assessment, as opposed to "securitizing climate change." In this regard, in 2017, a call for "climate-proofing" security institutions at all levels of governance emerged from the climate-security community—a concept introduced by the Center for Climate and Security

85 Franziskus von Lucke, Zehra Wellmann & Thomas Diez (2014) What's at Stake in Securitising Climate Change? Towards a Differentiated Approach, Geopolitics, 19:4, 857-884, DOI: 10.1080/14650045.2014.913028

86 Selby, J. and Hoffmann, C. (2014). 'Rethinking Climate Change, Conflict and Security', Geopolitics, 19 (4), 747-756.

87 Will Greaves in "Every Region of Canada is Vulnerable to Climate Insecurity - An Interview with Will Greaves", CDA Institute, October 2022, https://cdainstitute.ca/will-greaves-every-region-of-canada-is-vulnerable-to-climate-insecurity/

88 Ibid.

89 Brzoska, M. (2009). 'The securitization of climate change and the power of conceptions of security', Security and Peace, 27, 137-145.

90 Laura Ningelgen, "The Depiction of Climate Change as a Threat Multiplier and How It Hinders Action", E-international Relations, 11 May 2016, https://www.e-ir.info/2018/05/11/the-depiction-of-climate-change-as-a-threat-multiplier-and-how-it-hinders-action/

91 Halvard Buhaug, "Climate Change and Conflict: Taking Stock" *Peace Economics, Peace Science and Public Policy*, vol. 22, no. 4, 25 August 2016, pp. 331-338. https://doi.org/10.1515/peps-2016-0034

92 Elizabeth G. Boulton, "Climate Change Isn't a Threat Multiplier. It's the Main Threat », Defense One, 2 July 2022, https://www.defenseone.com/ideas/2022/07/climate-change-isnt-threat-multiplier-its-main-threat/368814/

in its Responsibility to Prepare framework, which was later presented to the UN Security Council.[93] [94] In 2021, Mark Nevitt called for "climatizing" the UN Security Council. [95]

These important reviews, critiques and commentaries have been constructively nourishing the climate-security debate and have been crucial in advancing and sharpening its framing.

SCHOLARLY EVOLUTIONS: LOOKING AHEAD TO ADVANCE THE CLIMATE-SECURITY FRAMING

Ongoing academic debate on the term has eventually led to conceptual developments and ramifications, factoring in the evolution of global climate-security realities and contributing to setting the direction for related policymaking.

BEYOND "THREAT MULTIPLIER": TOWARDS AN ACTION-ORIENTED APPROACH TO CLIMATE SECURITY

The first conceptual development to be noted stemmed from the CNA itself. In 2014, the CNA Military Advisory Board (MAB) issued a new report on climate risks on national security.[96] In this document, the MAB validated the findings of its first 2007 report, reasserted the threat-multiplier effect of climate change and characterized climate change as a "catalyst for conflict." Yet, it also introduced the important idea that climate change and its potential security ramifications "should serve as catalysts for change and cooperation."

A second conceptual development in 2017 derived from the aforementioned call for "climate-proofing" security institutions at all levels of governance.[97] [98]

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93 Caitlin E. Werrell, Francesco Femia, Sherri Goodman and Shiloh Fetzek, "A Responsibility to Prepare: Governing in an Age of Unprecedented Risk and Unprecedented Foresight," August 7, 2017, https://climateandsecurity.org/wp-content/uploads/2017/12/a-responsibility-to-prepare_governing-in-an-age-of-unprecedented-risk-and-unprecedented-foresight_briefer-38.pdf

94 Caitlin Werrell, "A Responsibility to Prepare," Prepared Remarks to the UN Security Council, December 15, 2017, https://climateandsecurity.org/wp-content/uploads/2017/12/werrell_responsibility-to-prepare_unsc.pdf

95 Mark Nevitt, "Is it Time to "Climatize" the UN Security Council?", The Center for Climate and Security, 17 December 2021

96 CNA Military Advisory Board, "National Security and the Accelerating Risks of Climate Change", May 2014, https://www.cna.org/archive/CNA_Files/pdf/mab_5-8-14.pdf

97 Caitlin E. Werrell, Francesco Femia, Sherri Goodman and Shiloh Fetzek, "A Responsibility to Prepare: Governing in an Age of Unprecedented Risk and Unprecedented Foresight," August 7, 2017, https://climateandsecurity.org/wp-content/uploads/2017/12/a-responsibility-to-prepare_governing-in-an-age-of-unprecedented-risk-and-unprecedented-foresight_briefer-38.pdf

98 Caitlin Werrell, "A Responsibility to Prepare," Prepared Remarks to the UN Security Council, December 15, 2017, https://climateandsecurity.org/wp-content/uploads/2017/12/werrell_responsibility-to-prepare_unsc.pdf

Following a similar approach, some academics, including Josh Busby and Farah Hegazi, have called for a stronger focus on opportunities for policy action. While arguing that climate security research has progressed since the identification of climate change as a threat multiplier and has "revealed a greater complexity to the links between climate and security,"[99] Busby, Hegazi *et al.* claim that such research should now "advance the conversation in a way that informs effective policies" and "context-specific interventions" to mitigate risks.[100] This involves understanding "the interplay between the potential pathways connecting the effects of climate change with insecurity,"[101] assessing local vulnerabilities, understanding "why climate change might lead to violent conflict or humanitarian emergencies in some places and not others,"[102] and identifying relevant policy responses to address these complex interactions.

This approach directly resonates with the concept of "threat minimizers," highlighted in the 2009 UNSG report to encourage policymaking and the design of measures to help lower climate-security risks.

THE RISE OF ECOLOGICAL SECURITY

Building on the existing climate security debate, an emerging academic and policy offshoot has been calling for a broader and more ambitious conceptualization, making the case for an ecological security discourse. In particular, the Council on Strategic Risks has initiated an "Ecological Security Program"[103] to elevate attention to current major ecological disruptions, including massive biodiversity loss, as underappreciated threats to national and global security.[104] Beyond the risk posed to national security, global stability and human security, other scholars advancing ecological security, such as Matt McDonald, adopt a distinct approach and argue that the linkage between climate and security should focus on the broader threats to "ecosystem resilience and the rights and needs of vulnerable contemporary populations, future generations and other living beings."[105] In terms of policy response, McDonald argues that this approach would likely drive initiatives oriented towards

99 Farah Hegazi et al., "Beyond a "Threat Multiplier": Exploring Links Between Climate Change and Security », New Security Beat", 26 July 2022, https://www.newsecuritybeat.org/2022/07/threat-multiplier-exploring-links-climate-change-security/

100 Josh Busby, "It's Time We Think Beyond "Threat Multiplier" to Address Climate and Security", Climate Diplomacy, 22 January 2020, https://climate-diplomacy.org/magazine/environment/its-time-we-think-beyond-threat-multiplier-address-climate-and-security

101 Farah Hegazi et al., "Beyond a "Threat Multiplier": Exploring Links Between Climate Change and Security », New Security Beat", 26 July 2022, https://www.newsecuritybeat.org/2022/07/threat-multiplier-exploring-links-climate-change-security/

102 Joshua Busby, *States and Nature: The Effects of Climate Change on Security*. Cambridge University Press, 24 March 2022

103 See for example the Ecological and Security Program of the Council on Strategic Risks: https://councilonstrategicrisks.org/ecological-security-project/

104 See Rod Schoonover et al., "The Security Threat that Binds Us", The Converging Risks Lab of The Council on Strategic Risks, February 2021, https://councilonstrategicrisks.org/wp-content/uploads/2021/01/The-Security-Threat-That-Binds-Us_2021_2-1.pdf & Rod Schoonover, "Societal and Security Implications of Ecosystem Service Declines", The Converging Risks Lab of The Council on Strategic Risks, March 2022, https://councilonstrategicrisks.org/wp-content/uploads/2022/03/Societal-and-Security-Implications-of-Ecosystem-Service-Declines_Part-1-Pollination-and-Seed-Dispersal_March-2022.pdf

105 "Ecological Security", Matt McDonald, E-International Relations, 28 November 2015, https://www.e-ir.info/2015/11/28/ecological-security/

urgent emissions mitigation, international cooperation on climate action and "the protection of the most vulnerable across time, space and species."[106]

4. CONCLUSION

Since its coinage in 2007, "threat multiplier" has become the signature phrase for characterizing climate security risks. The threat multiplier concept, as articulated by many research organizations, including the Center for Climate and Security, has helped to enable a broad community of practice on climate security. Today's climate security practitioners have broadened and deepened the concepts in ways that reach far beyond the original framing. Climate security and climate resilience is today practiced at the intersection of defense, development and diplomacy. These 3 "Ds," sometimes with Disaster as a Fourth D, form the framework from which today's practitioners and scholars seek to inform a better future.

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The authors would like to thank Isabel Scal, Research Assistant at the Center for Climate and Security and at the Wilson Center, for her contributions to this briefer.

106 Ibid.

APPENDIX: LIST OF NOTABLE "THREAT MULTIPLIER" REFERENCES

U.S. REFERENCES

2007

"National Security and the Threat of Climate Change" - CNA Military Advisory Board, May 2007[107]

- The term 'threat multiplier' is coined as a spin-off from U.S. Military term "force multiplier" to make environmental security more familiar and accessible
- "Climate change can act as a **threat multiplier** for instability in some of the most volatile regions of the world, and it presents significant national security challenges for the United States" (3)

Global Climate Change Security Oversight Act of 2007[108]

- Section 2: "(7) Environmental changes relating to global climate change represent a potentially significant **threat multiplier** for instability around the world as changing precipitation patterns may exacerbate competition and conflict over agricultural, vegetative, and water resources and displace people, thus increasing hunger and poverty and causing increased pressure on fragile countries."

Lieberman-Warner Climate Security Act of 2007[109]

- Section 4801: "(1) global climate change represents a potentially significant **threat multiplier** for instability around the world as changing precipitation patterns may exacerbate competition and conflict over agricultural, vegetative, and water resources and displace people, thus increasing hunger and poverty and causing increased pressure on least developed countries;"
- Section 4803: "(B) the extent to which global climate change, through its potential negative impacts on sensitive populations and natural resources in least developed countries, may threaten, cause, or exacerbate political instability or international conflict in those regions; and
    - (C) the ramifications of any potentially destabilizing impacts climate change may have on the economic and national security of the United States, including—

107 CNA Military Advisory Board, "National Security and the Threat of Climate Change", May 2007, https://www.cna.org/archive/CNA_Files/pdf/national%20security%20and%20the%20threat%20of%20climate%20change.pdf

108 Congress.gov. "Text - H.R.1961 - 110th Congress (2007-2008): Global Climate Change Security Oversight Act." June 20, 2007, https://www.congress.gov/bill/110th-congress/house-bill/1961/text

109 Congress.gov. "Text - S.2191 - 110th Congress (2007-2008): Lieberman-Warner Climate Security Act of 2007." May 20, 2008, https://www.congress.gov/bill/110th-congress/senate-bill/2191/text

- » (i) the creation of refugees; and
- » (ii) international or internal armed conflicts over water, food, land, or other resources;"

2009

American Clean Energy and Security Act of 2009[110]

- Section 491: "(1) Global climate change is a potentially significant national and global security **threat multiplier** and is likely to exacerbate competition and conflict over agricultural, vegetative, marine, and water resources and to result in increased displacement of people, poverty, and hunger within developing countries."

2011

S.1426 - Foreign Relations Authorization Act, Fiscal Years 2012 and 2013 (Introduced)[111]

- (2) supporting and integrating sustainable development, including –
  - (C) recognizing that climate change is –
    - » (ii) a potentially significant national and global security **threat multiplier** that is likely to exacerbate economic and social inequality and increase competition and conflict over agricultural, vegetative, marine, and water resources

2012

USAID Climate and Development Strategy: Clean Resilient Growth

- "Already, the U.S. military, USAID, and intelligence community consider climate change to be a **"threat multiplier"** and are actively studying how these threats would evolve under different scenarios as a matter of U.S. national security." (4)

110 Congress.gov. "H.R.2454 - 111th Congress (2009-2010): American Clean Energy and Security Act of 2009." July 7, 2009. https://www.congress.gov/bill/111th-congress/house-bill/2454/text

111 Congress.gov. "Text - S.1426 - 112th Congress (2011-2012): Foreign Relations Authorization Act, Fiscal Years 2012 and 2013." July 27, 2011. https://www.congress.gov/bill/112th-congress/senate-bill/1426/text

2014

2014 Quadrennial Defense Review[112]

- "Climate change poses another significant challenge for the United States and the world at large.As greenhouse gas emissions increase, sea levels are rising, average global temperatures are increasing, and severe weather patterns are accelerating. These changes, coupled with other global dynamics, including growing, urbanizing, more affluent populations, and substantial economic growth in India, China, Brazil, and other nations, will devastate homes, land, and infrastructure. Climate change may exacerbate water scarcity and lead to sharp increases in food costs. The pressures caused by climate change will influence resource competition while placing additional burdens on economies, societies, and governance institutions around the world. These effects are **threat multipliers** that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence."

Department of Defense 2014 Climate Change Adaptation Roadmap[113]

- "In our defense strategy, we refer to climate change as a "**threat multiplier**" because it has the potential to exacerbate many of the challenges we are dealing with today—from infectious disease to terrorism. We are already beginning to see some of these impacts."

CNA Military Advisory Board Report: National Security and the Accelerating Risks of Climate Change[114]

- "In many areas, the projected impacts of climate change will be more than **threat multipliers**; they will serve as catalysts for instability and conflict." (2)
- "Our 2007 report, National Security and the Threat of Climate Change, identified climate change as a "**threat multiplier**" for instability in some of the most volatile regions of the world and laid the groundwork for mounting responses to address these threats." (7)
- "The observed rapidity of climate change has resulted in effects that are becoming more than just "**threat multipliers**." We believe that without action to build resilience in the most vulnerable parts of the world, the projected impacts of climate change will likely serve as catalysts for conflict." (8)
- "Climate change—particularly drought and desertification—have impacted the region for hundreds of years; yet the region's environmental stressors have now become a **threat multiplier** across Sub-Saharan Africa, and have contributed to conflict dynamics in countries that have never enjoyed popular internal sovereignty in the postcolonial era or robust institutions to settle conflicts over vital resources." (13)

112 "Quadrennial Defense Review Report 2010", U.S. Department of Defense, February 2010, https://history.defense.gov/Portals/70/Documents/quadrennial/QDR2010.pdf?ver=vVJYRVwNdnGb_00ixF0UfQ%3d%3d

113 "2014 Climate Change Adaptation Roadmap", U.S. Department of Defense, June 2014, DOD Climate Change Adaptation Roadmap 2014

114 CNA Military Advisory Board, "National Security and the Accelerating Risks of Climate Change", May 2014, https://www.cna.org/archive/CNA_Files/pdf/mab_5-8-14.pdf

Sherri Goodman Testimony before the U.S. Senate Budget Committee, "The Cost of Inaction: The Economic and Budgetary Consequences of Climate Change" July 2014

- "Our first report, published in 2007, identified climate change as a **threat multiplier**, especially in fragile regions of the globe. Since that first report, we have had over 30 Generals and Admirals serve on the board, collectively with more than one thousand years of experience in evaluating security threats and mitigating risks. Our most recent report, which I would like to submit for the Record, identifies the accelerating risk of climate change and observes that in some circumstances climate change has, and increasingly will, serve as a catalyst for conflict."

2015

National Security Implications of a Changing Climate 2015 - The White House[115]

- "Thus, climate change impacts, coupled with other global dynamics, including growing and urbanizing populations, could devastate homes, land, and infrastructure. Climate change will exacerbate water scarcity and may lead to increases in food costs. The pressures caused by climate change will influence resource competition, while placing additional burdens on economies, societies, and governance institutions around the world. Many governments will face challenges to meet even the basic needs of their people as they confront demographic change, resource constraints, effects of climate change, and risks of global infectious disease outbreaks. These effects are **threat multipliers** that will aggravate stressors abroad such as poverty, environmental degradation, political instability, and social tensions—conditions that can enable terrorist activity and other forms of violence. The risk of conflict may increase."

2015 Department of Homeland Security testimony at House Committee on Homeland Security[116]

- "As articulated in the 2014 QHSR, natural disasters, pandemics, and climate change and associated trends continue to present a major area of homeland security risk, and may indirectly act as **"threat multipliers."** Each of these factors aggravates stressors abroad that can enable terrorist activity and violence, such as poverty, food insecurity, environmental degradation, and social tensions."
- "To disregard natural disasters, pandemics, and climate change would be ignoring how these factors may indirectly act as **"threat multipliers"**; and neglect our shared responsibility to strategically manage risk and build a more prepared, resilient Nation."

115 The White House, "Findings from Select Federal Reports: The National Security Implications of a Changing Climate", May 2015, https://obamawhitehouse.archives.gov/sites/default/files/docs/National_Security_Implications_of_Changing_Climate_Final_051915.pdf

116 "Testimony for Acting Assistant Secretary Thomas P. Smith Office of Policy", U.S. Department of Homeland Security, 8 July 2015, https://docs.house.gov/meetings/HM/HM09/20150708/103703/HHRG-114-HM09-Wstate-SmithT-20150708.pdf

July 2015 National Security Implications of Climate-Related Risks and a Changing Climate: DoD Congressional Report[117]

- "[Geographic Combatant Commands] assess that, in line with the Intergovernmental Panel on Climate Change (IPCC) conclusions, climate change will have the greatest impact on areas and environments already prone to instability, which aligns with DoD's wider assessment of climate change as a **threat multiplier**. USPACOM already reflects this likely implication in its planning processes by addressing not only the direct effects of climate change but also the imperative this implication creates for environmental and resource management. U.S. Central Command (USCENTCOM) similarly monitors resource scarcity (e.g., water, food, energy) in its arid AOR, and accounts for this factor in its planning. Although the context differs, USAFRICOM assesses that climate change will exacerbate existing economic, social, and environmental vulnerabilities, while conditions of drought, disease, and economic stagnation may tip states toward systemic breakdowns." (8)

2016

President Obama's Memorandum on Climate Change and National Security, Press Statement by Secretary of State John Kerry, September 2016[118]

- "As the recent report from the U.S. National Intelligence Council underscores, the nation's intelligence community has found that climate change impacts are likely to present 'wide-ranging national security challenges for the United States and other countries over the next 20 years.' We're already beginning to see the devastating effects of weather-related disasters, drought, famine, and damaged infrastructure on communities around the world."
- "Add to that an increased risk of conflict over water and land, and the large-scale displacement due to rising sea levels, and it's not hard to see why the Pentagon has deemed climate change a '**threat-multiplier**,' exacerbating the pressures and challenges far too many countries are already facing."

2019

2019 H.Res.109 - Recognizing the duty of the Federal Government to create a Green New Deal[119]

- "Whereas, climate change constitutes a direct threat to the national security of the United States—

117 "National Security Implications of Climate-Related Risks and a Changing Climate", U.S. Department of Defense, July 2015, https://climate-andsecurity.files.wordpress.com/2014/01/15_07_24-dod_gcc_congressional-report-on-national-security-implications-of-climate-change.pdf

118 "Memorandum on Climate Change and National Security", The White House Office - Administration of Barack Obama, September 2016, https://www.govinfo.gov/content/pkg/DCPD-201600621/pdf/DCPD-201600621.pdf

119 Congress.gov. "Text - H.Res.109 - 116th Congress (2019-2020): Recognizing the duty of the Federal Government to create a Green New Deal." February 12, 2019. https://www.congress.gov/bill/116th-congress/house-resolution/109/text

- (1) by impacting the economic, environmental, and social stability of countries and communities around the world; and
- (2) by acting as a **threat multiplier**;"

"The Biden Plan for a clean energy revolution and environmental justice" June 2019[120]

- "Make climate change a core national security priority. Climate change is a "**threat multiplier**" that magnifies existing geopolitical and weather-related risks. To address our defense and intelligence leaders' warnings about the threats climate change poses to global stability and security, Biden will elevate climate change as a national security priority."

Sherri Goodman Testimony before the U.S. House of Representatives Committee on Foreign Affairs Hearing: "How Climate Change Threatens U.S. National Security" April 2019[121]

- "In 2007, we identified climate change as a '**threat multiplier**,' in a seminal report, recognizing that climate change can exacerbate political instability, where food, water, and resource shortages already exist—often in the world's most dangerous and fragile regions. The CNA MAB in this Report stated, "[t]he potential consequences of climate change are so significant that the prudent course of action is to begin now to assess how these changes may potentially affect our national security, and what courses of action our nation should take."3 We recommended that the national security implications of climate change be incorporated into the broad range of national security strategy and planning documents."
- "Since we first characterized climate change as a '**threat multiplier**' in the 2007, the national security community has concluded that climate change now contributes to unprecedented security threats for the United States—and the world. Growing evidence demonstrates that climate change is increasing the likelihood of conflict in key regions."
- "The U.S. government should integrate climate change trends into its analyses of other critical security and foreign policy priorities. This is the 'just add climate' approach, justified by the nature of the threat and the fact that changes in the climate, acting as a **threat multiplier**, will affect the entire geostrategic landscape."

Sherri Goodman Testimony before the U.S. Senate Subcommittee on Security of the Committee on Commerce, Science, and Transportation, "Expanding Opportunities, Challenges, and Threats in the Arctic: A Focus on the U.S. Coast Guard Arctic Strategic Outlook" December 2019[122]

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120 "The Biden Plan for a Clean Energy Revolution and Environmental Justice", Biden-Harris Democrats, https://joebiden.com/climate-plan/#

121 "Testimony of Sherri Goodman Before the United States House of Representative Committee on Foreign Affairs Hearing: "How Climate Change Threatens U.S. National Security", 2 April 2019, https://docs.house.gov/meetings/FA/FA00/20190402/109249/HHRG-116-FA00-Wstate-GoodmanS-20190402.pdf

122 "Testimony of Sherri Goodman Before the U.S. Senate Subcommittee on Security of the Committee on Commerce, Science, and Transportation, "Expanding Opportunities, Challenges, and Threats in the Arctic: A Focus on the US Coast Guard Arctic Strategic Outlook"", 12 December 2019, https://www.commerce.senate.gov/services/files/913118B4-0C4C-4FAD-96BE-711441470E94

- "Climate change is a **threat multiplier**, reshaping the strategic operating environment for the Coast Guard in the Arctic, and around the world."

2021

Special Presidential Envoy for Climate John Kerry's closing remarks, UN Security Council Open Debate, 23 Feb 2021[123]

- "Our Pentagon has for years described the impact of climate as a **threat multiplier**. In fact, it is among the most complex and compelling security issues that I think we have ever faced. We're told repeatedly that it is an existential threat and yet despite impacts that can exacerbate existing political, social, and economic tensions, we honestly have yet as a world to respond with the urgency required."

Special Presidential Envoy for Climate John Kerry's closing remarks, Leaders Summit on Climate, April 2021[124]

- "The Pentagon has long said that the climate change—then a change, now a crisis—is a **threat multiplier**"

Fact Sheet: President Biden's Leaders Summit on Climate April 2021[125]

- **"**Promoting safety and security at home and abroad. Climate change has been identified by the Department of Defense (DoD) as a critical national security threat and **threat multiplier.** As a result, DoD has undertaken assessments of the impacts that the climate crisis has on American military installations."

Department of Homeland Security Climate Action Plan September 2021[126]

- "Climate change endangers national security and DHS's mission of safeguarding the American people, our homeland, and our values. The Intelligence Community recently stated that a changing climate will create a mix of direct and indirect threats, including risks to the economy, heightened political volatility, human displacement, and new venues of geopolitical competition that will play out during the next decade and beyond. Climate change has already contributed to instability in strategically important areas; it is a "**threat multiplier**." To adapt, focused solutions are needed. Investing in action now saves lives, conserves resources, and provides long-term cost savings.

123 "Secretary Kerry Participates in the UN Security Council Open Debate on Climate and Security", U.S. Department of State, 23 February 2021, https://www.state.gov/secretary-kerry-participates-in-the-un-security-council-open-debate-on-climate-and-security/. See also the video recording of the remarks: https://www.youtube.com/watch?v=AlQ7A31oNNo&ab_channel=USMissiontotheUnitedNations%5BPress%5D

124 "Special Presidential Envoy for Climate John Kerry Delivers Closing Remarks on Day One of the Virtual Leaders Summit on Climate", U.S. Department of State, 22 April 2021, https://www.state.gov/john-kerry-virtual-leaders-summit-on-climate-day-one-closing-remarks/

125 Fact Sheet: President Biden's Leaders Summit on Climate, https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/23/fact-sheet-president-bidens-leaders-summit-on-climate/

126 "Department of Homeland Security Climate Action Plan", DHS, September 2021, https://www.dhs.gov/sites/default/files/publications/21_1007_opa_climate-action-plan.pdf

Department of Defense Climate Adaptation Plan September 2021[127]

- "The Department of Defense (DOD) has identified climate change as a critical national security issue and **threat multiplier** (DOD 2014a) and top management challenge (DOD 2020a). Climate change will continue to amplify operational demands on the force, degrade installations and infrastructure, increase health risks to our service members, and could require modifications to existing and planned equipment. Extreme weather events are already costing the Department billions of dollars and are degrading mission capabilities. These effects and costs are likely to increase as climate change accelerates. Not adapting to climate change will be even more consequential with failure measured in terms of lost military capability, weakened alliances, enfeebled international stature, degraded infrastructure, and missed opportunities for technical innovation and economic growth."

INTERNATIONAL REFERENCES

NATIONAL GOVERNMENTS

UNITED KINGDOM

2008 (March): The National Security Strategy of the United Kingdom Security in an interdependent world—Cabinet Office[128]

- "Finally, climate change and related effects on water, energy and food security will **multiply other threats** and interact with other drivers of insecurity, including demographic pressures and the spread of disease.

2009 (June): The National Security Strategy of the United Kingdom: Update 2009 Security for the Next Generation[129]

- "Climate change will increasingly be a wide-ranging driver of global insecurity. It acts as a **threat-multiplier**, exacerbating weakness and tensions around the world."

127 "Department of Defense Climate Adaptation Plan", U.S. DOD, September 2021, https://media.defense.gov/2021/Oct/07/2002869699/-1/-1/0/DEPARTMENT-OF-DEFENSE-CLIMATE-ADAPTATION-PLAN-2.PDF

128 "The National Security Strategy of the United Kingdom Security in an interdependent world", UK Cabinet Office, March 2008, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/228539/7291.pdf

129 "The National Security Strategy of the United Kingdom: Update 2009 Security for the Next Generation", UK Cabinet Office, June 2009, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/229001/7590.pdf

FRANCE

2012 (February) : National Assembly - Information Report submitted by the European Affairs Committee on the impact of climate change on security and defence[130]

- "The effects of climate change on "intentional threats" are likely to **amplify and intensify these threats ("multiplier effect")**, since the social and political consequences of climate change are intrinsically intended to aggravate the factors of intra-State and inter-State tension. already existing ones, even if it means creating new ones"
- A **"multiplier" and "intensifier"** effect of stress factors

2022 (April): "Stratégie Climat et Défense," French Ministry of Armed Forces[131]

- "Climate change acts as an **amplifier of risks and threats** worldwide, affecting international peace and security"[132]

CANADA

Government of Canada, official website, section on Defense, Energy and Environment Strategy:[133]

- "Operationally, climate change has emerged as a **threat multiplier** that knows no borders, potentially affecting the frequency, scale, and complexity of our future missions. It can also undermine the capacity of our infrastructure and training areas to support our readiness activities. The effects of climate change are contributing to the complexity of the global security environment."

INTERNATIONAL ORGANIZATIONS AND OTHER GOVERNANCE BODIES

EUROPEAN UNION

2008 (March): Climate Change and International Security - Paper from the High Representative and the European Commission to the European Council[134]

130 Information report submitted by the European Affairs Committee on the impact of climate change on security and defense", French National Assembly, February 2012, https://www.assemblee-nationale.fr/13/europe/rap-info/i4415.asp

131 "Stratégie Climat & Défense". French Ministry of Armed Forces, April 2022, https://www.defense.gouv.fr/sites/default/files/tronc_commun/28.04.2022%20Strat%C3%A9gie%20climat%20et%20d%C3%A9fense.pdf

132 Translated from French by the authors of this briefer.

133 Accessed at: https://www.canada.ca/en/department-national-defence/corporate/reports-publications/dees/3-sustainable.html

134 "Climate Change and International Security - Paper from the High Representative and the European Commission to the European Council", European Commission, March 2008, https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/reports/99387.pdf

- "Climate change is best viewed as a **threat multiplier** which exacerbates existing trends, tensions and instability."

2009: EU contribution to the UN Secretary General's Report on Climate Change and International Security[135]

- "In this global age, instability anywhere in the world can affect our security more quickly and in more far reaching ways than before. Climate change is best viewed as a **"threat multiplier"** which exacerbates existing trends, tensions and instability."

2016 (June): A Global Strategy for the European Union's Foreign And Security Policy - European External Action Service[136]

- "We will therefore redouble our efforts on prevention, monitoring root causes such as human rights violations, inequality, resource stress, and climate change—which is a **threat multiplier** that catalyses water and food scarcity, pandemics and displacement."

2020 (January): Council conclusions on Climate Diplomacy - General Secretariat of the Council of the EU[137]

- "The European Union is acutely aware that climate change **multiplies threats to international stability and security** in particular affecting those in most fragile and vulnerable situations, reinforcing environmental pressures and disaster risk, contributing to the loss of livelihoods and forcing the displacement of people."

2020 (November): Climate Change and Defence Roadmap - European External Action Service (EEAS)[138]

- "As part of the wider climate-security nexus, the implementation of the Climate Change and Defence Roadmap contributes to the broader EU agenda, most notably the Council conclusions on Climate Diplomacy3 from January 2020. These Council conclusions acknowledge once more how **climate change multiplies threats** to international stability and security, in particular affecting those in most fragile and vulnerable situations."
- "The EU has long recognised that climate change acts as a **threat multiplier** with serious implications for peace and security across the globe. It will increase sea-level rise, drive up global temperatures and increase the frequency and intensity of extreme weather events. These developments might have a geo-political impact, including as regards global maritime security. They will limit the availability of food and

135 "EU contribution to the UN Secretary General's Report on Climate Change and International Security", European Council Secretariat and European Commission, 2009, https://www.un.org/esa/dsd/resources/res_pdfs/ga-64/cc-inputs/EU_CCIS.pdf

136 "A Global Strategy for the European Union's Foreign And Security Policy", European External Action Service, June 2016, https://www.eeas.europa.eu/sites/default/files/eugs_review_web_0.pdf

137 "Council conclusions on Climate Diplomacy", General Secretariat of the Council of the EU, January 2020, https://data.consilium.europa.eu/doc/document/ST-5033-2020-INIT/en/pdf

138 "Climate Change and Defence Roadmap", European External Action Service (EEAS), November 2020, https://data.consilium.europa.eu/doc/document/ST-12741-2020-INIT/en/pdf

water, undermine human health, cause people displacement and degrade infrastructure and economies, biodiversity and resources."

- "Climate change is **not just a conflict and security risk multiplier**. It introduces **new operational challenges**, including the need to provide missions and operations with equipment that is effective under extreme weather conditions and technology that is more energy efficient. "

2022 (March): The EU' Climate Change and Defence Roadmap[139]

- First sentence: "The EU has long recognised that climate change acts as a **threat multiplier** with serious implications for peace and security across the globe. Climate change poses a double challenge for EU's security and defence: Climate change increases global instability" and "Future capabilities will need to adapt."
- "The Climate Change and Defence Roadmap constitutes an integral part of the EU's overall effort to address climate change under the European Green Deal. It was developed by the EEAS in close cooperation with the European Commission and the European Defence Agency."
- "The Strategic Compass for security and defence calls for the full implementation of the Roadmap, as it recognises climate change as **a threat multiplier** that fundamentally affects our long-term security. It also invites Member States to share national plans on how to contribute to the objectives of the Roadmap."

THE UNITED NATIONS

UN SECURITY COUNCIL

2007 (April): UNSC's first debate on impact of climate change on peace and security[140]

- "Council President, Ms. BECKETT, Foreign Secretary of the United Kingdom, speaking in her national capacity, said that climate change was transforming the way the international community thought about security." (...) "Charged with the maintenance of international peace and security, she continued, the Security Council could go a long way towards building a shared understanding of what the effects of climate change would mean to international peace and security, now and in the future. Climate change was a **threat multiplier**."[141]

2015: UNSC Arria-Formula Meeting on Climate Change as a Threat Multiplier[142]

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139 "Climate Change and Defence Roadmap", European Union, March 2022, https://www.eeas.europa.eu/sites/default/files/documents/2022-03-28-ClimateDefence-new-Layout.pdf

140 NSC's first debate on impact of climate change on peace and security", UN Press, April 2007, https://press.un.org/en/2007/sc9000.doc.htm

141 Note from the authors: This was the first meeting of the Security Council examining the linkages between climate change and insecurity and heard over 50 speakers.

142 "Arria-Formula Meeting on Climate Change as a Threat Multiplier", Security Council Report, 29 June 2015, https://www.securitycouncilreport.org/whatsinblue/2015/06/arria-formula-meeting-on-climate-change-as-a-threat-multiplier.php

- UN Political Affairs Chief, UN Security Council meeting, January 2019,
    - "Most important, for all of us, is the recognition that deeds must follow words. Major armies and businesses have long recognized the need to prepare for climate-related risks, rightfully assessing climate change as a threat multiplier."[143]

2021 (Feb): UN Security Council High-Level Climate Security Debate[144]

- António Guterres, UN Secretary-General told the UNSC that, "climate disruption is a **crisis amplifier and multiplier**."
- "The UK has circulated a concept note in advance of the debate. The concept note states that the objective of the meeting is to discuss the role of the Council, the UN and the organisation's member states in confronting the future threats of climate change to international peace and security, "including through sustained and systematic consideration of related conflict risk, peacebuilding approaches and support for adaptation and resilience in climate-vulnerable settings." It asserts that climate change is **a "threat multiplier"** that contributes to crop failure, displacement, and pastoralist movements that can contribute to the risk of conflict"

UN GENERAL ASSEMBLY

2009 (September): United Nations General Assembly "Climate change and its possible security implications Report of the Secretary-General"[145]

- "Climate change is often viewed as a "**threat multiplier**," exacerbating threats caused by persistent poverty, weak institutions for resource management and conflict resolution, fault lines and a history of mistrust between communities and nations, and inadequate access to information or resources."
- "Channels linking climate change and security": "In this regard, it is useful to think of climate change as a **threat multiplier**, namely as a factor that can work through several channels (see figure below) to exacerbate existing sources of conflict and insecurity. By the same token, conditions, policies, institutions and actions which serve to relieve and manage stresses effectively can be considered **threat minimizers**."

143 UN Political Affairs Chief, quoted in "Climate change recognized as 'threat multiplier', UN Security Council debates its impact on peace", UN Security Council meeting, 25 January 2019, https://news.un.org/en/story/2019/01/1031322

144 "Secretary-General's remarks to the Security Council - on addressing climate-related security risks to international peace and security through mitigation and resilience building", UN Secretary General, 23 February 2021, https://www.un.org/sg/en/content/sg/statement/2021-02-23/secretary-generals-remarks-the-security-council-addressing-climate-related-security-risks-international-peace-and-security-through-mitigation-and-resilience-building#:~:text=peace%20and%20security.-,Mr.,risks%20of%20instability%20and%20conflict.

145 "Climate change and its possible security implications Report of the Secretary-General", United Nations General Assembly, September 2009, https://www.securitycouncilreport.org/atf/cf/%7B65BFCF9B-6D27-4E9C-8CD3-CF6E4FF96FF9%7D/sg%20report%202009.pdf

UNITED NATIONS ENVIRONMENT PROGRAMME

2011 (July): "Statement of UNEP Executive Director, Security Council, in Statement, Says 'Contextual Information' on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict," Security Council, 6587th Meeting[146]

- "Achim Steiner, Executive Director of the United Nations Environment Programme (UNEP), discussed climate change's profound implications for global stability and security, noting that it was a **threat multiplier** that could result in simultaneous and unprecedented impacts on where people could settle, grow food, maintain infrastructure or rely on functioning ecosystems."

COP 26

2021 (November): COP 26 High-level roundtable: "Climate, Peace and Stability: Weathering Risk Through COP and Beyond"[147]

- "I think it is clear as light and day that climate change is a **threat multiplier** in the Horn of Africa. It contributes to state fragility and to the vulnerability of our people." (Kenyan Cabinet Secretary for Foreign Affairs Raychelle Omamo)
- "Because as the Foreign Minister of Kenya stated, **climate change is a crisis multiplier**. Climate change is making our world more dangerous. Climate change increases competition about scarce resources as water, land, it forces millions of people to flee. And therefore it matters for security and therefore it matters for NATO." (NATO SG Jens Stoltenberg)
- "I would say all that we need is that in all the UN reporting, in all the UN analysis, we **need to highlight the risk, the threat multipliers**." (State Secretary, German Federal Foreign Office Miguel Berger)
- "And that reminds me of 2008, when I was the penholder for an EU report on climate change and security, which probably, for the first time at least for the EU, was describing climate change as a **threat multiplier**, not a security challenge as such, but a **threat multiplier** that exacerbates existing threats and challenges. And I think what we've been trying to do ever since back then and also in the OSCE now is to bring together the climate community with the security community." (OSCE SG Helga Maria Shmid)

146 "Statement of UNEP Executive Director, 20 July 2011, Security Council, in Statement, Says 'Contextual Information' on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict", Security Council, 6587th Meeting (AM & PM), https://press.un.org/en/2011/sc10332.doc.htm

147 "Remarks by NATO Secretary General Jens Stoltenberg at the high-level roundtable "Climate, Peace and Stability: Weathering Risk Through COP and Beyond" in Glasgow, UK", NATO, November 2021, https://www.nato.int/cps/en/natohq/opinions_188262.htm?selectedLocale=en

2021 (June): "NATO Climate Change and Security Action Plan"[148]

- First paragraph: "1. Climate change is one of the defining challenges of our times. It is a **threat multiplier** that impacts Allied security, both in the Euro-Atlantic area and in the Alliance's broader neighbourhood."

2021 (June): "Brussels Summit Communiqué"[149]

- "Climate change is a **threat multiplier** that impacts Alliance security."

2021 (December): "NATO Allied Command Transformation, Regional Perspectives on the Arctic—Strategic Foresight Analysis"[150]

- Includes an entire subsection on: "Climate Change and Security: A **Threat Multiplier** in the Arctic"
- "Simply put, if climate change is viewed as a **'threat multiplier'** it can be considered both an exacerbating factor in existing conflicts and a threat to international peace and security in and of itself"
- "The amalgamation of effects in the Arctic can now legitimately be considered as a **'threat multiplier,'** given climate risk has the ability to influence drivers for future conflict."
- "This transforming environmental complex is a **threat multiplier** given that climate change has the potential to accelerate competition, instability and human suffering"

2022 (June): NATO Strategic Concept[151]

- In the "Strategic Environment" section: "19. Climate change is a defining challenge of our time, with a profound impact on Allied security. **It is a crisis and threat multiplier**. It can exacerbate conflict, fragility and geopolitical competition. Increasing temperatures cause rising sea levels, wildfires and more frequent and extreme weather events, disrupting our societies, undermining our security and threatening the lives and livelihoods of our citizens. Climate change also affects the way our armed forces operate. Our infrastructure, assets and bases are vulnerable to its effects. Our forces need to operate in more extreme climate conditions and our militaries are more frequently called upon to assist in disaster relief."

148 "NATO Climate Change and Security Action Plan", NATO, 14 June 2021, https://www.nato.int/cps/en/natohq/official_texts_185174.htm

149 "Brussels Summit Communiqué", NATO, 14 June 2021, https://www.nato.int/cps/en/natohq/news_185000.htm

150 "Regional Perspectives Report on the Arctic - Strategic Foresight Analysis", NATO Allied Command Transformation, December 2021, https://www.act.nato.int/application/files/8516/3236/7596/regional-perspectives-2021-04.pdf

151 "NATO 2022 Strategic Concept", NATO, June 2022, https://www.nato.int/strategic-concept/

2022 (June): "Climate Change and Security Impact Assessment"[152]

- In the Foreword: "This year, the Euro-Atlantic area is experiencing profound instability and urgent security threats. But even as we address these pressing challenges, we cannot ignore the inexorable, global reality of climate change, and the security implications thereof. **Climate change is already a 'threat multiplier'**; one that will worsen as the world warms further. As an Alliance tasked with ensuring the security of its members, NATO must assess this challenge, adapt to it, and contribute to mitigating its effects while always maintaining military effectiveness."
- In the Executive Summary: "Climate change is the overarching challenge of our time. The scope, scale and intensity of climate change effects are projected to increase, ramping up considerably after 2040, as assessed by the July 2021 Report of the Intergovernmental Panel on Climate Change (IPCC). These conditions represent a **'threat multiplier' that has significant security implications for NATO on a tactical, operational and strategic level**."

WORLD ECONOMIC FORUM

2022 (June): "Explainer: How gender inequality and climate change are interconnected"[153]

- "Climate change is a "**threat multiplier,"** meaning it escalates social, political and economic tensions in fragile and conflict-affected settings."

152 "Climate Change and Security Impact Assessment", NATO's Secretary General, June 2022, https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/280622-climate-impact-assessment.pdf

153 "Explainer: How gender inequality and climate change are interconnected", World Economic Forum, 16 June 2022, https://www.weforum.org/agenda/2022/06/explainer-how-gender-inequality-and-climate-change-are-interconnected/#:~:text=Climate%20change%20is%20a%20%E2%80%9Cthreat,fragile%20and%20conflict%2Daffected%20settings.

CIVIL SOCIETY AND ACADEMIA (NON-EXHAUSTIVE LIST)

THE CENTER FOR CLIMATE AND SECURITY

2012 (February): "Briefer: Climate-Security a Reality, Not a Narrative," F. Femia and C.E. Werrell[154]

- "The serious scholars and practitioners in the climate-security sphere rarely, if ever, refer to climate change as "the biggest thing affecting the immediate security" of people in countries experiencing, or likely to experience, conflict. In most cases, climate change is treated as one serious variable among many, often defined as a "**threat multiplier**" or "**accelerant of instability**." In other words, the discourse is indeed sensitive to the other drivers of conflict"

2015 (February): "Climate Change as Threat Multiplier: Understanding the Broader Nature of the Risk," F. Femia and C.E. Werrell[155]

- "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."

2013 (February): "The Arab Spring and Climate Change A Climate and Security Correlations Series," Center for American Progress, Stimson Center, Center for Climate and Security[156]

- "This concept of a "**threat multiplier**" is a helpful way to think about climate change and security more broadly. In Syria, for instance, as Femia and Werrell tell us, a combination of "social, economic, environmental and climatic changes … eroded the social contract between citizen and government in the country, strengthened the case for the opposition movement, and irreparably damaged the legitimacy of the Assad regime."
- "the early events of what came to be called the Arab Spring offered a textbook example of what analysts mean when they talk of complex causality and the role of climate change as **a "threat multiplier**"
- "Climate change has been a **threat multiplier** in the sense that it was a necessary component of any number of possible scenarios, each of them sufficient to have led to the sort of unrest we are now witnessing in the Middle East and North Africa region."

154 Francesco Femia and Caitlin Werrell, "Climate-Security a Reality, Not a Narrative", The Center for Climate and Security, 21 February 2012, https://climateandsecurity.org/wp-content/uploads/2012/04/climate-security-a-reality-not-a-narrative_briefer-09.pdf

155 Caitlin E. Werrell and Francesco Femia, "Climate Change as Threat Multiplier: Understanding the Broader Nature of the Risk", The Center for Climate and Security, 12 February 2015, https://climateandsecurity.org/wp-content/uploads/2012/04/climate-change-as-threat-multiplier_understanding-the-broader-nature-of-the-risk_briefer-252.pdf

156 "The Arab Spring and Climate Change A Climate and Security Correlations Series", Center for American Progress, Stimson Center, Center for Climate and Security, Feb 2013, https://www.americanprogress.org/wp-content/uploads/2013/02/ClimateChangeArabSpring.pdf

2020 (February): The World Climate and Security Report 2020[157]

- "This overview finds that climate change-exacerbated natural disasters may act as **threat multipliers** in both the world's most fragile regions, and in more stable regions with underlying and underreported climate vulnerabilities."

2021 (June): The World Climate and Security Report[158]

- "Climate change is typically regarded as a **generic threat multiplier** and its link with conflict risk is less established in academic literature compared to other risk factors such as oppression, the presence of weapons, a history of conflict and weak governance."
- "The European Union (EU) has long recognized climate change as a **threat multiplier** in the context of global conflict and insecurity. "

2022 (June): Decarbonized Defense: The Need for Clean Military Power in the Age of Climate Change—A Volume of the World Climate and Security Report[159]

- "Military fuel consumption is not only a problem in terms of operational vulnerability. It also involves huge costs and dependency on external suppliers. It adds to the adverse climate impacts caused by emissions that result from burning fossil fuels for energy, and thereby to climate change serving as a **threat multiplier** by putting increasing stress on economic, social and political systems."

157 "The World Climate and Security Report 2020", IMCCS Expert Group, February 2020, https://imccs.org/wp-content/uploads/2021/01/World-Climate-Security-Report-2020_2_13.pdf

158 "The World Climate and Security Report 2021", IMCCS Expert Group, June 2021, https://imccs.org/wp-content/uploads/2021/06/World-Climate-and-Security-Report-2021.pdf

159 "Decarbonized Defense: The Need for Clean Military Power in the Age of Climate Change—A Volume of the World Climate and Security Report", IMCCS Expert Group, June 2022, https://www.clingendael.org/sites/default/files/2022-06/Decarbonized_Defense_World_Climate_and_Security_Report_2022_Vol._I.pdf

2015 (November): "Threat Multiplier: Climate Change, Disasters, and Poor People" - World Bank Group[160]

2015 (June): "A New Climate for Peace: Taking Action on Climate and Fragility Risks - Report" - Climate Diplomacy[161]

- "**Climate change is the ultimate threat multiplier**. When the impacts of climate change interact with other stresses, the combination can overburden weak states, spurring social upheaval and sometimes violent conflict. Even seemingly stable states can be pushed towards instability if the pressure is high enough or shock is too great. Seven compound climate-fragility risks emerge when climate change interacts with other social, economic, and environmental pressures"

2015 (November): "Climate change: the ultimate threat multiplier" - Australian Strategic Policy Institute[162]

- "Climate change can exacerbate a wide range of existing, interacting, non-climate threats to security; it may contribute to a conflict, rather than being the sole cause. In this way, climate change is often viewed as a '**threat multiplier'**. The role of climate change as a **threat multiplier** often works through its impacts on the availability of food and water. Communities, societies, countries and regions experiencing shortages of food and water are more vulnerable to tension, conflict and migration."

160 Stephane Hallegatte et. al, "Threat Multiplier: Climate Change, Disasters, and Poor People", World Bank Group, November 2015, https://elibrary.worldbank.org/doi/epdf/10.1596/978-1-4648-0673-5_ch3

161 "A New Climate for Peace: Taking Action on Climate and Fragility Risks - Report", Climate Diplomacy (commissioned by the G7 foreign ministries), June 2015, https://climate-diplomacy.org/sites/default/files/2020-11/NewClimateForPeace_FullReport_small_0.pdf

162 Will Steffen, "Climate change: the ultimate threat multiplier", Australian Strategic Policy Institute, 18 November 2015, https://www.aspistrategist.org.au/climate-change-the-ultimate-threat-multiplier/