

BRIEFER

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CLIMATE CHANGE A “TOP TIER THREAT” IN THE 2022 U.S. NATIONAL SECURITY STRATEGY

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The Biden Administration’s new National Security Strategy (NSS),¹ released in October 2022, elevates attention and focus on climate security beyond any prior NSS. The security risks of climate change get the attention in the NSS they have long deserved. Climate change is in fact framed as a top-tier threat on a par with geopolitical challenges from U.S. adversaries and competitors.² The NSS states:

“Of all of the shared problems we face, climate change is the greatest and potentially [most] existential for all nations. Without immediate global action during this crucial decade, global temperatures will cross the critical warming threshold of 1.5 degrees Celsius after which scientists have warned some of the most catastrophic climate impacts will be irreversible.”³

The world is already experiencing deadly and life-altering climate-related catastrophes (e.g, flooding in Pakistan, fires and drought in California, hurricanes in Florida) when the Earth’s global average land and ocean surface

1 “The National Security Strategy” The White House, 2022, <https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf>

2 Erin Sikorsky, “A Central Role for Climate Change in the New National Security Strategy,” *Lawfare*, November 1, 2022, <https://www.lawfareblog.com/central-role-climate-change-new-us-national-security-strategy>

3 “The National Security Strategy,” 9.

temperature has risen at least 1.1 degrees Celsius since the mid-1800s (approximately 2 degrees Fahrenheit).⁴ This NSS recognizes the unprecedented risks posed by such disasters. It therefore includes climate risks and related solutions in every aspect of national security and foreign policy, from reduction of carbon pollution to building resilience at home and abroad, and threading climate risks into every regional strategy. In this regard, the new NSS includes many of the recommendations in our Briefer of June 2021, “Climate Change in the U.S. National Security Strategy: History and Recommendations.”⁵

The most recent NSS addresses our five key recommendations as well as emerging concerns due to Russia’s war in Ukraine. These are 1) include all sectors, not just energy, including sources and sinks; 2) expand the concept of climate security to ecological security; 3) increase environmental monitoring; 4) forecast and plan for unpredictability; 5) assert strong U.S. leadership on climate and inter-related global ecological concerns, including passing aggressive climate and environmental restoration legislation and appropriating sufficient funding.

REDUCE GREENHOUSE GAS EMISSIONS IN ALL SECTORS

First, we recommended that the NSS call for “reducing emissions from all sectors and greenhouse gases, including sources and sinks.” The NSS properly observes:

“The necessity to protect forests globally, electrify the transportation sector, redirect financial flows and create an energy revolution to head off the climate crisis is reinforced by the geopolitical imperative to reduce our collective dependence on states like Russia that seek to weaponize energy for coercion.”

Healthy forests are an important carbon sink, as are healthy oceans. In putting forest protection first in the above sentence, and asserting that the U.S. will collaborate to “end deforestation in the next decade,”⁶ this NSS recognizes the role of carbon sinks in reducing greenhouse gases in the atmosphere. This is stated in addition to the critical role of decarbonizing the energy sector and industry, and reducing reliance on Russia’s weaponization of energy.

As such, commitments in the NSS include “ending public finance for unabated coal power” and “aiming to provide \$11 billion in annual climate funding to low and lower-middle income countries.” Likewise, the NSS calls for “embedding climate change in the investment strategies of our development finance institutions.”⁷ Though the NSS’s emphasis on climate action is still on the energy sector, as appropriate, it is excellent that

4 “The Earth Observatory,” NASA Goddard Space Flight Center, <https://earthobservatory.nasa.gov/world-of-change/global-temperatures>.

5 Holly Kaufman and Sherri Goodman, “Climate Change in the U.S. National Security Strategy: History and Recommendations”, The Center for Climate and Security, 29 June 2021, https://climateandsecurity.org/wp-content/uploads/2021/06/Climate-Change-in-the-U.S.-National-Security-Strategy_BRIEFER-21_2021_6_29.pdf

6 “The National Security Strategy,” 27.

7 “The National Security Strategy,” 28.

the security establishment recognizes the critical roles of forests, finance, trade, agriculture, methane and other super pollutants in the climate crisis and its solutions.

EMBRACE ECOLOGICAL SECURITY

Second, we called for expanding past the concept of climate security to ecological security, including biodiversity and ocean health. The NSS again delivers on our recommendations from the previous Briefer, devoting a paragraph to the linkages among biodiversity, ecosystem integrity and climate change:

“People around the world depend on the sea, air, and space for their security and prosperity. The world’s interconnected oceans, lands, waterways, and ecosystems generate economic opportunity and enable critical commercial and military activity. They contain biodiversity vital to food security, clean air and water, a stable climate, and health and wellbeing. Threats to these systems—including excessive maritime and airspace claims, pollution, unregulated deforestation, wildlife trafficking, and illegal, unreported, and unregulated fishing—impact governments’ abilities to meet basic human needs and contribute to political, economic, and social instability.”⁸

Biodiversity is vital to food security, and the document specifically identifies clean air and water and ocean health as critical resources. The NSS stresses threats to ecological systems as core security threats. This is an important step towards systems thinking as we also previously called for, which considers interconnected political, economic, social, and environmental factors for stability and ultimately, security.

INCREASE ENVIRONMENTAL MONITORING

Third, we called for increased focus on environmental monitoring for assessing and improving global ecological health. By explicitly calling out regional collaboration on climate mitigation and resilience as well as regional climate research cooperation, such as in the Arctic, the NSS implicitly underscores the need for improved environmental monitoring. However, the unfortunate reality is that the U.S. has fallen unacceptably behind its European partners in integrating climate and weather modeling in ways that can help decision makers in every sector of society make better decisions. This NSS does mention the need to use space for enabling climate surveillance⁹ and to prioritize the role of technology in national security by elevating the White House Office of Science and Technology Policy to a cabinet-level agency and full member of the National Security Council.¹⁰ However, it lacks a recommendation for the U.S. to be a global leader in Earth system science and to fully fund

8 “The National Security Strategy,” 45.

9 “The National Security Strategy,” 45.

10 The National Security Strategy,” 46.

the necessary satellites and other environmental detection and monitoring mechanisms needed to help the U.S. and the world tackle the climate and related crises.

FORECAST AND PLAN FOR UNPREDICTABILITY

Fourth, we called for the NSS to forecast and plan for unpredictability given that climate and ecological risks are non-linear. Destabilizing one or several of the interacting critical systems, such as soils, biodiversity, oceans, the cryosphere and the carbon and water cycles, creates cascading effects and intertwined feedbacks¹¹ which will continue to amplify climate impacts on human societies and activities. We have no sure ways of knowing just when we will brush up against an ecological tipping point until we have exceeded it. The NSS recognizes that these risks are non-linear; however, there are still implementation barriers to fully integrating these risks into programming, planning and budgeting.

For example, the Arctic could be ice-free in summer months 15 to 20 years from now,¹² with uncertainty in predictions depending on the natural variability in the climate system, the degree of human climate action, and model skill.¹³ In addition to interacting with other planetary boundaries, and potentially being one of the global climate tipping points,¹⁴ the melting of Arctic summer sea ice has led to growth in regional economic and military activities. This means that the non-linear nature of climate risks driven by the melting of Arctic summer sea ice needs to be fully integrated into planning – including by strengthening crisis-response capacities to potential shipping incidents in Arctic waters and improving Arctic domain awareness and communications capabilities.

In the Arctic and other climate-vulnerable regions, the U.S. needs to leverage its position as a technology and innovation leader to advance low-carbon and sustainable forecast systems allowing for observations, mapping and planning for unpredictability.¹⁵

11 Lade, S.J., Steffen, W., de Vries, W. *et al.* “Human impacts on planetary boundaries amplified by Earth system interactions.” *Nat Sustain* 3, 119–128 (2020). <https://doi.org/10.1038/s41893-019-0454-4>

12 “New study suggests climate models may underestimate rate of melting,” National Oceanic and Atmospheric Association, 28 February 2020, <https://www.ncei.noaa.gov/news/arctic-ice-study>.

13 Alexandra Jahn, “Guest post: How predictable is the first ice-free Arctic summer?,” *Carbon Brief*, 25 August 2016, <https://www.carbonbrief.org/guest-post-predictable-first-ice-free-arctic-summer/> & Qinghua Yang *et al.*, “The role of atmospheric uncertainty in Arctic summer sea ice data assimilation and prediction”, *Quarterly Journal of the Royal Meteorological Society*, 2015, DOI: 10.1002/qj.2523.

14 David I. Armstrong McKay *et al.*, “Exceeding 1.5°C global warming could trigger multiple climate tipping points”, *Science*, 9 September 2022, Vol 377, Issue 6611, DOI: 10.1126/science.abn7950.

15 Sherri Goodman, “New Security Dynamics in a Rapidly Changing Arctic”, Aspen Institute Congressional Conference in Reykjavik, July 2022.

FUND CLIMATE SECURITY WORK

Fifth, our briefer noted that Congress needs to support climate and ecological security to the extent called for in the NSS with appropriate funding. In security speak, it is often said, “Strategy without resources is hallucination.” Though national security strategies do not address funding, we would expect the foreign policy and national security agencies to develop a budget request for the President’s FY24 and 25 budget that reflects the urgency of the priorities it lays out.

Fortunately, Congress has supported many efforts to implement the Department of Defense’s (DOD) climate strategies including reaching net zero goals, improving the climate resilience of military bases, and integrating climate decision-making throughout DOD. And thanks to the 2022 Bipartisan Infrastructure Law and Inflation Reduction Act, more funding is now available to address domestic climate change mitigation and adaptation than ever before and to integrate climate change into our national security planning and policies.¹⁶ Additional funding is still needed across government agencies for climate finance to reduce global climate security risks such as growing energy poverty and food insecurity in strategically important and socially- and environmentally-fragile states, including to ensure that the U.S. fulfills its goal to provide over \$11 billion annually to climate funding in low- and lower-middle income countries.¹⁷

PREVENT THE WEAPONIZATION OF ENERGY

Finally, the NSS makes clear that Russia’s unprovoked war against Ukraine and its weaponization of energy and food as coercion should prompt the U.S. and its allies to accelerate the clean energy transition:

“Events like Russia’s war of aggression against Ukraine have made clear the urgent need to accelerate the transition away from fossil fuels. We know that long-term energy security depends on clean energy. Recognizing this transition will not happen overnight, we will work with partners and allies to ensure energy security and affordability, secure access to critical mineral supply chains, and create a just transition for impacted workers.”¹⁸

Though U.S. domestic energy interests have at times conflicted with the urgency of accelerating the clean energy transition, the unprecedented risks of climate change have also prompted new innovative decarbonization solutions such as green hydrogen, next generation nuclear energy, improved critical mineral supply chains, and increasing work on renewable industrial thermal heating and cooling, among many other non-technological methods. Social, financial, biological and technological climate solutions should increasingly be

¹⁶ “The National Security Strategy,” 27.

¹⁷ “The National Security Strategy,” 28.

¹⁸ “The National Security Strategy,” 28.

factored into U.S. security cooperation with allies and partners, both to reduce climate risk and advance clean economies, and to promote U.S. leadership in key industries. International trade is another arena that this NSS addresses, stating that the U.S. will also use trade tools to advance climate priorities. One example is the landmark steel and aluminum agreement with the EU which addresses both carbon intensity and global overcapacity, and is a model for future climate-focused trade mechanisms.¹⁹

CONCLUSION

The 2022 NSS is a breakthrough in recognizing the interdependence of all natural systems and resources, and of those systems and resources with human survival and economic and social stability. This NSS makes clear that our national security and that of the rest of the world depends on protecting and restoring nature. It falls short on the few occasions where it omits the notion of interdependence, such as not including climate change as an increasing contributor to the oft-mentioned refugee crisis. It embodies several contradictions, such as criticizing China for increasing coal use while U.S. fossil fuel production and use have also increased, including for plastics production, and calling for increased global fertilizer production which is highly energy and greenhouse-gas intensive.²⁰ In addition, the NSS says that the U.S. will abide by the “customary international law rules in the UN Convention on the Law of the Sea,”²¹ but has yet to ratify the treaty.

However, the theme of the 2022 NSS is spot on: “No country should withhold progress on existential transnational issues like the climate crisis because of bilateral differences.”²² It states that the world’s “shared response to the climate crisis is a political imperative and an economic opportunity.”²³ It recognizes that the “security and prosperity of the U.S hinges on that of our neighbors,”²⁴ and claims that the U.S. will continue to prioritize leading the international response to transnational challenges including climate change. Let’s hope that the U.S. lives up to this promise in both budget and action. U.S. policymakers should indeed pay heed to this NSS.

19 “The National Security Strategy,” 27, 35.

20 Ornella Kaze, “EIA expects U.S. fossil fuel production to reach new highs in 2023.” U.S. Energy Information Administration, 2022, <https://www.eia.gov/todayinenergy/detail.php?id=50978>.

21 “The National Security Strategy,” 45.

22 “The National Security Strategy,” 25.

23 “The National Security Strategy,” 38.

24 “The National Security Strategy,” 41.

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