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DEEPENING U.S. CLIMATE SECURITY AMBITION: A ROAD MAP FOR 2023

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In 2022, the world faced the challenging reality of the nexus of climate change and security on a daily basis. From deadly floods,[1] heatwaves, and droughts across nearly every continent, to an energy and food security crisis sparked by the Russian invasion of Ukraine,[2] the impact of climate change and continued use of fossil fuels has increased instability and insecurity for communities around the globe.

At the same time, U.S. policymakers and practitioners took unprecedented actions to address these intersecting security challenges. Many of these actions reflected recommendations the Center for Climate and Security (CCS) had made in the past—both in a short report, *Taking Stock: Integrating Climate Change into U.S. National Security Practices in 2022*[3] and the more in-depth *Challenge Accepted: A Progress Report on the Climate Security Plan for America and Recommendations for the Way Ahead*, endorsed by nearly 80 senior national security leaders.[4]

While we applaud and detail this progress in this briefer, we also recognize that it is far from enough. In particular, global investments in adaptation and resilience measures are woefully inadequate. The failure of the United States to increase climate finance funding last year—falling well short of its international pledges—was a missed opportunity to invest in U.S. national security. Helping the most climate-vulnerable countries address climate hazards can prevent instability and conflict that threatens U.S. interests, and strengthens U.S. credibility and leadership on the global stage.

In 2023, U.S. policymakers and practitioners will have many opportunities to solidify and institutionalize progress on climate security. Overall, the key themes for 2023 should be: execution, integration, and sustainability. Strategies and roadmaps have been created—now it is time for implementation.

To that end, a next step to ensure progress on climate security across all agencies is developing and filling the pipeline with climate adaptation and resilience projects so agencies are ready to spend when funding becomes available. Resilience projects can take years to be fully implemented, which means the resilience interventions must be started today to ensure tomorrow's security.[5] Additionally, given the pace and intensity of climate hazards—the National Oceanic and Atmospheric Administration (NOAA) assesses the United States experienced 18 separate disasters in 2022 whose damages exceeded $1 billion[6]—another overarching priority must be to significantly increase response capabilities, both at home and abroad.

This briefer evaluates progress and makes additional recommendations for the coming year across five different areas: integrating climate security in regional strategies; linking climate adaptation and conflict prevention; maximizing whole-of-government approaches; increasing support for allies and partners; and leveraging strategic forecasting tools.

INTEGRATE CLIMATE SECURITY IN REGIONAL STRATEGIES

2022 PROGRESS

The U.S. Government made some progress toward this recommendation in 2022. For example, the following regional strategies include climate concerns: the Pacific Partnership Strategy of the United States;[7] the U.S. Strategy Toward Sub-Saharan Africa;[8] the National Strategy for the Arctic Region;[9] and the U.S. Indo-Pacific Strategy.[10] In each case, the climate content goes beyond a mention in a laundry-list of regional challenges but instead is more fully integrated into the analysis and vision for each region. Agency regional strategies, such as the State Department's Middle East and North Africa Strategy,[11] include robust climate considerations as well.

Some Department of Defense (DoD) regional combatant commands have also strengthened efforts to integrate climate considerations in the past year. For example, U.S. Africa Command (AFRICOM) held a series of climate security events and has commissioned new tools and analysis to help it better prepare for climate risks on the continent.[12] Additionally, each of the three military branches released climate security plans for the first time, underscoring the importance of integrating climate into other functional components of the security apparatus.[13]

However, an April 2022 DoD Inspector General report on U.S. climate resilience in the Arctic concluded that the gap between strategies on paper and implementation remains significant.[14] This is not just a challenge for DoD, but for agencies across the U.S. government, based on our observations. The integration of climate change

considerations into regional strategies fulfills initial recommendations found in the *Challenge Accepted* report, but in order to further solidify climate security action appropriate resourcing, shifts in organizational culture, and new organizational structures that break down silos between functional and regional issues must follow.

2023 RECOMMENDATIONS

- **Ensure personnel understand how climate change impacts their areas of expertise:** Because climate security is now becoming a substantive piece of regional strategies, mainstreaming climate security in 2023 must include training for non-experts in addition to staffing dedicated climate-related positions inside regional and thematic shops. The State Department's new cadre of foreign service officers focused on climate is a good start and the agency should look to expand and deepen this effort in coming years. Climate security should be integrated broadly, not relegated to the climate office. The DoD, State and the Department of Homeland Security have invested in climate training programs which is a promising beginning.[15] These programs require senior-level engagement and attention to emphasize their importance and should be backed by adequate funding in order to ensure their success.
- **Routinely update analysis of climate security hotspots:** In *Challenge Accepted*, the Climate Security Advisory Group noted the need to regularly update regional assessments.[16] One place to start would be annual check ins on the regional analysis in the National Intelligence Estimate (NIE) on Climate Change based on new information (i.e. new studies on the Arctic and glacier melt, new political developments. etc.).[17] For example, Pakistan is identified as one of the countries of great concern in the NIE.[18] In what ways do the floods in 2022 change the intelligence assessments?
- **Ensure the Office of China Coordination includes dedicated climate staff:** Established at the end of 2022, the Office of China Coordination (informally known as China House) is meant to break down silos among regional and functional bureaus at the Department of State working on China issues. It is crucial that dedicated climate experts and climate analysis are integrated into China House so that the impact of climate change on China's national security priorities is regularly considered.[19]

LINK CLIMATE ADAPTATION AND CONFLICT PREVENTION

2022 PROGRESS

Clear progress on this recommendation was made via the updated approach to implementing the Global Fragility Act (GFA) of 2019. In April, the U.S. Department of State released a new prologue to the U.S. Strategy to Prevent Conflict and Promote Stability, drafted in accordance with the GFA, that addresses the impact climate change has on deepening fragility.[20] The document identifies four countries and one region[21] for which blueprints of locally-led, multi-sector peace and security engagement will be developed by whole-of-government teams.[22]

The USAID Climate Strategy, released on Earth Day 2022, also reflects the linkage between climate and conflict risk, with specific reference to building conflict-sensitive and gender-responsive approaches to climate adaptation co-developed with the most vulnerable.[23] Key to implementing and sustaining the climate-conflict elements of such high level strategies will be investments in concrete, local-level projects. For example, at the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27), President Biden announced continued support for the Sahel-Climate Advocacy and Peacebuilding with Pastoralists program, which addresses the risk of farmer-herder conflict in Niger and Benin through increased access to climate forecasts and political participation.[24] Investments in climate and conflict risk reduction initiatives like this one across a wider range of geographies will be increasingly important.

2023 RECOMMENDATIONS

- **Engage diplomacy, development, defense, and humanitarian government and non-government actors in conflict and climate risk reduction:** The publication of the updated Strategy to Prevent Conflict and Promote Stability and the PREPARE Action Plan, provide a promising foundation for climate security work. In the future, signals from humanitarian actors can act as canaries in the coal mine, warning of imminent or ongoing climate security risk. Active collaboration between humanitarian actors–whose purview is the consequences of disasters–and diplomatic, defense, and development actors–whose purview is to prevent or prepare for disasters–can ensure that climate and conflict risk reduction interventions provide effective resilience against both crises.[25]
- **Develop an international climate finance strategy that amplifies and prioritizes the security benefits of increased investments across multiple pathways:** Thus far the Biden Administration has failed to win Congressional support for its pledge to increase U.S. climate finance funding. To broaden support for such increases, the administration should develop a strategy that sharpens a focus on the national security benefits of such programming and regularly communicates those benefits to a wider, bipartisan audience ideally using security messengers. This strategy should also identify multiple policy

pathways, including bilateral support and reforms of the World Bank and International Monetary Fund (IMF), for achieving increased funding for adaptation and resilience programming abroad. Identifying a senior level champion and/or an inter-agency high level team to develop such a strategy could help, especially to ensure the issue gets as much attention as mitigation efforts have received under the leadership of Special Presidential Envoy for Climate (SPEC) John Kerry.

MAXIMIZE WHOLE-OF-GOVERNMENT APPROACHES

2022 PROGRESS

The updated State Department Strategy to Prevent Conflict and Promote Stability is one of many new strategies and plans released by the Biden Administration that centers a whole-of-government approach to addressing climate security. Others include the President's Emergency Plan for Adaptation and Resilience (PREPARE) Action Plan,[26] the National Security Strategy (NSS),[27] and the National Defense Strategy.[28]

The PREPARE Action Plan is a crucial piece in embedding and entrenching climate security on a whole-of-government scale in the United States. The document fulfills many recommendations made in *Challenge Accepted*, such as demonstrating leadership, assessing climate risks, supporting allies and partners, and preparing for and preventing climate change impacts.[29] The three pillars of PREPARE–Knowledge, Plans and Programs, and Resources–constitute key steps in mainstreaming action on climate security.[30] Implementing and resourcing these pillars will embed climate security action in an interconnected and holistic manner.

The passage of the U.S. Inflation Reduction Act of 2022 also advances a whole of government approach to managing climate risks. This landmark piece of climate legislation will help prevent the worst security outcomes of climate change while bolstering U.S. international credibility and improving energy security.[31] As noted in our analysis of the bill over the summer, "This legislation will speed up deployment of clean energy and lower U.S. carbon emissions by about 40 percent from 2005 levels, closing two-thirds of the remaining gap between current policies and the U.S. climate target of a 50 percent reduction in emissions by 2030."[32] Additionally, the National Defense Authorization Act (NDAA) of 2023 and the Consolidated Appropriations Bill, 2023–passed and signed in December 2022–will create even more opportunities for entrenching climate security action on a whole-of-government scale.[33]

Complementary to a whole-of-government approach is a whole-of-society approach that engages both public and private entities. The Biden Administration has made moves to increase public/private partnerships through initiatives such as the Climate Gender Equity Fund, the Indigenous Peoples Finance Access Facility, the Subnational Climate Action Leaders Exchange (SCALE), and a Youth Leadership Program on

resilience and clean energy.[34] While these are still nascent efforts and will require adequate resourcing and follow-through, they represent a recognition of the importance of engaging all levels of society in tackling climate-related risks.

2023 RECOMMENDATIONS

- **Close the gap between strategic offices and practitioners:** The Pentagon Inspector General's report on adaptation in the Arctic demonstrated that even the best plans and strategies fail when policymakers and practitioners are not on the same page. Thus, whole-of-government approaches to climate security will require more transparent and open exchange. Additionally, actions taken to reduce the gap between strategy and action will be effective in demonstrating climate leadership to the international community when securing increased funding for climate finance through Congress may be a more difficult prospect.
- **Develop a National Adaptation Plan:** The *Challenge Accepted* report notes that: "Given the increasing number of billion-dollar disasters that the United States has faced in recent years, it needs concrete, shared resilience goals and a framework for prioritizing risk reduction in federal, state, and local investments."[35] This is an area in which the United States remains behind the curve—many allies and partners have developed national adaptation plans, as has China.
- **Continue expanding innovative partnerships between federal, state, and local bodies:** A whole-of-government approach to climate change requires engagement at all levels of governance. The retasking of the National Geospatial-Intelligence Agency (NGA) Expeditionary Operations Team in the wake of Hurricane Ian to aid rescue efforts is one example of the kind of needed innovative collaboration.[36] Additionally, the National Guard and NGA FireGuard and Firefly programs have been able to offer complementary wildland fire response when state and local resources were overtaxed.[37] These kinds of collaborations and efforts must be expanded in response to advancing climate impacts.

INCREASE SUPPORT FOR ALLIES AND PARTNERS

2022 PROGRESS

The U.S. somewhat increased its support for climate security work by allies and partners through multiple avenues in 2022, yet there is much more to do. For example, the FY2023 National Defense Authorization Act renamed and expanded the focus of the Defense Environmental International Cooperation (DEIC) program to become the Defense Operational Resilience International Cooperation (DORIC) program, which supports the efforts of regional combatant commanders to collaborate with partner countries on environmental and operational energy issues.[38] At COP27 the United States announced further investments in early warning systems for Africa including a $13.6 million contribution to help fill weather, water, and climate observation

gaps.[39] Moreover, the omnibus spending bill includes $5 million for each of the regional combatant commands (and $10 million for Central Command) to fund international programs that support national security priorities related to the destabilizing effects of extreme weather conditions.

However, the United States missed a big opportunity to support allies and partners when Congress declined to support the President's FY2023 climate finance budget request. In the final bill, direct climate finance only increased by $900,000, well short of the several billion needed to achieve President Biden's commitment to deliver $11.4 billion annually by 2024. Of this, zero dollars were explicitly appropriated for the Green Climate Fund and bilateral climate programs were underfunded by at least 1.5 billion.[40] Not only does this lack of funding undercut U.S. climate leadership globally and leave climate-related threats to U.S. interests abroad inadequately addressed, but it also leaves an opening for competitors to fill.

U.S. allies and partners also increased climate security action last year. For example, Japan released a first-ever "Ministry of Defense Response Strategy on Climate Change,"[41] and the French Ministry of Defense penned a "Climate and Defence Strategy."[42] The European Union (EU) and the North Atlantic Treaty Organization (NATO) have been leveraging their organizational strength to move the agenda forward as well. In the new EU strategic compass, member states will be required to develop national strategies for preparing armed forces against climate change by the end of 2023.[43]

NATO released the Secretary General's Report "Climate Change and Security Impact Assessment" during its annual ministerial, and Secretary General Stoltenberg announced that the Alliance plans to reduce greenhouse gas emissions to net-zero by 2050.[44] The recently-created NATO Climate Change and Security Centre of Excellence, to be hosted in Montreal, will contribute to the effort of sharing knowledge on climate change impacts between allied military and civilian actors.[45] To that end, in December, NATO hosted its first Climate Change and Security Roundtable, a discussion with Allies and climate experts focused on issues such as the latest trends and implications of climate change on security and best practices for climate adaptation and mitigation.[46, 47]

2023 RECOMMENDATIONS

- **Prioritize climate resilience in development and assistance efforts:** The country and region strategies being built through the Global Fragility Act are led by country teams with local knowledge and expertise on political, social, economic, and climate issues which is crucial for their success. As a model is developed through this process, replicating its integration of climate in other regional and country plans and strategies is important to ensure short-term security and long-term resilience.
- **Engage allies and partners in strategic foresight exercises:** The threat of climate change-related risks provides a uniquely global challenge requiring unprecedented collaboration. As the DoD expands its use of climate-focused Table Top Exercises (TTX) and other forecasting tools, inviting the

participation of allies and partners will provide important insights about the collective efforts needed to combat climate change impacts, especially when these games are hosted by combatant commands. Engaging with multi-sector actors from allied and partner countries will increase the avenues to prepare for and prevent climate impacts.

- **Expand and solidify efforts centering scientific agency collaboration with allies and partners:** The Biden Administration's announcement to support the expansion of early warning systems on the African continent is a key way that U.S. scientific, diplomatic, and development agencies are ramping up support for allies and partners. This kind of collaboration should be pursued and prioritized for early warning and crisis watch centers, especially those already in existence so that potential climate security crises can be identified before they occur. It is important to note that early warning systems alone are not enough, however, and collaboration must also focus on how to build local level trust and buy-in for such systems.[48]
- **Support the new NATO Climate Change and Security Centre of Excellence:** While most support for allies and partners will take place on a bilateral basis, support for international organizations engaged in climate security is crucial for preparation. As NATO stands up the Climate and Security Centre for Excellence, U.S. support through funding and personnel will be vital given the DoD's tenured engagement on the issue.

LEVERAGE STRATEGIC FORESIGHT TOOLS

2022 PROGRESS

In 2022, the Department of Defense (DoD) made significant progress in leveraging strategic foresight tools to prepare for climate hazards. The DoD's Climate Working Group stood up a sub-working group on climate wargaming led by the Joint Staff's Principal Director for Logistics. So far, the DoD has conducted multiple regional and sectoral climate change-focused scenario exercises, and many of the regional combatant commands are planning games focused on security risks related to climate impacts in their regions.[49] In June 2022, the Department of the Navy also hosted a climate Table Top Exercise (TTX) to examine climate change impacts on mission, readiness, and warfighting capacity.[50]

Other government agencies are also leveraging innovative strategic foresight tools and approaches to address climate security risks. For example, the Defense Advanced Research Projects Agency (DARPA) is using artificial intelligence to detect rogue geoengineering projects, while NASA's recently launched the Surface Water and Ocean Topography (SWOT) satellite, a project in partnership with the French National Centre for Space Studies, will enable greater understanding of global water resources.[51] Other examples include the work of the congressionally mandated, and newly organized Climate Security Roundtable, housed in the National Academies of Sciences, Engineering, and Medicine and sponsored by the Office of the Director of National Intelligence (ODNI), to buttress government anticipatory work on climate-related risks through convening experts from academia, the private sector, and civil society.[52] At the intergovernmental level, Germany, the Netherlands, the United States, and the United Nations are supporting the newly established Complex Risks Analytics Fund (CRAF'd) which will engage projects advancing analytics and Artificial Intelligence (AI) to aid local and global stakeholders in anticipating, preventing, and responding to the impacts of climate fragility.[53]

In 2022, the Center for Climate and Security (CCS) explored future climate security risks using scenarios exercises and other strategic foresight tools which leveraged subject matter expertise from those in and out of government. Geographically, these climate security reports mostly focused on the Asian continent, including analysis of the risks in the South and East China Seas[54] and Mainland Southeast Asia,[55] and the climate vulnerabilities faced by China.[56] These efforts and the events of 2022 made clear that addressing climate security risks will increasingly require balancing the focus of resources and attention between short-term disaster response and long-term resilience development. Foresight tools and analysis can aid in identifying and achieving the balance between short-term response and long-term preparation and prevention.

2023 RECOMMENDATIONS

- **Use scenarios exercises to stress test regional strategies for "worst-case" outcomes:** Foresight tools such as scenarios exercises can prove invaluable in assessing the robustness of strategies and plans. By exploring worst-case outcomes for a specific issue or region, the inadequacies and failings of interventions can be found and addressed before they result in maladaptation or compound existing risks.
- **Leverage foresight tools and TTX outside of DoD:** Though climate-oriented TTX and wargames are largely being facilitated at the DoD, multiple agencies and departments must use these exercises and tools to engage a wide range of strategic and practitioner stakeholders in order to create effective cross-governmental resilience plans.
- **Include climate change impacts in all strategic foresight exercises:** While TTX and wargames which begin with climate-driven crises are important in a world where climate-related risks are increasing in scope and decreasing in predictability, it is equally important to explore the impact climate change will have in scenarios where the problem is not primarily environmental. The effects of climate change rarely occur in isolation, but interact with ongoing security challenges. In future, climate security risks and context should also be incorporated into non-climate games.

CONCLUSION

As 2022 made clear, the intersection between climate change and security challenges is growing in prevalence and importance globally. While the U.S. government did begin to move from words to action on climate security during the last year, 2023 requires that those actions increase in scale and urgency. Part of this will require a shift in focus from primarily immediate, post-crisis interventions towards more long-term resilience-building measures which protect people, livelihoods, and infrastructure from the cascading impacts of climate change. Practitioners and policymakers alike must be able to balance the needs of the now with the needs of the future to avoid being overwhelmed by preventable impacts.

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