

ELLIPTIC THUNDER Quick Look

J-8 Studies, Analysis, and Gaming Division (SAGD)

~~(S)~~ On 25 March 2021, the Office of the Undersecretary of Defense for Policy's Stability and Humanitarian Affairs Division (OUSD(P)SHA) and the Joint Staff J-5's Counter Threats and International Cooperation (CTIC) Division sponsored a table top exercise (TTX) to facilitate a discussion of DOD's preparedness to identify and respond to climate change, ensuing environmental security challenges, and adversary attempts to exploit them. Participants included the Secretary of Defense Climate Advisor, the Department of State Climate Advisor to Hon. Kerry's office, National Security Council directors, Department of State Deputy Assistant Secretaries, Deputy Assistant Secretaries of Defense for Environment and Energy Resilience (EER) and Strategy and Forces Development (SFD), AFRICOM J-5, Joint Staff J-4 Vice Director, Joint Staff J-5 Deputy Director for Africa, USAID, the National Intelligence Council, Defense Intelligence Agency, Central Intelligence Agency, and the National Oceanic and Atmospheric Administration. This Quick Look Report summarizes the TTX structure and provides initial findings as observed by the SAGD staff. It is not an official summary of conclusions and does not establish a Joint Staff position. It offers the impartial observations of the TTX staff and should be interpreted only as a starting point for the participants to continue their dialogue.

~~(S)~~ ELLIPTIC THUNDER Structure

~~(S)~~ The purpose of ELLIPTIC THUNDER was to explore DOD preparedness to identify and respond to climate related environmental security challenges, instability, cascading events, and adversary attempts to exploit them through 2040. The TTX objectives were to: 1) consider the national security impacts of climate related events and their effect on stability and security; 2) explore ways in which adversaries may exploit instability from climate change, environmental insecurity, and natural disasters, including impacts to allied and partner relationships; 3) identify current DoD policies and strategies to recognize and respond to climate related security challenges and interagency response; and 4) identify key gaps in DoD policies, strategies, authorities, and plans to respond to climate related security challenges including cascading events and compound crises.

~~(S)~~ The TTX was designed using an East Africa vignette to facilitate discussion of multiple climatic and security themes. Following an overview brief of the global and regional climatic and security environments, participants discussed the TTX objectives in the context of three specific moves. The first move was based on instability stemming from a long-term heat wave and drought and the rise of a violent extremist organization (VEO), the second utilized cascading food insecurity and El Nino induced flooding with great-power supported regional maritime struggles, and the third posited destructive cyclones and cholera outbreaks and their impact to strategic international government positions. In each move, the "Blue team" of principal participants representing the US Government perspective discussed the TTX objectives while a Red (adversary) and Green (allies, partners, and science) Team observed and provided strategic level perspectives to the Blue Team after each move. The TTX concluded with the Blue Team sharing their final insights.

~~(U)~~ Initial Insights

~~(C)~~ *Effective preparation for climate change impacts requires a shift to proactive engagement.*

- ~~(CU)~~ Blue Team participants noted that, generally, DoD policies and actions default to reactive vice proactive responses. Regarding climate-change driven insecurity, there was wide concurrence that continuous cooperation, rather than reactive crisis response, with partners and allies would be the first step to “getting left of the boom.” Participants emphasized the near term nature of climate change issues and environmental security challenges and that the interagency should take actions today to allow the USG to detect, mitigate, and deter future instability.
- ~~(CU)~~ Many Blue Team participants noted that there is limited discretionary spending for DoD and other agencies’ disaster mitigation and prevention programs. Participants noted, however, that these investments pay great dividends and recounted a study which found that one dollar in drought mitigation efforts equated to three future dollars in response to drought.
- ~~(CU)~~ Participants concurred that proactive engagement requires the United States to build trust with affected local governments. Stable governance and resource management are effective measures that mitigate climate change’s destabilizing impacts. The Blue team agreed that resources and policies oriented toward mitigation and adaptation were preferable to reactive responses that do not address underlying vulnerabilities or the impacts of climate change. Building this consensus with local governments is why proactive engagement that builds trust is key.

~~(CU)~~ *Effective preparation requires DoD to build internal resilience and flexibility.*

- ~~(CU)~~ Participants noted that preparations should account for the fact that climate change will likely result in increased frequency and severity of stressors/events impacting security and stability. Those events will then pose a greater risk due to their compounding and additive nature, eroding operational capacity and resilience across the board. The nature of slow-onset climate change means that resilience to the effects of climate change are diminished subtly over time. Planning should acknowledge these trends.
- ~~(CU)~~ The Blue Team noted that climate change will affect not just individual areas of responsibility (AORs) but also global operations at critical geostrategic choke points or military logistics and operational nodes that serve multiple AORs or operational plans (OPLANS).
- ~~(CU)~~ One participant noted linkages between the Joint Warfighting Concept (JWC) and its Joint Concept for Contested Logistics (JCCL) with respect to the resilience needed to prepare for climate change driven challenges, and suggested future work to better explore this linkage.
- ~~(CU)~~ Participants discussed flexible response options including an increase in unrestricted funds available to combatant commanders and interagency partners to mitigate future events related to climate change. They agreed that increasing unrestricted funding may also foster U.S. private sector opportunities with allies and partners, thereby limiting those available to adversaries. Flexible funding authorities would allow commanders to meet the biggest issues at the point of need rather than waiting for a specific declaration associated with a given event.

- ~~(CUH)~~ Participants noted that building resilience and flexibility requires specific force development, including a need for increased military-to-military and military-to-civil capacity. Resources such as agricultural business teams, provincial reconstruction teams, and scientific liaisons were identified as useful and ones that should be considered for permanent, vice ad hoc, establishment.
- ~~(CUH)~~ Intelligence collection and analysis postures will impact the degree to which DoD and the United States will be aware of and able to prepare for and respond to growing instability. Several participants observed that specific and targeted collection on environmental concerns from geographic and human intelligence sources could assist in shaping the most appropriate proactive and response options providing better recognition and understanding of climate related challenges.

~~(CUH)~~ ***Effective proactive engagement requires building affected nations' resilience and flexibility with coordinated partnerships.***

- ~~(CUH)~~ Participants agreed that nations affected by climate stress should be seen as critical contributors and capacity builders of resilience and flexibility. Moreover, their contributions need not be directly tied to climate change effects: participants noted metaphorically that even a partner nation's forklift could be construed as a critical capability to increase the efficacy and reduce the burden of USG assistance during a crisis or operation. Additionally, building partner capacity directly links to strategic access for a range of future operations and responses.
- ~~(CUH)~~ Participants concurred that building resilience requires an integrated whole-of-government approach to provide local governments with the tools and advice needed to expand their capacity to prepare for and respond to climate change. Furthermore, the tools and advice given should encompass not just available technology transfer but also understanding and skill. Participants noted that the same solutions may not be effective for neighboring communities as the environment changes over time – as an example, the Green Team observed that a solar-powered water pump wouldn't be terribly useful following a drought without water to pump.
- ~~(CUH)~~ Participants noted that AOR specific communications, studies, and strategies that incorporate multiple levels and areas of expertise could be useful in aligning climate change efforts (e.g. Indo-Pacific Strategy, maritime resource studies, etc.). Additionally, efforts such as developing cooperative early warning systems present the opportunity to foster partner trust and responsiveness while simultaneously reducing impacts from climate change exacerbated events like droughts and hurricanes.
- ~~(CUH)~~ Partnerships with specific allies and groups such as the United Nations and European/African Unions create the opportunity to share the burden of climate change effects through policy, plans, and actions. Partners should be engaged to magnify efforts for prevention, access, scientific modeling, and early warning.

~~(CUH)~~ ***Coherent continuous messaging is critical to proactive strategy and can limit adversary attempts to exploit crises.***

- ~~(CUH)~~ To meet future challenges, domestic messaging today needs to highlight the magnitude of value for future climate change risk reduction. Domestic messaging builds buy-in from numerous branches of government as we bolster prevention and early warning capabilities. Participants

suggested highlighting the value of climate change efforts in view of current and emerging threats such as great power competition, countering violent extremist organizations, and reducing instability.

- ~~(CUI)~~ Successful future external messaging and resiliency/flexibility building efforts abroad are directly linked to domestic policy and success today.
- ~~(CUI)~~ Regardless of the underlying causes, humanitarian assistance and disaster response operations will require the United States to take a leadership role as compared to our adversaries so as to protect our own goals rather than supporting our adversaries' objectives. To enable this, messaging should highlight response standards and expectations from other nations and invest toward resilience.
- ~~(CUI)~~ Messaging must also counter the adversary's ability to re-shape the narrative. This includes highlighting adversary policy actions to mitigate climate change and promoting facts regarding their status as a climate-change exacerbating consumer/producer. The Red Team noted that messaging in the face of a crisis allows money to matter more than facts, giving the adversary an opportunity to reshape perceptions. To mitigate, U.S. messaging strategies must also be proactive.
- ~~(CUI)~~ Adversaries may have opportunities to exploit crises through their own response efforts and technology. Allowing adversaries to rebuild or modernize power grids, telecommunications infrastructure, or civil support services increases adversary access and increases risks to future U.S. operations. Mitigating adversary access may be best accomplished by encouraging United States or allied private sector companies to participate in resiliency building or disaster response efforts around the globe.

~~(CUI)~~ ***Effective DOD engagement now requires integration across the whole of government to mitigate future impacts of climate change exacerbated instability.***

- ~~(CUI)~~ Regional and functional stakeholders should coordinate and align to promote awareness and better interagency outcomes. This allows for integrated experience and perspective to shape future engagement. These efforts require clear national strategy and authorities to be successful.
- ~~(CUI)~~ The Blue Team considered whether thresholds, the crossing of which trigger a response to climate driven events, would help agencies' decisions to respond. Some thought that thresholds that triggered an automatic release of resources would be helpful. DoD participants noted that an Execute Order will be associated with sufficient funding to execute response but that the Department is largely limited to providing advice and recommendation until such an order was given.
- ~~(CUI)~~ Cooperation on climate-change and environmental security today allows the United States and its allies to balance stabilization and high-end strategic efforts. Current cooperative efforts across the interagency have the ability to shape future operating environments to be favorable to the U.S. and less favorable to our adversaries. Shaping future operating environments shifts focus from disrupting current adversary operations to degrading future growth and initiatives, especially considering counter-VEO activities.
- ~~(CUI)~~ Future conflicts and unforeseen changes within specific countries (e.g. coups and associated U.S. legal restrictions) may adversely affect investments toward stability and governance within a

given region; however, the TTX participants agreed the benefits to engagement outweigh the risks. Resource management efforts and conflict dispute investments can further reduce that risk.

~~(CU)~~ *DoD capacity and capability to respond to climate change impacts to security and instability require tradeoffs now between strategic and crisis response competencies.*

- ~~(CU)~~ Participants agreed that crisis response operations would likely increase in demand through 2040. Recognizing that the United States “cannot be everywhere,” participants noted that a balance must exist between strategic and expeditionary capabilities. Capabilities such as smaller modular hospital ships, mobile construction teams, and available power generation/desalination equipment may be needed to augment future operations. One participant noted that utilization/access choices between strategic bases and capabilities of forces/equipment/etc. should not be binary between fixed and expeditionary but a rheostat.
- ~~(CU)~~ The Blue Team noted that reducing future instability and insecurity would likely require giving up some combat capability funding. While combat capability may be reduced, the positive externalities of making such concessions today would be realized by lower crisis response requirements in the future. Additionally, funding could be used for expeditionary capabilities that could be used for both operations.
- ~~(CU)~~ The Blue Team also noted across all moves that there would still be requests from other departments for DoD support such as noncombatant evacuation operations (NEO) and security for humanitarian assistance efforts. While participants recognized that population changes will stress organic DoD NEO capacity, the capability would still be in demand. The Red Team noted that any response would be stressed by the operating environment’s permissive/non-permissive nature.

~~(CU)~~ *Scenarios, modeling, and tabletop exercises will help understand the changes needed to shape whole of government action regarding climate change driven events.*

- ~~(CU)~~ Multiple participants noted the need to create additional models to better predict impacts of climate change on stability. Participants viewed early warning of instability as critical to effectively prepare for and respond to environmental security challenges. Additionally, participants observed that by anticipating environmental impacts, the United States and its allies and partners may be able to reduce the degree of instability precipitated by climate change or weather events. The greater challenge will lie in connecting the predictive risk assessment capabilities of the Intelligence Community, scientific community, and development agencies to shape an understanding of operational security.
- ~~(CU)~~ Understanding climate change’s impact to security and instability requires systemic understanding across all national instruments of power. The systems lens should examine beyond traditional metrics for instability and consider a broader range of factors to create more effective early recognition and warning of potential events. One of such metrics noted was to use community health predictors as a means of assessing environmental impacts.
- ~~(CU)~~ Scientific cooperation and involvement will be critical to understanding future trends and challenges. International cooperative initiatives are underway at organizations like NOAA that

include personnel from multiple countries to increase sharing and understanding. Such initiatives may also provide paths towards greater cooperation with and access to foreign nations.

Prepared by: (b)(6)

Approved by: (b)(6)

Controlled by: Joint Staff, J-8, Studies Analysis and Gaming Division