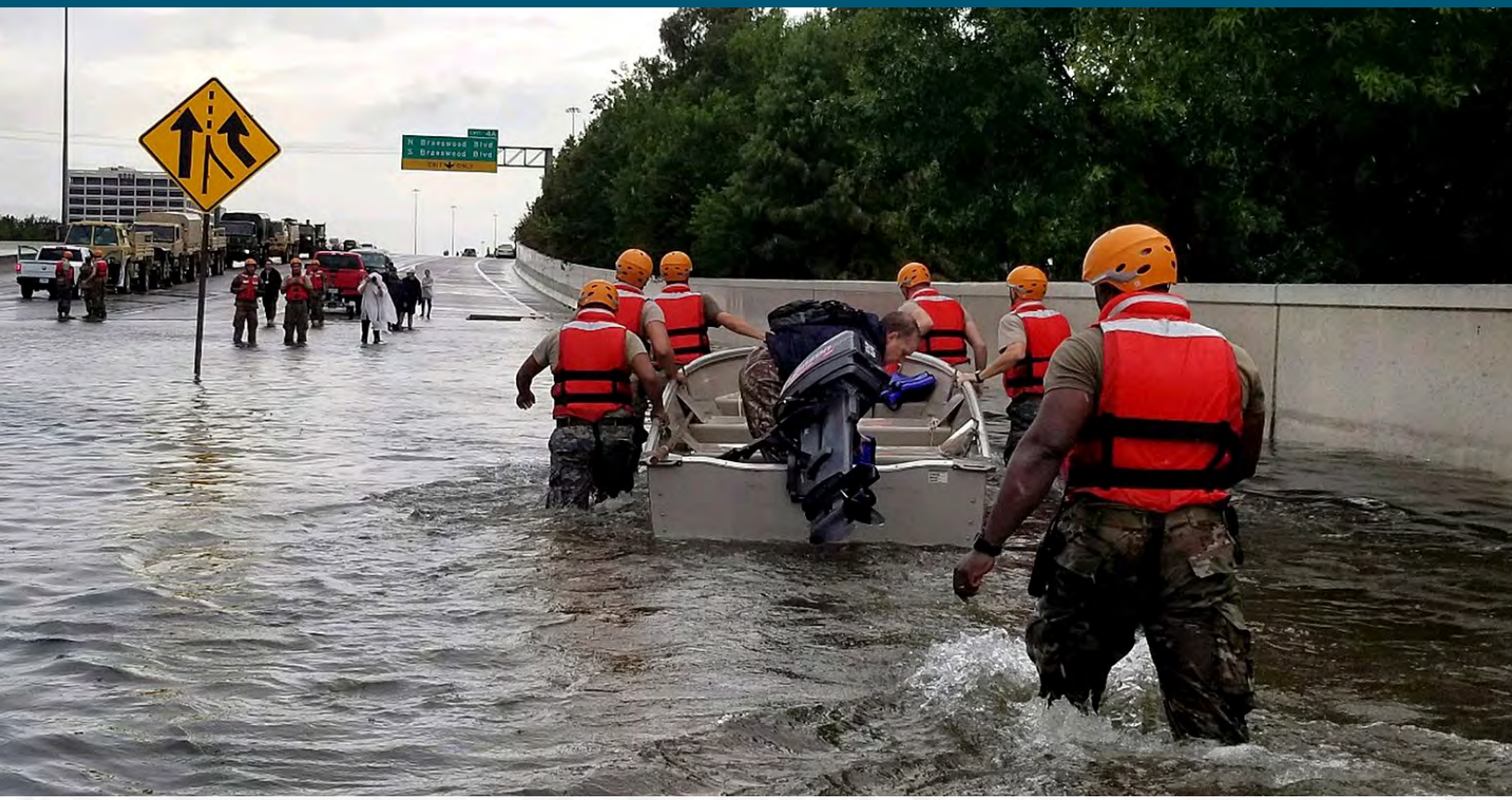
THE CLIMATE AND SECURITY ADVISORY GROUP

A CLIMATE SECURITY PLAN FOR AMERICA

A PRESIDENTIAL PLAN FOR COMBATING THE SECURITY RISKS OF CLIMATE CHANGE



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Edited by John Conger, Francesco Femia and Caitlin Werrell

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Cover Photo:
Soldiers with the Texas Army National Guard move through flood-waters from Hurricane Harvey.
U.S. ARMY PHOTO BY 1ST LT. ZACHARY WEST.

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EXECUTIVE SUMMARY AND TOP RECOMMENDATIONS:
A STRATEGIC VISION FOR CLIMATE SECURITY

In the next few years, the U.S. President will be forced to respond to increasing and unprecedented climate-driven security risks to the nation. These are risks that we can already anticipate, given available science, intelligence and predictive capabilities. In this context of unprecedented risk and unprecedented foresight, the President has a responsibility to prepare the nation for the unavoidable impacts of climate change, and a responsibility to prevent future security scenarios that impose catastrophic consequences. Combating these risks will require extraordinary leadership and a response involving a broad range of Federal agencies, including those managing intelligence, defense, diplomacy, development, homeland security, science, technology and energy. This report proposes a Climate Security Plan for America that the President should announce and implement through a newly-created Presidential National Security Directive in order to combat these unprecedented security risks urgently and comprehensively.

The strategy embodied in the Climate Security Plan for America is based on two fundamental principles. First, to make a real difference in addressing the security risks posed by climate change, climate security must be an articulated priority of the President, one communicated plainly to both the American people and to the Federal agencies tasked to respond to the threat. Second, climate impacts must be integrated into the considerations of security actors throughout the government, not just as a separate category of action, but as a risk that informs and affects the security priorities with which these agencies wrestle on a daily basis. Upon that foundation of Presidential prioritization and agency integration, the plan comprises four pillars of action:

1. Demonstrating Leadership: Make Climate Change a Vital National Security Priority.

Top Recommendation: The President should announce a government-wide Climate Security Plan for America, enshrined in a newly-created Presidential National Strategy Directive, and create a new White House Office on Climate Security, led by a senior White House official reporting directly to the President, to oversee implementation of the directive and related interagency efforts.

2. Assessing Climate Risks: Take Advantage of Unprecedented Foresight About Climate Change.

Top Recommendation: The President should create an interagency Climate Security Crisis Watch Center in the Office of the Director of National Intelligence (ODNI) to drive government-wide assessments of the security risks driven by climate change.

3. Supporting Allies and Partners: Reinforce U.S. National Security and Compete on the World Stage by Bolstering Climate Resilience Abroad.

Top Recommendation: The President should task the National Security Advisor with creating Regional Climate Security Plans – unified interagency plans that support U.S. national security, foreign policy and development strategies in critical regions of the world to bolster climate resilience and clean energy transitions in key countries, prevent climate stress from destabilizing fragile states, expand U.S. alliances and partnerships, and compete with great powers.

4. Preparing for and Preventing Climate Impacts: Build U.S. Resilience to Climate Change Risks and Reduce Their Scale and Scope.

Top Recommendations: The President should launch a major Climate Security Infrastructure Initiative to improve the climate resilience of our critical civilian and military infrastructure, and an economy-wide Climate Security Prevention Policy focused both in the U.S. and globally to reduce greenhouse gas emissions at a scale necessary for both avoiding catastrophic security consequences and bolstering economic development.

INTRODUCTION: THE RISKS NECESSITATING A CLIMATE SECURITY PLAN FOR AMERICA

Human civilization has never before experienced the current rapid rate of climatic change, but despite the unprecedented risks associated with this change, there is a silver lining. The United States today is fortunate to have unprecedented foresight capabilities. From advanced climate modeling to accurate predictive tools on state instability to artificial intelligence capabilities that are improving our ability to forecast future social and political dynamics, we can foresee these trends with a high degree of certainty, particularly as compared to other difficult-to-predict dynamics in the security landscape, such as terrorism and the proliferation of nuclear weapons. Indeed, most of our past climate models have proved remarkably accurate, and have usually underestimated rather than overestimated the changes and the risks. We can therefore project the implications of a wide range of emissions levels and their associated climate impacts such as sea level rise, rainfall variability, wildfires, impacts on biodiversity and marine and terrestrial ecosystems and functions, and new disease ranges, helping us to understand our future security environment.

New and evolving risks will shape the security environment of the next decade and beyond. Climate change is a threat that shapes the entire geostrategic environment, including our relationship with key regional powers, near-peer competitors, rogue states and fragile nations – and in profoundly destabilizing ways. Russia and China, for example, are expanding their influence into the Arctic because the ice is receding. Tension between India and Pakistan is influenced by Pakistan's water shortfalls and India's control over Pakistan's supply of fresh water, which is in turn influenced by shrinking Himalayan glaciers. Violent extremist organizations take advantage of water and food insecurity to enhance their leverage over adversaries and local populations. Climate change isn't separate from other threat priorities. Rather, it significantly exacerbates and complicates other threats. The security challenges of climate change take four general forms.

Threatening critical infrastructure: Climate change has a direct impact on security through its effect on the critical infrastructure underpinning the national security of the U.S. and our allies and partners. This includes sea level rise and other extreme weather risks to military installations that can degrade the ability to conduct military, humanitarian assistance and disaster relief operations, as well as increases in the frequency and intensity of extreme weather events that can devastate essential energy, financial and agricultural centers that undergird U.S. and global economic viability and the well-being of our populations.

Driving instability: Climate change also presents an indirect threat to the national security of the U.S. and our allies and partners by stressing the critical resources underpinning international security, including water, food and energy, through increasing frequency of extreme weather events, rainfall variability, sea-level rise and other climate-related hazards. These stresses degrade a nation's capacity to govern. Decreases in water, food and energy availability have and

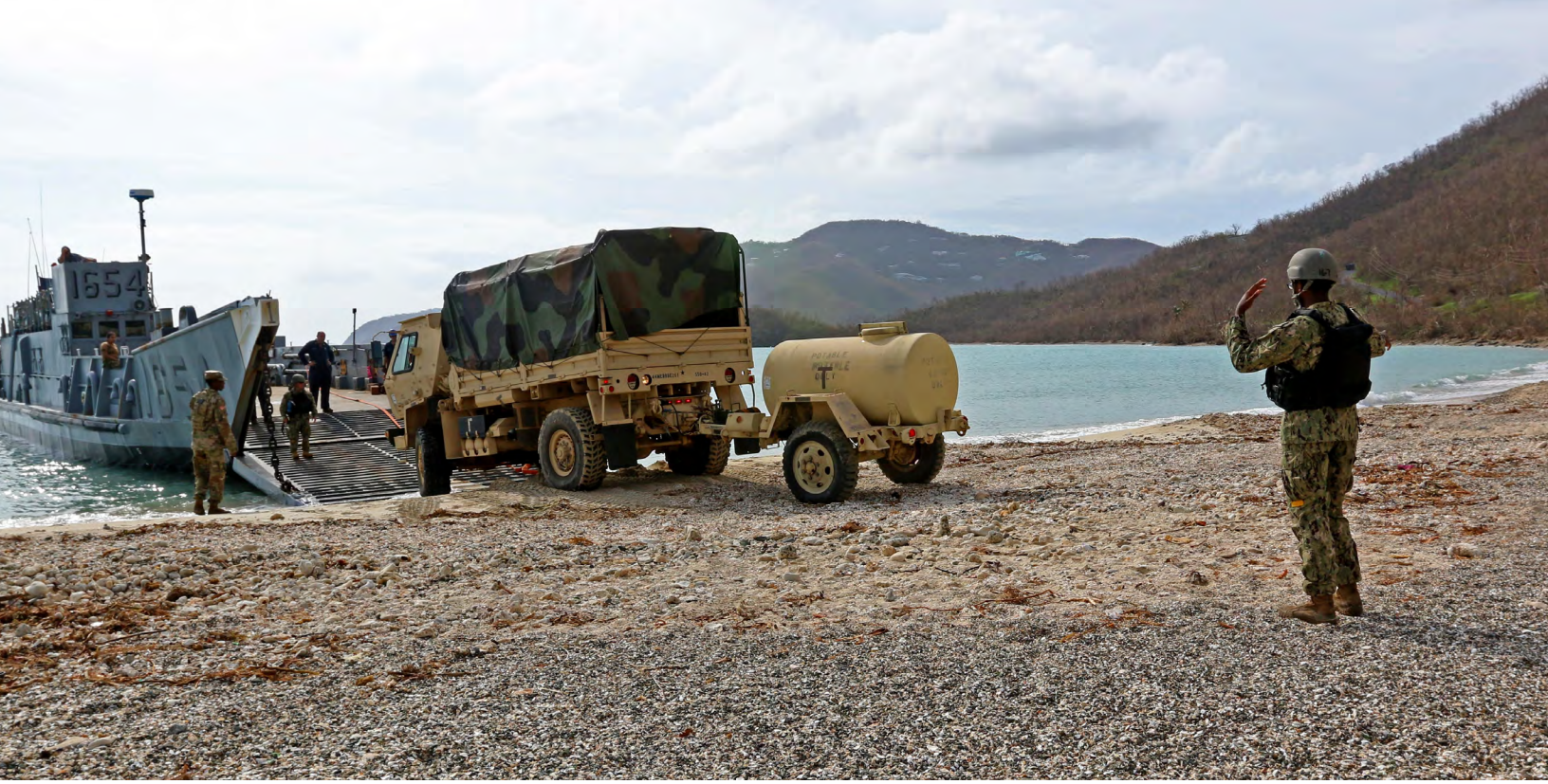
will continue to devastate livelihoods, and contribute to a broad range of destabilizing trends, including population displacements, migrations and political unrest abroad. These pressures in turn can contribute to state fragility, conflict, state collapse, mass displacements of peoples, and the emboldening of hyper-nationalist political forces, which can have significant implications for national and international security.

Emboldening competitors and adversaries: Climate change also indirectly changes or disrupts existing international security dynamics in key geostrategic environments, such as the Arctic and the South China Sea, which can in turn embolden competitors and adversaries, whether that is China, Russia, or other hostile political forces. For example, China and Russia are taking advantage of a melting Arctic, increasing their military and commercial presence there, and a warming ocean in the South China Sea is driving fish-stocks into contested waters, which could precipitate increased tensions between China on the one hand and the U.S. and our regional allies and partners on the other.

Challenging U.S. leadership: Climate change also presents a challenge to U.S. leadership. The U.S. is contending with an international environment colored by the announcement of the intent of the U.S. to withdraw from the Paris Agreement, a loss of American prestige and international leadership as a result, a lack of trust between the U.S. and its partners and allies, and significant moves by other nations, such as China, to fill that global leadership vacuum. China, for example, is positioning itself as a regional and global leader in investments in climate resilience and clean energy transitions. This challenge to U.S. leadership on climate change, particularly from near-peer competitors, can have significant implications for U.S. national security well beyond this issue.

These threats and challenges are already evident, and given existing foresight and resource capabilities, the U.S. can both reduce many of those risks, and avoid others. The President will therefore have both a responsibility to prepare the nation for the unavoidable impacts of climate change, and a responsibility to prevent future security scenarios that impose catastrophic consequences.

By the end of the century, Americans and others around the globe face the possibility of many feet of sea-level rise and coastal cities that may need to be abandoned; hundreds of millions of displaced persons around the world; billions of new people globally requiring more energy, more food, and more water, and a climate that makes that more difficult to accommodate; new weather patterns, a million lost species, and major disruptions to natural resources around the world; and potentially wide-reaching changes in the global order. The near-term risks are significant and must be managed, but the medium and long-term may pose security crises that we must take steps to avoid.



U.S. ARMY SERVICE MEMBERS RETURN TO U.S. VIRGIN ISLANDS TO ASSIST WITH DISASTER RELIEF OPERATIONS IN RESPONSE TO HURRICANES IRMA AND MARIA, SEPT. 23, 2017. U.S. ARMY PHOTO BY PVT. ALLEEA OLIVER/RELEASED

A CLIMATE SECURITY PLAN FOR AMERICA

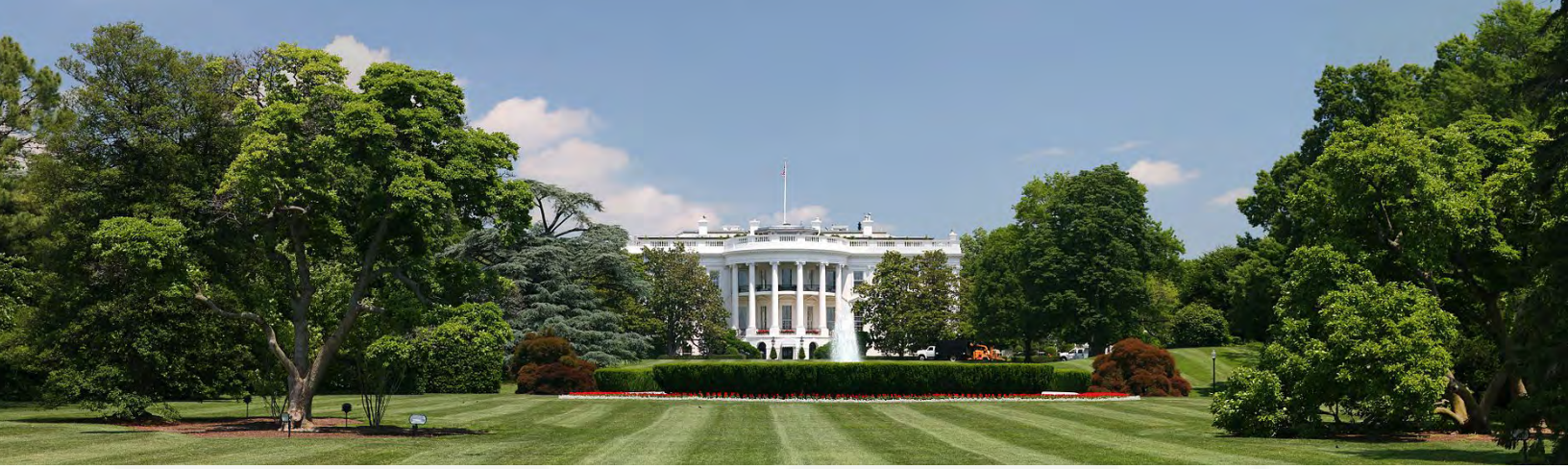
Given the unprecedented threat of climate change, the President should announce an ambitious Climate Security Plan for America, through a National Strategy Directive, to both prepare for and address the locked-in threats to security from climate change, and to significantly reduce the scale and scope of climate change so as to avoid intolerable security disruptions in the future. The plan should both elevate climate change as a security priority, and deeply integrate it into all elements of national and homeland security, through four core categories of action:

1. Demonstrating Leadership: Make Climate Change a Vital National Security Priority.

2. Assessing Climate Risks: Take Advantage of Unprecedented Foresight About Climate Change.

3. Supporting Allies and Partners: Compete on the World Stage by Bolstering Climate Resilience Internationally.

4. Preparing for and Preventing Climate Risks: Build U.S. Resilience to Climate Risks and Reduce Their Scale and Scope.



SOUTH LAWN OF THE WHITE HOUSE. PUBLIC DOMAIN.

I. DEMONSTRATING LEADERSHIP:

Make Climate Change a Vital National Security Priority

As the President takes stock of the implications of climate change on national security, it is critical to establish it as a vital national security and presidential priority, and to direct the leaders of Federal Departments and Agencies to do the same, beginning with the announcement of an ambitious Climate Security Plan for America, enshrined in a newly-created National Strategy Directive. One of the most powerful ways a President can set tone is to articulate a clear and bold agenda, as well as appoint and nominate individuals that will carry forward that agenda.

A clear and bold agenda: Take for example Project Solarium, a "national-level exercise in strategy" which President Eisenhower spearheaded due to significant differences among his Cabinet members on how to address the Soviet threat. This resulted in a clear national strategy for the United States articulated through a national strategy directive (NSC 162/2), which was ultimately implemented across the entire U.S. government, and guided U.S. foreign and national security policies for almost a half century. While there are certainly multiple lessons to be learned from an over-strict adherence to the containment strategy that emerged, the clarity of mission it gave to the U.S. government ensured that the U.S. advanced policies that were commensurate to the threat (and that ultimately helped avoid potentially more catastrophic approaches to the Soviet Union). A similar approach to the security implications of climate change is appropriate to meet the significant scope and scale of the threat (without the pitfall of nearly endless global confrontations).

Personnel as policy: For an example of the power of a cabinet appointment, one need not look back to the 1950s, but rather, to the beginning of 2017 and the nomination of James Mattis as Secretary of Defense. Secretary Mattis recognized the implications of climate change on national security and set the tone from the outset of his tenure that climate change was real, and had a significant impact on the military mission and national security. When he declared that climate change impacts stability and that such impacts needed to be reflected into the planning of Combatant Commanders, his words had impact. When he committed to "ensure that the department continues to be prepared to address the effects of a changing climate on our threat assessments, resources and readiness," he was committing everyone in the Department to do so as well. He was then followed by dozens of senior defense officials who from 2017-2019 publicly expressed their concerns about a changing climate. In addition to setting the tone by appointing leaders that take climate and security seriously, it's important for ensuring that real progress is made. For example, while those responsible for maintaining military infrastructure may independently decide to incorporate climate change into decisions on new construction, it is motivating to have their leaders establishing measurable goals, and tracking their progress. Finally, global leadership is vital to U.S. national security interests, and on the international stage it is critical for the United States to significantly expand its global leadership role in addressing the security implications of climate change.

Recommendations

1.1. Announce the Plan: Establish Climate Security as a vital national security priority and announce a Climate Security Plan for America, enshrined in a newly-created National Strategy Directive, to combat the threat.

The President should make it clear that the impacts of climate change represent an unprecedented and vital national security risk and announce through a newly-created "National Strategy Directive," or its equivalent, an ambitious Climate Security Plan for America - a whole-of-government effort to address the national security implications of climate change, both at home and abroad. The plan should incorporate the philosophy that the unprecedented risks of climate change coupled with unprecedented foresight underline a responsibility to prepare for unavoidable climate security risks and to prevent unacceptable climate security risks in the future. The plan should establish specific and ambitious objectives for the Departments and Agencies with timelines, metrics and benchmarks for implementation of the plan, create new leadership structures and roles to drive the fulfilment of those objectives, call for and commit significant resources and funding requirements. As recent evidence shows that we have a short time to act on climate change in order to prevent disastrous global consequences, such a plan should be announced by the President as soon as practical and implemented expeditiously. The plan should include, but should not be limited to, all the actions listed below.

1.2. Appoint the Plan's Standard-Bearer: Create a new White House Office on Climate Security, led by a senior White House official reporting directly to the President, to be responsible for its implementation.

The President should create a new White House Office on Climate Security, led by a senior White House official (Director of the White House Office on Climate Security) with significant experience and credibility in the national security field, who reports directly to the President and provides regular briefings. In order to ensure its effectiveness, the Office should be given authority over all work related to climate security that is conducted across the Executive Office of the President.

The Director of the White House Office on Climate Security should establish and lead a Climate Security Principals Group consisting of the National Security Advisor, the Secretary of Defense, the Secretary of State, the Secretary of Homeland Security, the Director of National Intelligence, the Secretary of Energy, the Secretary of Commerce, the Secretary of the Interior, and the Director of the White House Office of Science and Technology Policy to coordinate the interagency Climate Security Plan for America, and regularly inform and advise the President on its implementation.

Each of these Principals should appoint an official, at the Assistant Secretary level or equivalent, to be their Senior Climate Security Official. These officials will be members of the Climate Security Steering Group, which will help drive and track progress in implementation of the Climate Security Plan for America, integrate responses to unforeseen climate security issues, and to adapt the plan accordingly. This group will work with the National Security Council and the Domestic Policy Council as appropriate.

All departments and agencies with security responsibilities should provide detailees to the White House Office on Climate Security to help staff the Office.

Finally, the office should coordinate with science officials and resource agencies such as the U.S. Global Change Research Program, the Office of Science and Technology Policy, the Council on Environmental Quality, the National Oceanic and Atmospheric Administration, the National Aeronautics and Space Administration, and other relevant departments and agencies to ensure the best and most relevant science is informing U.S. security posture.

1.3. Acknowledge Climate Change as a Vital National Security Priority: Ensure climate security is identified as a vital priority in the National Security Strategy and all other national strategic documents.

The President should direct the National Security Advisor to identify climate change as a vital national security threat in the National Security Strategy and to drive alignment across all national strategic documents, including but not limited to the National Defense Strategy, the National Military Strategy, Defense Planning Guidance, the National Intelligence Strategy, the National Strategy for Homeland Security, the State Department's Joint Functional Strategy and Joint Regional Strategy, US Agency for International Development Joint Strategic Plan, and the Department of Energy Strategic Plan. The most recent National Security Strategy did not explicitly characterize climate change as a threat, though its influence is easily read into the dynamics of great power competition that are emphasized in the document. The next National Security Strategy should explicitly call out climate change, and its influence on the range of threats that will be prioritized over the next four years, as a vital national security threat and prioritize implementation of the Climate Security Plan for America as a vital national security objective for the United States.

1.4. Appoint Climate Security Champions Throughout the Government: Nominate Cabinet officials and nominate or appoint other leaders within national security agencies and the Executive Office of the President who understand the security risks posed by climate change and will make the Climate Security Plan for America a high priority.

Among the most important decisions a President must make involve staffing senior positions, particularly his or her cabinet. As was noted above, the appointment of Secretary Mattis ensured the continued attention to climate change within the Department of Defense during his tenure. Similarly, an appreciation and prioritization of the security implications of climate change should be expected of sub-Cabinet appointments. The President should direct the Director of the White House Office on Climate Security to ensure that each nominee or appointee takes the security risks of climate change seriously, and supports the overall objectives of the Climate Security Plan for America.

1.5. Elevate Climate Security Leadership at the Department of Defense: Appoint a Senior Director for Climate Security within the Office of the Secretary of Defense.

The Secretary of Defense should appoint a senior member of the OSD staff as the Senior Director for Climate Security, who will also serve as DoD's Senior Climate Security Official and participate in the White House Climate Security Steering Group. This person will be tasked with coordinating all aspects of climate security within the Department, with integrating key scientific inputs to inform DoD stakeholders, and with working directly with the DoD components, Joint Staff and agencies

whose responsibility it is to address the implications of climate change for infrastructure resiliency, operational and training constraints, evolving missions and plans, and strategic posture. The Senior Director for Climate Security should also create Senior- and Action Officer-level working groups tasked with assessing and addressing climate change risks to military readiness, operations and strategy.

Further, the roles and responsibilities of DoD senior leaders in respect to climate change are currently outlined within DoD Directive 4715.21 "Climate Change Adaptation and Resilience" and associated guidance documents. These directives and instructions should be embraced and fully implemented. Moreover, the directive should be updated to include the role of the Senior Director for Climate Security.

In addition, the Secretary of Defense should build on the successes of the U.S. Navy Task Force Climate Change by directing the development of similar institutional models for addressing climate change in each of the other services, with the Marine Corps, Army, and Air Force addressing areas in line with their own equities, expertise and interest.

The Secretary of Defense should also direct that the Director of the Defense Security Cooperation Agency conduct a thorough review of security cooperation and assistance programs, in coordination with the Assistant Secretary of State for Political-Military Affairs, to ensure that the Security Assistance and Foreign Military Sales programs are effective in assisting allies and partners in addressing the security impacts of climate change, to include strengthening the ability of their militaries to be effective in providing military support to civilian authorities in response to disasters and other climate-related emergencies. This directive should include a requirement to formulate proposed changes to the underlying statutory authorities for security assistance required to make climate-related security assistance effective.

Finally, the Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, should elevate combating climate change into a core element of military doctrine, and make necessary adjustments to military strategy and force structure based on that doctrine.

1.6. Elevate Climate Security Leadership at the Department of State: Create a Bureau of International Climate Security, headed by an Assistant Secretary of State for International Climate Security, reporting directly to the Under Secretary of State for Arms Control and International Security Affairs.

Create a Bureau of International Climate Security, reporting directly to the Under Secretary of State for Arms Control and International Security Affairs, led initially by a career Ambassador-level individual with a non-UNFCCC mandate. Request that Congress approve a new Senate-confirmed position of Assistant Secretary of State for International Climate Security. Establish the mission of the Bureau of International Climate Security as follows: (1) promoting, in coordination with the Assistant Secretary for Political-Military Affairs and others, the intradepartmental integration of climate change and security concerns; (2) working with international partners and embassies on climate change and security issues; (3) briefing the Secretary of State and the U.S. Ambassador to the United Nations on climate security matters; (4) providing advice and assistance on climate security matters to other elements of the Department of State, including specifically to the Political Advisors to the Geographic Combatant Commanders, and (5) acting as a primary point of contact with DoD and other offices and agencies of the USG on climate change and security issues.

The Bureau would be charged with recruiting a staff with expertise in security, conflict and peace-building, as well as in climate security, water security, and other natural resource security issues.

1.7. Elevate Climate Security Leadership in the Intelligence Community: Appoint a Senior Director for Climate Security in the Office of the Director of National Intelligence (ODNI) to drive government-wide intelligence assessments of climate change impacts on national security, and appoint a National Intelligence Officer (NIO) for Climate and Security within the National Intelligence Council (NIC).

In order to drive coherent, objective government-wide intelligence assessments of climate change impacts on national security, the Director of National Intelligence (DNI) should create a new position of "Senior Director for Climate Security" at the ODNI to implement such assessments, and communicate them to the DNI, the President, and the US Congress (see the "Assess" section below for more on a proposed Climate Security Crisis Watch Center at ODNI, to be led by this official). This official should also serve as the ODNI's Senior Climate Security Official and act as a member of the White House Climate Security Steering Group. Further, the DNI should appoint a new National Intelligence Officer (NIO) for Climate Security within the National Intelligence Council (NIC) as a key supporting official in the implementation of such assessments.

1.8. Elevate Climate Security Leadership at the Department of Homeland Security: Appoint a Senior Advisor for Climate Security within the Office of the Secretary of Homeland Security.

A Senior Advisor for Climate Security, housed at DHS Headquarters, should be appointed to coordinate efforts across the Department, including with the FEMA Administrator. This individual should be responsible for encouraging a greater emphasis on assessing, preparing for and preventing the effects of climate change on U.S. critical infrastructure, disaster risk reduction, and disaster recovery and response. There should be a special emphasis on ensuring that the U.S. homeland is ready for cascading disasters that are highly likely to occur under plausible future climate change scenarios. The U.S. homeland is currently not well-prepared to deal with major natural disasters happening simultaneously or in close succession, and the Secretary of Homeland Security should have an individual assigned to coordinate efforts to prepare the U.S. for those eventualities. This official should also serve as the Department's Senior Climate Security Official and will be a member of the White House Climate Security Steering Group.

1.9. Elevate Climate Security Leadership at the Department of Energy: Appoint a Senior Director for Climate Security within the Office of the Secretary of Energy.

A Senior Advisor for Climate Security should be appointed by the Secretary of Energy to work with the Department of Defense, the Department of Homeland Security, other relevant departments and agencies, and state governments to drive comprehensive assessments, planning and actions to address climate change risks to critical energy infrastructure across the United States. The Senior Director for Climate Security should also advance a new research program exploring the intersection of climate change and nuclear security risks, as well as the nexus of climate policy and nuclear security, to help ensure that there are complementary gains across these issue sets. For

example, connecting climate and nuclear issues may create new diplomatic opportunities that could help build the trust and confidence required for discussions on other difficult security issues, such as nuclear proliferation. Multilateral and international mechanisms that originally focus on climate concerns may also be grown or leveraged in the future to further mitigate nuclear risks, and vice versa. This official should also serve as the Department's Senior Climate Security Official and will be a member of the White House Climate Security Steering Group.

1.10. Elevate Climate Security Leadership at the Departments of Agriculture, Commerce, Health and Human Services, and Interior, as well as the Environmental Protection Agency: Appoint senior climate and security advisors within each of these offices.

As climate change risks to U.S. and global food supply, global trade, and the health of maritime, aquatic, and terrestrial ecosystems within the U.S. and globally increase, the importance to national security of the policies of the Departments of U.S. Agriculture, Commerce, Health and Human Services, and Interior, as well as the Environmental Protection Agency (EPA), will increase. How the next President manages natural resources, including food, water and land, and how she or he considers the climate resilience and energy innovation factors in U.S. investment policies, both at home and abroad, will become more and more critical to the national and international security environment. In this context, the U.S. President should ensure that the Departments of Agriculture, Commerce, Health and Human Services and Interior, as well as at EPA, each appoint a senior advisors for climate security to ensure that their respective department policies at both the domestic and international levels are sensitive to and consistent with, and act to reduce the security risks in the U.S. and globally resulting from the security risks of climate change, and also to the strategic opportunities that arise from it. These officials will also serve as their respective department's Senior Climate Security Official and will be a member of the White House Climate Security Steering Group.

1.11. Demonstrate Climate Security Leadership at the U.S. Mission to the United Nations: Direct the US Ambassador to the United Nations to work to make Climate Security a priority at the U.N., and appoint a senior U.S.-UN official to lead the effort.

The President should direct the Ambassador to the United Nations to make Climate Security a US-UN priority, including at the UN Security Council and more broadly within other elements of the UN, and to appoint a senior U.S.-UN official with climate security expertise to lead the effort. This effort should include calling on the UN Secretary General (UNSG) to appoint a UN Special Envoy for Climate Security to lead a new UN institutional home on climate security, including a UN Climate Security Crisis Watch Center. The UN Climate Security Crisis Watch Center should be staffed by expert analysts watching for climate security hotspots and issuing regular recommendations for action to the UN Security Council and the broader UN system. The U.S. should work closely with allies, as well as seek to recruit support from key emerging economies in the Global South, to advance this effort.

1.12. Demonstrate Climate Security Leadership at Other Key International Security Institutions: Direct department and agency leaders to place climate security high on the international security agenda.

Beyond the United Nations, the President should direct department and agency leaders to bring climate change and security risks to the center of the agendas and priorities of key international security institutions such as the North Atlantic Treaty Organization, the G7, the G20, the Organization for Security and Cooperation in Europe, Association of South East Asian Nations Defense Ministers Meetings, the African Union and the Inter-American Defense Board, as well as important international security forums, such as the Munich Security Conference, the Halifax International Security Forum, the Shangri-la Dialogue, and the Arctic Security Forces Roundtable.

1.13. Re-establish Climate Leadership on the World Stage: Announce the intention to remain in the Paris Agreement on climate change.

Even without considering the long-term security implications of climate change and the importance of addressing the prospect of future catastrophe by taking action proactively, there has been a price paid for announcing the intention to withdraw from the Paris Agreement. It has exacted a cost in stature and leadership, posturing the U.S. as something of a rogue nation on the world stage, and for no gain – not least as all Paris commitments are voluntary.

While the U.S. should certainly reverse its posture and embrace the global effort to head off the climate crisis, from a security perspective, *it should at least announce the U.S. intention to remain in the agreement and to resume its seat at the table*. This would allow the U.S. to help shape the global response to climate change, and to reestablish its leadership role on the world stage, particularly with allies, partners and prospective partners for whom climate change and the energy transition are vital and in some cases existential issues.

OFFUTT AIR FORCE BASE FLOODED ON MARCH 17, 2019, CAUSED BY INCREASE IN WATER LEVELS OF SURROUNDING WATERWAYS DUE TO RECORD-SETTING SNOWFALL IN WINTER & LARGE DROP IN AIR PRESSURE. U.S. AIR FORCE PHOTO BY TSGT. RACHELLE BLAKE.

II. ASSESSING CLIMATE RISKS:

Take Advantage of Unprecedented Foresight About Climate Change

Despite the unprecedented risk of climate change, it can be modeled with a relatively high degree of certainty.

Consider, for instance, the first accurate climate change model is from 1967, a half a century ago, and for the most part, the climate is changing as the model predicted. A political scientist in 1967 would have had a much more difficult time predicting the current international security landscape. Other climate models have also shown prescient prediction capabilities. Strikingly, where inaccuracies have occurred, they have often been characterized by an underestimation of the rate and severity of climate change, showing a milder picture than what eventually emerged. Subsequent technological and scientific refinements have led to more complex models and a strong record of accurate predictions of the rate and scale of global climatic changes under emissions scenarios that ultimately materialized. While uncertainties in predicting the most localized climatic changes and ecological interactions remain, existing projections from climate models paint a clear picture of what the future holds for global and regional climate changes under various scenarios, which provides a strong basis for governments and societies to anticipate risks and plan accordingly.

However, foresight does not automatically translate to action. In order to prepare for the national, international, and homeland security risks of a changing climate, the U.S. government must leverage these models and projections and strengthen the collection and dissemination of relevant data in order to conduct increasingly robust and actionable assessments of climate risks. These assessments must be developed continuously and routinely, due to the dynamic nature of the effects and risks of climate change and the availability of more robust relevant data, and they must be focused on supporting specific actions that can be taken to mitigate those risks. Information from these assessments must be widely shared across the U.S. government and with key domestic and international partners to ensure efforts are connected and aligned.

Recommendations

2.1. Prioritize Intelligence Assessments on Climate Security: Create an interagency Climate Security Crisis Watch Center in the Office of the Director of National Intelligence (ODNI).

By its very nature, climate change poses cross-cutting risks that can spread across regions, manifest in multiple ways, and have implications for nations from peer competitors to the smallest states. This includes globalized risks driven by climate change that may happen thousands of miles away (such as major crop devastation) but can impact the homeland, as well as cascading disasters happening in quick succession that could be unpredictably de-stabilizing. While the DNI should continue to include climate change implications for national security in the Annual Worldwide Threat Assessment and in other intelligence assessments (as it has done annually since 2008), assessments of climate security threats need to be broadened beyond this overarching product.

In this context, the DNI should create a Climate Security Crisis Watch Center, led by the aforementioned Senior Director for Climate Security in the Office of the Director of National Intelligence (ODNI), to facilitate an annual, stand-alone, in-depth interagency assessment, drawing from analysis across the intelligence community and beyond, of the risks that climate change poses to U.S. national security. Such a Center should consider the full range of climate change projections and ensure that the associated risks are incorporated into all national strategic documents and assessments of critical threats to U.S. interests. The Climate Security Crisis Watch Center, working with the NIO for Climate Security, should also develop an early warning and rapid response capacity, bringing together international and scientific experts to provide early indications of climate-driven crises, to project the implications of such crises for U.S. interests, and to issue the information needed for rapid responses. The Center should be staffed with intelligence, security and scientific experts, and it should leverage research conducted by all the intelligence agencies, the science agencies, other relevant department and agencies, and credible outside organizations, including the intelligence agencies of our key allies and partners. The Center should also conduct routine assessments and communications to intelligence consumers of current and emerging climate risks

2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.

Climate change poses a range of threats to infrastructure. Where that infrastructure comprises critical security facilities, those threats become direct threats to national security. In this context, the President should direct the preparation of Climate Security Infrastructure Assessments by relevant departments and agencies.

The Secretary of Defense, in coordination with the designated Senior Director for Climate Security in the Office of the Secretary of Defense, should direct the Services and Defense Agencies to comprehensively assess the vulnerability of each of their installations to climate change and to develop installation-specific plans with measures to address each of those vulnerabilities. Where installation capacity is limited for performing these assessments and creating these plans, the Secretary of Defense should prioritize investing in that capacity. These assessments should consider the highest levels of projected climate risk. Military installations and other key facilities rely on local communities for electricity, water, wastewater, transportation, communications, housing, civilian personnel and more. It is critical, therefore, to understand the impacts not only inside the fence

line, but outside of it. Therefore, these assessments should consider the climate vulnerabilities of civilian infrastructure and local communities that directly support installations and of transportation arteries and hubs that are critical to the overseas deployment and sustainment of military personnel and equipment. These assessments should also include vulnerabilities of infrastructure due to breaks in supply chains from climate-related events regionally and internationally, such as changes in river and port navigability.

Similar assessments should be conducted by the Secretary of Homeland Security, the Director of National Intelligence, the Secretary of State, the Secretary of Energy and the Secretary of the Interior for the critical infrastructure they oversee.

2.3. Expand Efforts to Assess Risks that Climate Change Poses to the U.S. Military Mission: Conduct Climate Security Mission Impact Assessments.

Climate change poses threats not only to security infrastructure, but also to military readiness, operations and strategy. In this context, the Secretary of Defense should announce a Climate Security Mission Impact Assessment plan to capture the full range of risks climate change poses to the military mission.

As part of the Climate Security Mission Impact Assessment, the Secretary of Defense should direct each of the Armed Services to conduct a comprehensive assessment of the implications of climate change on readiness, training, testing and operations - making sure to consider worst-case climate risk projections - and to develop measures to address those vulnerabilities.

In addition, the Chairman of the Joint Chiefs of Staff, in coordination with the military departments and defense agencies, should direct a comprehensive analysis of the security risks posed by climate change on operational plans and theater security cooperation plans by Combatant Commanders, including worst case scenarios. Combatant Commanders, with input from their Political Advisors, Development Advisors, the Intelligence Community, and security officials of allies and partners, should assess the likelihood of changing requirements in their respective Areas of Responsibility (AORs) driven by climate change. These assessments should include impacts to the deployment and operations of US forces, the evolving posture of peer competitors, expanding requirements for humanitarian assistance and disaster response, the impacts of climate change on the political and social stability of nations within their respective AORs, and emerging flashpoints. These assessments should then inform updates to operational plans.

For long-term strategic planning purposes, the Secretary of Defense should also direct that regular wargames and exercises forecasting climate-driven crises be conducted, as well as a long-term climate security assessment by the DoD Office of Net Assessment (ONA).

Lastly, the Secretary of Defense should direct that the Senior Climate Security Official submit an annual report through the Secretary of Defense and the Chairman of the Joint Chiefs of Staff to the U.S. Congress on the broader strategic and operational impacts of climate change, measures to address such impacts, and progress in developing and implementing such measures.

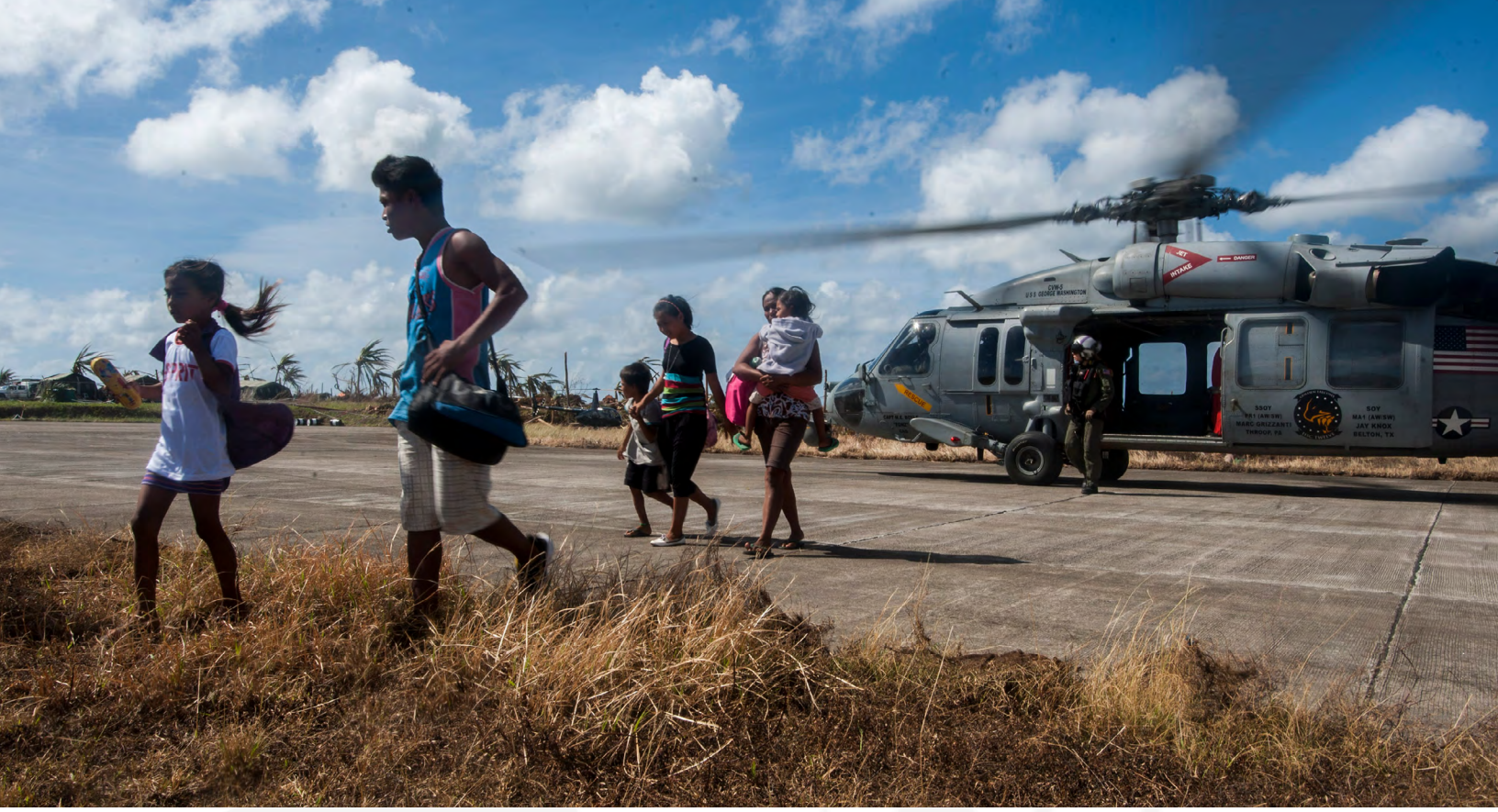
2.4. Call for a Climate Security Crisis Watch Center at the United Nations: Enhance the capacity of the international community to anticipate climate security risks.

The Administration should work with allies and partners at the UN Security Council to promote the establishment of an institutional home for climate and security at the UN - a Climate Security Crisis Watch Center - to be led by a proposed UN Special Envoy on Climate Security. The Climate Security Crisis Watch Center should be staffed by expert analysts watching for climate and security hotspots and issuing regular recommendations for action to the UN Security Council and the broader UN system.

2.5. Initiate a Climate Security Research Agenda: Support robust climate change research at the Federal science agencies and ensure security requirements inform future climate research priorities.

Implicit in the idea that the nation has unprecedented foresight on the threats that climate change poses to our national security is the premise that it is continuing to support a robust research enterprise. This is not only a science priority, but a security priority, as our nation's security enterprise must be informed by the best available science and data.

The President should therefore direct the National Science Advisor to develop a Climate Security Research Agenda that expands climate change research at Federal science agencies and climate-relevant data collection across the Federal enterprise, while prioritizing the advancement of security-relevant research on climate change. In addition to ensuring the security community is able to leverage the most up to date scientific information in assessing the risks of climate change across the breadth of the enterprise, the security community should also have a way to inform the federal science community as it sets directions for security-relevant scientific research. This is currently done on a fairly limited basis through programs such as the Strategic Environmental Research and Development Program administered by the Department of Defense, but the Administration should establish a formal Security-to-Science mechanism for the security community to provide regular input to the Federal science agencies regarding climate change research topics that will support security requirements. Further, it is critical that this information reach the right people at the right time – namely, government leaders responsible for making decisions on national security. To this end, the Administration should support forums, conferences and other means of engagement among scientists, policy makers, and informed citizens to promote transparency and public understanding.



GUIUAN, EASTERN SAMAR, REPUBLIC OF THE PHILIPPINES (NOV. 15, 2013) CIVILIANS EXIT A U.S. NAVY MH-60S SEAHAWK HELICOPTER ASSIGNED TO HELICOPTER SEA COMBAT SQUADRON (HSC) 12 AFTER BEING AIRLIFTED FROM AN AREA OF THE PHILIPPINES AFFECTED BY SUPER TYPHOON HAIYAN. **PUBLIC DOMAIN.**

III. SUPPORTING ALLIES AND PARTNERS:

Compete on the World Stage by Bolstering Climate Resilience Internationally

As we contemplate the challenges posed by climate change on national security, we must embrace the integrated nature of the risk. While the United States may in the short term be able to endure certain changes and build resilience to climate stress, its allies and partners may not – and their vulnerabilities may undermine U.S. national security as much as any direct impacts the United States faces from climate change. Sea-level rise and flooding impose existential threats on island nations and low-lying coastal areas, with potentially catastrophic consequences for billions of people and extreme stress on neighboring states seeking to respond. Water scarcity, food insecurity, economic displacement and consequent migration are reshaping the globe and impacting U.S. interests both directly and indirectly. Fragile states are vulnerable to climate change impacts and will struggle to meet their populations' basic needs, creating the potential for humanitarian crises and increased risks of state instability and conflict – all of which create openings for non-state actors and destabilization that could pose threats to the United States.

As the Administration contemplates its global strategy and posture, it should embrace a major initiative to enhance the resilience of these nations and build within them the capacity to endure the stresses imposed by climate change. China is already expanding its influence by doing just that – embracing the climate goals of U.S. allies, providing direct and tangible assistance to climate-vulnerable nations, and securing influence and economic gains through clean energy investments.

Recommendations

3.1. Demonstrate International Leadership Through Ambitious Regional Engagement: Develop high-level Regional Climate Security Plans.

The President should direct the National Security Advisor to work with the Secretary of State, the Secretary of Defense, the heads of other relevant departments and agencies, and the Director of the White House Office on Climate Security to develop Regional Climate Security Plans to inform and be fully incorporated into the full suite of agency and interagency regional and country-specific plans that support U.S. national security, defense, foreign policy and development strategies in critical regions such as the Asia-Pacific, the Arctic, the Americas, Africa, South Asia, and the Middle East. These initiatives should involve significant U.S. investments in the climate resilience and clean energy transitions of nations at risk, as a means of both strengthening these countries and expanding U.S. alliances and partnerships.

3.2. Help Prevent Climate-Driven Fragility and Conflict: Create a Climate Security Conflict Prevention Framework for State and USAID.

The U.S. Agency for International Development (USAID) and the Department of Defense's Minerva Initiative have supported important research identifying nations that are most fragile in the face of climate change and most likely to experience conflict and other insecurities. This work has also examined where climate vulnerabilities – especially those relating to water security – also present an opportunity for conflicting parties to cooperate over shared natural resources.

In this context, the President should direct the Secretary of State and the Administrator of USAID to create a Climate Security Conflict Prevention Framework, building on USAID's Climate Change and Conflict Annex to the Climate-Resilient Development Framework. This framework should ensure that efforts and investments designed to reduce the fragility of nations, and to anticipate, prevent and respond to conflict, are climate-proofed (i.e. have climate change considerations baked into them). This effort should also include focused investments in the climate resilience of fragile nations, with an eye towards dual-purposing such investments for conflict prevention and resolution. The Secretary of State and Administrator of USAID should also ensure that climate security analysis is incorporated across State and USAID programming and that employees across State and USAID offices are trained in interpreting this analysis within their on-the-job contexts.

3.3. Engage Allied and Partner Militaries on Climate Resilience: Create a Security Forces Climate Engagement Plan.

The Secretary of Defense should direct the development of a Security Forces Climate Engagement Plan to promote regular military-to-military and civil-military international engagement on climate change preparation, to enhance the resilience of U.S. allies and partners, and to enhance U.S. influence vis-à-vis its primary competitors.

There are multiple possible venues for this engagement. For example, Combatant Commanders should engage allied and partner nations' militaries on adapting to climate change and working to mitigate impacts to military operations, energy resilience, infrastructure and readiness through

a variety of fora, ranging from formal intergovernmental NATO Summits to Track II-focused fora such as the Halifax International Security Forum, the Pacific Environment Forum, and the International Military Council on Climate and Security.

The Defense Security Cooperation Agency should also provide training, equipment and other resources to assist allies and partners in making their military installations and forces more resilient to climate change.

The Chief of the National Guard Bureau should include emphasis on climate security in the National Guard State Partnership Program, enhancing the capabilities of allied and partner militaries to respond to climate-driven natural disasters.

The Secretary of State should direct that the Under Secretary for Arms Control and International Security Affairs and the Assistant Secretary for Political-Military Affairs work with their counterparts in the DoD to fully integrate addressing the security impacts of climate change in security assistance and security cooperation programs measures, including training and equipping, in order to strengthen the capacity of allied and partner militaries to identify and respond to the security impacts of climate change, including providing support to civil authorities in disaster risk and response activities.

Finally, the President should call for an expansion of the scope of security assistance and foreign military sales to include climate security-related assistance, include a legislative proposal to create a climate security training program modelled on the existing International Military Education and Training (IMET) program in order to provide relevant climate security training to civilian officials of key foreign civilian agencies.

3.4. Significantly Increase Strategic International Investments in Climate Resilience: Direct the Secretary of State to find innovative means of supporting strategic climate resilience investments.

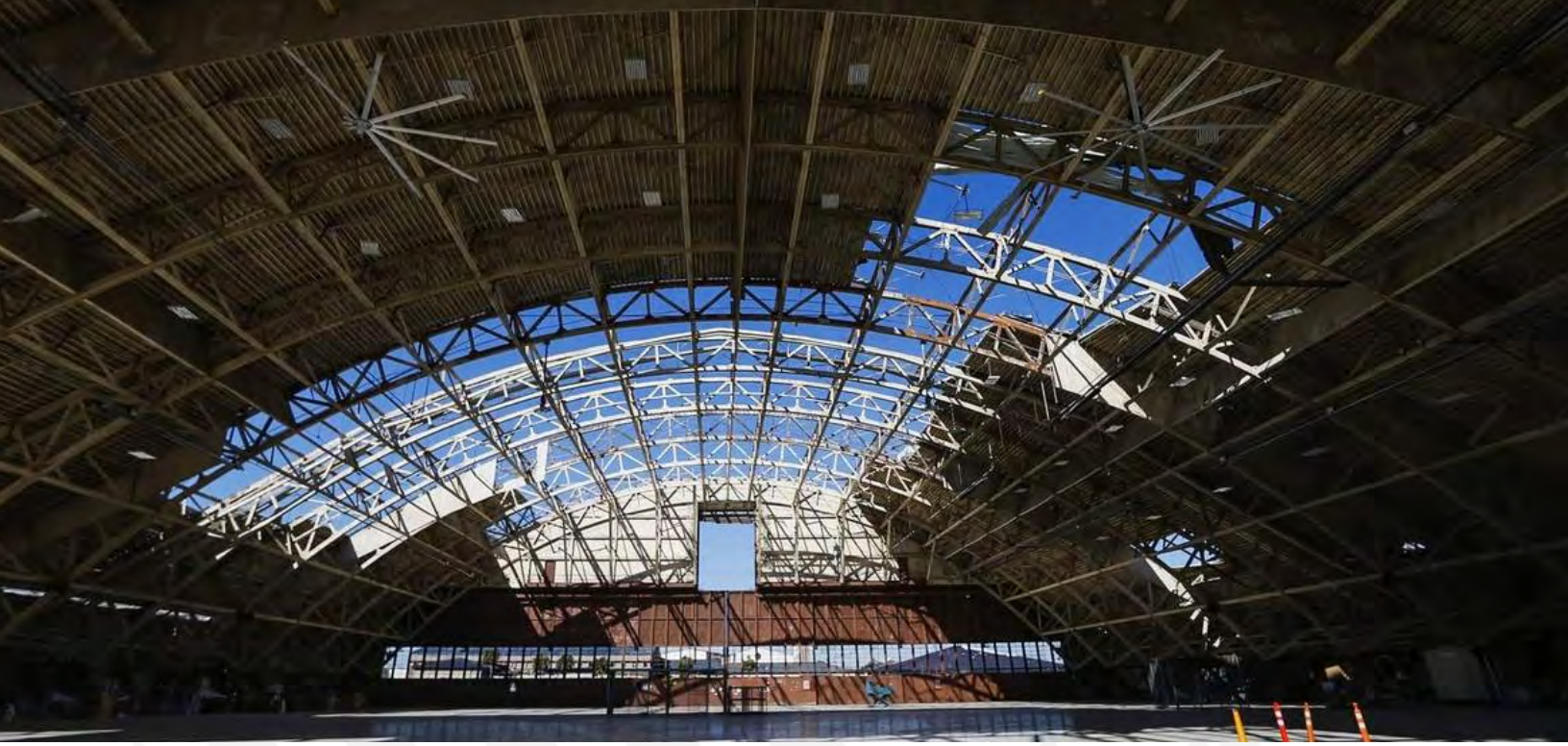
The President should direct the Secretary of State, working with key State Department officials, the heads of other relevant federal agencies and offices, and with the U.S. representatives at key international financial institutions, to develop innovative ways of significantly increasing international investments in climate change adaptation and mitigation, in regions of core strategic interest to the United States, as a means of broadening alliances and partnerships, enhancing regional stability, combating emerging threats, and fostering regional efforts on disaster risk reduction and response.

3.5. Invest in Energy Innovation: Provide significant funding for the Mission Innovation initiative to complement climate resilience investments.

To avoid potentially catastrophic climate scenarios, the world will need to rapidly advance the state of the art in low and zero/net-zero-emissions technology, particularly in lowering the cost of developing and fielding such technologies at the scale required to sustain stable global economic development. To truly incentivize nations around the world to invest in researching, developing and fielding such energy technologies, public and private innovators in the U.S. and elsewhere will need to drive down the cost sufficiently to make it the most attractive and affordable option

at the global level. The President should provide significant funding for the Mission Innovation initiative, working closely with the initiative's international partners to push for increased energy research and development funding focused on driving down costs, building more climate resilient energy systems, and encouraging broader international collaboration. The United States should make sure to invest in the full range of zero emissions technologies.

Leading in this kind of an international innovation effort will not only advance the state of energy technology, but it will offer a way for the U.S. to demonstrate global leadership on climate issues, countering the impression that U.S. is no longer a leader in this space.



DAMAGED CEILING OF HANGER 5 AT TYNDALL AIR FORCE BASE EARLY IN 2019 – A RESULT OF HURRICANE MICHAEL.
TAMPA BAY TIMES PHOTO BY TAILYR IRVINE

IV. PREPARING FOR AND PREVENTING CLIMATE IMPACTS:

Build U.S. Resilience to Climate Risks and Reduce Their Scale and Scope

The combination of an unprecedented global risk and an unprecedented ability to forecast that risk creates a clear responsibility for governments and intergovernmental institutions to prepare for and prevent the security risks of climate change. More frequent and severe weather events are impacting critical infrastructure that military and national security organizations rely on to accomplish their missions. Projected sea level rise will affect DoD installations and surrounding communities, disrupting operations domestically and around the world. The impacts of climate change will adversely impact training availability and environments, such as when droughts prevent live fire training because of wildfire risk, or when frequent and consistent flooding affects military installations.

In addition to making existing missions more difficult to execute, climate change effects will expand the types of missions for which our military is responsible. Defense support to civil authorities is becoming a more prominent component of domestic military operations, particularly to respond to more frequent and severe weather events. Humanitarian assistance and disaster relief missions are increasingly important responsibilities for military commanders around the world. Arctic ice is receding, opening previously inaccessible natural resources, shipping lanes, and tourism opportunities, with many countries eager to compete for claims and influence. And this does not even begin to scratch the surface of climate-driven state instability, conflict and mass displacements of people in the future, which can create significant and difficult-to-manage implications for U.S. national security.

Facing this future, the U.S. must incorporate climate change considerations into its military requirements, build long-term resiliency into its infrastructure, prioritize climate change threat reduction across the U.S. government, be prepared for global changes where there is no excuse for being surprised, and reduce emissions to prevent catastrophic security consequences.

Recommendations

4.1. Strengthen Security Infrastructure: Launch a Climate Security Infrastructure Initiative to both bolster the climate resilience of our critical civilian and military infrastructure and help prevent future climate security scenarios that impose unacceptable consequences.

In the last year, DoD installations sustained over $8 billion in damage from extreme weather – extreme weather that climate change makes increasingly likely. At the same time, sea-level rise is making recurring flooding more common in coastal communities and at coastal bases, and wildfire season is no longer confined to one season, or one geography. Projections from the U.S. government forecast significantly increasing risks under current emissions pathways.

In this context, the President should announce a major Climate Security Infrastructure Initiative to invest in the resilience of both military installations and critical civilian infrastructure, including low-carbon footprint projects designed to significantly lower the scale and scope of climate change.

The Climate Security Infrastructure Initiative would both bolster national security and create long-lasting employment opportunities. In the face of increasing threats from sea level rise, extreme weather events and wildfires, it should involve a comprehensive program to repair, construct, fortify, and responsibly site the nation's interconnected military, energy, transportation, agriculture, water, and commerce infrastructure in a climate resilient fashion. This should include an emphasis on building resilience to plausible worst-case climate scenarios.

This effort can build on existing forward-thinking investments by the Department of Defense. A review of Navy shipyards, for example, highlighted the vulnerability of drydocks at the Norfolk Naval Shipyard. As a result, the Navy requested $49 million to elevate floodwalls that protect them and the extraordinarily expensive vessels they are used to maintain. In addition, the DoD requests more than $100 million annually for the Energy Resilience and Conservation Investment Program, which invests in energy resilience upgrades such as microgrids to improve energy security during grid outages. These existing initiatives exemplify what must be done for critical infrastructure on a much broader scale.

4.2. Sustain Military Training Range Lands: Increase the climate resilience of the military's training range lands to ensure long term availability and capability to support current and future training and weapon systems.

Within the last five years, military training range lands have been ravaged by the devastating impacts of climate-exacerbated severe weather events. Hurricanes, unprecedented rainfall events, wildfires, and rising temperatures have resulted in billions of dollars in damage to these lands. Training days and access to training lands have been lost, and the short and long-term capability of training lands to support military requirements has been diminished.

The ability of training range lands to support the through-put of military personnel, weapon systems, and equipment cannot be underestimated. Live training depends on the resiliency and carrying capacity of the land to support the intensity of military training. Land conditions directly impact the ability to conduct and sustain realistic training.

As part of the Climate Security Infrastructure Initiative, the President should announce an initiative to invest in the climate resilience of training range lands to support the increased load and doctrinal training requirements needed to ready the force in light of both the short and long-term effects of climate change.

4.3. Protect Ongoing Defense Investments: Require that new defense investments incorporate climate-resilient building standards, and that existing infrastructure is retrofitted for climate resilience.

While each hurricane is a devastating event, we can and should learn lessons from them. One of the insights that recent extreme weather has made clear is that facilities built to modern codes survive much better in the face of extreme weather. In this context, the Secretary of Defense should ensure all DoD infrastructure meets climate resilience standards, incorporating lessons learned from recent extreme weather events.

Building codes and standards should be updated to improve resilience to climate change effects that manifest in each specific locality – with an emphasis on building resilience to the plausible, worst-case future climate scenarios. It might be prohibitively expensive to make every single building resilient to the strongest hurricanes, but the Department can thoughtfully upgrade standards to significantly improve resilience across the trillion-dollar defense real property enterprise. With a military construction budget in excess of $10 billion annually, ensuring this funding is spent on infrastructure that is resilient will steadily transform DoD installations.

4.4. Facilitate Robust Civilian-Military Collaboration on Climate Change Resilience: Create a Civil-Military Climate Partnership.

Preparing for climate change can be substantially complicated by jurisdictional boundaries, including between civilian and military authorities. As a means of alleviating that problem, the President should call for a comprehensive Civil-Military Climate Partnership to bridge the civilian-military divide in order to make climate preparation easier and more effective, while enhancing the security of U.S. critical infrastructure.

For example, FEMA currently provides funding to civilian communities as pre-disaster mitigation grants, and the Disaster Recovery Reform Act of 2018 sets aside six percent of estimated disaster grant expenditures for pre-disaster mitigation. This will be an important and recurring source of resilience for civilian communities in the years to come, reducing the impact and cost of future disasters. FEMA should implement these programs in ways that encourage submission of grant applications for projects that would protect regionally and nationally critical infrastructure, including military installations, and DoD should commit to using the authorities and resources it has to cooperate with civilian agencies and entities in "outside the fence line" resilience efforts protecting both civilian and military assets as a means of both aiding vulnerable communities and bolstering national security.

Further, the Department of Defense should create a collaborative framework, modeled on the existing collaborative framework for transportation planning, that its installation commanders can use to engage local communities on resilience planning – both to prepare for the increased tempo of disaster response missions and to invest in collaborative resilience.

4.5. Protect the Homeland: Produce a Climate Security Strategy for Critical Infrastructure that prepares for worst-case scenarios.

The President should direct the Department of Homeland Security to produce a Climate Security Strategy for Critical Infrastructure as a significant revamp of its former National Adaptation and Resilience Strategy. This strategy should ensure that disaster-preparedness is aimed at preparing for worst-case future climate change scenarios, and significantly increases investments in that preparedness. It should also include actions for utilizing homeland security resources to support the resilience of the nation's most critical infrastructure and communities, such as those communities that support military installations or other security infrastructure.

4.6. Prioritize Climate Change Threat Reduction: Expand the Mandate of the Defense Threat Reduction Agency.

The seriousness with which the United States takes a security issue can be gleaned by whether or not it is a focus of its federal threat reduction efforts. Currently, climate change is not addressed in this context, and that must change. To start, the Secretary of Defense should expand the mandate of the Defense Threat Reduction Agency (DTRA), including the Threat Reduction Advisory Council (TRAC), to include serious attention to the security risks of climate change. The work of DTRA and TRAC should feed directly into the above-mentioned Climate Security Mission Impact Assessments.

4.7. Prepare for Expanded Activity in the Arctic: Create a National Arctic Security Policy and establish a National Arctic Security Council to implement it.

The United States will also need to be prepared for rapidly-changing geostrategic conditions internationally. The melting Arctic, in particular, is an emerging theater of operations where the each of the Services, including the Coast Guard, will be required to operate, particularly as U.S. adversaries such as Russia and China increase their military and commercial presence there. The President should therefore direct the creation of a government-wide National Arctic Security Policy, and establish a National Arctic Security Council to implement it. The National Arctic Security Policy should incorporate and build upon the existing activities and strategies of all federal agencies with responsibilities in the region, and that includes climate security as a priority issue.

The Secretary of Defense should direct the Department of the Navy to ensure its ability to operate in the Arctic when the ice recedes further. The Navy should assess the ability of surface fleets to operate in sub-zero conditions, the adequacy of satellite coverage for communications and surveillance, and the possible requirement for military icebreakers.

The Secretary of Homeland Security should fully fund the construction of the Coast Guard's authorized icebreaker fleet and ensure it has the ability to perform search and rescue operations in the region.

The Secretary of State should appoint a Special Representative for the Arctic Region, or create an Assistant Secretary of State for Arctic Affairs, and ensure that the position includes responsibility for issues related to climate change and national security.

4.8. Prepare for a Changing Battlefield: Direct the Combatant Commands (COCOMs) to include climate change risks in their planning processes.

DoD has long considered climate change to be a "threat multiplier", memorializing the term in the 2014 Quadrennial Defense Review. As a threat multiplier, climate change adds stress to complex international problems, potentially destabilizing them and contributing to conflict or humanitarian emergencies. Even where it doesn't lead to conflict or other insecurities, it can change the behavior of important actors and shape regional dynamics. Whether the impact is through sea-level rise and displacement, water scarcity, food insecurity, changing economic conditions or the melting Arctic, Combatant Commanders need to incorporate these climate-related factors into planning processes.

In March 2019, General Scaparrotti, Commander of European Command, noted that he had amended operational plans to incorporate the melting Arctic and resulting Russian behavior. Each of the Combatant Commands (COCOMs) should be prepared to make such changes. Broadly, COCOMs should factor climate change impacts into their deliberate and contingency planning processes (OPLANS and CONPLANS), considering the potential for ongoing climatic shifts to drive instability or behavior changes in other actors. Informed by the relevant Regional Climate Security Plan framework recommended in paragraph 3.1 above, COCOMs should also address climate security concerns as a strategic security risk in Theater Campaign Plans and Theater Security Cooperation Plans, with an emphasis on the stabilizing benefits and low cost of adaptation efforts on conflict avoidance.

4.9. Train to Prepare: Develop training programs to ensure federal employees understand how to characterize and respond to climate security risks.

All too often, staff at federal agencies, both in Washington and at installations and offices around the nation, know that climate change and resilience are priorities, but they don't know what they're supposed to do about it, or how. While outside expertise can sometimes fill this gap, there is a clear requirement to develop training programs to assist installation master planners, regional engineers, and others to understand and respond to climate risks, including training in the use of models and tools to help them understand those risks. In addition to resilience training, there should be climate preparedness and disaster risk reduction training for National Guard and other key first responders.

4.10. Prevent Catastrophic Futures: Embrace an economy-wide Climate Security Prevention Policy to reduce greenhouse gas emissions at a scale necessary for avoiding catastrophic security consequences.

The climate stresses that will impact global stability and the military mission in the future are highly dependent on net global emissions. Current plausible future emissions scenarios portend likely catastrophic security consequences. Our security agencies should focus on preparing for and meeting these threats, but there is another way to leverage foresight: prevention. In addition to adapting to climatic changes that are unavoidable, we must work to prevent catastrophic futures from ever coming to pass.

Based on the national security implications alone, the President should embrace an all-of-the-above Climate Security Prevention Policy to reduce net greenhouse gas emissions both in the U.S. and globally at a scale necessary for avoiding the catastrophic security consequences of current plausible emissions pathways, including worst-case scenarios. That means both significantly reducing U.S. emissions, demonstrating leadership to ensure that global emissions are rapidly reduced to avoid catastrophic security scenarios, and accelerating the research, development, techniques, and technologies in diverse fields from energy production and storage to agriculture, forestry, and beyond needed to ensure that net global emissions are reduced.

Though the CSAG, made up of security experts, does not suggest a specific emissions reduction strategy, it is clear that avoiding catastrophic security scenarios will require significant investments in clean and advanced energy technology, compelling incentives to reduce emissions through a comprehensive economy-wide climate policy, and adherence to robust international agreements. It cannot be assumed that the U.S. will naturally adapt to the security risks of climate change in the future. The President has a responsibility to protect our national security from future climate threats by ensuring they never come to pass.

APPENDIX A:
RECOMMENDATIONS BY AGENCY

WHITE HOUSE

Theme	Topline Recommendation	Recommendation
Leadership	1.1. Announce the Plan: Establish Climate Security as a vital national security priority and announce a Climate Security Plan for America, enshrined in a newly-created National Strategy Directive, to combat the threat.	• The President should make it clear that the impacts of climate change represent an unprecedented and vital national security risk and announce through a newly-created "National Strategy Directive," or its equivalent, an ambitious Climate Security Plan for America - a whole-of-government effort to address the national security implications of climate change, both at home and abroad.
	1.2. Appoint the Plan's Standard-Bearer: Create a new White House Office on Climate Security, led by a senior White House official reporting directly to the President, to be responsible for its implementation.	• The President should create a new White House Office on Climate Security, led by a senior White House official (Director of the White House Office on Climate Security). • The Director of the White House Office on Climate Security should establish and lead a Climate Security Principals Group. • Each of these Principals should appoint an official, at the Assistant Secretary level or equivalent, to be their Senior Climate Security Official.
	1.3. Acknowledge Climate Change as a Vital National Security Priority: Ensure climate security is identified as a vital priority in the National Security Strategy and all other national strategic documents.	• The President should direct the National Security Advisor to identify climate change as a vital national security threat in the National Security Strategy and to drive alignment across all national strategic documents.

Leadership	1.4. Appoint Climate Security Champions Throughout the Government: Nominate Cabinet officials and nominate or appoint other leaders within national security agencies and the Executive Office of the President who understand the security risks posed by climate change and will make the Climate Security Plan for America a high priority.	• The President should direct the Director of the White House Office on Climate Security to ensure that each nominee or appointee takes the security risks of climate change seriously, and supports the overall objectives of the Climate Security Plan for America.
Assessing Risks	2.5. Initiate a Climate Security Research Agenda: Support robust climate change research at the Federal science agencies and ensure security requirements inform future climate research priorities.	• The President should therefore direct the National Science Advisor to develop a Climate Security Research Agenda that expands climate change research at Federal science agencies and climate-relevant data collection across the Federal enterprise, while prioritizing the advancement of security-relevant research on climate change. • The Administration should establish a formal Security-to-Science mechanism for the security community to provide regular input to the Federal science agencies regarding climate change research topics that will support security requirements.
Supporting Partners	3.1. Demonstrate International Leadership Through Ambitious Regional Engagement: Develop high-level Regional Climate Security Plans.	• The President should direct the National Security Advisor to work with the Secretary of State, the Secretary of Defense, the heads of other relevant departments and agencies, and the Director of the White House Office on Climate Security to develop Regional Climate Security Plans.
Preparing for/ Preventing Impacts	4.1. Strengthen Security Infrastructure: Launch a Climate Security Infrastructure Initiative to both bolster the climate resilience of our critical civilian and military infrastructure and help prevent future climate security scenarios that impose unacceptable consequences.	• The President should announce a major Climate Security Infrastructure Initiative to invest in the resilience of both military installations and critical civilian infrastructure.

Preparing for/ Preventing Impacts	4.7. Prepare for Expanded Activity in the Arctic: Create a National Arctic Security Policy and establish a National Arctic Security Council to implement it	• The President should therefore direct the creation of a government-wide National Arctic Security Policy, and establish a National Arctic Security Council to implement it.
	4.10. Prevent Catastrophic Futures: Embrace an economy-wide Climate Security Prevention Policy to reduce greenhouse gas emissions at a scale necessary for avoiding catastrophic security consequences.	• The President should embrace an all-of-the-above Climate Security Prevention Policy to reduce net greenhouse gas emissions both in the U.S. and globally at a scale necessary for avoiding the catastrophic security consequences of current plausible emissions pathways.

Theme	Topline Recommendation	Recommendation
Leadership	1.5. Elevate Climate Security Leadership at the Department of Defense: Appoint a Senior Director for Climate Security within the Office of the Secretary of Defense.	• The Secretary of Defense should appoint a senior member of the OSD staff as the Senior Director for Climate Security, who will also serve as DoD's Senior Climate Security Official and participate in the White House Climate Security Steering Group. • DoD Directive 4715.21 "Climate Change Adaptation and Resilience" should be fully implemented. The directive should be updated to include the role of the Senior Director for Climate Security. • The Secretary of Defense should build on the successes of the U.S. Navy Task Force Climate Change by directing the development of similar institutional models for addressing climate change in each of the other services, with the Marine Corps, Army, and Air Force addressing areas in line with their own equities, expertise and interest. • The Secretary of Defense should also direct that the Director of the Defense Security Cooperation Agency conduct a thorough review of security cooperation and assistance programs, in coordination with the Assistant Secretary of State for Political-Military Affairs, to ensure that the Security Assistance and Foreign Military Sales programs are effective in assisting allies and partners in addressing the security impacts of climate change. • The Secretary of Defense, in coordination with the Chairman of the Joint Chiefs of Staff, should elevate combating climate change into a core element of military doctrine, and make necessary adjustments to military strategy and force structure based on that doctrine.

Assessing Risks	2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.	• The Secretary of Defense should direct the Services and Defense Agencies to comprehensively assess the vulnerability of each of their installations to climate change and to develop installation-specific plans with measures to address each of those vulnerabilities.
	2.3. Expand Efforts to Assess Risks that Climate Change Poses to the U.S. Military Mission: Conduct Climate Security Mission Impact Assessments.	• The Secretary of Defense should announce a Climate Security Mission Impact Assessment plan to capture the full range of risks climate change poses to the military mission. • The Secretary of Defense should direct each of the Armed Services to conduct a comprehensive assessment of the implications of climate change on readiness, training, testing and operations - making sure to consider worst-case climate risk projections - and to develop measures to address • The Chairman of the Joint Chiefs of Staff, in coordination with the military departments and defense agencies, should direct a comprehensive analysis of the security risks posed by climate change on operational plans and theater security cooperation plans by Combatant Commanders. • The Secretary of Defense should also direct that regular wargames and exercises forecasting climate-driven crises be conducted, as well as a long-term climate security assessment by the DoD Office of Net Assessment (ONA). • The Secretary of Defense should direct that the Senior Climate Security Official submit an annual report through the Secretary of Defense and the Chairman of the Joint Chiefs of Staff to the U.S. Congress on the broader strategic and operational impacts of climate change, measures to address such impacts, and progress in developing and implementing such measures.
	2.5. Initiate a Climate Security Research Agenda: Support robust climate change research at the Federal science agencies and ensure security requirements inform future climate research priorities.	• The Administration should establish a formal Security-to-Science mechanism for the security community to provide regular input to the Federal science agencies regarding climate change research topics that will support security requirements.

Supporting Partners	3.1. Demonstrate International Leadership Through Ambitious Regional Engagement: Develop high-level Regional Climate Security Plans.	• The President should direct the National Security Advisor to work with the Secretary of State, the Secretary of Defense, the heads of other relevant departments and agencies, and the Director of the White House Office on Climate Security to develop Regional Climate Security Plans.
	3.3. Engage Allied and Partner Militaries on Climate Resilience: Create a Security Forces Climate Engagement Plan.	• The Secretary of Defense should direct the development of a Security Forces Climate Engagement Plan to promote regular military-to-military and civil-military international engagement on climate change preparation, to enhance the resilience of U.S. allies and partners, and to enhance U.S. influence vis-à-vis its primary competitors. • The Defense Security Cooperation Agency should also provide training, equipment and other resources to assist allies and partners in making their military installations and forces more resilient to climate change. • The Chief of the National Guard Bureau should include emphasis on climate security in the National Guard State Partnership Program, enhancing the capabilities of allied and partner militaries to respond to climate-driven natural disasters. • The President should call for an expansion of the scope of security assistance and foreign military sales to include climate security-related assistance.
Preparing for/ Preventing Impacts	4.1. Strengthen Security Infrastructure: Launch a Climate Security Infrastructure Initiative to both bolster the climate resilience of our critical civilian and military infrastructure and help prevent future climate security scenarios that impose unacceptable consequences.	• The President should announce a major Climate Security Infrastructure Initiative to invest in the resilience of both military installations and critical civilian infrastructure.

Preparing for/ Preventing Impacts	4.2. Sustain Military Ranges: Increase resiliency against climate change impacts to the military's ranges and training lands to ensure long term availability and capability to support current and future training and weapon systems.	• The President should announce an initiative to investment in resiliency of ranges and training land to support the increase load and doctrinal training requirements needed to ensure and train and ready force in light of both short-term and long-term effects of climate change.
	4.3. Protect Ongoing Defense Investments: Require that new defense investments incorporate climate-resilient building standards, and that existing infrastructure is retrofitted for climate resilience.	• The Secretary of Defense should ensure all DoD infrastructure meets climate resilience standards, incorporating lessons learned from recent extreme weather events. • Building codes and standards should be updated to improve resilience to climate change effects that manifest in each specific locality – with an emphasis on building resilience to the plausible, worst-case future climate scenarios.
	4.4. Facilitate Robust Civilian-Military Collaboration on Climate Change Resilience: Create a Civil-Military Climate Partnership.	• The President should call for a comprehensive Civil-Military Climate Partnership to bridge the civilian-military divide in order to make climate preparation easier and more effective, while enhancing the security of U.S. critical infrastructure. • The Department of Defense should create a collaborative framework, modeled on the existing collaborative framework for transportation planning, that its installation commanders can use to engage local communities on resilience planning.
	4.6. Prioritize Climate Change Threat Reduction: Expand the Mandate of the Defense Threat Reduction Agency.	• The Secretary of Defense should expand the mandate of the Defense Threat Reduction Agency (DTRA), including the Threat Reduction Advisory Council (TRAC), to include serious attention to the security risks of climate change.

Preparing for/ Preventing Impacts	4.7. Prepare for Expanded Activity in the Arctic: Create a National Arctic Security Policy and establish a National Arctic Security Council to implement it.	• The Secretary of Defense should direct the Department of the Navy to ensure its ability to operate in the Arctic when the ice recedes further. The Navy should assess the ability of surface fleets to operate in sub-zero conditions, the adequacy of satellite coverage for communications and surveillance, and the possible requirement for military icebreakers.
	4.8. Prepare for a Changing Battlefield: Direct the Combatant Commands (COCOMs) to include climate change risks in their planning processes.	• COCOMs should factor climate change impacts into their deliberate and contingency planning processes (OPLANS and CONPLANS), considering the potential for ongoing climatic shifts to drive instability or behavior changes in other actors. • COCOMs should also address climate security concerns as a strategic security risk in Theater Campaign Plans and Theater Security Cooperation Plans, with an emphasis on the stabilizing benefits and low cost of adaptation efforts on conflict avoidance.
	4.9. Train to Prepare: Develop training programs to ensure federal employees understand how to characterize and respond to climate security risks.	• Develop training programs to assist installation master planners, regional engineers, and others to understand and respond to climate risks, including training in the use of models and tools to help them understand those risks. • In addition to resilience training, there should be climate preparedness and disaster risk reduction training for National Guard and other key first responders.

Theme	Topline Recommendation	Recommendation
Leadership	1.6. Elevate Climate Security Leadership at the Department of State: Create a Bureau of International Climate Security, headed by an Assistant Secretary of State for International Climate Security, reporting directly to the Under Secretary of State for Arms Control and International Security Affairs.	• Create a Bureau of International Climate Security, reporting directly to the Under Secretary of State for Arms Control and International Security Affairs. • Request that Congress approve a new Senate-confirmed position of Assistant Secretary of State for International Climate Security.
	1.11. Demonstrate Climate Security Leadership at the U.S. Mission to the United Nations: Direct the US Ambassador to the United Nations to work to make Climate Security a priority at the U.N., and appoint a senior U.S.-UN official to lead the effort.	• The President should direct the Ambassador to the United Nations to make Climate Security a US-UN priority, including at the UN Security Council and more broadly within other elements of the UN, and to appoint a senior U.S.-UN official with climate security expertise to lead the effort. • The U.S. should call on the UN Secretary General (UNSG) to appoint a UN Special Envoy for Climate Security to lead a new UN institutional home on climate security, including a UN Climate Security Crisis Watch Center.
	1.12. Demonstrate Climate Security Leadership at Other Key International Security Institutions: Direct department and agency leaders to place climate security high on the international security agenda.	• The President should direct department and agency leaders to bring climate change and security risks to the center of the agendas and priorities of key international security institutions.
	1.13. Re-establish Climate Leadership on the World Stage: Announce the intention to remain in the Paris Agreement on climate change.	• The U.S. should announce the its intention to remain in the Paris Agreement and to resume its seat at the table.

Assessing Risks	2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.	• The Secretary of State should direct its components to comprehensively assess the vulnerability of each of their installations and facilities to climate change and to develop location-specific plans with measures to address each of those vulnerabilities.
	2.4. Call for a Climate Security Crisis Watch Center at the United Nations: Enhance the capacity of the international community to anticipate climate security risks.	• The Administration should work with allies and partners at the UN Security Council to promote the establishment of an institutional home for climate and security at the UN - a Climate Security Crisis Watch Center - to be led by a proposed UN Special Envoy on Climate Security.
Supporting Partners	3.1. Demonstrate International Leadership Through Ambitious Regional Engagement: Develop high-level Regional Climate Security Plans.	• The President should direct the National Security Advisor to work with the Secretary of State, the Secretary of Defense, the heads of other relevant departments and agencies, and the Director of the White House Office on Climate Security to develop Regional Climate Security Plans.
	3.2. Help Prevent Climate-Driven Fragility and Conflict: Create a Climate Security Conflict Prevention Framework for State and USAID.	• The President should direct the Secretary of State and the Administrator of USAID to create a Climate Security Conflict Prevention Framework. • The Climate Security Conflict Prevention Framework should also include focused investments in the climate resilience of fragile nations. • The Secretary of State and Administrator of USAID should also ensure that climate security analysis is incorporated across State and USAID programming and that employees across State and USAID offices are trained in interpreting this analysis within their on-the-job contexts.

Supporting Partners	3.3. Engage Allied and Partner Militaries on Climate Resilience: Create a Security Forces Climate Engagement Plan.	• The Secretary of State should direct that the Under Secretary for Arms Control and International Security Affairs and the Assistant Secretary for Political-Military Affairs work with their counterparts in the DoD to fully integrate addressing the security impacts of climate change in security assistance and security cooperation programs measures, including training and equipping. • The President should call for an expansion of the scope of security assistance and foreign military sales to include climate security-related assistance.
	3.4. Significantly Increase Strategic International Investments in Climate Resilience: Direct the Secretary of State to find innovative means of supporting strategic climate resilience investments.	• The President should direct the Secretary of State, working with key State Department officials, the heads of other relevant federal agencies and offices, and with the U.S. representatives at key international financial institutions, to develop innovative ways of significantly increasing international investments in climate change adaptation and mitigation, in regions of core strategic interest to the United States.
	3.5. Invest in Energy Innovation: Provide significant funding for the Mission Innovation initiative to complement climate resilience investments.	• The President should provide significant funding for the Mission Innovation initiative, working closely with the initiative's international partners to push for increased energy research and development funding focused on driving down costs, building more climate resilient energy systems, and encouraging broader international collaboration.
Preparing for/ Preventing Impacts	4.7. Prepare for Expanded Activity in the Arctic: Create a National Arctic Security Policy and establish a National Arctic Security Council to implement it.	• The Secretary of State should appoint a Special Representative for the Arctic Region, or create an Assistant Secretary of State for Arctic Affairs, and ensure that the position includes responsibility for issues related to climate change and national security.

Theme	Topline Recommendation	Recommendation
Leadership	1.8. Elevate Climate Security Leadership at the Department of Homeland Security: Appoint a Senior Advisor for Climate Security within the Office of the Secretary of Homeland Security.	• A Senior Advisor for Climate Security, housed at DHS Headquarters, should be appointed to coordinate efforts across the Department, including with the FEMA Administrator.
Assessing Risks	2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.	• The Secretary of Homeland Security should direct its components to comprehensively assess the vulnerability of each of their installations and facilities to climate change and to develop location-specific plans with measures to address each of those vulnerabilities.
Preparing for/ Preventing Impacts	4.1. Strengthen Security Infrastructure: Launch a Climate Security Infrastructure Initiative to both bolster the climate resilience of our critical civilian and military infrastructure and help prevent future climate security scenarios that impose unacceptable consequences.	• The President should announce a major Climate Security Infrastructure Initiative to invest in the resilience of both military installations and critical civilian infrastructure.
	4.4. Facilitate Robust Civilian-Military Collaboration on Climate Change Resilience: Create a Civil-Military Climate Partnership.	• The President should call for a comprehensive Civil-Military Climate Partnership to bridge the civilian-military divide in order to make climate preparation easier and more effective, while enhancing the security of U.S. critical infrastructure.
	4.5. Protect the Homeland: Produce a Climate Security Strategy for Critical Infrastructure that prepares for worst-case scenarios.	• The President should direct the Department of Homeland Security to produce a Climate Security Strategy for Critical Infrastructure as a significant revamp of its former National Adaptation and Resilience Strategy

Preparing for/ Preventing Impacts	4.7. Prepare for Expanded Activity in the Arctic: Create a National Arctic Security Policy and establish a National Arctic Security Council to implement it.	• The Secretary of Homeland Security should fully fund the construction of the Coast Guard's authorized icebreaker fleet and ensure it has the ability to perform search and rescue operations in the Arctic.
	4.9. Train to Prepare: Develop training programs to ensure federal employees understand how to characterize and respond to climate security risks.	• Develop training programs to assist installation master planners, regional engineers, and others to understand and respond to climate risks, including training in the use of models and tools to help them understand those risks. • In addition to resilience training, there should be climate preparedness and disaster risk reduction training for National Guard and other key first responders.

INTELLIGENCE COMMUNITY

Theme	Topline Recommendation	Recommendation
Leadership	1.7. Elevate Climate Security Leadership in the Intelligence Community: Appoint a Senior Director for Climate Security in the Office of the Director of National Intelligence (ODNI) to drive government-wide intelligence assessments of climate change impacts on national security, and appoint a National Intelligence Officer (NIO) for Climate and Security within the National Intelligence Council (NIC).	• The Director of National Intelligence (DNI) should create a new position of "Senior Director for Climate Security" at the ODNI. • The DNI should appoint a new National Intelligence Officer (NIO) for Climate Security within the National Intelligence Council (NIC).
Assessing Risks	2.1. Prioritize Intelligence Assessments on Climate Security: Create an interagency Climate Security Crisis Watch Center in the Office of the Director of National Intelligence (ODNI).	• The DNI should create a Climate Security Crisis Watch Center, led by the Senior Director for Climate Security in the Office of the Director of National Intelligence (ODNI). • The Climate Security Crisis Watch Center should facilitate an annual, stand-alone, in-depth interagency assessment, drawing from analysis across the intelligence community and beyond, of the risks that climate change poses to U.S. national security.
	2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.	• The Director of National Intelligence should direct its components to comprehensively assess the vulnerability of each of their installations and facilities to climate change and to develop location-specific plans with measures to address each of those vulnerabilities.

OTHER FEDERAL AGENCIES

Theme	Topline Recommendation	Recommendation
Leadership	1.9. Elevate Climate Security Leadership at the Department of Energy: Appoint a Senior Director for Climate Security within the Office of the Secretary of Energy.	• A Senior Advisor for Climate Security should be appointed by the Secretary of Energy to work with the Department of Defense, the Department of Homeland Security, other relevant departments and agencies, and state governments to drive comprehensive assessments, planning and actions to address climate change risks to critical energy infrastructure across the United States. • The Senior Director for Climate Security should also advance a new research program exploring the intersection of climate change and nuclear security risks, as well as the nexus of climate policy and nuclear security.
	1.10. Elevate Climate Security Leadership at the Departments of Agriculture, Commerce, Health and Human Services, and Interior, as well as the Environmental Protection Agency: Appoint senior climate and security advisors within each of these offices.	• The President should ensure that the Departments of Agriculture, Commerce, Health and Human Services and Interior, as well as at EPA, each appoint a senior advisors for climate security.
Assessing Risks	2.2. Comprehensively Assess the Vulnerabilities of Critical Infrastructure: Conduct Climate Security Infrastructure Assessments with supporting prioritized action plans.	• Federal agency heads should direct their components to comprehensively assess the vulnerability of each of their installations and facilities to climate change and to develop location-specific plans with measures to address each of those vulnerabilities.
	2.5. Initiate a Climate Security Research Agenda: Support robust climate change research at the Federal science agencies and ensure security requirements inform future climate research priorities.	• The Administration should establish a formal Security-to-Science mechanism for the security community to provide regular input to the Federal science agencies regarding climate change research topics that will support security requirements.

Supporting Partners	3.5. Invest in Energy Innovation: Provide significant funding for the Mission Innovation initiative to complement climate resilience investments.	• The President should provide significant funding for the Mission Innovation initiative, working closely with the initiative's international partners to push for increased energy research and development funding focused on driving down costs, building more climate resilient energy systems, and encouraging broader international collaboration.

THE CLIMATE AND SECURITY ADVISORY GROUP

A CLIMATE SECURITY PLAN FOR AMERICA

A Presidential Plan for Combating the Security Risks of Climate Change

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