

*Administration of Barack Obama, 2016*

**Memorandum on Climate Change and National Security**

*September 21, 2016*

*Memorandum for the Heads of Executive Departments and Agencies*

*Subject: Climate Change and National Security*

By the authority vested in me as President by the Constitution and the laws of the United States of America, I hereby direct the following:

*Section 1. Purpose.* This memorandum establishes a framework and directs Federal departments and agencies (agencies) to perform certain functions to ensure that climate change-related impacts are fully considered in the development of national security doctrine, policies, and plans.

*Sec. 2. Background.* Climate change poses a significant and growing threat to national security, both at home and abroad. Climate change and its associated impacts affect economic prosperity, public health and safety, and international stability. Extended drought, more frequent and severe weather events, heat waves, warming and acidifying ocean waters, catastrophic wildfires, and rising sea levels all have compounding effects on people's health and well-being. Flooding and water scarcity can negatively affect food and energy production. Energy infrastructure, essential for supporting other key sectors, is already vulnerable to extreme weather and may be further compromised. Impacts of a changing climate can create conditions that promote pest outbreaks and the spread of invasive species as well as plant, animal, and human disease, including emerging infectious disease, and these can further undermine economic growth and livelihoods. Impacts can also disrupt transportation service, cutting off vulnerable communities from relief immediately after events and reducing economic output. These conditions, in turn, can stress some countries' ability to provide the conditions necessary for human security. All of these effects can lead to population migration within and across international borders, spur crises, and amplify or accelerate conflict in countries or regions already facing instability and fragility.

Climate change and associated impacts on U.S. military and other national security-related missions and operations could adversely affect readiness, negatively affect military facilities and training, increase demands for Federal support to non-federal civil authorities, and increase response requirements to support international stability and humanitarian assistance needs.

The costs of preparing for, responding to, and recovering from the impacts of climate change are expected to increase in the coming decades. Some meteorological events (i.e., heat waves and intense precipitation) are projected to become more frequent and more severe, occur in geographic areas not previously exposed to such events, inflict more damage, heighten humanitarian needs, undermine development investments, adversely impact public health, contribute to ecological, social, and political instability, compromise diplomatic goals, and undermine national security interests. There is evidence that the rate of climate change and the resulting impacts are accelerating, even as global efforts to curb greenhouse gas pollution are increasing. The United States must take a comprehensive approach to identifying and acting on climate change-related impacts on national security interests, including by maintaining its international leadership on climate issues.

*Sec. 3. Policy.* It is the policy of the Federal Government to ensure that the current impacts of climate change, and those anticipated in the coming decades, be identified and considered in the development and implementation of relevant national security doctrine, policies, and plans. This policy builds on the following Presidential directives and policies:

- (a) the 2015 *National Security Strategy*, which identified climate change as an urgent and growing threat to our national security, contributing to increased natural disasters, refugee flows, and conflicts over basic resources like food and water. It added that increased sea levels and storm surges threaten coastal regions, infrastructure, and property, which in turn threatens the global economy, and compounds the growing costs of preparing and restoring infrastructure;
- (b) the President's *Climate Action Plan* of June 2013, which included actions to help prepare the United States for the impacts of climate change;
- (c) Executive Order 13653 of November 1, 2013 (*Preparing the United States for the Impacts of Climate Change*), which directed Federal agency actions to incorporate climate-resilience considerations into agency operations and other mission objectives;
- (d) Executive Order 13677 of September 23, 2014 (*Climate-Resilient International Development*), which set requirements for systematically integrating climate-resilience considerations into U.S. international development work; and
- (e) Executive Order 13693 of March 19, 2015 (*Planning for Federal Sustainability in the Next Decade*), which directed Federal actions to improve environmental performance and Federal sustainability.

*Sec. 4. Coordination on Climate Change and National Security.*

(a) *The Climate and National Security Working Group.* The Assistant to the President for National Security Affairs and the Assistant to the President for Science and Technology, or their designees, will chair an interagency working group (Working Group) to coordinate the development of a strategic approach to identify, assess, and share information on current and projected climate-related impacts on national security interests and to inform the development of national security doctrine, policies, and plans.

(b) *Representation.* The Working Group shall include representatives, at the Assistant Secretary or equivalent level, or their designees, from:

- (i) the Department of State;
- (ii) the Department of the Treasury;
- (iii) the Department of Defense;
- (iv) the Department of Justice;
- (v) the Department of the Interior;
- (vi) the Department of Agriculture;
- (vii) the Department of Commerce;
- (viii) the Department of Health and Human Services;
- (ix) the Department of Transportation;
- (x) the Department of Energy;

- (xi) the Department of Homeland Security;
- (xii) the United States Agency for International Development;
- (xiii) the Environmental Protection Agency;
- (xiv) the National Aeronautics and Space Administration;
- (xv) the Office of the Director of National Intelligence;
- (xvi) the U.S. Mission to the United Nations;
- (xvii) the Office of Management and Budget;
- (xviii) the Council on Environmental Quality;
- (xix) the Millennium Challenge Corporation; and
- (xx) any other agencies or offices as designated by the Co-Chairs.

(c) *Functions.* The Working Group, in close collaboration with the U.S. Global Change Research Program (USGCRP), shall:

- (i) identify the U.S. national security priorities that are within the scope of the Working Group's mission;
- (ii) develop recommendations for requirements for climate and social science data and intelligence analyses, as appropriate, that support national security interests;
- (iii) catalog climate science data, intelligence analyses, and other products and programs that support or should be considered in the development of national security doctrine, policy, and plans. This catalogue shall include climate and social science data repositories and analytical platforms; climate modeling, simulation, and projection capabilities; and information-sharing tools and resources supporting climate risk analyses and assessments, such as the Climate Data Initiative, the Climate Resilience Toolkit, the Global Change Information System, and the National Climate Assessment;
- (iv) identify information and program gaps that limit consideration of climate change-related impacts in developing national security doctrine, policies, and plans. Descriptions of these gaps will be provided to Federal science agencies and the United States Intelligence Community to inform future research requirements and priorities, including collection priorities, on climate data, models, simulations, and projections;
- (v) facilitate the production and exchange of climate data and information with relevant stakeholders, including the United States Intelligence Community, and private sector partners, as appropriate;
- (vi) produce, as appropriate, and make available science-informed intelligence assessments to agencies having responsibilities in the development of national security doctrine, policies, and plans in order to identify climate change-related impacts and prioritize actions related thereto;
- (vii) establish, by consensus, guidance for Working Group members on coordinating, sharing, and exchanging climate science data among the members, and with the National Science and Technology Council (NSTC);

- (viii) provide a venue for enhancing the understanding of the links between climate change-related impacts and national security interests and discussing the opportunities for climate mitigation and adaptation activities to address national security issues;
- (ix) work to improve the Federal Government's capability and capacity to characterize greenhouse gas sources and sinks accurately at sub-continental scales;
- (x) in coordination with the NSTC, recommend research guidelines concerning the Federal Government's ability to detect climate intervention activities;
- (xi) develop, by consensus, guidance for Working Group members on building climate resilience in countries vulnerable to climate change-related impacts;
- (xii) provide information and Working Group-related progress updates to the Council on Climate Preparedness and Resilience, established by Executive Order 13653, *Preparing the United States for the Impacts of Climate Change*, on a quarterly basis;
- (xiii) take into account defined requirements and current capabilities described in subsection (4)(c)(ii) and (iii) of this memorandum to facilitate the consideration of climate change-related impacts into national security doctrine, policies, and plans. The Working Group shall develop recommended climate data requirements and consider the cost of the production and exchange of this information, and making this information available;
- (xiv) have classified and unclassified capabilities, as required and appropriate, to consolidate and make available climate change-related impact information, intelligence analyses, and assessments for access and use by Working Group member agencies;
- (xv) identify the most current information on regional, country, and geographic areas most vulnerable to current and projected impacts of climate variability in the near- (current to 10 years), mid- (10 to 30 years), and long- (more than 30 years) term, in order to support assessments of national security implications of climate change, and identify areas most vulnerable to these impacts during these timeframes;
- (xvi) develop recommendations for the Secretary of State to help ensure that the work of U.S. embassies, including their planning processes, are better informed by relevant climate change-related analyses; and
- (xvii) coordinate on the development of quantitative models, predictive mapping products, and forecasts to anticipate the various pathways through which climate change may affect public health as an issue of national security.

(d) *Action Plan.* Within 90 days of the date of this memorandum, the Working Group shall, by consensus, develop an Action Plan, which shall identify specific steps that are required to perform the Working Group's functions. The Action Plan shall also include specific objectives, milestones, timelines, and identification of agencies responsible for completion of all actions described therein. The Action Plan shall include recommendations to inform the development of agency implementation plans, as described in section 5 of this memorandum. The Action Plan shall be submitted to the Assistant to the President for National Security Affairs and the Assistant to the President for Science and Technology.

*Sec. 5. Federal Agency Implementation Plan.* Within 150 days of the date of this memorandum, the agencies listed in subsection 4(b) of this memorandum shall each develop an appropriate implementation plan supporting the policy of this memorandum. Such implementation plans may be classified, as required, to meet specific agency requirements. Implementation plans shall consider for inclusion, but not be limited to, a description of how the respective agencies will accomplish the following actions:

- (a) identify, sustain, and strengthen climate-related data repositories, tools, and modeling products that inform climate change-related impacts on national security;
- (b) identify climate change-related risks to agency missions, and risks that may be caused by agency policies, programs, and actions concerning international development objectives, fragility, and regional stability;
- (c) pursue agency adaptation strategies and methods that address climate change-related impacts on national security and homeland defense;
- (d) identify and implement climate change-related information-sharing opportunities and arrangements through international development activities, military-to-military engagements, and government-to-government climate-related data exchanges;
- (e) identify economic considerations arising from the impacts of climate change globally and the resulting specific impacts on national security, including macroeconomic analyses and data-sharing mechanisms;
- (f) identify the potential impact of climate change on human mobility, including migration and displacement, and the resulting impacts on national security;
- (g) identify climate change-related impacts on global water and food security and nutrition and the resulting impacts on national security, and recommend actions to mitigate these impacts;
- (h) identify climate change-related global health security concerns affecting humans, animals, and plants, and develop options to address them;
- (i) develop an agency-specific approach to address climate-related hazards and threats to national security;
- (j) determine and act on climate change-related threats to infrastructure at the asset, system, and regional level and act to strengthen the safety, security, and resilience of infrastructure critical to national security; and
- (k) incorporate climate change-related impact information and considerations into agency technical and executive education and training programs.

*Sec. 6. Definitions.* For the purposes of this memorandum:

- (a) "Adaptation" refers to the adjustment in natural or human systems in anticipation of or in response to a changing environment in a way that effectively uses beneficial opportunities or reduces negative effects.
- (b) "Climate" refers to the prevailing meteorological conditions over a period of several decades, including the typical frequency of occurrence and duration of extreme storms, heat waves, precipitation, droughts, cloudiness, winds, ocean temperatures, and other events that a region is likely to encounter.

(c) "Climate change" refers to detectable changes in one or more climate system components over multiple decades, including changes in the average temperature of the atmosphere or ocean; changes in regional precipitation, winds, and cloudiness; and changes in the severity or duration of extreme weather, including droughts, floods, and storms.

(d) "Climate modeling" refers to the mathematical representation of the set of interdependent components of the climate system, including the atmosphere and ocean, cryosphere, ecology, land use, natural greenhouse gas emissions, and anthropogenic greenhouse emissions.

(e) "Fragility" refers to a condition that results from a dysfunctional relationship between state and society and the extent to which that relationship fails to produce policy outcomes that are considered effective or legitimate.

(f) "Global health security" refers to activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries and includes the efforts of the Global Health Security Agenda to establish capacity to prevent, detect, and respond to disease threats, whether naturally occurring, deliberate, or accidental.

(g) "United States Intelligence Community" has the same definition as used in section 3003 of title 50, United States Code (Definitions), and section 3.5(h) of Executive Order 12333 of December 4, 1981 (United States Intelligence Activities), as amended.

(h) "National security" refers to the protection of the Nation and its people and interests.

(i) "Resilience" refers to the ability to anticipate, prepare for, and adapt to changing conditions and to withstand, respond to, and recover rapidly from disruptions.

*Sec. 7. General Provisions.* (a) This memorandum shall be implemented consistent with applicable laws, regulations, Executive Orders, and policies, including the National Security Strategy and the Climate Action Plan, and subject to the availability of appropriations.

(b) Nothing in this memorandum shall be construed to impair or otherwise affect:

(i) the authority granted by law to a department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(c) All activities conducted pursuant to this memorandum shall be undertaken consistent with all applicable classification requirements set forth in law, Executive Orders, regulation, and policy.

(d) This memorandum is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

BARACK OBAMA

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