

Report to Congress
Global Food System Vulnerabilities
Department of Defense



April 2019

As required by Section 1075 of the National Defense Authorization Act for Fiscal Year 2018.

(Public Law 115 – 91)

The estimated cost of this report or study for the Department of Defense is approximately \$27,000 in Fiscal Years 2018 - 2019. This includes \$0 in expenses and \$27,000 in DoD labor.

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Statutory Requirement

This report is submitted in accordance with Section 1075 of the National Defense Authorization Act for Fiscal Year 2018 (P.L. 115-91), which requires the Department of Defense to: evaluate the vulnerabilities in the global food system that may affect the national security of the United States; identify how DoD strategy, policy, and plans account for these vulnerabilities, with reference to U.S. interests in areas where food system vulnerability poses an acute threat; and identify areas of opportunity to minimize global system shocks. Section 1075 provides:

(a) REPORT REQUIRED.—Not later than one year after the date of the enactment of this Act, the Secretary of Defense shall, in consultation with the heads of such components of the Department of Defense as the Secretary considers appropriate, submit to the congressional defense committees an assessment of Department of Defense policies and operational plans for addressing the national security implications of global food system vulnerabilities.

(b) CONTENTS.—The report required by subsection (a) shall include, at a minimum, the following:

(1) An evaluation of vulnerabilities in the global food system that may affect the national security of the United States and the Department of Defense roles, missions, and capabilities in addressing such vulnerabilities, including information technology, data management, and surveillance capabilities for detection and assessment of food system shocks with the potential to result in the deployment of the Armed Forces or directly affect bilateral security interests with allies or partners.

(2) A characterization of how Department of Defense strategy, policies, and plans, including the Unified Command Plan, defense planning scenarios, operational plans, theater cooperation plans, and other relevant planning documents and procedures, account for food system vulnerabilities as precursors to and components of protracted major state conflicts, civil wars, insurgencies, or terrorism.

(3) An evaluation of United States interests, including the interests of allies and strategic partners, and potential United States military operations, including thresholds for ordering such operations, in regions where food system instability represents an urgent and growing threat, including due to the presence of destabilizing non-state actors who may weaponize access to food.

(4) An identification of opportunities to initiate or further develop cooperative military-to-military relationships to build partner capacity to avoid, minimize, or control global and regional food system shocks.

Response to Request

1. Overview

1.1 Food security and nutrition are the access to – and availability, utilization, and stability of – sufficient food to meet caloric and nutritional needs for an active and healthy life. The global food system encompasses the complex and interconnected global processes, infrastructure, and means for food and nutrition security to exist.

1.2 Key food system vulnerabilities include conflict (e.g., civil conflict, interstate violence, terrorism), weather and the effects of a changing climate (e.g., drought and floods), and policy (e.g., poor regulations) that endanger food production and distribution. Food vulnerabilities can be both a cause and effect of conflict – food vulnerabilities can contribute to instability and conflict, and conflict can generate food vulnerabilities.

1.3 In the Global Food Security Act of 2016, Congress acknowledged that global hazards and sustainable food security are best managed by multi-stakeholder strategies via an overall whole-of-government approach. In response, the U.S. Government developed a Global Food Security Strategy, an interagency document coordinated by the U.S. Agency for International Development (USAID) and the State Department.¹

1.4 Food system vulnerabilities have both domestic and international implications; in both cases, these implications largely are beyond the mandate of the core missions of the Department of Defense. Domestically, U.S. food security and system management – such as agricultural and economic policy, pricing, production, inspections, and monitoring – are beyond the Department of Defense’s scope.² Similarly, because food security is not central to DoD’s core missions, the Department is not postured to play a leading role in many international aspects of addressing this challenge – e.g., advancing agricultural development and education or promoting economic, health, and social reforms in other nations that contribute to food resilience, such as generating rural off-farm income activities, empowering women in agriculture, or reducing food waste.

1.5 The Department does, however, contribute to the security and stability of the global food system in important, albeit indirect, ways. The priority missions of the armed forces, as reflected in the *2018 National Defense Strategy*, include deterring aggression, defending the homeland

¹ The Department of Defense was not one of the 11 relevant Federal departments and agencies contributing to the Global Food Security Strategy. Stakeholders: USAID (lead); Department of Agriculture; Department of Commerce; Department of State; Department of Treasury; Millennium Challenge Corporation; Overseas Private Investment Corporation; Peace Corps; Office of the United States Trade Representative; African Development Foundation; and U.S. Geological Survey. Link: <https://www.usaid.gov/sites/default/files/documents/1867/USG-Global-Food-Security-Strategy-2016.pdf>; <https://www.feedthefuture.gov/partnership/us-government/>.

² The U.S. Government Recognized the food and agriculture sector as a critical infrastructure sector in 2003, recognizing its significant contribution to national security and the economy. The Department of Defense was a member representative to the Food and Agriculture Government Coordinating Council but not a Sector Specific Agency for the 2015 Food and Agriculture Sector-Specific Plan. Link: <https://www.dhs.gov/sites/default/files/publications/nipp-ssp-food-ag-2015-508.pdf>.

from attack, preventing terrorists from directing or supporting external operations against the U.S. homeland, and ensuring common domains remain open and free.³ The ultimate objective of these priority missions is to sustain the free and open international order on which our security and prosperity depend. These missions can deter conflict that can introduce or complicate food system vulnerabilities, mitigate threats to the U.S. and international food system, bolster the diplomatic and developmental strengths of the United States as we pursue national objectives abroad (including food security), and help provide stability for the flow of commerce. These contributions, although indirect, provide the bedrock of stability for the global food system and improve the effectiveness of the U.S. Government stakeholders that have a more direct equity in food security.

2. Global Vulnerabilities

2.1 The global food system is composed of complex and dynamic interactions that introduce the potential for cascading effects. Such vulnerabilities within the global food system are a national security concern for the United States. Their immediate effects, such as food scarcity or extreme food prices, and second-order effects, such as agricultural job losses, increase the risk of destabilization or conflict. For certain populations, these effects can increase their risk of starvation and political coercion (including by terrorist groups), and increase organized crime and mass migration.

2.2 In 2015, the U.S. Intelligence Community (IC) assessed the risk of major food-related interstate conflict as unlikely through 2025.⁴ However, the IC assessed that risks of food insecurity and low-level conflict in multiple countries will increase and that weaponization of food by malign non-state actors will continue.

3. Roles and Planning

3.1 The Department of Defense normally plans against threats posed by other actors, not systemic issues such as global food system vulnerabilities. Global food system vulnerability is not a priority role and responsibility of the armed forces. However, the Department does have capabilities and undertakes planning to deter aggression and provide stability in key regions, which can mitigate food system vulnerabilities and support proactive interagency responses.

3.2 Components of the Department of Defense – including the Office of the Secretary of Defense, the Joint Staff, the Military Departments, the Combatant Commands, and Defense intelligence community – analyze the global security environment to identify trends and threats to Departmental objectives. Some of these dangers may also affect the global food system, such as weather and climate patterns, terrorism, and political instability within an area of operations. For example, the U.S. Air Force uses existing climate models to conduct global weather

³ Link: <https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf>.

⁴ Link: https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/Global_Food_Security_ICA.pdf. This is the most recent unclassified intelligence community assessment on this issue.

monitoring and prediction services in such areas as precipitation, temperature, and drought conditions to understand current trends and for long-term planning purposes.⁵ The Defense Intelligence Agency and National Geospatial-Intelligence Agency participated in drafting the 2015 “Global Food Security” Intelligence Community Assessment. The Chairman of the Joint Chiefs of Staff academic year 2018-2019 Joint Professional Military Education (JPME) special areas of emphasis list includes food insecurity as part of the “Non-Traditional Threats to Security and Stability” topic, which is incorporated into JPME curricula. The Minerva Research Initiative, within the Office of the Under Secretary of Defense for Research and Engineering and the Office of the Under Secretary of Defense for Policy, has supported scholarly research projects that address food security. These assessments are part of a body of reporting on the geopolitical environment available in strategy formulation processes and progress assessments.

3.3 The Unified Command Plan outlines responsibilities and broad areas of responsibility. As such, it does not list the global food system as a specific planning task. Similarly, in the Department’s other strategic documents, the Department addresses the preservation of global norms, such as freedom of navigation, which are critical for the global food system.

3.4 The Department of Defense conducts two types of operational planning: campaign and contingency. Campaign planning directs, coordinates, and prioritizes the activities, operations, and tasks of a Combatant Command to prevent or mitigate conflict while setting the conditions for the successful execution of contingencies. Contingency planning is the Combatant Commander’s prepared response to crises, providing the President with military options within a coordinated U.S. Government response to address threats posed by specific actors. These plans include activities to prepare and respond to dangers that may affect the global food system.

3.5 Most directly, the Department of Defense maintains some capacity to support U.S. food and humanitarian relief efforts. For instance, U.S. military forces have contributed to humanitarian relief efforts that mitigate food insecurity in the wake of disasters. The U.S. Army Corps of Engineers (USACE) supports humanitarian assistance and disaster relief projects and activities on behalf of the Combatant Commands. Domestically, USACE conducts civil works activities that support disaster resilience and key infrastructure, such as waterways, that facilitate the movement of agricultural goods. DoD humanitarian relief also includes support to other government agencies in certain situations; for example, upon request, U.S. Southern Command has provided support to USAID for transportation of food. DoD’s Global Health Engagements also support efforts to prevent food insecurity by responding to, detecting, and preventing transboundary diseases, thereby helping protect U.S. forces and the regions where they operate. These exercises (e.g., Pacific Partnership and Enduring Promise) often address food insecurity through military-to-military training that promotes achieving and maintaining a safe food supply and feeding system.

⁵ Link: https://www.usaid.gov/sites/default/files/documents/1865/Global_Water_Strategy_2017_final_508v2.pdf.

4. Regional Interests and Risks

4.1 The *2018 National Defense Strategy* (NDS) commits the Department to: maintain favorable regional balances of power in the Indo-Pacific region, Europe, the Middle East, and the Western Hemisphere; sustainably compete to deter state aggression in the Indo-Pacific region, Europe, and the Middle East; and defeat terrorist threats to the United States. In each region, this favorable balance of power provides stability that deters conflict, supports the free flow of goods and commerce, and sustains a free and open international order on which our prosperity depends. All of these dynamics provide salutary benefits for the global food system.

4.2 The NDS also requires the Department to deepen its alliances and attract new partners. As a result, the Department places a priority on strengthening alliances and partnerships in the Indo-Pacific region and with NATO in Europe, forming enduring partnerships in the Middle East, sustaining advantages in the Western Hemisphere, and supporting relationships to address significant terrorist threats in Africa. This core strength of a strong alliance and partnership network facilitates stability that is a key factor in mitigating food vulnerabilities.

4.3 Africa, the Middle East, South Asia, and the Indo-Pacific region are areas of particular concern for global food system vulnerabilities. This food insecurity could potentially exacerbate conflicts that ultimately result in the deployment of U.S. forces.

4.4 Political instability, low-level conflict, population growth, and environmental degradation contribute to food insecurity in several African States. U.S. Africa Command does not have specific plans that directly address global food system vulnerabilities, but does work closely with USAID and the Department of State to provide humanitarian and development assistance in the region.⁶ Additionally, U.S. Africa Command partners with local institutions and security forces to build capacity and combat extremism.

4.5 Prominent risk factors for food shocks in the Middle East are conflict and reduced water availability. For example, ongoing strife in Syria and Yemen have made populations vulnerable to starvation. DoD Components monitor and evaluate such hazards as they pertain to operations. These include understanding how weather and climate may change the operating environment, as well as assessing hazards from purposeful food insecurity measures, such as blockade or destruction of agricultural land. U.S. Central Command plans provide guidance on military-to-military contacts to build partner nation capability and capacity. These, and other engagements, contribute to reducing conflict that can lead to food system vulnerabilities.

4.6 South Asia and the Indo-Pacific region face a variety of challenges. Pressures from population growth, water stress, and environmental degradation have created food system vulnerabilities in South Asia. Such vulnerabilities will increase the importance of imports and

⁶ U.S. Africa Command 2018 Posture Statement to Congress. Link: <https://www.africom.mil/about-the-command/2018-posture-statement-to-congress>.

exports of food into the future, and will increase dependency on sea-based trade, therefore increasing the importance of shipping lanes and freedom of navigation in the Indo-Pacific region. Throughout its area of responsibility, U.S. Indo-Pacific Command maintains a number of military-to-military contacts that involve vulnerabilities in food supply. For example, the Pacific Environmental Security Forum and its associated operations, activities, and investments engage Oceania and South East Asian nations on the effects of a changing climate and illegal, unregulated, and unreported fishing, which threaten many Oceania nations' food supplies, as well as those of U.S. Pacific dependencies. In Laos, U.S. Indo-Pacific Command funded and established the Lao American Nutrition Institute with Humanitarian Assistance Funds. This military-to-military contact, which partners with the Lao Ministry of Health and Oregon Health and Science University, monitors, studies, and directly combats food insecurities in Laos. With the exception of Oceania and Laos, U.S. Indo-Pacific Command does not have a global food system vulnerability line of effort, but does factor food availability into select security cooperation activities and other plans.

5. Conclusion

5.1 Global food system vulnerabilities are complex, requiring a broad effort across the U.S. Government, international institutions, nongovernmental organizations, and private industry. The Department of Defense will continue to play a supporting role to USAID, the Department of State, and others advancing the U.S. Global Food Security Strategy and related efforts.

5.2 The Department of Defense remains committed to deterring and defending against hostile actors, working with allies and partners to foster regional stability that is amenable to food security, and bolstering the free and open international order that underpins the global food system.