

Review of DoD Report for NDAA 2018 Section 1075

A. Introduction

The NDAA 2018 required DoD to assess its policies and operational plans for addressing the national security implications of global food system vulnerabilities. The Report was to address the following topics (See Section C for the full text of the legislation):

- (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.
- (2) A characterization of how Department of Defense strategy, policies, and plans account for food system vulnerabilities.
- (3) An evaluation of United States interests and potential United States military operations, including thresholds for ordering such operations.
- (4) An identification of opportunities to initiate or further develop cooperative military-to-military relationships to build partner capacity for addressing food system shocks.

This review of the DoD Report was conducted by a panel of DoD, IC, and food system experts. In summary, the reviewers found that the Report submitted in April 2019 in fulfillment of the statutory requirement is a start but does not fully address the required topics. The panel concluded that the Report does not 1) address DoD's understanding of the global food system and its vulnerabilities, 2) explain where the global food system problem set for DoD resides organizationally or in governance, 3) discuss where the global food system is incorporated into DoD processes—i.e., Joint Planning Process (JPP), Joint Capabilities Integration and Development System (JCIDS), or capability development under USD(R&E), or 4) specify how to improve partner capacity to increase the resilience to global food system shocks.

The Report's treatment of each of the four required Section 1075 topics is discussed next. For each, the Panel reviews of how well the Report responded to the requirement, followed by the Panel's view of what must be addressed.

1. An evaluation of the vulnerabilities in the global food system

The Report describes the global food system vulnerabilities in terms of “complex and dynamic interactions that introduce the potential for cascading effects,” which is very much on the mark. Yet DoD-relevant vulnerabilities are not described at a sufficient level of detail to support any analysis, nor does the Report provide any assessment of such vulnerabilities.

Further, the Report does not address how the structure and function of the global food system affects U.S. and allied mission areas. While the Report mentions massive shocks to the global food system, this is in the context of humanitarian responses, which is only one of many potential DoD exposures to global food system shocks. The advent of genome editing, and the asymmetries that have developed gradually on many fronts may enhance the viability of food systems as an unconventional attack vector in Great Power conflict. Other system shocks—e.g., financial and derivative market shocks amplified by automated algorithmic trading, multi-bread basket failures, critical logistics hub disruptions, cyber attack, and disease—may cause the U.S. and DoD to take action to manage direct threats to U.S. national security equities or may have a significant effect on DoD operations.

The Report notes that DoD normally “does not plan against systemic issues such as global food system vulnerabilities”, even though such “vulnerabilities are a national security concern for the U.S.” The Report states “Food security is not a core mission for DoD, and DoD is not involved with the departments and agencies contributing to the Global Food Security Strategy.” The legislation, however, does not use the term, ‘food security.’ Food security, a condition where every person has access to a safe and nutritious diet that meets their preferences, is one outcome of a food system in balance. The statutory language, however, requires the Report to describe and assess vulnerabilities in the global food *system* relevant to U.S. national security, thus the Report is not responsive to the study instruction.

Panel: For DoD to plan or prepare as appropriate to mitigate the potential impacts of global food system vulnerabilities on the DoD, whether direct or indirect, a more comprehensive understanding of these vulnerabilities must be developed. This will require the participation of multiple Agencies, Departments, and other organizations. As noted above, the term, ‘food security,’ has a formal definition which does not equate with ‘food system stability’ or ‘food system security,’ and does not reflect the statutory language which mandates an assessment 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.”

2. A characterization of how DoD plans consider food system vulnerabilities

This Report broadly describes how DoD allocates roles and plans against threats; and makes clear that food system security and stability is not a traditional threat vector that fits current directives for operational planning. The Report assesses that DoD will use its existing processes and practices to provide support as directed, similar to what it has done both for the United States in disaster relief operations (through support to civil authorities), and internationally as directed.

Panel: The Report does not address the intelligence and information requirements to identify and track food system vulnerabilities that are specifically relevant to the U.S. DoD

“roles, missions and capabilities.” The statute mandates a study that includes a characterization of how DoD plans consider food system vulnerabilities. These vulnerabilities could result from the impacts of extreme weather on food production or transport, and/or foreseeable and unforeseeable weaponization of the U.S. domestic or global food systems by an adversary pursuing unconventional attack of the homeland. This intelligence and information on U.S. and global food system security could, and should, as appropriate, underpin planning assumptions and facts for operational plans.

3. An evaluation of U.S. interests including thresholds for actions

This topic was not addressed in the Report. The Report describes high level regional interests and risks as requested; however, it does not contain any mention of how to establish or administer a threshold or a process for action.

Panel: This important requirement of the statute requires two additional areas of research. The first area must integrate the complex, interacting factors to create a quantitative, useful representation of the key parameters of global food system resilience in the context of U.S. national security, and indicators of major thresholds for the purpose of supporting decision-making in the DoD. This representation is essential to establish and test objective thresholds for the DoD to take action, and to establish a taxonomy of actions/decision points available to the DoD to ensure that the DoD’s equities are protected in response to significant perturbations of the global food system. These perturbations may originate as a result of natural, accidental, and/or intentional acts including the declaration of war.

A complete picture will include geography; weather; food production, transport, and demand; economics; digital vulnerabilities; potential for disruption in the event of kinetic or cyberattack, mis/disinformation, economic or other sabotage, and the extent to which alterations in the attributes of the global food system could impinge on DoD preparedness or capacity to fulfill its mandated roles and maintain required capabilities. The second research area determines how the actions and contributions of other parts of the United States Government (USG), the relevant private sector stakeholders, alliances, international organizations and non-governmental organizations contribute to the determination of operational thresholds.

4. An identification of opportunities to build partner capacity

The fourth required topic was not addressed in the Report. The Report identified several region where global food system vulnerabilities are a significant risk to governments and populations. The Report did not identify, however, whether ongoing cooperative efforts were sufficient or where added capabilities or focus is needed.

Panel: Increasing partner capacity is a key part of creating a resilient global food system. Progress in this area requires that the vulnerabilities are better understood, and that intelligence and information requirements are established to inform a picture of risks that includes thresholds.

B. Recommended Next Steps

1. Establish Indicators and Warning, and Assemble Data

For both the USG and DoD identifying the needed data and gaining access to such data are both significant challenges. To create improved planning and response to foreseeable, high impact vulnerabilities that may affect the national security of the United States the DoD and the Intelligence Community need to identify data sets and other resources, including classified, unclassified, and proprietary data, that have applicability to this problem set. The next step would be creating the data architecture and access mechanisms so that public, unclassified and classified data can all be used for analysis. The first recommendation is to determine what information about the global food system should be collected or accessed by and/or for the DoD to improve warning, planning, and preparedness essential to the national security of the United States. Specific recommended actions may include:

- Assemble intelligence and information data assets for analyzing the global food system properties specifically relevant to the DoD and U.S. national security, create a priority list of critical/essential food products, and define and assess vulnerabilities with the potential to affect the U.S. warfighting forces or with the potential to draw the U.S. DoD into military action or major humanitarian relief missions. Develop a portfolio of planning scenarios, thus making the full spectrum and nature of major generic vulnerabilities more concrete.
- Create a DoD-relevant representation of the essential/critical global food system that is informed by existing efforts by the Defense Logistics Agency, DARPA, the Military Departments, and Combatant Commands that integrates the complex, interacting real-time factors including geography; formal and informal flows of information; weather; food production, transport, storage, and demand; economics; corruption; effects of ownership or major investment by foreign interests, and other food system attributes.
- Use this picture to establish indicators, warnings, and thresholds for taking action in response to food system shocks or alterations that would have an impact on DoD preparedness or operations, or, more broadly that may impact U.S. national security.

- Determine the impacts of U.S. Department of State, large trading and food manufacturing interests, international organizations and non-governmental organizations that can directly impact thresholds for action in support of secure and stable food systems.
- Innovate and redesign food systems in the DoD to minimize transport of water, unsecured shipments, convoys and soft targets on bases.

2. Conduct a national-level exercise addressing global food system failure

Because the purpose of the NDAA requirement was to help the Department be more explicit about its exposure to major challenges to its preparedness or ability to take requisite actions, more detail is necessary. How does the Department conduct or task relevant intelligence analysis regarding the implications of issues in the global food systems, e.g., African Swine Fever or the global spread of the Fall Army Worm or multi-drug resistant plasmids? Where are the focal points within the department that are responsible for ensuring that the DoD is prepared beyond stockpiled MREs, and what parts of the DoD are accountable for stimulating action with respect to this type of emergent threat where traditional approaches of hardening have severe limitations? How does the Department intend to raise the profile of managing high likelihood, high impact vulnerabilities (HLHIV) in DoD operations that originate or reside in global food systems in both its planning and operations?

The National Exercise Program potentially is a useful approach for developing DoD and USG preparedness requirements related to global food system vulnerabilities. An important next step is to add this area of concern to one of the following current National Planning Scenarios, eventually growing the scope to consider global-scale effects:

- Scenario 2: Biological Attack – Aerosol Anthrax
- Scenario 3: Biological Disease Outbreak – Pandemic Influenza
- Scenario 4: Biological Attack – Plague
- Scenario 13: Biological Attack – Food Contamination
- Scenario 14: Biological Attack – Foreign Animal Disease

a. Extend a National Planning Scenario to include effects of Global Food System disruptions

Identify and participate in the FEMA national level planning/exercise cycles for the relevant scenarios listed above. The main responsibility for planning will fall to Combatant Commanders or the Joint Staff; the commanders own the plans and planning staff to update them. The challenge will be either to help adapt the scenario inputs and storylines to include the effects of and responses to significant global food system disruptions, or to create a

future “National Planning Scenario 16: Global Food System Vulnerabilities” that can be applied globally.

b. Determine requirements for defense support to civilian authorities caused by disruptions in the global food system

Participate in similar planning/exercise cycles at the state and FEMA Regional level, and coordinate closely with the National Guard. During the planning and exercise cycle, NORTHCOM helps the other agencies and FEMA define the requirements to assign to DoD, and works to shape the necessary legislation and department regulations, plans and policies.

Authority and guidance documents that underpin these efforts include:

- Presidential Policy Directive 8 (PPD-8): National Preparedness (aimed at strengthening the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters)
- PPD-21: Critical Infrastructure Security and Resilience (directs the Secretary of DHS to lead efforts to reduce the Nation’s vulnerability to terrorism and deny the use of infrastructure as a weapon)

C. Statutory Requirement for the Section 1075 Study

(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.