After continuous rains caused serious flooding in Haiti's north, government agencies supported by UN mission in Haiti and World Food Program responded with evacuations, temporary shelters, and food and supplies distributions, November 11, 2014 (Courtesy UN/Logan Abassi)

The U.S. Government's Approach to Food Security
Focus on Campaign Activities

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Chairman of the Joint Chiefs of Staff General Joseph F. Dunford, Jr., stresses the importance of effective cooperation with nonmilitary organizations to promote a common operational framework and allocate critical information and resources. Per his direction, the joint force continues to inquire about and examine the nuances between organizational workforce cultures and methodologies. One area where military and nonmilitary workforce approaches differ is security. This article focuses on an aspect of security known in international circles and endorsed by the United Nations (UN) as *human security*.[1] Threats to human security can be categorized in seven dimensions, one of which is food security.[2] Complementing an initial installment on health security also published in *Joint Force Quarterly*, this article addresses the U.S. Government's approach to food security with a focus on combatant command campaign activities.[3]

Food security is inextricably linked to national, regional, and international stability.[4] It involves food availability and access based on purchase, agricultural

practices, and systems of distribution.[5] Nations and international organizations such as the United States and the UN continue to develop policies and deploy workforces to prepare for, respond to, and even prevent threats to food security. As domestic approaches mature and international demands for food security expand, U.S. military involvement in support of increased national food security objectives should be expected. Although food security is not an inherent Department of Defense (DOD) function for civilian populations, it is an objective of U.S. Government strategic competition.[6] Without food security, political, economic, or social stability can deteriorate, leading to increased requests for U.S. military assistance. Additionally, U.S. Government workforce deployments that counter nontraditional threats (such as those to any dimension of human security) can easily increase costs beyond those of conventional war. While trends of conflict and instability (for example, human displacement, disease, hunger, and famine) may impact food security, neglect of food security efforts can result in limited food access, reduced safety, less defense, and reduced agricultural development, thus impacting overall political stability, human security, and the global economy. In other words, food security is crucial to U.S. national security.

To understand the nuances of food security, definitions and descriptions are presented from both governmental and nongovernmental organizational documentation. One U.S. Government report describes food security as both food aid (in-kind food donations) and food assistance (in-kind donations and cash transfers for purchasing food from local economies) that also includes supporting economic development projects and nutrition programs.[7] U.S. Code defines food security as access by all people at all times to sufficient food and nutrition for a healthy and productive life.[8] The UN defines food security as a condition that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life based

on food availability, access, utilization, and stability.[9] For our discussion, food security refers to all of the above including plant, animal, and processed food safety and defense from contamination by human intention (for example, agroterrorism) and nonhuman progression (such as invasive species).[10] This analysis, based on research and informal discussions, is categorized into four sections: the history of U.S. policy in conjunction with international initiatives, executive branch strategy and activities, military campaign activities, and recommendations for strengthening food security efforts.

Legislative Actions and International Engagement

U.S. legislative history and international agreements capture methods that address modern food security concerns. U.S. Government international food aid can be traced back to an 1812 earthquake in South America when Washington donated shipments of flour to Venezuela just weeks before declaring war with England.[11] Twenty-five years later, a food and agricultural office was lodged within the Department of State that eventually moved to the Department of the Interior.[12] During the Civil War, President Abraham Lincoln established the U.S. Department of Agriculture (USDA) to assist those who produced food and owned land that developed food.[13]

In the 20th century between the world wars, legislation focused on domestic food and agriculture that is now couched in a present-day quadrennial law known as the U.S. Farm Bill. At the end of World War II, food security became a necessity for the international community to maintain postwar regional stability. In support of this goal, the UN Food and Agriculture Organization was born out of a decade-old International Institute of Agriculture to defeat hunger. In 1949, the United States became a signatory to a set of international treaties known as the Geneva Conventions and Protocols, the fourth of which addressed occupying power responsibilities to provide population food aid.[14] A few years later, Congress enacted legislation on surplus food donation and

agricultural trade development that also supports organizations such as the UN World Food Program.

In 1961, Congress passed the Foreign Assistance Act to better assist partner nations with security challenges. This law created the U.S. Agency for International Development (USAID), which carries out U.S. global food policy implementation and coordination.[15] Subsequently, U.S. Government international policy began to shift from donating surplus food to emergency response and long-term agricultural development. Since then, food security–related legislation steadily increased domestic food security and food resilience capability development in foreign nations. Certain initiatives include the Food for Progress Act (the latest Farm Bill),[16] the Feed the Future (FTF) Initiative,[17] the Food for Peace Act,[18] the Global Food Security Act,[19] and relevant public health and agricultural bioterrorism acts.[20] To better understand U.S. Government organizations that implement food security efforts, the following section examines components of the executive branch.

The Executive Branch

One document that links executive policy to governmental activities is a national strategy. The President's National Security Strategy articulates policy goals that are connected to objectives that expressly describe or imply food security approaches.[21] In support, the U.S. Government Global Food Security Strategy links food security departmental objectives to National Security Strategy objectives.[22] As a result, food security roles within the executive branch become further defined. The President also articulates policy through executive orders on national security matters via Presidential directives. Over the last 15 years, the following directives set conditions for impacting food security and strategy development. In 2004, President George W. Bush issued the directives *Defense of U.S. Agriculture and Food*, focusing on food security preparedness, and *Biodefense for the 21st Century*, to address food contamination threats.[23]

Table. U.S. Agency for International Development and United Nations Sectors

USAID Humanitarian Sectors	UN Cluster Sector System
Agriculture and Food Security	Food Security
Economic Recovery and Market Systems	Early Recovery
Health	Health
Humanitarian Coordination and Information Management	Camp Coordination and Camp Management
Humanitarian Studies, Analysis, or Applications	Education
Logistics and Relief Commodities	Logistics
Nutrition	Nutrition
Protection	Protection
Natural and Technological Risks	Emergency Telecommunication
Shelter and Settlements	Emergency Shelter
Water, Sanitation, and Hygiene	Sanitation, Water, Hygiene

In 2010, President Barack Obama issued the U.S. Global Development Policy, which emphasized food security through FTF.[24] The following year, the President issued *National Preparedness*, replacing a previous directive to better synchronize whole-of-government responses to threats that include food security. He also approved *Implementation of the National Strategy for Countering Biological Threats* in support of President Bush's biodefense directives.[25] Moreover, *Critical Infrastructure Resilience* revoked a previous directive that replaced another and identified sectors such as food and agriculture.[26] The directive *U.S. Security Sector Assistance* was issued to build capabilities of partners and allies in addressing common security issues.[27] Focusing on departments with Presidentially appointed Secretaries that implement U.S. Government policy, the following overviews capture individual department global and domestic food security efforts in three cascading categories: significant, additional, and remaining.

Significant Efforts. The State and Agriculture departments play significant roles in achieving global food security objectives. State manages foreign affairs for the President and recently prioritized food security as an issue of national security. Two strategic documents that provide organizational guidance on food assistance, nutrition, and agricultural and rural development are the *Quadrennial Diplomacy and Development Review* and the *Department of State and USAID Joint Strategic Plan*.[28] For purposes of this discussion, USAID, which coordinates and integrates economic development and disaster assistance expertise and resources abroad, is categorized as an entity under State, as they both report to the same Cabinet Secretary.[29]

State conducts diplomacy that results in foreign aid or assistance (for example, security, humanitarian, development) to other nations. As the lead for U.S. Government security sector assistance, State leads policies, programs, and activities to engage with, help build and sustain the capacity of, and enable foreign partners to contribute to efforts that address their common security challenges, including food security.[30] Under security assistance programs, State's Economic Support Fund grants that focus on the poor provide programs for primary agricultural needs.[31] In conjunction with DOD security teams, State leads joint mission Provincial Reconstruction Teams in Afghanistan to advance local agricultural capacity development.[32] The State's Office of Global Food Security also leads diplomatic engagement on U.S. food security and nutrition policy in bilateral and multilateral assistance forums.[33] For domestic response, State manages international contributions of support.

While State leads engagement for U.S. Government food-related initiatives, USAID coordinates and integrates long-term economic development expertise and resources. Additionally, the USAID administrator serves as the government's de facto Global Food Security Coordinator for the purposes of aligning and coordinating FTF with other U.S. Government food security–related programs and policies. Under the FTF program, USAID leads security and sustainment of food and agriculture development activities as well as administration of certain Food for Peace assistance programs.[34] Moreover, USAID implements Global Food Security Act efforts via the Global Food Security Strategy to ensure that government resources are aligned to achieve national objectives.[35] For international disasters and crisis situations, State arranges U.S. emergency and early recovery assistance that is managed by USAID across 11 organizational sectors that closely resemble the UN Cluster system (see table).[36]

The Agriculture and Food Security humanitarian sector that closely mirrors UN Food and Agriculture Organization efforts within the UN Food Security Cluster is administered by the USAID Office of U.S. Foreign Disaster Relief Assistance through coordination and integration of disaster assistance expertise and resources. Other efforts, such as the Famine Early Warning Systems Network, track and forecast potential famines worldwide and aid in prepositioning food in preparation for the deluge of refugees.[37]

USDA supports U.S. Government food security objectives through governance of issues relating to food, agriculture, natural resources, rural development, and nutrition.[38] With offices at over 90 U.S. Embassies, USDA has a long institutional history of cooperating with other countries to achieve their food security goals. In support of the Global Food Security Strategy and other efforts, USDA uses cooperative approaches to animal health, crop diseases, food safety, nutrition, and natural resource management that can reinforce and strengthen national capabilities. Countries in turn can participate in international markets, thus expanding the demand for U.S. agricultural products and enhancing

Sailors aboard aircraft carrier USS *Ronald Reagan* provide humanitarian assistance to Japan as directed in support of Operation *Tomodachi,* March 15, 2011 (U.S. Navy/Michael Feddersen)

global food security.[39] Under Food for Peace, USDA implements international nutrition, development, and research collaboration programs through its Foreign Agriculture Service.[40]

With other organizations, USDA assists in food security efforts through agricultural advisor deployments to DOD- or State-led Provincial Reconstruction Teams, research programs, information-sharing, policy and regulation promotions that expand agricultural markets and trade, and leadership to multilateral food security initiatives (for example, the Global Open Data for Agriculture and Nutrition initiative, Global Alliance for Climate Smart Agriculture, Committee on World Food Security, and G20 Meeting of Agricultural Chief Scientists).[41]

Both at home and abroad, the USDA Animal and Plant Health Inspection Service protects animal and plant health from invasive pests and diseases. Domestically, USDA develops and executes Federal laws related to farming,

agriculture, forestry, and food guidance.[42] With its largest focus on food and nutrition service programs, USDA-led activities assist farmers and food producers with the sale of crops and food and help the United States supply high-quality food to the world.[43] In support of crisis response, USDA is delegated to be the lead coordinator for Emergency Support Function 11, *Agriculture and Natural Resources*, by the Department of Homeland Security (DHS) in the National Response Framework.[44]

Additional Efforts. Other departments make substantial contributions to U.S. Government global food security efforts. For example, DHS provides domestic security and coordinates Federal crisis response and recovery through its Federal Emergency Management Agency. DHS also supports food security efforts through activities such as cross-border protection at U.S. airports and seaports, agricultural and food sector awareness and warning, vulnerability assessment, mitigation of screening procedures, and

countermeasure employment against the intentional introduction of diseases and biological threats to food supplies.[45]

The Department of Commerce's strategic food objectives focus on fostering healthy and sustainable marine resources such as fish stocks, habitats, and ecosystems.[46] Its National Oceanic and Atmospheric Administration provides access to comprehensive oceanic, atmospheric, and geophysical data and offers capacity-building assistance through improved weather forecasting, drought early warning systems, and climate change resilience and adaptation.[47] Furthermore, its International Trade Administration ensures fair trade of agricultural commodities.

DOD supports food security efforts primarily through its military workforce. For international and domestic requests, the sheer size, budget, and ready capabilities of DOD make it an attractive candidate for food security requests in support of government efforts.[48] In support of U.S. capacity-building

More than 3,000 internally displaced persons sheltered inside UN Mission in Darfur base in Khor Abeche, South Darfur, following attack by armed group on March 22, 2014 (Courtesy UN/Albert Gonzalez Farran)

activities abroad, DOD contributes to engagement and prevention programs and surveillance and response systems, as well as raising awareness and developing missions that incorporate risks posed by current and projected climate variations into planning, resource requirements, and operations considerations.[49] DOD also provides defense support to civil authorities through research, preparation, surveillance, and response efforts.

The Department of Health and Human Services emphasizes information-sharing, disease surveillance, and laboratory research to diagnose, prevent, and control the spread of disease that impacts food safety.[50] Via certain components (Centers for Disease Control and Prevention, Food and Drug Administration, and U.S. Public Health Service), Health and Human Services supports responses to investigate, improve surveillance, mitigate consequences, assure safety and security of national food supplies, and detect foodborne illnesses to protect the U.S. food supply from bioterrorism or agroterrorism.[51]

The Treasury Department funds food security programs (for example, the World Bank and Global Agriculture and Food Security Program), relieves or enforces sanctions, and supports economic growth and poverty reduction by overseeing U.S. Government efforts with international financial institutions.[52]

Remaining Efforts. Other departments maintain capabilities that address domestic food security concerns but have minimal equity in support of global food security efforts. The Department of the Interior develops surveillance and monitoring systems and tracks commodities related to food security, while the Department of Justice enforces Federal consumer protection laws.[53] It is also worth noting that the Environmental Protection Agency enacts laws to protect the food supply from waste and chemicals.

As U.S. Government departments continue to develop their own strategies in support of national food security objectives, the future is uncertain on how they will plan for a robust international workforce response, especially to food systems disruption or complete collapse. Currently, USAID-led foreign disaster relief is effective for routine disasters, but coordinated U.S. food-related assistance is still needed in environments impacted by catastrophic events with cascading effects on critical public infrastructure.[54] Climate and demographic changes will also place a larger burden and expectations on U.S. Government departments, more specifically DOD, regarding transport and security capabilities. For interoperability and educational reasons, non-DOD organizations should keep a watchful eye on how they are portrayed

by the U.S. military in joint doctrine—the core foundation of military workforce best practices.[55]

Military Campaign Activities

Food security can be debilitated by political, economic, and social elements of conflict such as weak governance, food price volatility, and poor food distribution systems. These elements can lead to long-term disruption of national food systems (growing, harvesting, packing, processing, transforming, marketing, consuming, and disposing of food).[56] While food security may not be an inherent DOD function for civilian population protection, the joint force conducts food security tasks that are either directed by senior military and political leadership or identified as combatant commander objectives during planning. Food security discussions in joint doctrine can be inferred in several joint documents: under stabilizing activities of Joint Publication (JP) 3-0, *Joint Operations*; security and humanitarian assistance stability functions within JP 3-07, *Stability*; interagency and other organizational dimensions within JP 3-08, *Interorganizational Cooperation*; security sector assistance within JP 3-20, *Security Cooperation*; emergency support responsibilities within JP 3-28, *Defense Support of Civil Authorities*; disaster relief roles within JP 3-29, *Foreign Humanitarian Assistance*; and civil-military interaction within JP 3-57, *Civil-Military Operations*.[57]

The joint force traditionally provides support to U.S. Government food security efforts as an occupying force with legal responsibilities to the population, as part of a peacekeeping operation to protect humanitarian workers for food distribution, or as a provider of assistance to vulnerable populations to ensure food access and availability.[58] These deployments, activities, and investments can come with more advantages if military personnel and their commanders have basic knowledge of strategic, regional, and local food and agricultural issues. Unfortunately, the lack of food security knowledge can impact operations, long-term U.S. Government efforts,

and, most importantly, the local human and agricultural environment. For example, in the last 15 years, U.S. Central Command (USCENTCOM) and coalition forces that deployed to rural areas in Afghanistan found themselves either directly or indirectly in contact with food and agricultural issues. While roughly 80 percent of Afghans rely on agriculture to provide income and food for their families, decades of conflict have continuously interrupted the traditional interfamilial knowledge transfer of farming. Initially unaware of negative impacts and attitudes generated toward foreign intervention, many stabilization efforts were undermined or lost by a failure to recognize social protocols pertaining to food and agriculture. Some military commanders planned activities that inadvertently disrupted crop production cycles and endangered family food security. Certain tactical practices that were not mindful of herd behavior angered herders who might have otherwise provided valuable intelligence across the vast swaths of insurgent-impacted landscapes the herders occupied. Moreover, interpreters were typically from urban backgrounds and seldom understood food and agricultural issues, which further strained cooperation.[59] In U.S. Africa Command (USAFRICOM), a former commander described food security challenges as contributing to regional instability but relevant in all areas where the U.S. military has forward presence

There are undeniable linkages . . . between our responses to food emergencies, food security, and our broader security and stability objectives. . . . environmental challenges are likely to increase the severity and frequency of food emergencies . . . unless the international community works together to increase the sustainability of regional and global food supplies.[60]

While many terms can be used to describe DOD food security contributions, this discussion refers to those DOD-specific contributions as *campaign activities* (for example, military investments, limited deployments, and large-scale missions). Based on mutual

agreements, military investments are in the form of engagement, cooperation, and deterrence activities that promote long-term regional stability through civilian and military capacity-building efforts. These campaign activities are meant to manage internal threats and eventually encourage security-recipient nations to become security providers. Limited deployments such as crisis response and contingencies meet defined requirements rather than promote broad, open-ended, long-term stability, compared to large-scale, standalone missions that are larger, more complex, and longer.[61] As the impact of food insecurity on the broader security environment, along with the connection that conflict has to food access, becomes clearer to understand, the following levels of crisis describe joint force activities: capacity-building, slow onset, rapid onset, and complex.[62]

Capacity-Building. Combatant commands identify and participate in campaign activities that build partner and host-nation capacity in support of food security. These campaign activities improve the collective ability of the United States and its partner nations in responding effectively and expeditiously to food security challenges. Geographic and functional combatant commands, such as U.S. Pacific Command (USPACOM) and U.S. Special Operations Command (USSOCOM), identify food security–related objectives in campaign plans. For more efficient first-responder, risk-reduction activities, USSOCOM and civil affairs personnel conduct on-the-ground observations that can feed back real-time information on food security threats. In support of their missions are training as well as education through formal courses such as the Agricultural Development for Armed Forces Pre-Deployment Training and Active Army battalion and brigade pilot programs such as Farm Assessment and Evaluation Training. Graduates from these courses return to their units and many deploy to better advise commanders on tactical-level food security issues.[63]

Additionally, the Chairman of the Joint Chiefs of Staff recently endorsed a special area of emphasis on nontraditional security threats including food security

for military institution consideration.[64] Other DOD capacity-building efforts include the National Guard Bureau's Agribusiness Development Team concept and State Partnership Program. Both efforts support combatant commander objectives through training and advice to universities, ministries, and farmers as well as through formal state partnerships with foreign countries. In USCENTCOM, National Guard personnel from Texas developed a relationship with a university in Afghanistan to support the country's agriculture future and student preparation for postgraduate work in that field.[65] In another example, in U.S. European Command, National Guard personnel from Iowa conducted campaign activities with Kosovo ministry counterparts on agricultural exchanges and cooperation with public and private collaboration on agriculture.[66] At home, U.S. Northern Command (USNORTHCOM) and USPACOM campaign activities support U.S. Government agricultural plant and animal biological defense and safety.[67] A legitimate threat to domestic food security is embodied by an al Qaeda training manual that is devoted to agroterrorism—that is, the destruction of crops, livestock, and food processing operations.[68] In conjunction with capacity-building efforts, lethal and nonlethal military operations in support of regional organization, partner, and host-nation requests may be necessary but, importantly, can mitigate instability that impacts the evolution of slow, rapid, and complex food crises.

Slow Onset Crisis. Most slow onset crises emerge based on a confluence of events.[69] These crises can result in famine or hunger due to either crop failure from drought, climate change, spread of agricultural pests or disease, or gradual deterioration of a situation leading to conflict (for example, chronic poverty, destitution, and government policies that result in widespread malnutrition, an increase in mortality rates, and the destruction of stable livelihoods).[70] Upon request, DOD acts as a first responder to conduct campaign activities such as limited deployments of crisis response or other contingencies to support U.S. Government–sanctioned

peace operations, foreign humanitarian assistance, and defense support to civil authorities. In USAFRICOM, General Thomas D. Waldhauser, USMC, stated that stabilization efforts that focus against the al Shabaab terrorist group in Somalia could become complicated by famine and drought and that USAFRICOM has to coordinate closely with relief agencies to avoid impacting civilians on the move in search of food.[71] Slow onset crisis missions are usually in response to international calls to action, and if requested, DOD activities would support U.S. Government requirements to support individual nation or international requests.

Rapid Onset Crisis. Rapid onset crises are often localized to one particular area, generally small, and periodic in occurrence. They are usually the result of sudden, natural events such as windstorms, cyclones, hurricanes, typhoons, floods, tsunamis, wildfires, landslides, avalanches, earthquakes, and volcanic eruptions. Upon request, DOD conducts campaign activities such as limited deployments and large-scale missions to support government efforts.[72] Abroad in 2008, U.S. Southern Command (USSOUTHCOM) rapidly responded to a U.S. Government request to transport and deliver food to Haiti after flooding.[73] In 2011, USPACOM personnel transported and delivered tens of thousands of meals in Japan via rotary-wing aircraft after an earthquake and typhoon. A few years later, USCENTCOM personnel airdropped hundreds of bundles of food and thousands of meals to refugees in northern Iraq fleeing persecution by the so-called Islamic State.[74]

For domestic limited deployments and large-scale response missions, DOD (under USNORTHCOM and USPACOM) supports USDA under Emergency Support Function 11 to contain and eradicate outbreaks of plant or animal diseases as well as to provide disaster relief. During Hurricane Sandy, USNORTHCOM assisted in setting up food distribution points around New York City and provided over 144,000 meals to citizens in need, including food delivery to high-rise buildings throughout the city. Besides building capacity and

providing contributions in the form of security and transportation of food during the onset of crisis, DOD contributions are most often intertwined with long-term diplomatic and development efforts.

Complex Crises. Complex crises can result in numerous deaths and considerable suffering from war, disease, hunger, and displacement owing to natural and manmade actions or events.[75] A tactic to encourage capitulation by adversaries is withholding food from populations or the prevention of food access as a weapon of war (for example, burning crops).[76] In 2015, the Syrian government used a "starve into submission" policy that led to brokered ceasefires with rebels where they surrendered weapons in return for easing sieges and allowing the entry of food into their controlled areas.[77] A potential complex crisis related to counterterrorism efforts in the USCENTCOM area of responsibility is the Saudi Arabian blockade of Yemen, a country with high food insecurity that imports 90 percent of its food.[78] Other considerations are the impacts of globalization, increased food prices, a changing demand for food at the local level, the unintended secondary consequences of economic policies, and increased urbanization challenges (for example, resources and megacities) that lead to population grievances and sometimes radicalization.[79]

In 2007–2010, countries located in both the USCENTCOM and USAFRICOM areas of operation experienced food price increases and subsequent rioting across North Africa and the Middle East as droughts coincided with dramatic changes to food availability and cost.[80] People across the region no longer found work in the fields and moved to cities, where most did not find work and showed their frustration in the streets in protest.[81] In many cases, protests turned to violence and regimes were toppled, leading the United States into more substantial diplomatic involvement and potential deployment or workforces including the joint force in support of stabilization efforts. In 2010, USSOUTHCOM responded to a government request in support of Haiti

Norman Borlaug Institute for International Agriculture country director and project coordinator shows land being cleared for future farming as part of partnership with U.S. Africa Command to produce large-scale agriculture project on Camp Base, March 17, 2011, Democratic Republic of the Congo (U.S. Africa Command/Amanda McCarty)

earthquake disaster relief by transporting tens of thousands of humanitarian daily rations for distribution.[82] The issue here was not weak governance but the complete decapitation of governance itself from the people that increased complexities regarding disaster relief, food access, and availability. However, in USCENTCOM, the al Qaeda–affiliated militant group al Shabaab is presently delivering food to locations in Somalia suffering from severe drought. This approach counters previous insurgency practices that severely damaged their group's image with and influence over the local population in 2011, when al Shabaab blocked food aid delivery and killed humanitarian workers.[83]

Given that U.S. Government support to an international response is expensive, especially in lethal and uncertain environments, and regardless of the fact that the joint force employs certain capabilities to assist responders, the international community should expect the quantity of U.S. Government response to be limited or even diminished. Therefore, participation in complex crises will most likely need to be planned for beyond a whole-of-government response and require a whole-of-society approach through interorganizational (public, private, and so forth) cooperation to future challenges.[84]

Successfully managing food security can mitigate or prevent conflicts and civilian deaths. When it comes to food security, all levels of command should be aware of the criticality of knowledge transfer and the impact that food security have on the broader security environment. Even though threats persist, the protection of a country's food system and its restoration when disrupted will be challenges that the U.S. Government should plan and prepare for, including making arrangements to support international workforces as needed.

Although a budget increase is proposed, the amounts are not quite a substitute for the loss of soft power capabilities in other departments, and the extra funds may not even keep the department at an acceptable level of equipment and systems readiness. As such, further analysis of joint force roles in campaign activities such as capacity-builders, first responders, and protectors of critical infrastructure, and the interorganizational cooperation sought with others, should be conducted to create and practice more efficiencies in support of food security efforts.[85] **JFQ**

Notes

1 United Nations (UN) Development Programme Human Development Report Office, Human Security, UN General Assembly, 66th Session, "Follow-up to Paragraph 143 on Human Security of the 2005 World Summit Outcome" (A/RES/66/290), October 25, 2012; UN General Assembly, 66th Session, "Follow-up to General Assembly Resolution 64/291 on Human Security" (A/66/763), April 5, 2012; and UN General Assembly, 64th Session, "Human Security, Report of the Secretary-General" (A/64/701), March 8, 2010.

2 The seven dimensions of human security are economic, food, health, environmental, personal, community, and political. See James Gustave Speth, Human Development Report 1994, *New Dimensions of Human Security* (New York: Oxford University Press, 1994), 24–25.

3 George E. Katsos, "U.S. Government Approach to Health Security: Focus on Medical Campaign Activities," *Joint Force Quarterly* 85 (2nd Quarter 2017), 66–75.

4 U.S. Africa Command, "General Ham Speaks at NDU Food Security Conference," March 8, 2012, available at <www.africom.mil/media-room/transcript/8881/transcript-general-ham-speaks-at-ndu-food-security>.

5 Speth, 27.

6 *National Security Strategy* (Washington, DC: The White House, May 2010), 12, 14, 18.

7 Randy Schnepf, *U.S. International Food Aid Programs: Background and Issues*, R41072 (Washington, DC: Congressional Research Service, September 2016).

8 7 U.S.C. §1732, U.S. Code, Unannotated Title 7, Agriculture §1732, Definitions.

9 Government Accountability Office, *Global Security Progress*, 10-494T (Washington, DC: Government Accountability Office, March 2010).

10 United States Department of Agriculture, "Food Defense Overview," available at < https://www.fsis.usda.gov/wps/portal/fsis/topics/food-defense-defense-and-emergency-response/food-defense-overview>; *Agribusiness Industry Final Report, Spring 2014 Industry Study* (Washington, DC: National Defense University, 2014), 14.

11 National Archives, "Letter to James Madison from Henry Lee, 24 April 1812," available at <https://founders.archives.gov/documents/Madison/03-04-02-0367>.

12 Food and Drug Administration, "FDA Organizational Histories," available at <www.fda.gov/aboutfda/whatwedo/history/forgshistory/default.htm>.

13 Public Acts of the Thirty-Seventh Congress, Chapter LXXII, 37th Cong., 2nd sess., May 15, 1862.

14 *United Nations Humanitarian Civil-Military Coordination Field Handbook* (Geneva, Switzerland: Palais des Nations, n.d.), 21, 82.

15 Foreign Assistance Act of 1961, Public Law 87-195, 87th Cong., 1st sess., September 4, 1961.

16 The Food for Progress Act of 1985, Public Law 99-198, 99th Cong., 1st sess., December 23, 1985; 7 U.S.C. 17360.

17 The Global Food Security Act of 2016 represents a codification of the administration's Global Hunger and Food Security Initiative, Feed the Future program, into the Foreign Assistance Act of 1961; Schnepf, 42.

18 The Food for Peace Act, Public Law 110-246, 110th Cong., 2nd sess., June 18, 2008, replaced the Agricultural Trade Development and Assistance Act, Public Law 83-480, 83rd Cong., 2nd sess., July 10, 1954.

19 Global Food Security Act of 2016, Public Law 114-195, 144th Cong., 2nd sess., July 14, 2016; Schnepf, 42.

20 Agricultural Bioterrorism Protection Act of 2002, *Federal Register* 67, no. 155 (August 12, 2002); Public Health Security and Bioterrorism Preparedness and Response Act of 2002; and Biennial Review and Republication of the Select Agent and Toxin List (42 U.S.C. 262a) (Bioterrorism Act).

21 *National Security Strategy.*

22 *U.S. Government Global Food Security Strategy FY 2017–2021* (Washington, DC: U.S. Agency for International Development [USAID], September 2016), 110.

23 Homeland Security Presidential Directive 9, *Defense of U.S. Agriculture and Food* (Washington, DC: The White House, January 30, 2004); Homeland Security Presidential Directive 10/National Security Presidential Directive 33, *Biodefense for the 21st Century* (Washington, DC: The White House, April 28, 2004). President Barack Obama followed up these directives with one on specific strategy implementation; see Presidential Policy Directive 2, *Implementation of the National Strategy for Countering Biological Threats* (Washington, DC: The White House, November 23, 2009).

24 Presidential Policy Directive 6, *U.S. Global Development Policy* (Washington, DC: The White House, September 23, 2010).

25 Presidential Policy Directive 8, *National Preparedness* (Washington, DC: The White House, March 8, 2011); Homeland Security Presidential Directive 8, *National Preparedness* (Washington, DC: The White House, December 17, 2003).

26 Presidential Policy Directive 21, *Critical Infrastructure Security and Resilience* (Washington, DC: The White House, February 12, 2013); Homeland Security Presidential Directive 7, *Critical Infrastructure Identification, Prioritization, and Protection* (Washington, DC: The White House, December 17, 2003); and Presidential Decision Directive 63, *Critical Infrastructure Protection* (Washington, DC: The White House, May 22, 1998).

27 Presidential Policy Directive 23, *U.S. Security Sector Assistance* (Washington, DC: The White House, April 5, 2013).

28 The first combined State and USAID strategic plan was published in 2003. *FY 2014–2017 Quadrennial Diplomacy and Development Review* (Washington, DC: Department of State, 2015); *FY 2014–2017 Department of State and USAID Strategic Plan* (Washington, DC: Department of State, 2014).

29 22 U.S.C. § 6592, U.S. Code, Unannotated Title 22, Foreign Relations and Intercourse § 6592, Administrator of AID reporting to Secretary of State.

30 The White House, Office of the Press Secretary, "Fact Sheet: U.S. Security Sector Assistance Policy," April 5, 2013, available at <https://obamawhitehouse.archives.gov/the-press-office/2013/04/05/fact-sheet-us-security-sector-assistance-policy>.

31 Defense Security Cooperation, "Introduction to Security Cooperation," I-5, available at <www.disam.dsca.mil/documents/greenbook/v35_0/01_Chapter.pdf>.

32 *Provincial Reconstruction Teams in Afghanistan and Iraq*, GAO 09-86R (Washington, DC: Government Accountability Office, October 1, 2008), 6–7, 12; *Afghanistan PRT Handbook* (Washington, DC: Government Accountability Office, October 1, 2008), 50.

33 *U.S. Government Global Food Security Strategy FY 2017–2021* (Washington DC: USAID, September 2016), 72.

34 *Global Food Security, USAID Is Improving Coordination but Needs to Require Systematic Assessments of Country-Level Risks*, GAO-13-809 (Washington, DC: Government Accountability Office, September 17, 2013), 6.

35 USAID, 60.

36 Joint Publication (JP) 3-08, *Interorganizational Cooperation* (Washington, DC: The Joint Staff, 2016), A-Q-2, B-B-13.

37 Famine Early Warning Systems Network Web site, available at <www.fews.net/>.

38 JP 3-08, A-B-1.

39 *Strategic Plan for FY 2014–2018* (Washington, DC: Department of Agriculture, 2014).

40 *U.S. Government Global Food Security Strategy FY 2017–2021*, 63.

41 Ibid. See also "About Food and Nutrition Service," USDA Web site, available at <www.fns.usda.gov/about-fns>.

42 Agricultural Act of 2014 (Farm Bill), Public Law 113-79, 113th Cong., 2nd sess., February 7, 2014.

43 *U.S. Government Global Food Security Strategy FY 2017–2021*, 63; United States Department of Agriculture Web site, available at <www.fns.usda.gov/about-fns>.

44 *National Response Framework* (Washington, DC: Department of Homeland Security, January 2008).

45 *Quadrennial Homeland Security Review* (Washington, DC: Department of Homeland Security, June 18, 2014); Homeland Security Act of 2002, Public Law 107-296 § 707, 107th Cong., 2nd sess., November 25, 2002, 154; and *2012 Annual Report: Duplication, Overlap, and Fragmentation*, GAO 12-342SP (Washington,

DC: Government Accountability Office, February 2012), 15–16.

⁴⁶ *FY 2014–FY 2018 Strategic Plan* (Washington, DC: Department of Commerce, 2014), 26.

⁴⁷ National Oceanic and Atmospheric Administration Web site, available at <www.noaa.gov/our-mission-and-vision>.

⁴⁸ Paul N. Stockton, *All-Hazards Foreign Response: Lessons Learned from Haiti, Fukushima, and Other Catastrophes* (Falls Church, VA: Anser, 2013).

⁴⁹ *National Security Implications of Climate-Related Risks and a Changing Climate* (Washington, DC: Department of Defense, July 2015), 3.

⁵⁰ *National Health Security Strategy and Implementation Plan (NHSS/IP) 2015–2018* (Washington, DC: Department of Health and Human Services, 2014).

⁵¹ *Strategic Plan FY 2014–2018* (Washington, DC: Department of Health and Human Services, March 2014).

⁵² Ibid., 27; *Strategic Plan for Fiscal Years 2014–2017* (Washington, DC: Department of Treasury, 2014); and *U.S. Government Global Food Security Strategy FY 2017-2021*, 76–77.

⁵³ *Strategic Plan Fiscal Years FY 2011–2016* (Washington, DC: Department of Interior, 2011); *Fiscal Years 2014–2018 Strategic Plan* (Washington, DC: Department of Justice, 2014).

⁵⁴ Stockton.

⁵⁵ JP 3-08.

⁵⁶ United Nations Food and Agriculture Organization, "The Future Food System: The World on One Plate?" available at <www.fao.org/cfs/home/blog/blog-articles/article/en/c/448182/>.

⁵⁷ JP 3-0, *Joint Operations* (Washington, DC: The Joint Staff, January 17, 2017); JP 3-07, *Stability* (Washington, DC: The Joint Staff, August 3, 2016); JP 3-08; JP 3-20, *Security Cooperation* (Washington, DC: The Joint Staff, May 23, 2017); JP 3-28, *Defense Support of Civil Authorities* (Washington, DC: The Joint Staff, July 31, 2013); JP 3-29, *Foreign Humanitarian Assistance* (Washington DC: The Joint Staff, January 3, 2014); and JP 3-57, *Civil-Military Operations* (Washington, DC: The Joint Staff, September 11, 2013).

⁵⁸ 1949 Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War, 6 U.S.T. 3516, 75 U.N.T.S. 287, Art. 55 (Geneva, Switzerland: UN, August 12, 1949); Jennifer Perry and Jennifer Borchard, *Food Security and Conflict: Current and Future Dimensions of the Challenge in Africa* (Fort Belvoir, VA: Defense Threat Reduction Agency, April 2010), 41–42.

⁵⁹ John Groninger et al., "ADAPT: Training for Agriculture? Seminal Role in Stability Operations for Afghanistan and Beyond," *Small Wars Journal*, August 22, 2013.

⁶⁰ U.S. Africa Command, "General Ham Speaks at NDU Food Security Conference."

⁶¹ JP 3-0, VIII-1.

⁶² Perry and Borchard, 17, 41; JP 3-29, III-3/4.

⁶³ Jesse Belford, "92ⁿᵈ Civil Affairs Battalion (Airborne) Tests New Agricultural Program," available at <www.army.mil/article/159354/92nd_Civil_Affairs_Battalion__Airborne__Tests_New_Agricultural_Program>; Agricultural Development for Armed Forces Pre-Deployment Training, "Stability Through Food Security," available at <www.adaptworkshop.org>.

⁶⁴ Johanna Mendelson Forman, "Educating the Next Generation of Military Leaders on Food Security," Stimson Center, available at <www.stimson.org/content/educating-next-generation-military-leaders-food-security>; Paul J. Selva, *Academic Year 2017–2018 Joint Professional Military Education Special Areas of Emphasis*, CM-0238-16, December 23, 2016.

⁶⁵ Alexander K. Stewart, "U.S. Army Agriculture Development Teams: A Grassroots Effort in Afghanistan Supporting Development and Tackling Insurgency," March 3, 2013, available at <www.nationalguard.mil/News/Article-View/Article/631290/iowa-kosovo-a-model-national-guard-state-partnership-program-relationship/>.

⁶⁶ Jim Greenhill, "Iowa, Kosovo: A model National Guard State Partnership Program Relationship," November 25, 2015, available at <www.nationalguard.mil/News/Article-View/Article/631290/iowa-kosovo-a-model-national-guard-state-partnership-program-relationship/>.

⁶⁷ JP 3-41, *Chemical, Biological, Radiological, and Nuclear Response* (Washington, DC: The Joint Staff, September 9, 2016), I-10.

⁶⁸ Jim A. Davis et al., *Agroterrorist Attack: DOD Roles and Responsibilities* (Maxwell Air Force Base, AL: United States Air Force Counterproliferation Center, 2006), chapter 1, available at <www.hsdl.org/?abstract&did=747577>.

⁶⁹ UN Office for the Coordination of Humanitarian Affairs (OCHA), *OCHA and Slow-Onset Emergencies*, Occasional Policy Briefing Series No. 6 (New York: OCHA, 2011), available at <www.unocha.org/sites/unocha/files/OCHA%20and%20Slow%20Onset%20Emergencies.pdf>.

⁷⁰ JP 3-29, III-3.

⁷¹ Richard Sisk, "Somalia Famine Complicates U.S. Counter-Terror Campaign," *Military.com*, March 27, 2017, available at <www.military.com/daily-news/2017/03/27/somalia-famine-complicates-us-counter-terror-campaign.html>; Selva.

⁷² JP 3-0, xix–xvii.

⁷³ Reliefweb, "Haiti Storms," available at <http://reliefweb.int/sites/reliefweb.int/files/resources/4DA6D03DB027E2D2492574C4000A2D7F-Full_Report.pdf>.

⁷⁴ Claudette Roulo, "Humanitarian Assistance Continues in Iraq," available at <www.defense.gov/News/Article/Article/603047/humanitarian-assistance-continues-in-iraq/>.

⁷⁵ JP 3-29, III-4.

⁷⁶ Perry and Borchard, 17, 41; Forman.

⁷⁷ "Food Insecurity in War-Torn Syria: From Decades of Self-Sufficiency to Food Dependence," Carnegie Endowment for International Peace, June 4, 2015, available at <http://carnegieendowment.org/2015/06/04/food-insecurity-in-war-torn-syria-from-decades-of-self-sufficiency-to-food-dependence-pub-60320>.

⁷⁸ Max Bearak, "Alarm Grows in Washington as Saudi Coalition Attack on Yemen Port Appears Imminent," *Washington Post*, May 2, 2017, available at <www.washingtonpost.com/news/worldviews/wp/2017/05/02/alarm-grows-in-washington-as-saudi-coalition-attack-on-yemen-port-appears-imminent/?utm_term=.9b45027c5102>; Reliefweb, "Yemen—Recent Cholera Cases, Food Insecurity and Population Displacement," available at <http://reliefweb.int/map/yemen/yemen-recent-cholera-cases-food-insecurity-and-population-displacement-dg-echo-daily-map>.

⁷⁹ Perry and Borchard, 17, 41.

⁸⁰ *Agribusiness Industry Final Report, Spring 2015 Industry Study*, 1; Aled Jones, "Food Security: How Drought and Rising Prices Led to Conflict in Syria," Carnegie Endowment, June 4, 2015, available at <http://carnegieendowment.org/2015/06/04/food-insecurity-in-war-torn-syria-from-decades-of-self-sufficiency-to-food-dependence-pub-60320>.

⁸¹ Dalia Mortada, "Did Food Prices Spur the Arab Spring?" *PBS.org*, available at <www.pbs.org/newshour/updates/world-july-dec11-food_09-07/>.

⁸² William Landay, "Humanitarian Assistance for Haiti," available at <http://dscadirectorblog.blogspot.com/2010/01/humanitarian-assistance-for-haiti.html>.

⁸³ Larisa Epatko, "Al-Shabab Militants Try Food to Win Hearts and Minds in Somalia," *PBS.org*, available at <www.pbs.org/newshour/updates/al-shabab-militants-try-food-win-hearts-minds-somalia/>.

⁸⁴ James C. McArthur et al., "Interorganizational Cooperation I of III: The Interagency Perspective," *Joint Force Quarterly* 79 (4ᵗʰ Quarter 2015), 106–112; James C. McArthur et al., "Interorganizational Cooperation, II of III: The Humanitarian Perspective," *Joint Force Quarterly* 80 (1ˢᵗ Quarter 2016), 145–152; James C. McArthur et al., "Interorganizational Cooperation III of III: The Joint Force Perspective," *Joint Force Quarterly* 81 (2ⁿᵈ Quarter 2016), 129–139.

⁸⁵ Ibid.