



DRAFT

TOWARD A SAFER WORLD

A REPORT ON CIVIL–MILITARY COOPERATION IN PANDEMIC PREPAREDNESS AND RESPONSE

30 JUNE 2011

**UNITED STATES AFRICA COMMAND (USAFRICOM)
UNITED STATES PACIFIC COMMAND (USPACOM)**

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
1. OVERVIEW.....	4
2. PANDEMIC PREPAREDNESS IN THE PAST FIVE YEARS.....	4
3. LESSONS LEARNED.....	7
A. LACK OF COMPREHENSIVE NATIONAL PREPAREDNESS AND RESPONSE PLAN.....	7
B. KNOWLEDGE OF NATIONAL PLANS, POLICIES AND PROCEDURES.....	8
C. SUPPORTING PLANS.....	8
D. LACK OF A STRATEGIC RISK COMMUNICATION PLAN.....	8
E. LACK OF BUSINESS CONTINUITY PLANNING.....	9
F. LACK OF TRAINING IN CIVIL-MILITARY COOPERATION.....	9
G. LACK OF TRAINING AND EXERCISE PROGRAMS.....	9
H. LACK OF ADEQUATE ANALYSIS AND IDENTIFICATION OF CIKR.....	10
I. LACK OF EQUIPMENT AND SUPPLIES.....	10
J. ROLE OF NATIONAL DISASTER OPERATIONS CENTERS IN DISASTER RESPONSE..	10
4. ADDITIONAL GAPS & SHORTFALLS.....	11
5. CROSS SECTOR COLLABORATION.....	13
6. CONDUCTING MIL TO MIL TRAINING AND ENHANCING CIVIL- MILITARY COLLABORATION.....	14
7. CIVIL-MILITARY ASPECTS OF WHOLE OF SOCIETY APPROACH TO DISASTER PREPAREDNESS AND RESPONSE.....	15
8. KEY LESSONS OF PANDEMIC PREPAREDNESS EFFORTS.....	16
9. CONCLUSION.....	17
APPENDIX 1: BIBLIOGRAPHY.....	19
APPENDIX 2: DETAILED LISTING OF USAFRICOM PRP EVENTS.....	20
APPENDIX 3: DETAILED DESCRIPTION OF USAFRICOM PRP EVENTS....	23

EXECUTIVE SUMMARY

Civil-military cooperation is widely regarded as a major component of disaster response, particularly in response to major disasters with significant societal impact. The resources present within the militaries of developing countries usually exceed any available to civilian disaster managers from any other sources, including the private sector. In addition to the equipment available within military organizations, the level of training of professional military personnel is often better than that of national, regional and local disaster management personnel, although this training may not have a specific disaster management focus. Effective utilization of these resources is therefore critically important to the success of disaster response operations within developing countries, and often in developed countries as well.

Recognizing the significance of civil-military cooperation to successful disaster response, including response to a severe global pandemic, the United States Agency for International Development coordinated with United States Africa Command (USAFRICOM) and United States Pacific Command (USPACOM) to develop and resource programs to enhance this cooperation within identified partner nations throughout Africa and Asia. These programs were developed with the same overall mission, although both commands established somewhat differing program methodologies for achieving mission success. Both programs sought to work with the militaries of partner nations to enhance their roles in pandemic and disaster preparedness and response and to develop appropriate contingency plans to institutionalize and prepare for these roles. These programs conducted scores of events over the past few years, working with partner nations to accomplish program objectives. Direct feedback from national authorities and event participants indicates that both programs have been extremely successful and are highly valued by all partner nations.

It should be noted that several nations have indicated that program events have positively impacted response to various disaster events which occurred in recent years. These nations indicate that national response capabilities were noticeably enhanced by training and exercises conducted by USAFRICOM and USPACOM and that this increased capability positively impacted various disaster response operations over the past several years, including the 2009 H1N1 Influenza Pandemic.

Despite the work already accomplished, USAFRICOM and USPACOM have noted a number of areas where additional work is needed to improve partner nation pandemic and disaster preparedness and response capabilities. Lessons learned in past program events have shown these two commands and their partner nations that in many cases existing policies, procedures and plans are insufficient to deal with the challenges of a severe global pandemic, or even a major disaster event. USAFRICOM and USPACOM, together with their partner nations have developed future program activities to address these shortfalls and continue their past efforts to improve partner nations' disaster response capabilities. This document contains a detailed description and analysis of program methodologies, past activities, and future plans to address the many remaining challenges to pandemic readiness in Africa and Asia. The lessons learned provide insight into the challenges faced in responding to a major pandemic or other disaster event and provide an opportunity to revise current strategies to enhance future pandemic/disaster response efforts.

1. Overview. The civil-military sector is recognized as one of the most significant and complex aspects of disaster response and one whose importance increases as the severity of a disaster increases. Proper utilization of the vast resources often inherent in military forces is absolutely critical to successful disaster response, particularly in countries where these resources are less available within the private sector. Although disaster response is not a primary mission for most military forces, inclusion of these assets within national plans provides the necessary guidance from civilian leadership and informs military leaders of civilian expectations for military response to disaster events. This allows military leaders to properly plan and prepare for disaster response activities, increasing the efficacy of military involvement. It should be noted that a severe pandemic may indeed result in events to which militaries in some countries would typically respond, including civil unrest, large-scale refugee situations, increased criminal activity, border incursions, and possibly even escalation of existing local, national, and/or regional conflicts. But beyond these areas of typical military involvement, there are many other pandemic response activities which may require the military to support civilian authorities. Facilitating the effective response of partner nation militaries during a severe global pandemic is a primary focus of these USAID-funded programs at United States Africa Command (USAFRICOM) and United States Pacific Command (USPACOM).

2. Pandemic Preparedness Activities in the Past Five Years.

a. USAFRICOM.

- i. **Overview.** USAFRICOM'S Pandemic Response Program (PRP) seeks to strengthen African partner nations' military capability and capacity to respond to a severe pandemic disaster in support of civilian authorities. The military in many countries is expected to play a key role in disaster response, maintaining security, providing logistical support to ensure the flow of key commodities, maintaining communications, augmenting civilian healthcare, and generally supporting the response of other governmental, non-governmental and international organizations. Preparing partner nation militaries to perform these functions during a severe global pandemic is the central goal of this program. It should be noted that the efforts of USAFRICOM have been actively supported by the Center for Disaster and Humanitarian Assistance Medicine (CDHAM) in organizing events and in providing subject matter experts, support which has been critical to the success of this program.
- ii. **PRP Partner Nations.** Current countries targeted as Partner Nations in the PRP initiative include Benin, Mali, Botswana, Malawi, Burkina Faso, Namibia, Burundi, Nigeria, Egypt (in conjunction with CENTCOM), Rwanda, Ethiopia, Senegal, Ghana, Togo, Kenya, Tanzania, Liberia, and Uganda. USAFRICOM PRP activities also include the participation of the African Union and its eight Regional Economic Communities, the Regional Disaster Management Center of Excellence and the Kofi Annan International Peacekeeping Center.
 - a) **Bi-lateral Engagements:** USAFRICOM's PRP initially conducted Bilateral Engagement and Response Planning to provide technical assistance, training and capacity building to address gaps in military pandemic response plans, and planning for national and military tabletop exercises. The bilateral contingency planning development and training focus areas of the program are logistics, transportation, security, engineering, public health/medical, regional response in collaboration with non-governmental organizations (NGO) and international organizations (IO), communication infrastructure, strategic messaging, legal framework, 2nd and 3rd order effects specific to a pandemic disaster and development and/or validation of military pandemic response contingency plans.

- b) **Workshops.** PRP has conducted Civil-Military Pandemic Planner Workshops that focused on a regional pandemic “Whole of Government” approach to enhancing cooperation and developing synergies in planning between civilian governmental institutions and partner nation militaries. The workshops were designed for senior-level military and civilian disaster and/or pandemic planners from each government. The objectives of the workshop were to ensure effective integration of the military into national pandemic planning and to ensure that mechanisms were in place to support the rapid involvement of other external stakeholders (IO, NGO, etc.) and neighboring countries. The workshops consisted of morning didactic sessions provided by subject matter experts from the World Health Organization, World Food Program, UN-OCHA, IFRC, and others on a variety of topics critical to effective pandemic response. These sessions were followed by afternoon sessions of practical plan writing.
 - c) **Table-Top Exercises:** PRP Tabletop Exercises have provided a venue to collaborate with partner nations in the assessment and development of national and regional plans for response to a pandemic-based complex humanitarian emergency. The tabletop exercises were designed for senior-level military and civilian disaster and/or pandemic response planners. These exercises consisted of a two day didactic session facilitated by the Center for Disaster and Humanitarian Assistance Medicine (CDHAM) and augmented by subject matter experts from WHO, WFP, UN-OCHA, IFRC, ICRC, UNICEF, IOM, UNHCR, USAID OFDA. This didactic session was followed by a two and a half day table-top exercise focused on enhancing participant understanding of existing pandemic preparedness and response plans, the roles of key stakeholders and the challenges inherent in response to a severe global pandemic.
- iii. **Specific events:** During this period, events included the Natural Fire 10 Tabletop Exercise in Kampala, Uganda 19-23 October 2009; the Regional Contingency Planning 101 Workshop in Accra, Ghana, 7-11 December 2009; the joint U.S. Africa Command and U.S. Pacific Command United Nations Annex Development Military Contingency Plan Workshop in Honolulu, Hawaii, 23- 26 February 2010; the West Africa Pandemic Disaster Response Table Top Exercise in Cotonou, Benin 21-25 June 2010; and the Kenyan National Government Pandemic Disaster Response Tabletop Exercise Mombasa, Kenya, 23- 27 August 2010. These exercises accomplished the following PRP goals:
- a) Provided an opportunity for senior and mid-level military leaders to train in disaster management, humanitarian assistance and pandemic preparedness.
 - b) Assisted partner nations in assessing their pandemic influenza preparedness and response baseline.
 - c) Assisted the national level authorities and military in their validation of roles and responsibilities within the National Pandemic Response Plan.
 - d) Assisted Partner Nations in understanding the roles of the international community (International Organizations, NGO’s, and Regional Governments) in the management of a pandemic response.
 - e) Promoted interoperability and enhanced capability of host nations to respond to complex humanitarian emergencies.
 - f) Provided a venue for participants to identify national and regional opportunities for improvement to assist in the development of multi-country response to pandemics and other hazards.

- iv. **Specific Achievements.** The achievements of the USAFRICOM PRP have been significant. Partner nations consistently tout the lessons learned in the various program activities as benefiting their response to smaller-scale disasters which have occurred annually since the program's inception and changing the way they view their preparedness activities for larger scale disaster events. At the conclusion of each program event, participants were asked to provide their own assessment of the key lessons or achievements which had the most impact. An example of these "takeaways" provided by the participants after conclusion of the Kenyan National Pandemic Response Exercise (August 2010) is illustrative of the value of this, and other PRP events:
 - a) The exercise provided a firsthand look at whole of government integration in response to a complex emergency event.
 - b) Participants were challenged in numerous situations that tested their ability to communicate and request assistance from local, regional, national and international players.
 - c) The scenario facilitated establishment of baselines (logistics, communication, health and security) for further development of country and national specific pandemic response and mitigation plans.
 - d) The exercise demonstrated the value of using an integrated whole of government/society approach in disaster response training.
 - e) The exercise further demonstrated the intent and willingness of U.S. Africa Command to build the capacity of partner nations to prepare for, and respond to a complex humanitarian emergency.
- v. A more detailed description of all USAFRICOM PRP events is attached at Appendix 2 of this document.
- b. **USPACOM.**
 - i. **Overview.** From 2007 to present USPACOM and the Center of Excellence in Disaster Management and Humanitarian Assistance (COE) conducted 28 events focused on preparing for, or responding to a complex pandemic event. The original base curriculum was the WHO Rapid Response Training materials that were presented in Bangkok, Thailand in June 2006. The simple mission given to the 140 participants at that event was to disseminate these materials to appropriate entities. COE and 13th Air Force, representing USPACOM, agreed to primarily focus on military pandemic preparedness in Asia. This original mission has remained constant, however, the content, focus, and audience shifted during the course of the program. During workshops and other pandemic-related events conducted by USPACOM, participants have been provided four recommended tasks for accomplishment, all of which facilitate the primary goal of strengthening the capacity of Asian militaries to respond to a complex pandemic event. These recommended tasks are:
 - a) Develop an infectious disease Force Protection Plan to protect your forces and their families before and during a pandemic.
 - b) Develop strong working relationships with the lead government agency(s) that have the pandemic mission in your country; Normally the Ministry of Health. (Whole of Government Planning)
 - c) Develop relationships with international agencies that you will most likely be working with during a pandemic, which for the military are WFP and WHO. NGOs and IOs are country dependent. The Red Cross/Red Crescent will also be worked with in all countries.

- d) Develop and exercise Continuity of Operations Plans (Business Continuity Planning) based on recognized Pandemic planning assumptions in order to carry out pandemic response tasks. Potential National Security and civil security and stability tasks during the time of social and economic disruption are also part of the Business Continuity planning.
- ii. **Specific Achievements.** The USPACOM program has recorded significant achievements in the past several years. Although many of the most important achievements are found in the changes of the attitudes of disaster managers and military leaders about civil-military cooperation and thus do not lend themselves to specific observation, the following are specific examples of program achievements which have positively impacted the pandemic and disaster preparedness of partner nations:
 - a) Development of a Force Protection Plan for protecting forces in infectious disease environments and trained Rapid Response Teams for Investigation of disease alerts in all targeted countries. WHO training Standards were provided and used. (2007-2008).
 - b) Military membership on the National Pandemic Committee and inclusion in the national plan and planning process (2008-2009). The degree of this inclusion varied somewhat from country to country. Some militaries had their own internal pandemic plans that address medical surge capacity at military medical treatment facilities and are part of the national medical plan.
 - c) Development of an understanding of what UN response agencies can, and will do, and the nature of the military's potential responsibilities and interface. For the military, the particular focus was on WFP as a supported and supporting element. WFP attended every event and developed relationships with Asian senior and mid-level military planners and decision makers in all of the countries. WHO also sent representatives to approximately half of the events and also developed critical contacts. Of particular note was Paul Cox from WHO-Geneva, who explained the Containment Protocols in the days before the 2009 H1N1 Pandemic. (2008-2009)
 - d) Continuity of Operations and/or Business Continuity Planning was discussed during the last year (2010) in some detail, as was the Whole of Government Planning model, although the extent to which this model has been utilized is not certain at this time. Reordering of national security priorities was discussed at some length, although actions taken on this discussion are also not yet known, and in many cases are classified national security matters. However, anecdotal information indicates that these interactions have been helpful and are being utilized by partner nations.

3. Lessons Learned. Throughout the course of events conducted by USAFRICOM and USPACOM, various lessons learned have been identified. While these lessons are not universal from country to country, they occur often enough to warrant mention. In most cases, these lessons were derived directly from country feedback after pandemic-related workshops, exercises and other events.

a. Lack of a Comprehensive National Pandemic Preparedness and Response Plan

- i. **Observations.** Exercise participants identified the lack of a comprehensive national pandemic preparedness and response plan as the most significant gap in pandemic preparedness. Participants believed that existing disaster response plans often did not adequately address pandemic preparedness and response. In addition, participants noted the lack of ministerial-level pandemic plans and continuity of operations plans as a shortfall. They opined that these

plans, which would support the national plan, would be critical to guide ministerial-level preparedness and response and ensure the ability of these key stakeholders to continue operations during a severe pandemic. Also noted was the lack of military contingency plans to support civilian pandemic preparedness and response operations.

- ii. **Recommendation:** Comprehensive, executable National Pandemic Preparedness and Response Plan should be developed to provide guidance for future pandemic preparedness and response operations. Once developed, this plan should serve as a guide for the development of lower-level ministerial plans and the development of appropriate military contingency plans to support both national disaster preparedness and response plans and also national pandemic preparedness and response plans.

b. Knowledge of National Plans, Policies and Procedures

- i. **Observations.** Participants in several exercises were extremely knowledgeable in their areas of expertise but they were largely unaware of existing national disaster response plans, policies and procedures. This lack of institutional knowledge was considered a major impediment to effective national disaster response capabilities.
- ii. **Recommendation:** Additional training should be conducted to acquaint all pandemic response stakeholders with appropriate plans, policies and procedures. This should be incorporated into an overall training and exercise program (see observation G. below)

c. Supporting Plans

- i. **Observations.** International and national NGOs often participated in pandemic events sponsored by the two commands. It was noted that host nations were often unaware of the pandemic plans, policies and procedures of international and national non-governmental organizations (NGOs). These various NGOs are often relied upon by partner nations to provide critical disaster response support, support which would be problematic during a severe global pandemic. During several events, it was noted that partner nations relied heavily on these organizations to support national pandemic response operations, but were unaware of the plans of these organizations and whether their internal disaster and pandemic plans would support these identified national requirements.
- ii. **Recommendation:** Pandemic and disaster plans of international organizations should be taken into consideration in the development of national disaster response plans. Knowledge of NGO plans will assist civil authorities in assigning proper roles and responsibilities and managing expectations during catastrophic events. In addition, more realistic expectations of NGO support capabilities will encourage national capacity building.

d. Lack of a Strategic Risk Communication Plan

- i. **Observations.** Partner nations often identified the lack of established Risk Communication Plan as a major shortfall. This shortfall was identified as a gap in communications policies and procedures for pandemic preparedness and response. While National Disaster Response Plans may address communications for all types of disasters, it was not seen as providing the full scope of policies and procedures found within a risk communication plan and did not address the unique communication challenges inherent in a severe global pandemic.
- ii. **Recommendation:** Government authorities should develop a risk communication plan as a component or adjunct of the National Pandemic Preparedness and Response Plan. This plan should be developed with input from all appropriate stakeholders, including the military and

should address the procedures for interface between these stakeholders during a pandemic emergency.

e. Lack of Business Continuity Planning

- i. **Observations.** Partner nations often identified the lack of formal business continuity plans as a major issue which would impact the ability of key ministries and other stakeholders to respond to a severe global pandemic. These plans were seen as critical to ensuring that key pandemic stakeholders would retain the capacity to respond to a pandemic by establishing plans and procedures for coping with the absenteeism inherent in a severe pandemic. While participants strongly recommended the development of national and ministerial response plans, these plans were seen as ineffective without development of appropriate business continuity plans to ensure response capacity is retained by key response stakeholders.
- ii. **Recommendation:** Government authorities should work with all pandemic stakeholders to ensure that appropriate business continuity plans are prepared.

f. Lack of Training in Civil-Military Cooperation

- i. **Observations.** Partner nations often identified an overall lack training in civil-military cooperation as a shortfall inhibiting disaster preparedness. Civilian authorities were largely unaware of the capabilities of the military and therefore were unsure of what roles and responsibilities to assign military forces during disaster response. Additionally, many participants believed that the perception of military capabilities held by civilian authorities exceeded the actual capabilities of the military. It was also pointed out that civilian authorities have a tendency to “back off” once military forces become involved in any disaster, believing the military is “in charge” at that point and no longer requires the same level of civilian involvement in disaster response. On the other hand, military participants were unaware of the support requirements which civilian authorities would have during a major disaster, including a pandemic event and how civilian and military disaster response components would interface and maintain a coordinated response.
- ii. **Recommendation:** Government authorities should develop and conduct additional training in civil-military cooperation and conduct periodic exercises to reinforce this training as part of a regular disaster response exercise program. Additionally, pandemic response plans should reflect the interaction between civil and military disaster response components and institutionalize applicable policies and procedures.

g. Lack of Training and Exercise Programs

- i. **Observations.** Partner nations often identified a lack of disaster management training and exercises at all levels of government as an area needing improvement. It was the opinion of most nations that additional training in this area would significantly enhance the ability of all stakeholders to provide timely and effective disaster response in complex humanitarian emergencies, including severe pandemics. In addition, the lack of a formal exercise program to periodically assess response training plans was identified as a shortfall. Many national disaster management representatives believed that this program should not only address national plans and training, but be “pushed down” to lower levels of government to truly assess the ability of the nation to respond to a major disaster, including a severe global pandemic.
- ii. **Recommendation:** Governments should develop disaster management training and exercise programs and conduct applicable training and exercises to assess the efficacy of training and plans. These programs should focus on “all hazards” disaster response, including a severe global

pandemic. International organizations and bilateral relationships should be considered as resources available to assist in these programs.

h. Lack of Adequate Analysis and Identification of Critical Infrastructure and Key Resources (CIKR)

- i. **Observations.** Several nations identified the lack of an adequate compilation of critical infrastructure and resources as an issue which inhibits the ability to respond effectively to a disaster, including a severe global pandemic. It was often noted that the tendency is to identify CIKR during disaster response, but that compiling a better, more comprehensive listing of CIKR during the preparation period would provide more time to thoroughly analyze national infrastructure and resources using input from key subject matter experts and determine the most effective method of protecting and utilizing these resources.
- ii. **Recommendation:** Governments should establish an appropriate working group to conduct analysis of existing infrastructure and resources to identify those that should be considered “critical” and therefore should be protected during a major disaster.

i. Lack of Equipment and Supplies

- i. **Observations.** Partner nations also identified the lack of stockpiled equipment and supplies for disaster response as a shortfall which would inhibit disaster response. They opined that an assessment of required equipment and supplies should be conducted and where applicable, these items should be procured and stored for use in future disaster situations. This was identified as being particularly important for disasters which are global in nature, as in a pandemic, since it would be difficult to procure these items during the disaster due to increased global demand. These items were identified as including personal protective equipment, pharmaceuticals, food, water, and other commodities which would be required during a major disaster. It was pointed out that some items may have short “shelf life” and thus might not be appropriate for stockpiling.
- ii. **Recommendation:** Authorities should conduct an assessment of requirements, working with experts from appropriate NGOs, the UN and other sources, including bi-lateral engagements with partner nations, to identify and then procure the necessary commodities to create an adequate stockpile for use in future disaster situations.

j. Role of National Disaster Operations Centers in Disaster Response

- i. **Observations.** Some disaster managers in partner nations believed that the functions, responsibilities and authorities of national disaster operations centers were not sufficiently delineated and understood by all stakeholders, a shortfall they recommended be addressed as an immediate priority. They stated that the function of these critical centers should be clearly delineated in applicable national plans, policies and procedural documents to ensure an understanding by all disaster and pandemic stakeholders. These managers widely agreed that these centers should exercise command and control of national disaster response operations during major disasters, including a severe global pandemic. To enable these centers to perform these functions, participants suggested that they should be given autonomy from governmental ministries, under control of the central administration, the Prime Minister’s or President’s Office, as appropriate. They further suggested that to be effective, the centers should have a standing budget sufficient to perform their assigned functions.
- ii. **Recommendation:** Governments should identify the functions, responsibilities and authorities necessary to establish their national operations center as a viable entity, capable of exercising command and control of multi-sectoral disaster response operations. The budgetary

requirements of these centers should be addressed to ensure their ability to execute these identified functions. Once established, these functions, responsibilities and authorities should be captured within appropriate disaster plans, policies and procedures.

4. Additional Gaps/Shortfalls. In addition to the specific lessons learned provided by partner nations during past events, some additional gaps have been identified by USAFRICOM and USPACOM which would potentially impact future pandemic response operations. Where appropriate, actions identified by partner nations, USAFRICOM and USPACOM to address these shortfalls are also noted:

a. USAFRICOM.

i. **Civil-Military Pandemic Preparedness and Response Plans.** As identified by event participants above, most partner nations lack, or have inadequate pandemic preparedness and response plans. Therefore, USAFRICOM's PRP has outlined an action plan to assist partner nations in addressing this deficiency in the next 2-3 years.

a) FY 11: Tanzania, Uganda, Kenya, Rwanda, Ghana, Nigeria

b) FY 12: Burundi, Benin, Burkina Faso, Liberia, Ethiopia, Senegal, Egypt

c) FY 13: Malawi, Namibia, Togo, Mali, Botswana

i. **International standards of Impact Assessment.** PRP has begun utilizing key quantitative impact indicators in the assessment of programming, but other quantitative indicators may still need to be added. Drs. Reaves, Schor and Burkle, in two of their recent articles,^{i,ii} identify key criticisms of prior civil-military humanitarian assistance operations, primarily that military aid efforts have lacked standardized and well-accepted impact assessment indicators that other international relief and development organizations commonly use in their work. The use of quantitative impact indicators may serve to not only make PRP program efforts more effective and measurable, but also make them more useful to international organizations.

ii. **Willingness to Work with Military in Pandemic Preparedness and Response Efforts.** This is a key area which must be addressed and which has negatively influenced prior pandemic preparedness efforts. The willingness of political leaders, particularly at lower levels, to collaborate with military forces during disaster response is critically important. PRP events have demonstrated the hesitancy of some civilian authorities to work with their militaries and to utilize military expertise, manpower and logistical capabilities, even in catastrophic disaster situations. In addition to this reluctance to utilize military resources, some political leaders also demonstrate a similar reluctance to acquiesce to the expertise of national disaster management officials in making response decisions. In both cases cited above, the solution appears to be building better understanding among these stakeholders and the establishment of detailed protocols and agreements during the preparedness phase, prior to occurrence of any disaster event, and to institutionalize these protocols in appropriate planning documents.

iii. **Communication with Pandemic Stakeholders.** There is a perceived need for improved communication across ministries, departments and agencies to ensure that processes involved in responding to a pandemic or other disaster are coordinated and effective, and that redundancy is eliminated or significantly reduced. Evidence also indicates that there is inadequate coordination of response plans and information flow between the national government and lower level governmental entities. In addition, a need has been identified for the various US agencies (CDC, USAID, and DOD-MUWRP) to collaborate more effectively and to mutually address the many programmatic challenges associated with public health support to

partner nations. Finally, a lack of communication with the private sector and other community entities during preparedness planning was also identified as an area needing improvement.

- iv. **Allocation of Resources.** There is a perceived lack of adequate resourcing to support preparedness plans and activities, impacting the effectiveness of response efforts. This includes everything from overall preparedness funding to food, shelter, medications, trained personnel, and equipment. In addition, supply chain and logistics considerations are noticeably inadequate, including a need for improved warehousing capability. There is also a lack of access to seasonal influenza vaccines and antiviral drugs and inadequate plans for procurement and distribution of pandemic influenza vaccine (once developed) during a pandemic emergency.
- v. **Surveillance and Epidemiological Investigation.** Resourcing of Epidemiological Surveillance and Investigation (ESI) was noted as a specific area where additional support is critically needed, particularly in many African nations. These mechanisms, which are critical to pandemic preparedness, are generally less developed in the human sector than in the veterinary sector within most partner nations. Although most nations have basic capabilities, the policies, procedures and plans associated with their programs are poorly defined and available equipment and training of personnel is correspondingly deficient. Finally, the integration of existing ESI mechanisms into a system, and the integration of that system into the national healthcare system has not been achieved.
- vi. **Inadequate Disaster Response Training for Military Forces.** Little disaster response training has been conducted for partner nation militaries, impacting the ability of these forces to respond effectively to complex humanitarian emergencies. The primary challenge in providing this training at the present time is the lack of adequate disaster and pandemic plans, as well as the lack of military contingency plans for disaster scenarios. In the absence of such plans, skills training may be possible, but unit level training and exercises of any size are generally designed based on existing plans and the tasks assigned therein. Therefore, the USAFRICOM PRP remains focused on assisting in plan development, after which training is planned, followed subsequently by appropriate pandemic response exercises.
- vii. **Risk Communication.** There is a general lack of policies, procedures and plans for pandemic risk communication and public education within most partner nations. National level disaster response authorities understand that improvement in these areas is critical to community mitigation efforts, which can significantly reduce morbidity and mortality during a severe global pandemic. Therefore, these authorities demonstrate willingness to collaborate with appropriate stakeholders to address this deficiency. Unfortunately, a widespread lack of knowledge in these areas at all levels of government, in the private sector and within the media makes addressing this deficiency a difficult, but necessary endeavor.

b. USPACOM.

- i. As noted previously in this report, one of the most important areas of concern is multi-sectoral and business continuity pandemic planning. Both of these types of planning are in the early stages of development in all the countries and need additional effort.
- ii. Vertical integration of pandemic plans, from the national to the provincial to the local level. This process began with USAID's H2P initiative, but much more work remains to complete this important initiative.
- iii. Community mitigation planning, including non-pharmaceutical intervention (school closures, work stoppages, etc.) and development of related risk communication messaging needs much

more work. These planning components must be developed and incorporated within appropriate national and lower level pandemic preparedness and response plans.

- iv. A major gap, from a military perspective, is development of an annual comprehensive interagency Pandemic (infectious disease) training plan, including training of military forces with pandemic response requirements.
- v. “Hands on” training, specifically designed to enhance military force protection during a pandemic (PPE, containment protocols, pharmaceutical and non-pharmaceutical interventions, etc).
- vi. There is a need for more public Information related to basic hygiene and preventive measures which can be taken by individuals to mitigate the impacts of a severe pandemic. This information should include the need for community and family plans to address possible food shortages, school closures and other potential pandemic impacts for which the public and local communities must plan. Militaries have already been asked promote this type of information to assist military families and better prepare them for a pandemic event. This initiative is not yet complete in most countries.
- vii. Essential services for “special needs” populations, which comprises up to 30% of the population in some countries, requires additional civil-military coordination. This is currently a major planning deficiency in all countries.
- viii. Development of comprehensive vaccination prioritization and distribution plans and related civil-military exercises that adhere to WHO guidelines is needed.

5. Cross-Sector Collaboration.

- a. **USAFRICOM.** The following are several examples of cross-sector collaboration within partner nations of USAFRICOM.
 - i. **Ghana:** To address pandemic and disaster preparedness work in Ghana, the National Disaster Management Organization (NADMO) has been legally mandated to coordinate preparedness response activities. NADMO has analyzed all hazards in the country and identified all partners whose individual and collective roles will assist risk reduction for each hazard. Additionally, technical committees have been formed with public, private, and civil society agencies/organizations, including NGOs and the military. These committees provide a multi-sectoral approach to preparedness and response activities.
 - ii. **Kenya:** One of the best examples of cross-sector collaboration was provided by Kenyan authorities and involved the military’s involvement in quelling the violence following recent post-election violence. This civil-military collaboration in a difficult disaster situation was accomplished through effective communication and with a careful adherence to impartiality, allowing the Kenyan military to step in when necessary to prevent loss of life and destruction of property without being perceived as partial to either side of this internal disorder. The collaboration necessary to accomplish this delicate balance involved a wide array of Kenyan governmental agencies and representatives of neighboring countries.
 - iii. **Tanzania:** The Kilosa flooding incident was a very good example of cross-sector collaboration and coordination between government and military, both within and outside of a country. Organizations involved included every possible sector, including the national government, Tanzanian military, private sector food, telecommunication and transportation companies and

all of the major non-governmental and UN organizations. This event provided the opportunity to conduct cross-sector coordination on a scale which exceeded any previous disaster response effort. These organizations combined to provide a very successful disaster response, creating a cross-sector synergistic effort which saved lives and property.

b. USPACOM

- i. **All Countries.** Militaries are now included within the multi-sectoral committees/councils that exist in all partner nations, a relatively new development that did not exist five years ago.
- ii. **Some Countries.** Military rapid response teams are working directly with the Ministry of Health, or in some cases as “stand-alone” military response units within some key countries.
- iii. **Malaysia.** The Ministry of Health (Laboratory Division) has collaborated with USPACOM/COE in training 14-18 military and civilian laboratory technicians in their state-of-art Biosafety Level III laboratory, using CDC curriculum for H5N1 and H1N1 RT-PCR testing. (2008-2010).
- iv. **Vietnam and Cambodia.** Vietnam (140 participants; 80% of the provinces) and Cambodia (90 participants; all provinces) hosted pandemic province-level training that included military and civilian (MOH) healthcare providers and planners in 2010. They were assigned additional planning tasks by national authorities for completion upon return to their provinces

6. Conducting Mil-to-Mil Training and Enhancing Civil-Military Collaboration

- a. Organizations and/or personnel responsible for conducting military-to-military training, as well as enhancing civilian-military collaboration in pandemic and disaster response, should have a number of significant qualifications. First, they must have members with experience in military operations, ideally including current actively serving military personnel and also veteran military personnel with experience in civilian disaster management. Such a group must also include purely civilian personnel that can accurately represent the perspectives and concerns of civilian organizations regarding the limitations inherent in such collaborative efforts, as well as to emphasize the overall civilian control of civil-military efforts. All should have a solid working knowledge of the militaries in question, to include missions, tasks, command relationships, history, and current decision-makers. Additionally, knowledge of the historic relationships with civilian organizations, to include; the National Security apparatus, Ministry of Health, Police, National Disaster agencies, UN organizations, and NGOs is desirable.
- b. Optimal collaborative efforts are most likely to be achieved through the following tenets: define appropriate roles for military forces prior to occurrence of any disaster event, promote development of relationships between civilian and military agencies, establish humanitarian aid training programs for appropriate Ministry of Defense and military personnel, and develop and use military quantitative aid impact indicators for assuring quality and effectiveness of humanitarian aid.
- c. Military-to-military and civilian-military collaborations both involve significant language and cultural issues. This is true even between the civilian and military members of the same country, but is amplified when bi-lateral or multi-lateral cultural or language differences are involved. This may include the requirement to train through an interpreter, preferably one with an appropriate level of expertise in the field being trained.
- d. Due to the technical nature of pandemic as a hazard within the overall construct of disaster management, at least some personnel should have a background in infectious disease response

and United Nations System Agencies' protocols, including the International Health Regulations, WHO Pandemic Guidelines, WFP instructions related to food delivery and distribution, OCHA guidelines and UNHCR pandemic guidelines at borders.

- e. Finally, a sense of humor and a passion for this complex work greatly benefits opportunities for success.

7. Civil-Military Aspects of the Whole of Society Approach to Disaster Preparedness and Response.

- a. From a planning perspective that are two major ways to implement a "Whole of Society" approach for developing countries. 1) Threat based scenarios or 2) Capabilities based planning. A Threat based planning model assumes little or no resource constraints and that neighbors or allies will assist with response efforts. Capabilities-based planning assumes little or no assistance and is based on utilizing only those assets available within the country in question. In a developing country, the vertical integration of tasks, functions, and resources utilizing the capabilities-based model can best leverage the planning assumption that help may not arrive very quickly after onset of a disaster event.
- b. The benefits of the "whole of society" approach from the civil-military standpoint are that military forces and their leadership, with their considerable capabilities, are not "left out" of pandemic planning. Inclusion of partner nations' military forces as an essential component in disaster planning has the positive effects of promoting stronger intergovernmental relationships between civilian and military entities, reinforcing the concept of civilian control of military forces, and ensuring that the military is aware of civilian expectations for their involvement in disaster response activities, thus allowing them to conduct appropriate planning to accomplish their assigned missions.
- c. USAFRICOM and USPACOM have employed the whole of society approach to planning throughout their workshops, exercises and other events, assisting nations in their efforts to utilize this approach in developing or revising their pandemic and disaster plans. In addition, these commands have worked closely with USAID's Project Prepare to assist their efforts to employ whole of society sectoral planning in partner nations.
- d. Tabletop exercises in AFRICOM's area of interest have focused on promoting a military, regional and/or national pandemic "Whole of Government/Society" approach for enhancing cooperation and developing synergies in planning between civilian governments and their militaries. These exercises are designed to ensure that militaries are effectively integrated into national governments' pandemic response planning and to ensure that mechanisms are in place to support the rapid involvement of all societal stakeholders.
- e. USPACOM/COE has developed a 4 day "Whole of Society" bilateral planning course that demonstrates the value of vertical integration during a pandemic. It has been successfully deployed in Vietnam and Cambodia.
- f. An assessment of tasks which military forces might perform during disaster response operations was first conducted during the joint USPACOM and USAFRICOM military planning workshop conducted in Hawaii in February 2010. This list of tasks has since been further refined and is now being utilized as a template for involvement of military forces in pandemic response operations. The tasks include:
 - Assist in outbreak containment efforts, if applicable.
 - Support health sector with military medical assets.

- Assist force protection efforts of all responders.
- Support police in law enforcement operations.
- Assist with border control, including air and sea ports.
- Support care of IDP/refugee populations by civil authorities and NGOs.
- Provide logistics support to facilitate procurement, storage and distribution of critical commodities.
- Provide transportation and security of relief supplies.
- Maintain critical communications links during civilian network failures.
- Assist civil authorities in operations management – situation monitoring, reporting, etc.
- Provide skilled labor to other sectors to supplement shortfall of essential personnel due to absenteeism.
- Continue to perform primary military missions.

8. Key Lessons from Pandemic Preparedness and Response Efforts and Their Application to All-Hazards Disaster Preparedness and Response.

- a. Prepare to care for yourself and your community/society. Do not count on others to provide the resources to address your disaster response challenges. This is a key tenet of pandemic preparedness, since a global pandemic will seriously challenge the ability of the international community to provide the type of support typically seen in more localized disasters. However, this tenet is also important for all types of disaster events, since it encourages countries to build their internal response capacity and not depend so heavily on external actors for support.
- b. Infectious disease outbreaks are disasters that often impact every aspect of daily life. They require a coordinated response from many sectors of society, which requires significant interagency coordination and cooperation across the public and private sectors. No stakeholder can singlehandedly address this challenge, a fact which is applicable in pandemic response, but also in practically all disasters, regardless of the precipitating event.
- c. Emphasis that pandemic preparedness is applicable to preparedness for any other major disaster. This includes the need for regional cooperation and a coordinated national approach, grounded in the need to recognize interdependence and the value of synergy between segments of society and neighbor nations.
- d. National leaders should be aware of key policies, procedures and plans for disaster management and the roles of various stakeholders in all types of disasters.
- e. Emergency funds should be available to support all disaster response efforts, with established, streamlined procedures for their disbursement.
- f. Society must involve all stakeholders in pandemic preparedness and response and must focus significant preparedness efforts on the non-health impacts of a severe pandemic. The involvement of private sector partners must not be based on achievement of profits, but rather on support of the long-term health of society, an endstate in which the private sector has tremendous equities. It should be understood that this lesson not only addresses response to an influenza pandemic, but is equally applicable to any disaster event since all disasters impact multiple sectors of society.
- g. Many ethical issues and considerations arise in pandemic preparation and response, particularly in the distribution of resources, including pharmaceutical interventions and use of protective equipment. There is a critical need to evaluate the best use of available resources both to

maximize societal benefit and to achieve the best equity of use. Other types of disasters also require prioritization in the distribution of resources and although the types of resources may be different from disaster to disaster, the ethical issues and the decision-making processes to address them are quite similar.

- h. Risk communications planning is essential to effective pandemic preparedness and response due to the fact that a severe pandemic will impact practically every member of society, not something typically occurring in other disaster events. Therefore, development of a comprehensive and well structured plan for maintaining an effective dialogue with the public and conducting effective messaging operations must be a high priority. Although risk communications is often thought to be even more important during a pandemic event than during other disasters, it should be noted that the requirement to prepare a risk communications plan exists in all disaster preparedness and response efforts, regardless of the type of disaster event. Therefore, addressing this requirement for pandemic preparedness and response planning will typically benefit planning for other types of disasters.
- i. Governments and other societal stakeholders often do not understand or appreciate the resources which militaries possess and therefore do not plan adequately for their use during disaster response. A general reluctance exists in some societies to utilize military resources for disaster response, particularly during public health emergencies, such as an influenza pandemic. This is often the case because the initial focus during pandemic response is on actions taken by the healthcare community, which is often seen as a strictly civilian enterprise. This focus does not consider the significant healthcare resources of many militaries and even more importantly, the second and third order non-health impacts which a severe global pandemic will have on all sectors of society and which will necessitate the mobilization of all available resources. Any prejudice which inhibits the use of military forces in disaster response must be overcome by better civil-military interaction in disaster response planning, training and exercises, with an overall focus on increasing mutual understanding and respect.

9. Conclusion. The importance of civil-military cooperation in disaster planning, including planning for a severe global pandemic cannot be overstated. The very nature of response to major disaster events requires that all available resources be employed to mitigate the loss of life and destruction of property. In many developing countries, the military's capability to respond to a disaster situation far exceeds that of the civilian government or the private sector. Simultaneously, within these countries, civil-military cooperation is in its infancy, with historical events inhibiting the building of trust between these key elements of society. The efforts of USAFRICOM and USPACOM (supported by CDHAM and COE), have focused on building the necessary relationships and expanding capacity to support the use of military resources to support civilian response to major disasters, including that of a severe global pandemic. These efforts have been very successful, but much work remains to be done. Both commands have plans to continue their support of partner nation civil-military cooperation efforts, work which will expand the capability of national militaries to effectively support their civilian authorities during preparedness for, and response to major a severe global pandemic and other major disasters.

ⁱ Reaves EF, Schor KW, Burkle FM Jr. Implementation of evidence-based humanitarian programs in military-led missions: part I. Qualitative gap analysis of current military and international aid programs. *Disaster Med Public Health Prep.* 2008 Dec;2(4):73-78.

ⁱⁱ Reaves EF, Schor KW, Burkle FM Jr. Implementation of evidence-based humanitarian programs in military-led missions: part II – The Impact Assessment Model. Disaster Med Public Health Prep. 2008 Dec;2(4):237-44.

DRAFT