HIV/AIDS: Implications for Development and Security in Sub-Saharan Africa

Author: Rodger Yeager
Civil-Military Alliance to Combat HIV & AIDS
Rolle, Switzerland, and Morgantown, WV, U S A

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Published by the Civil-Military Alliance to Combat HIV &AIDS (CMA) – 2003
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1. Introduction

The HIV/AIDS pandemic bears unique and powerful implications for development and security in Sub-Saharan Africa. This is immediately suggested by unique nature of the Human Immunodeficiency Virus (HIV) and the Acquired Immunodeficiency Syndrome (AIDS), and by what is estimated to be their current epidemiological status globally and in Africa.

Aside from the irony of HIV's nearly universal lethality and yet its almost complete preventability, this infection is set apart from other infectious diseases by the cultural sensitivities and social stigmas attached to its major means of transmission. In a related way that fosters stigmatization and discrimination, HIV is also distinguished by the relatively long length of its asymptomatic period before the onset of illness and death.

According to United Nations estimates,[1] at the end of 2002 about 42 million people were living with HIV/AIDS - 70 percent of them in Africa south of the Sahara. During that year, an estimated five million new HIV infections occurred, again 70 percent in Africa, and three million HIV victims died of AIDS-related symptoms, 77 percent in Africa.

While HIV/AIDS epidemics are also well underway in Eastern Europe, South and South East Asia, and the Caribbean/Central American region, the epicenter of the pandemic remains Sub-Saharan Africa and especially Southern Africa. In the 10 countries of this sub-region, an estimated 11.89 million adults and children were infected by the end of 2001, 10 percent of the total population, with national adult HIV prevalence rates ranging from over 5 percent to nearly 40 percent. AIDS claimed over 900,000 lives during 2001 in Southern Africa and left more than three million children without their mothers, fathers, or both parents. [2]

A key indicator of basic human security and socio-economic development is average life expectancy at birth with or without a reasonable expectation of 50 years of productive life. As suggested by estimates from eight Southern African countries and five others from East and West Africa,[3] AIDS has drastically reduced life expectancy at birth and has rendered most prospects for a half-century of productive life illusory. And as the noted conflict analyst Ted Robert Gurr has observed, low life expectancy at birth provides an important predictor of "revolutionary wars, ethnic wars, genocides, and disruptive regime transitions."[4]

It must be said that, in Africa and increasingly elsewhere, HIV/AIDS represents a clear and present danger to development and security no matter how and at what level these terms are defined. Nowhere is this threat more pronounced than in the institution that is typically entrusted with protecting national security, the military, and in its relations with civil society. In fact, most African militaries are more endangered by HIV/AIDS than the civil societies that they are sworn to protect.[5]

2. The Effects of HIV/AIDS on Military and Civil-Military Relations

Military Forces perform a major protective role for society and are called upon to serve internally and to deploy outside their national boundaries. Today, African and other militaries are challenged by the changing nature of threats to national and international peace and security. These include a growing number of post-Cold War internal and cross-border conflicts, at worst accompanied by genocidal ethnic and religious confrontations and massive displacements of populations, combining to produce highly complex humanitarian emergencies. By the late 1990s some 15 such conflicts raged in Sub-Saharan Africa, five carrying military deaths in excess of 100,000 each.[6]

To a greater extent than in the past, national militaries and international peacekeeping forces are deployed to assist civilian relief agencies in mitigating the human impact of complex emergencies. In these close encounters, military and civilian populations face a common enemy, infectious disease, that is especially strong under conditions of massive social upheaval. During and immediately after armed conflicts throughout history, rapidly spreading diseases have killed many more people than the fighting itself.[7]

Always present among wartime and post-wartime diseases are sexually transmitted infections (STIs). Even today, and even in peacetime, military STI rates are generally two to five times higher than STI rates in corresponding civilian populations.[8] In wartime situations, risk of STIs becomes much higher for both military personnel and the civilians among whom they are deployed. Since World War II, advances in medicine have rendered STIs and other infectious diseases less dangerous to military and civilian populations alike. Especially in technologically advanced societies, reduced threat of epidemics has also turned public health concerns less toward disease prevention through environmental and behavioral change and more toward preventive and curative medicine. In the past two decades of escalating human conflict, however, one deadly STI, HIV, has emerged for which medicine has no vaccine or cure.

The armed forces recruit both males and females at a time at a time of their greatest risk to HIV, in the 15-24 year age group where more than half of all HIV infections occurs. Military personnel are also vulnerable in that they are regularly away from home for extended periods, are often in need of recreation to relieve stress and loneliness, and are subject to risk-enhancing alcohol and drug use. They may have feelings of invincibility, at an age and in a profession that often excuse and even encourage risk-taking. Military camps and other installations attract sex workers and those who deal in illicit drugs, enticing off-duty soldiers who are sure to have cash - but not necessarily condoms and sterile syringes - in their pockets.

Civilian and military leaders in a number of African countries have become alarmed that HIV is now compromising military readiness,[9] and the costs of in-service patient care and replacement training severely tax military budgets. When a unit is missing several key members, ill for increasingly long intervals or deceased and not yet replaced, the unit cannot be considered to be fully functional and thus deployable. Readiness is further eroded when those sick or lost to AIDS include senior officers. Diminished capacity in the defense establishment becomes part of a larger AIDS-related threat to socio-economic well being and development, and to national and international security.

3. The Social and Economic Consequences of HIV/AIDS

In countries where HIV/AIDS is far advanced, the disease has become a development crisis of the first order. It now calls into question the social cohesion, economic fabric, and political stability of whole nations and regions. These crises reverse decades of Africa's uneven progress toward economic modernization and political stabilization. As such, exploding rates of HIV incidence and prevalence have far-reaching consequences at all levels of society and their repercussions extend far beyond the domain of public health.

Research into the effects of AIDS on household economies has documented the often unbearable loss of work time and income, increase in health expenditures, and consumption of family savings to pay for funeral and mourning costs. Decreasing family incomes lead to severe reductions in the ability to pay for essential goods and services. An HIV/AIDS impact study of urban households in C⊥te d'Ivoire estimated that attrition from the disease caused outlays for school expenses to be halved, per capita food consumption to decline by 41 percent, and the cost of health care to increase by more than 400 percent.[10]

Health-care systems in Africa are stressed and later inundated as the HIV-infected of past years become AIDS-symptomatic. AIDS attacks the health sector in two ways; it dramatically increases the number of people seeking services, and it creates an ultimately futile demand for care that is more expensive than that required for more treatable conditions. AIDS-related cases have already overwhelmed health services in several African countries including C⊥te d'Ivoire, Malawi, Zambia, and Zimbabwe, where patients occupy between 50 and 80 percent of hospital beds.[11] This worsens problems of overcrowding and increases risk of secondary infections such as tuberculosis and diarrhoea. Treatment facilities are typically inadequate, diagnostics and drugs are in short supply, and medical protocols have not been adjusted to meet the needs of people living with AIDS. Staffs are often inadequately trained to identify opportunistic infections at a treatable stage. Fear and stigma may result in discrimination against AIDS patients.

Problems of understaffing can also quickly become acute. In highly endemic African countries, many caregivers are themselves HIV seropositive, others are seriously ill, and still others have died. A recent study by a select committee of the British House of Commons reported that in some countries health-care workers are dying at a rate faster than they can be replaced.[12] Growing numbers of the healthy are frequently absent because they are tending to sick relatives and attending funerals. The overall result is rising costs of health care with diminishing resources - beds, essential drugs, physicians, nurses, orderlies, and laboratory staff.

Equally catastrophic dislocations affect communications, education,[13] and formal economies led by agriculture including food production, mining, transport, and tourism.[14]

4. Socio-Economic Destabilization and National Security

In the early 1990s, the World Bank developed a model to calculate the macroeconomic impact of HIV/AIDS according to losses in per capita gross domestic product (PC/GDP) for countries with high HIV prevalence rates. The result of this exercise was that, on average, the 10 most affected African countries were losing 0.6 percent of PC/GDP growth per year.[15] More recent estimates have confirmed an approximate 1 percent annual loss of growth.[16] These figures may not initially appear alarming, but over 20 years the continuous decline can amount to as much as 25 percent. In Kenya, total PC/GDP will likely fall by 14.5 percent between 1995 and 2005.[17] Here the consequences of HIV/AIDS will devastate an economy that is already beset by rural and urban overcrowding,[18] by drought and flooding, by unfavorable export and import markets, and by official corruption and mismanagement. All of these factors promise domestic instability and challenges to regional security, which is already tenuous in East Africa. Similar situations prevail in Southern, Central, and West Africa.

5. HIV/AIDS and Fragile Geopolitical Systems

HIV/AIDS and other poverty-related factors that endanger development naturally also pose a threat to political stability. This particular crisis affects all sectors of African societies in much the same manner as other complex humanitarian emergencies have occurred in history. Poverty, hunger, and crumbling socio-economic and political infrastructures lead to a growing sense of helplessness and anger among surviving populations, which may already be divided along ethnic, religious, and/or territorial lines of conflict. Governments are further weakened by their inability or unwillingness to respond, and are increasingly perceived to be more a part of the problem than an instrument of its solution. A major co-factor to an HIV/AIDS epidemic in largely agrarian societies is a collapse of food security. This compounds the devastation already caused

by AIDS and increases the likelihood of social and political destabilization in countries where more than 25 percent of children and adults may be, or soon be, AIDS patients and where a rapidly growing number of children are AIDS orphans.[19]

Changes in national population profiles produce fewer economically active adults, leaving in their place destitute older and younger people. Forced as orphans into urban centers, children begin working at an earlier age and for lower wages, and additional young sex workers enter a marketplace that is susceptible to STI and HIV transmission. Increasing numbers of socially alienated children and adolescents roam the streets, creating a new wave of hunger, disease, and crime and forming a ready clientele for lawless "militias." At the other end of the socio-economic spectrum, a rising middle class with high rates of HIV infection is composed of educated young adults who know that life-prolonging drugs exist but are too expensive to be personally afforded or offered by their own government. The next leadership generation's urgent but unsatisfied demand for such therapies creates political tensions that may lead to rampant corruption, reactive political authoritarianism, yet more state failures, and civil breakdown. Evidence of these collective pathologies is present in several important African countries including the Democratic Republic of the Congo, Nigeria, South Africa, and Zimbabwe.

High HIV incidence and prevalence occur in countries that are relatively at peace and where free movement of people and trade is possible. Nevertheless, a close relationship links HIV/AIDS, socio-economic and political disintegration, complex humanitarian emergencies, and armed conflict. Fighting places cross-border refugees and internally displaced persons (IDPs) on the move and into an environment of extreme vulnerability. More than four million Africans are currently of concern to the UN High Commission for Refugees (UNHCR).[20] What has become a culture of violence partly because of HIV and AIDS also helps to extend the chances of acquiring HIV and AIDS. This situation reflects the **structural nature of the HIV risk environment** for all populations caught up in complex humanitarian emergencies, which exists before the fighting has commenced and continues after it has ceased.

6. The Structural Risk Environment of HIV

Formally stated, the essential elements of the HIV risk environment are:

- Social disruption resulting in and contributing to sudden, widespread, and profound poverty. One of the first consequences of this situation is acute health and food insecurity suffered by family units.[21]
- Loss of income and employment leading to the sale of sex by often-illiterate young women, men, and children as a last recourse toward meeting their basic needs. Rapid

expansion of an unregulated informal sex industry occurring primarily among recent urban migrants who are "pushed" into an alien urban lifestyle by a social and economic breakdown in the rural areas including the loss of relatives to AIDS.

- Exploitative child-labor markets made possible by adult labor shortages and by orphaned "street urchins" who are reduced to shortened lives of violence, poverty, ignorance, and disease. Many of these are likely candidates for recruitment into armed gangs and rebel armies.[22]
- Migration of surviving adult breadwinners to find employment, often in mining camps and other HIV-endemic working environments, further jeopardizing family integrity and local economies.
- Refugees and IDPs entering lives of desperation that that foster sexual abuse, domestic violence, and gender inequality. Women are several times more likely to become HIV-infected in refugee and displacement camps than in the surrounding general population.[23]
- Decimated health-care infrastructures that become unable to maintain or create sexual and reproductive health services, blood-safety protocols, sterile equipment, STI/HIV counseling services, and facilities for the care of those with AIDS-related diseases.
- Reduced access to education extending into the next generation, including training in employment skills and HIV-prevention education made appropriate to local belief systems and capacities to act.

If left unchecked, these conditions promise a continuing downward spiral into human insecurity, political instability, and violence on a wider and wider scale. The structured nature of the HIV risk environment is also an important factor when military forces are deployed as combatants and as peacekeepers. HIV transmission is a two-way street. Troops may bring HIV home with them or they may transmit the infection to other soldiers and civilians in the field.[24] These are particular concerns for African ministries of defense, which are increasingly asked to provide international and regional peacekeepers in Africa and elsewhere.[25] African defense ministries also tend to rely heavily on the financial proceeds of United Nations peacekeeping missions, which are currently remitted at a monthly rate of approximately US$1,000 per peacekeeper.[26]

7. HIV/AIDS in Africa: A Critical Issue of Development and Security

Instead of resulting in a more unified, economically developed, and secure global community, the post-Cold War period has produced an increasingly bipolar world of have and have-not countries. It is likewise a multipolar have-not world of unresolved internal and regional

conflicts in which the distinction between combatants and non-combatants is often blurred. In an age of expanding globalization under these circumstances, environmental and public-health status has joined economic and geo-political self-interest as a critical measure not only of human development but also of national and international security.

At least three reasons explain this shift in paradigm:[27]

- Because of vastly improved physical communications, health conditions in any one part of the world can quickly and sometimes radically influence health conditions in any other part of the world. It should be recalled that as early as 1918 the so-called "Spanish" influenza pandemic, which killed more than 20 million people worldwide, began in the United States. The appearance in 1999 of Uganda's dangerous West Nile virus in the eastern U.S. and its rapid spread in all directions reinforce the point.
- Because the greatest challenges to public health predominate in the world's majority of impoverished countries that also contain many vital industrial resources and a majority of the world's population and potential markets, health-related threats to national economic and political fortunes now extend to all countries.
- Because epidemic health crises are among those that contribute to and result from armed conflicts in and between less-developed countries, international interventions including peacekeeping responses are now required that must inevitably involve developed countries as well.[28]

The UN Security Council confirmed these new realities at its opening session on January10, 2000 when, for the first time in Council history, it recognized a public-health problem, HIV/AIDS in Africa, as a threat to international peace and security.[29] Actions were immediately undertaken to strengthen HIV/AIDS prevention training in the UN Department of Peacekeeping Operations (DPKO) both at pre-deployment training sites and for peacekeepers already in the field.[30] In late April 2000 the U.S. National Security Council released a declassified version of its own first-ever intelligence estimate on the global impact of infectious diseases, describing the HIV/AIDS pandemic as a threat to U.S. national security.[31]

Barely 10 years ago, perceptions of HIV/AIDS varied between denial of its existence as a major health challenge, to acceptance of the virus as a deadly but demographically and geographically contained health crisis. In succeeding years, as HIV/AIDS became a true pandemic, it became more accurately viewed as a short-term socio-economic catastrophe and a long-term threat to global public health and development. Also during this period, high HIV/AIDS incidence and prevalence appeared regularly with political instability and armed conflict, revealing HIV/AIDS as a danger to national, regional, and world security.

Today this ominous dynamic is playing itself out in Sub-Saharan Africa, where the HIV prevalence rate is about eight times the global rate. By the late 1990s, this region was also embroiled in more armed struggles than any other. Directly and indirectly, violent conflict produced millions of deaths, more than three million refugees,[32] and additional numbers of IDPs. As previously noted, the surviving casualties of war were placed at an elevated risk of HIV infection and re-infection. There are even anecdotal reports that HIV was used as a weapon of "ethnic cleansing" in Central Africa.[33] By early 1999, fighting in Africa also included about 120,000 voluntary and conscripted child soldiers, many untrained and undisciplined, some themselves AIDS orphans, but all potential HIV carriers and AIDS victims.[34]

The close association of poverty, communicable disease, and war in Africa's complex humanitarian emergencies is well known to relief and development workers. It is only now receiving the serious attention of development policy specialists and defense analysts. Their concern is increasingly focused on the centrality of HIV/AIDS to both underdevelopment and insecurity, and on the urgent need for effective control over this deadly enemy. In the absence of efficient and cost-effective preventive and curative medicines, an essential follow-on to this concern is to identify and support agencies that are already in place and in a position to offer assistance on behalf of HIV prevention and AIDS care.

Among such groups are public and private, civil and military agencies that promote domestic and international cooperation in the struggle against HIV/AIDS, and these include the Civil-Military Alliance to Combat HIV and AIDS (CMA). In the discussions to follow, I would be happy to explain the activities of the Civil-Military Alliance in Africa.

8. Conclusions

In an era of emergent and newly re-emergent infectious diseases, HIV is distinguished by its pandemic scope, by its ability to evade vaccines and curative drugs, by its fatal consequences for virtually all of its victims, and by its capacity to wreak socio-economic and political havoc. Because of these factors, in 2000 World Bank President James Wolfensohn declared HIV/AIDS prevention and management to be one of the Bank's top priorities. Speaking at the unprecedented January 10, 2000 session of the UN Security Council, the first time a World Bank president addressed this body, Wolfensohn declared:

> ***We face a major developmental crisis, and more than that, a security crisis. For without economic and social hope we will not have peace, and AIDS surely undermines both. We need to break that vicious circle of AIDS, poverty, conflict, AIDS. For the truth is that not only does AIDS threaten stability, but when peace breaks down it fuels AIDS. Of the countries in Africa with the highest prevalence of AIDS, half are engaged in conflict of one kind or another.***[35]

During its 2002 financial year, the Bank committed US$1 billion in no-interest loans to a recently instituted Multi-Country HIV/AIDS Program for Africa (MAP).[36] For the same reasons that the Bank has acknowledged, bilateral donors, the Joint United Nations Programme on HIV/AIDS (UNAIDS), the DPKO, and other UN organizations have extended their own priority attention to HIV control in national military, international peacekeeping, and other uniformed services.[37]

At present, the most effective weapons against HIV lie in its prevention through changes in behavior that may vary considerably from culture to culture and is often grounded in deeply embedded attitudes, values, and beliefs. The enormity and complexity of the behavioral task at hand, compounded by the vaccine-eluding adaptability of the virus, mean that intensive inter-sectoral and international cooperation is essential to any widespread success in combating the HIV/AIDS pandemic. To enable such cooperation, local, national, and international networks of communication are needed that bring together the skills, knowledge, and resources of a wide range of individuals, groups, and institutions - public and private, civil and military.

In terms of policy imperatives to guide this cooperation, sectoral, inter-sectoral, and regional networks of governmental and non-governmental agencies must be empowered to advance the following goals:

- Promote **sustainable** STI/HIV/AIDS prevention education.
- Contain and reduce the incidence and prevalence of treatable STIs by providing widely available STI drugs and treatment services.

- Strongly encourage sexual abstinence in youth and also marital fidelity.
- Ensure the maximum consistent use of condoms through their widespread promotion and ready availability.
- Implement medically, ethically, and economically enlightened policies of HIV testing and counseling.
- Advance humane and human-resource conserving programs of care and support for those who are HIV-infected and AIDS-symptomatic.
- Prevent stigmatization and discrimination against all people living with HIV/AIDS.
- Protect all people, and especially women and children, from all forms of sexual abuse.
- Intensify long-term investment in social and economic development, including health care, education, food production,[38] and other forms of productive employment.[39]

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9. References and Endnotes

[1] Joint United Nations Programme on HIV/AIDS (UNAIDS) and World Health Organization (WHO), 2002, *AIDS Epidemic Update: December 2002*. Geneva: UNAIDS/WHO, pp. 3, 16, available at **www.unaids.org/epidemic_update/report_dec01#full**

[2]UNAIDS, WHO, and United Nations Children's Fund (UNICEF), 2002, *UNAIDS/WHO Epidemiological Fact Sheet 2002 Update*, available at **www.unaids.org/hivaidsinfo/statistics/fact_sheets/by_region_en.htm#africa**

[3]

Country	Actual Average Years (with AIDS)	Hypothetical Average Years (without AIDS)	Average Years of Life Expectancy Lost
Namibia	41.5	67.7	26.2
Botswana	48.9	73.0	24.1
South Africa	47.2	67.4	20.2
Zimbabwe	50.4	69.8	19.4
Kenya	51.0	69.8	18.8
Mozambique	39.6	56.7	17.1
Zambia	51.5	63.7	12.2
Cameroon	55.3	66.2	10.9
Tanzania	52.4	63.2	10.8
Malawi	48.1	57.3	9.2
Lesotho	59.2	68.3	9.1
C⊥te d'Ivoire	54.8	62.8	8.0
Nigeria	53.6	58.4	4.8

Source: United Nations Development Programme (UNDP), "The World at Six Billion," 12 October 1999, cited in International Crisis Group (ICG), June 19, 2001, *HIV/AIDS as a Security Issue*. Washington and Brussels: ICG, p. 5.

[4] Cited in National Intelligence Council (NIC), January 2000, *The Global Infectious Disease Threat and its Implications for the United States,* NIE 99-17D, Washington: NIC, p. 33. Gurr statistically defines low life expectancy at birth in terms of high infant mortality.

[5]

Country	Est. Total Active Forces 2001	Est. Forces with HIV/AIDS 2001	Est. Military Prev. Rate %	Men Aged 18-22 Years 2001	Men Aged 23-32 Years 2001
Angola	130,500	52,200-78,500	40-60	583,000	888,000
Congo	10,000	1,000-2,500	10-25	148,000	234,000
C⊥te d'Ivoire	10,000	1,390-2,780	10-20	842,000	1,212,000
D.R. Congo	81,400	32,560-48,840	40-60	2,510,000	3,620,000
Eritrea	171,900	17,190	10	210,000	319,000
Nigeria	78,500	7,850-15,700	10-20	6,693,000	10,056,000
Tanzania	27,000	4,050-8,100	15-30	1,600,000	2,380,000

Source: ibid., p. 35; UNAIDS UNESCO, and WHO estimates; and International Institute for Strategic Studies, *The Military Balance 2001-2002*, October 2001, Oxford: Oxford University Press.

[6] Project Ploughshares 2000, available at **www.ploughshares.ca/imagesarticles/ACR00/map.armed.conflict.99.pdf**

[7] Yeager, R., 2000, *AIDS Brief for Sectoral Planners and Managers: Military Sector*. Washington: U.S. Agency for International Development (USAID), pp. 1-2, available at **www.certi.org/cma**

[8] UNAIDS, May 1998, *AIDS and the Military*. UNAIDS Point of View. Geneva: UNAIDS.

[9] See, for example, Heinecken, L, "Strategic Implications of HIV/AIDS in South Africa," *Conflict, Security Development*, 1:1, pp. 109-114; and Price-Smith, A.T., 2002, *Pretoria's Shadow: The HIV/AIDS Pandemic and National Security in South Africa*. Health and Security Series, Special Report. Washington: Chemical and Biological Arms Control Institute (CBACI).

[10]Simulation by Bechu, Delcroix, and Guillaume, 1997, reported in Alban, A. and Guinness, L., 2000, *Socio-Economic Impact of HIV/AIDS in Africa*. Power Point ADF 2000. Geneva: UNAIDS, slide 13.

[11]Bonnemaison, E., January 2002, *AIDS and Security*. Arlington, VA: African Center for Strategic Studies (ACSS), p. 17.

[12] *HIV/AIDS: The Impact on Social and Economic Development*, Report of the Select Committee on International Development, British House of Commons, March 29, 2001, cited in ICG, *AIDS as a Security Issue*, p. 16.

[13]A recent report released by the International Labour Organization (ILO) predicts that, within the next decade, 200,000 African teachers, 9.4 percent of the 1999 teacher population, will die of AIDS-related symptoms. South Africa will lose 44,900 teachers to AIDS, Kenya 25,000, Zimbabwe 16,200, and Uganda 14,900. The immediate result will be precipitous declines in primary school attendance due to a lack of teachers and to the fact that children will drop out of school because of poverty, because many must stay at home to care for ailing relatives, and because still others will become AIDS orphans and/or patients. The World bank projects that by 2010 primary-school attendance will fall by 24 percent in Zimbabwe, 20

percent in Zambia, 14 percent in Kenya, and 12 percent in Uganda. Reported in *The Nation* (Nairobi, Kenya), August 12, 2002.

[14] See ICG, *AIDS as a Security Issue*, pp. 9-12, 16; Bonnemaison, *AIDS and Security*, p. 17; and Yeager, R.D. and Kingma, S.J., 2001, "HIV/AIDS: Destabilising National Security and the Multi-National Response," *International Review of the Armed Forces Medical Services*, 74:1, pp. 5-6, available at **www.certi.org/cma**

[15]World Bank, 1993, *World Development Report 1993: Investing in Health*, New York: Oxford University Press, p. 20.

[16] NIC, *The Global Infectious Disease Threat,* p. 29.

[17]World Bank estimate, reported in ibid.

[18] Eighty percent of Kenya's population is concentrated on the most arable 20 percent of land.

[19]In Southern Africa, both UNICEF and the International Federation of Red Cross and Red Crescent (IFRC) have recognized the synergistic effects of food and AIDS crises. During food crises, populations respond through coping mechanisms that include migration, dropping out of school, and - especially among women and girls - exchanging sex for food and cash. All of these survival strategies increase the risk of HIV infection and the creation of AIDS orphans who often overwhelm the food-providing capacities of their already overstressed extended families. HIV is further spread by truck drivers and outside food-aid workers who transact food for sex, and by lowered labor capacities within families which increase basic poverty and place the especially vulnerable (women, children, and the elderly) at additional risk of under-nutrition, malnutrition, and starvation. Drought and flooding themselves increase ill-health due to unsafe water sources and diarrhoea, which has its greatest impact on infants who are bottle-fed because their mothers have died or are too sick to breast feed. UN Office for the Coordination of Humanitarian Affairs, Integrated Regional Information Network (IRIN), "Plus News" (not necessarily reflecting the views of the United Nations), August 8 and September 4, 2002, available at **www.irinnews.org/aidsfp.asp**

[20]UNHCR, 2002, available at **www.unhcr.ch/**

[21]Among six countries in Southern Africa currently encountering severe food shortages, Zimbabwe is the hardest hit with nearly seven million people affected by September 2002. Reuters, (South Africa), September 16, 2002. UNAIDS has observed that "people are more likely to get (HIV) infected and re-infected in times of starvation, and people who are HIV-positive are more likely to face the degeneration of their immune system." Further, "statistical analyses show that HIV prevalence is correlated with falling calorie consumption, falling protein consumption and other variables conventionally associated with susceptibility to infectious disease." Quoted in *Panapress* (Zimbabwe), September 9, 2002.

[22] At the XIV International AIDS Conference in Barcelona convened during July 2002, the U.S. Agency for International Development (USAID), UNICEF, and UNAIDS estimated that by 2010, 20 million African children will be orphaned by AIDS, representing nearly 6 percent of all children in the region. *Wall Street Journal*, and *The Washington Post*, July 11, 2002.

[23]See UNAIDS, February 2001, *Population Mobility and AIDS*. UNAIDS Technical Update. Geneva: UNAIDS; and Lawday, A., 2002, *HIV and Conflict: A Double Emergency*. London: Save the Children UK.

[24] During the 1990s, Nigerian ground forces were deployed as the major component of a regional peacekeeping effort of the Economic Community of West African States Monitoring Group (ECOMOG) in Sierra Leone and Liberia. A medical study of this operation was conducted by Brigadier General A. Adefolalu, Commandant and Chief Consultant Surgeon at the Nigerian Army Medical Command School Headquarters in Lagos. From his preliminary findings Adefolalu concluded that, while HIV prevalence among Nigerian Army troops was less than 1 percent in 1989/90, by 1997 it had increased to 5 percent and

by 1999 to 10 percent. The years 1998 and 1999 also coincided with a return of troops from ECOMOG operational areas, and among them the HIV prevalence rate was 12 percent. The Adefolalu study also included a comparative analysis of HIV incidence and soldiers' individual lengths of stay in the Operation Sandstorm area of Sierra Leone. Incidence rates increased from 7 percent after one year, to 10 percent after two years, to more than 15 percent after three years of duty in the operational area, for a cumulative annual risk factor of about 2 percent. Adefolalu, A., October 1999, "HIV/AIDS as an Occupational Hazard to Soldiers - ECOMOG Experience," paper presented at the 3rd All Africa Congress of Armed Forces and Police Medical Services, Pretoria, South Africa, pp. 4, 5, 9, 10, 11. See also Yeager, R. and Kingma, S., February 2000, *A Civil-Military Response to the HIV/AIDS Epidemic in Nigeria*. Morgantown, WV and Rolle, Switzerland: The Civil-Military Alliance to Combat HIV and AIDS.

[25] In the case of the South African National Defence Force (SANDF), a potentially vital contributor of African peacekeeping contingents, Price-Smith notes that "it is apparent that the high and increasing prevalence of HIV in the SANDF will weaken its combat readiness [and] undercut its ability to support international peacekeeping operations . . . ." Price-Smith, *Pretoria's Shadow*, p. 22.

[26]United Nations Department of Peacekeeping Operations (DPKO), 2002, available at **www.un.org/depts/dpko/ques.htm%23shortages**

[27]See Daulaire, N., October 2, 1999, "U.S. National Security, Foreign Policy and Global Health," The John P. McGovern Award Lecture presented at the 1999 Annual Meeting of the Association of Academic Health Centers: Global Dimensions of Domestic Health Issues.

[28]Price-Smith predicts that, for South Africa, "infected [SANDF] forces will increasingly be unable to participate effectively in international peacekeeping operations, effectively shifting the burden of peacekeeping operations in Africa to non-African countries (including the United States)." Price-Smith, *Pretoria's Shadow*, loc.cit. The April 1999 "Blue Crane" multinational peacekeeping exercise of the Southern African Development Community (SADC) provides empirical evidence in support of this view. According to one study, almost 50 percent of all participating contingents was HIV-seropositive and 30 percent of South African participants was deemed medically unfit for deployment. Mills, G., "AIDS and the South African Military: Timeworn Cliché or Timebomb?" in Lange, M., ed., 2000, *HIV/AIDS: A Threat to the African Renaissance?* Konrad Adenauer Foundation Occasional Paper, p, 70.

[29] United Nations Security Council, *Press Release SC/6781*, January 10, 2000.

[30]At this time in Africa, UN peacekeeping and observer missions were deployed in the Central African Republic (MINURCA), the Democratic Republic of the Congo (MONUC), Sierra Leone (UNAMSIL), and Western Sahara (MINURSO). UN Department of Peacekeeping Operations, 2002, *Completed* and *Current Peacekeeping Missions*, August 25, 2002, available at **www.un.org/depts/dpko/co_mission/co_miss.htm**

[31]NIC, *The Global Infectious Disease Threat*. See also Ban, J., 2001, *Health, Security, and U.S. Global Leadership*. Health and Security Series, Special Report 2. Washington: Chemical and Biological Arms Control Institute (CBACI).

[32]U.S. Committee for Refugees December 1998 estimate, available at **www.refugees.org/world/statistics/wrs99_tableindex.htm**

[33] See Forsythe, S., 1999, "Infectious Disease and Global Security: Historical Lessons for the Age of AIDS," *AIDS Analysis Africa*, 10:3.

[34] Report of the Committee to Stop the Use of Child Soldiers, released in Maputo, Mozambique and cited in "Irin-Extra-162," a service of the UN's IRIN Humanitarian Information Unit (not necessarily reflecting the views of the United Nations), April 19, 1999, available at **www.reliefweb.int**

[35]World Bank Group, News Release 2000/172/S, Washington, January 10, 2000.

[36]World Bank Group, News Release 2002/197/HD, Washington, February 7, 2002.

[37]See, for example, the following. UNHCR, WHO, and UNAIDS, 1996, *Guidelines for HIV Interventions in Emergency Settings*. Geneva: UNHCR, WHO, UNAIDS, (currently under revision). UNAIDS, *AIDS and the Military*. Ruscavage D., and Purnell, P., May 1999, *HIV Prevention and Behaviour Change in International Military Populations*, a five-volume training curriculum developed by the Civil-Military Alliance to Combat HIV and AIDS in collaboration with the Henry M. Jackson Foundation for the Advancement of Military Medicine, with the support of the Ford Foundation. New York: DPKO, first edition. Yeager, R., February 2000, *Aide-M9moires: Policy Guidelines on HIV Prevention and Control for UN Military Planners and Commanders*. New York: DPKO.

[38]See UN Food and Agriculture Organization (FAO) and UNAIDS, December 1999, *Sustainable Agricultural/Rural Development and Vulnerability to the AIDS Epidemic*. Geneva: UNAIDS.

[39]See World Bank, 2000, *Intensifying Action Against HIV/AIDS in Africa: Responding to a Development Crisis*. Washington: The World Bank.