
Too Poor *for* Peace?

Global Poverty,
Conflict, and Security
in the 21st Century

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2

Poverty Breeds Insecurity

SUSAN E. RICE

FEW AMERICAN LEADERS today evince much interest in poverty—either domestic or international. Contrast our current obsession with flag burning, the estate tax, immigration, or gay marriage with the animating themes of the 1960s. Then, John and Robert Kennedy, Lyndon Johnson, Martin Luther King Jr., and many others summoned our national energy to wage a “War on Poverty” and build a “Great Society.” Our media brought us searing images of destitution from Appalachia to the Mississippi Delta to the South Bronx. Our president insisted in global forums that “political sovereignty is but a mockery without the means of meeting poverty and illiteracy and disease. Self-determination is but a slogan if the future holds no hope.”¹

With domestic poverty less visible but no less real and global poverty dismissed by many as the inevitable fate of the black, brown, and yellow wretched of the earth, the majority of Americans seem, variously, tired or ignorant of, or indifferent to, a scourge that kills millions across our planet every year. Yet, in Britain, Labour and Conservative party leaders compete on the basis of their commitment to fight global poverty. Public awareness of this issue in Britain would confound most Americans. Perhaps Britons have been so relentlessly bombarded by Bono, Bob Geldof, the BBC, Gordon Brown, and Tony Blair that many have come to recognize the linkages between their own security and prosperity and that of peoples in remote corners of the planet. Americans do not yet, and it is past time that they should.

Poverty and Insecurity

Grinding poverty is the lot of half the world's population. Three billion human beings subsist on less than \$2 per day—\$730 a year—the equivalent of seven pairs of quality sneakers in the United States. In the developing world, poverty is not just a sentence to misery; it can often be a sentence to death. Hunger, malnutrition, and easily preventable diseases like diarrhea, respiratory infections, malaria, and cholera thrive in fetid slums that have no basic sewerage, clean water, or electricity, while desolate rural areas lack basic health infrastructure to provide prenatal care or lifesaving vaccines. According to UNICEF, 10.5 million children *under five years old* die *each year* from preventable illnesses—30,000 *each day*—ten times the number who perished in the attacks of September 11, 2001. The vast majority of these children succumb, in effect, to poverty. Children living in the poorest 20 percent of households are two to three times more likely to die than those living in the richest 20 percent in the same countries.²

Basic intuition suggests that such pervasive poverty and grotesque disparities breed resentment, hostility, and insecurity. Nevertheless, a significant amount of punditry and even academic effort has been devoted to discrediting the notion that poverty has any security consequence for Americans.³ The most frequently invoked canards draw on oversimplified truisms, such as poverty does not cause terrorism, because the 9/11 hijackers were mainly middle-class, educated Saudis; if poor people were prone to be terrorists, then Africa and not the Middle East would be the hotbed of terrorism; and poor people are too busy just trying to survive to do anyone harm. All these statements are superficial and flawed, but assume for a moment they are true. Assume that an individual's economic impoverishment has nothing to do with his or her decisions about whether or not to engage in acts of violence. Would that be a rational basis for concluding that global poverty has no security significance to the United States? Some would have us believe so, but they would be mistaken.

For even if poverty *at the individual level* were of no security significance to the United States and other developed countries (dubious though that proposition is), poverty is highly significant *at the country level*.⁴ Poor states typically fail to meet the basic needs of many of their citizens—for food, clean water, health care, or education. Where human needs are great and service gaps persist, people tend to accept help from almost anyone willing to provide it. Sometimes, help comes from multilateral or bilateral aid agencies.

Sometimes, it comes from secular nongovernmental organizations (NGOs). But in Africa and South Asia, food, clothing, schools, and health care are often provided by foreign-funded religious NGOs, Christian missionaries or mosques—sometimes with theological, even extremist, strings attached. These same poor states that cannot fulfill their core responsibilities to provide security or sustenance to their own people may also fail to exercise effective sovereign control over their territory. Poor states often lack the legal, police, intelligence, or security sector capacity to control their borders and remote areas and to prevent plundering of their natural resources.

Poor states can be high-risk zones that in a rapidly globalizing world may eventually, often indirectly, pose significant risks to faraway countries. How? People, goods, funds, and information now traverse the planet with lightning speed. More than 2 million travelers cross an international border each day. Between 1994 and 2006, air traffic volume is estimated to have nearly doubled from 2.1 trillion passenger-kilometers flown to 3.95 trillion passenger-kilometers.⁵ Since 1970, total seaborne trade is estimated to have almost tripled.⁶ These factors combine to increase Americans' exposure to distant phenomena—transnational security threats that can arise from and spread to anywhere on the planet.

These threats could take various forms: a mutated avian flu virus that jumps from poultry to humans in Cambodia or Burkina Faso; a U.S. expatriate who unwittingly contracts Marburg virus in Angola and returns to Houston on an oil company charter flight; a terrorist cell that attacks a U.S. Navy vessel in Yemen or Somalia; the theft of biological or nuclear materials from poorly secured facilities in the former Soviet Union; narcotics traffickers in Tajikistan and criminal syndicates from Nigeria; or, over the longer term, flooding and other effects of global warming exacerbated by extensive deforestation in the Amazon and Congo River basins. Weak states such as these can function *passively* as potential incubators or conveyor belts for transnational threats. Dangerous spillovers from weak states could result in major damage to the U.S. economy. In a worst-case scenario, such as a deadly pandemic, they could result in the loss of hundreds of thousands—if not millions—of American lives.

Which States Are Weak, and Why?

The world's weakest states are typically poor states that lack the capacity to fulfill essential government functions, chiefly (1) to secure their population

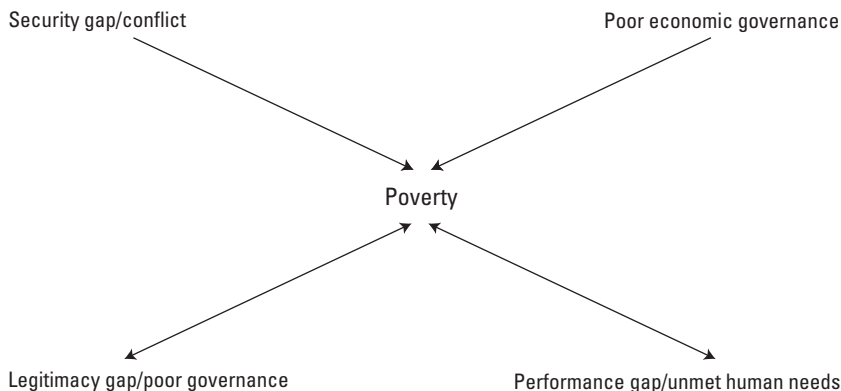
from violent conflict, (2) to competently meet the basic human needs of their population (that is, food, health, education), (3) to govern legitimately and effectively with the acceptance of a majority of their population, and (4) to foster sustainable and equitable economic growth. Descriptions of the universe of weak states vary. The British Department for International Development, the Fund for Peace, the World Bank, and others have defined substantially overlapping but differing sets of “weak,” “fragile,” “failing,” or “low-income . . . under stress” states. In some instances, the countries are not listed publicly or the rationale for their inclusion is left unstated to avoid political controversy.

In 2006, Susan Rice and Stewart Patrick initiated a collaborative project called the “Weak States Threat Matrix.” We have begun identifying the world’s weakest states based on clear-cut and transparent criteria. We will subsequently assess the nature and significance of the transnational security threats that can or do emanate from each of these countries. Our purpose is to provide policymakers with an analytical basis for differentiating among the large number of weak states and for prioritizing the allocation of scarce attention and resources.

The drivers of state weakness vary enormously from state to state. Poverty fundamentally erodes state capacity—by fueling conflict, sapping human capital, by hollowing out or impeding the development of effective state institutions and markets, and by creating especially conducive environments for corrupt governance. Though poverty underlies state weakness, weakness is also a consequence of other capacity deficits: a lack of political legitimacy, a lack of competence in economic governance and in the adequate provision of essential services to the population, and a lack of security as evidenced by conflict and instability. Each of these capacity gaps can, in turn, exacerbate poverty (figure 2-1).

Susan Rice and Stewart Patrick’s research collaboration identifies the weakest states as those that suffer from the most significant deficits in security, economic performance, social welfare, and political legitimacy.

A preliminary analysis shows that the preponderance of the world’s weakest states is found in Africa, Central Asia, and South Asia (figure 2-2). They include Afghanistan, Algeria, Angola, Bangladesh, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Colombia, Comoros, Democratic Republic of the Congo, Côte d’Ivoire, Djibouti, East Timor, Equatorial Guinea, Eritrea, Ethiopia, Gambia, Guatemala, Guinea, Guinea-Bissau, Haiti, India, Indonesia, Iraq, Kenya, Laos, Liberia, Madagascar,

Figure 2-1. State of Capacity Deficits

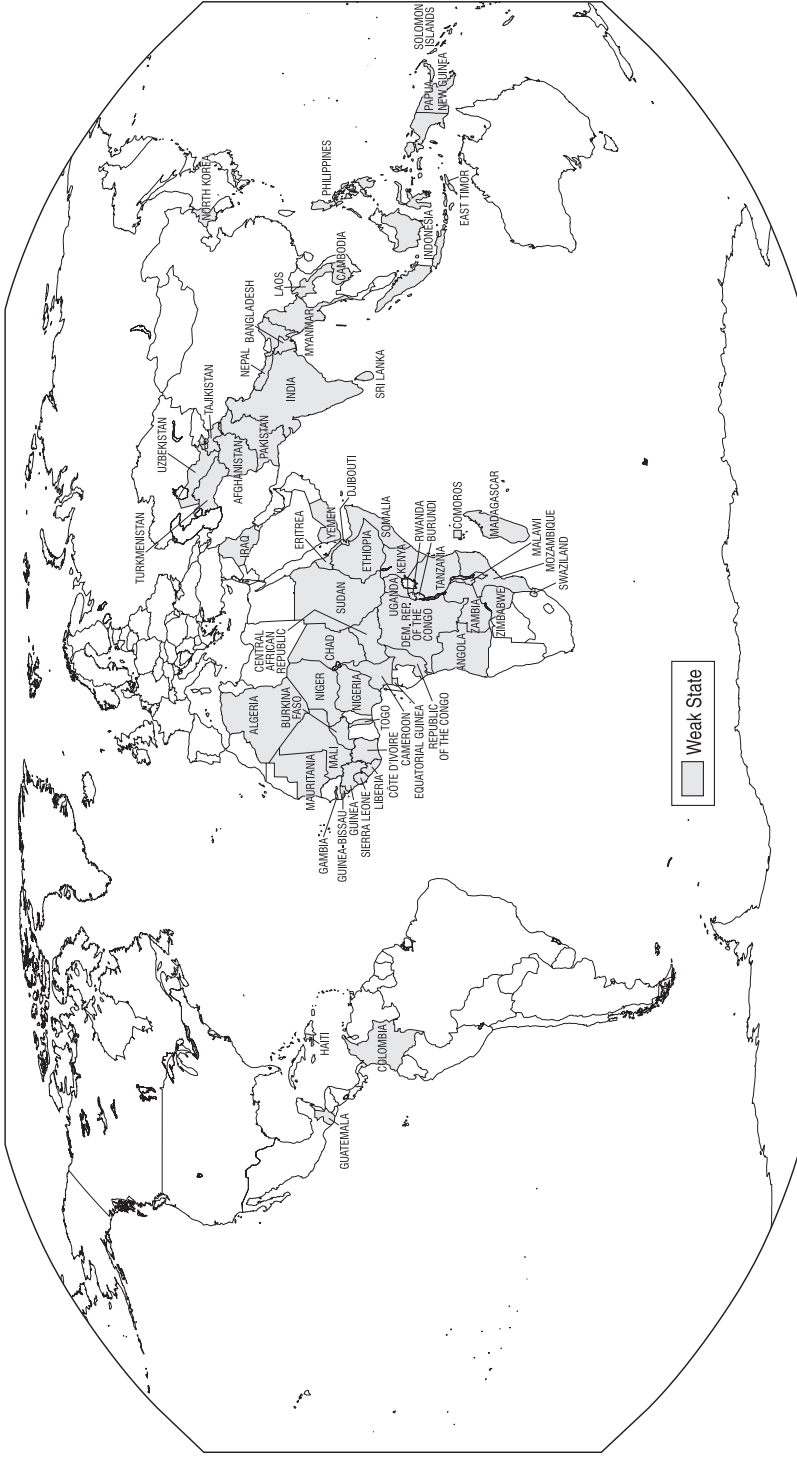
Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Nigeria, North Korea, Pakistan, Papua New Guinea, Philippines, Republic of Congo, Rwanda, Sierra Leone, Solomon Islands, Somalia, Sri Lanka, Sudan, Swaziland, Tajikistan, Tanzania, Togo, Turkmenistan, Uganda, Uzbekistan, Yemen, Zambia, and Zimbabwe.

There is a second tier of states that also warrant close scrutiny, because they may still serve as significant breeding grounds for transnational security threats. Among these are Cuba, Egypt, and Iran.

Weak states can be classified into four categories: autocracies; conflict countries; countries transitioning from conflict or autocracy; and fragile, young democracies that appear to be on a path to sustainable security, if not yet broad-based development. These classifications are admittedly fluid, and some states may not fall squarely into any single category but rather straddle the gray areas between or among them. Nonetheless, the objective of U.S. and international policy should be to help weak states move from conflict and autocracy, through postconflict or postautocratic transitional periods, to the more stable stage of fragile, functioning democracy (figure 2-3).

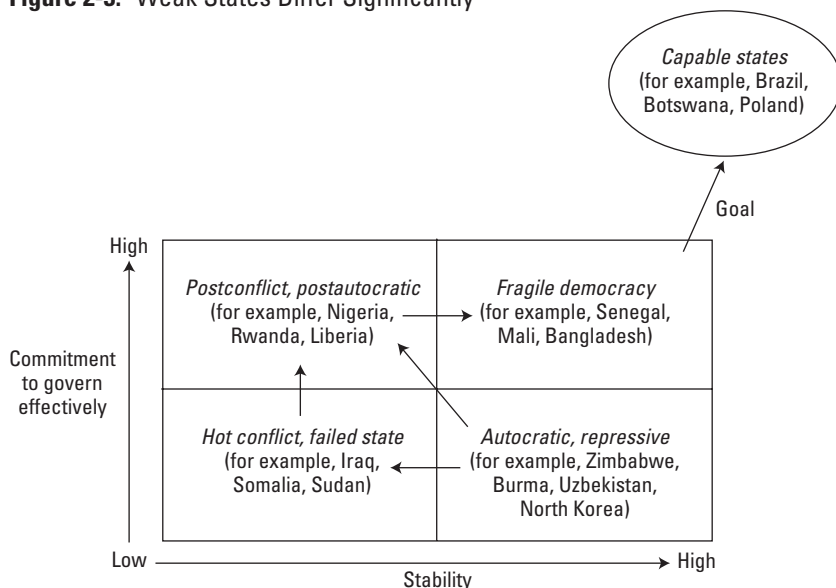
The ultimate policy goal should be to build the ranks of capable states—such as Botswana, Chile, Mauritius, Romania, Poland, and Thailand—that attain at least middle-income status, consolidate democracy, and achieve lasting peace (for at least a generation), while contributing constructively to the international system.

Figure 2-2. Map of Weak States



Source: Based on author's rankings of weak states.

Figure 2-3. Weak States Differ Significantly



Transnational “Spillovers” from Weak States

Weak states hobbled by poverty and, often, by poor governance, pose the most immediate and deadly risks to their own citizens. These dangers can include violence, corruption, and governmental neglect or abuse. Yet, in a globalizing world that must contend increasingly with transnational security threats even more often than state-based threats, the consequences of state weakness can and do spill over borders into neighboring countries and even to far-flung regions of the world.

Conflict

Among the most significant consequences of country-level poverty is heightened risk of conflict. Poor countries are much more likely than rich countries to experience civil war. Recent statistical research on poverty and conflict suggests that for a country at the 50th percentile for income (like Iran today), the risk of experiencing civil conflict within five years is 7–11 percent; for countries at the 10th percentile (like Ghana or Uganda today), the risk rises to 15–18 percent.⁷ A wide range of empirical research finds that per capita

GDP has an important, statistically significant relationship with the likelihood of civil war outbreak.⁸ The link between poverty and conflict is a rare area of emerging scholarly consensus and probably the most robust finding in the econometric literature on conflict.⁹

Put simply, increasing a country's GDP—without changing other important factors such as the degree of democratization or number of ethnic groups—reduces the chance of civil war in that country. An otherwise “average” country with \$250 GDP per capita has a 15 percent risk of experiencing a civil war in the next five years, whereas for a country with per capita GDP of \$5,000, the risk of civil war drops to less than 1 percent over the same period.¹⁰ Other potential poverty-related conflict risk factors include shrinking economic growth, low levels of education, and high child mortality rates.

The case of Sierra Leone is illustrative. Just before civil war broke out there in March 1991, economic growth was negative and real GDP per capita had dropped more than 35 percent from 1970s levels.¹¹ Sierra Leone in 1990 ranked last on the UN Human Development Index. Youth unemployment had soared and the education system, once among the best in the region, had collapsed with the economic decline of the 1980s. Lacking opportunities to pursue responsible employment, disaffected youth were more easily drawn to rebel activity as a means of gaining power and income looted from civilians and the country's rich alluvial diamond fields.¹²

When conflict breaks out, poverty can help perpetuate the fighting, and once a conflict has ended, poverty may also increase the likelihood that it will recur.¹³ The resumption of violence in East Timor in 2006, which displaced an estimated 150,000, underscores this risk. Many experts lauded East Timor as reliably on the path to lasting peace, but they failed to weigh the security consequences of its persistent poverty. Seven years into the postconflict period, poverty jumped following the departure of the large UN presence four years ago, which had artificially boosted economic activity. Despite substantial international aid inflows, relatively little was devoted to improving basic health services or stimulating job-creating investment. East Timor's child mortality rate remains among the highest in the world, and more than 50 percent of young men and many veterans have no jobs, heating a cauldron of disaffected youth.¹⁴

Civil wars tend to be long, and their resolution often falters. By one estimate, civil wars last an average of sixteen years.¹⁵ One-third of those that end later reignite.¹⁶ Thus, poor countries can fall into a vicious cycle termed the “conflict trap.”¹⁷ This trap can be broken or avoided when economic performance improves in postconflict countries. Mozambique exemplifies the

alternative path. In the years since the war ended in 1994, Mozambique, one of the world's poorest nations, has achieved average annual GDP growth of 8.1 percent, according to the World Bank. Gross primary school enrollment jumped from 60 percent in 1995 to roughly full enrollment for the period 2003–5. Sustained economic growth and investments in social services contributed to a 16 percent reduction in poverty from 1997 to 2003.¹⁸ More than a decade after the cessation of conflict, Mozambique appears to be among the more stable young democracies in Southern Africa.

When conflicts ignite, they function as the ultimate killer of innocents. They also can be sinkholes that destabilize entire regions, as did Liberia and Congo, and require costly international peacekeeping and humanitarian interventions. At the same time, conflict zones provide the optimal anarchic environment for transnational predators: international criminals, as in Haiti and Moldova; drug producers and smugglers, as in Afghanistan, Colombia, and Tajikistan; weapons traffickers, as in Somalia and West Africa; international terrorists, as in Bosnia, Iraq, and Sudan; and deadly pathogens, as in Angola, Congo, and Uganda.

Terrorism

Most dangerous are those conflict zones that collapse into fully failed states, which lose the ability to control much of their territory. Afghanistan and, most recently, Somalia are classic failed states where anarchy facilitated the ascendancy of Islamic extremists who gained their foothold by defeating warlords and providing essential social services to bereft populations. Before the June 2006 takeover by the radical wing of the Islamic Courts Union, Somalia served as an operational base for al Qaeda–linked terrorists. The perpetrators of “Black Hawk Down” are believed to have received arms and training from al Qaeda for the 1993 attack on U.S. forces. Several al Qaeda operatives implicated in the East Africa embassy bombings have taken refuge in Somalia. Arms smuggled from Somalia were used in the 2002 Mombasa attacks. More recently, terrorists with ties to al Qaeda killed a series of Western civilians in Somaliland, Mogadishu, and other parts of the country.¹⁹

Yet weak states need not collapse into conflict or fail before they can be exploited by terrorist groups. Al Qaeda has preyed on the territory, cash crops, natural resources, and financial institutions of low-income but comparatively more stable states from Senegal to Yemen. Militants exploited poor immigration, security, and financial controls to plan and carry out terrorist operations in Kenya, Tanzania, and Indonesia. It is estimated that al Qaeda and its affiliates operate in approximately sixty countries worldwide.²⁰

Mali is an example of a well-governed country that suffers from capacity gaps that extremist groups have been able to exploit. Ninety percent Muslim and a multiparty democracy since 1992, Mali cooperates fully with the United States on counterterrorism matters. It remains, however, an extremely poor state with gross national income per capita of \$380.²¹ An estimated 72 percent of its almost 12 million people live on less than \$1 per day, and income inequality is high. Mali's human development ranked the fourth lowest in the world in 2005.²² Landlocked and bordering seven states—Mauritania, Algeria, Côte d'Ivoire, Guinea, Senegal, Burkina Faso, and Niger—Mali is roughly the size of Texas plus California. Malian authorities have struggled, often without success, to prevent al-Qaeda-linked terrorists of the Algerian-based Salafist Group for Preaching and Combat (GSPC) from operating on their territory. Mali's poorly controlled borders, nomadic populations, vast uninhabited spaces, and underresourced security services render it an attractive recruiting, training, and hiding place for the GSPC. Its leader, Amari Saifi (known as "El Para") and his associates evaded capture in the Northern Malian desert for six months before releasing thirty-two European hostages seized in southern Algeria. The GSPC also utilizes Mali's centuries-old trans-Saharan Tuareg trading routes to smuggle cigarettes and other contraband to raise cash for operations.²³

Mali's poverty renders it vulnerable to terrorist infiltration in another critical way. Like several poor, weak states with large Muslim populations (for example, Pakistan, Bangladesh, Somalia, and Nigeria), Mali's government lacks the resources and institutional capacity to provide adequately for its citizens. Large numbers do not have enough to eat or have access to potable water, basic medical care, or educational opportunities for their children. In Mali, as elsewhere, the social services gap is being filled by outsiders, often Wahhabist charities and mosques funded from the Gulf States. As Abass Haidara, imam of the historic Sankore Mosque in Timbuktu, explained: Wahhabists are setting up mosques all over northern Mali, often right next door to the indigenous Sufi mosques. They offer what the Sufis cannot—food, clothing, medical care, schools, and the opportunity to send young men to Saudi Arabia for religious training. When those newly minted Wahhabist clerics return, they draw additional adherents to their extremist ideology. The Wahhabists, Haidara says, take the long view—over generations—as they slowly work to drive the traditional mosques out of existence.²⁴

There is recent evidence that al Qaeda strategists deliberately target weak, poor states. The Combating Terrorism Center of the U.S. Military Academy at West Point calls *The Management of Savagery: The Most Critical Stage*

through *Which the Umma Will Pass* “one of the most recent and significant” jihadi strategic texts. In it, Abu Bakr Naji outlines successive stages in establishing an Islamic caliphate. A key stage, “the management of savagery,” aims to bring order, security, and Islamic sharia rule to formerly chaotic states, such as pre-Taliban Afghanistan, so they can form the foundation of an eventual caliphate. Naji writes: “The states initially designated for inclusion in the group of priority regions are the regions of the following states: Jordan, the countries of the Maghrib, Nigeria, Pakistan, and the countries of the Haramayn and the Yemen.” The “common links between states in which the regions of savagery can come into being” include “the weakness of the ruling regime and the weakness of the centralization of its power in the peripheries of the borders of its state and sometimes in internal regions, particularly those that are over-crowded” and “the presence of jihadi, Islamic expansion being propagated in these regions.”²⁵

Similarly, a 2006 article by Abu Azzam al-Ansari, titled “Al Qaeda Moving to Africa,” in *Sada al-Jihad*, an online jihadi magazine, cites the weakness of Africa’s states and pervasive corruption as an advantage, making it an easier place to operate than “in other countries which have effective security, intelligence and military capacities.” The same author also writes that Africa’s poverty and social conditions “will enable the mujahadeen to provide some finance and welfare, thus, posting there some of their influential operatives.”²⁶

Disease

Poverty increases the risk of human exposure to pathogens and severely constrains poor countries’ capacity to prevent, detect, and treat deadly disease outbreaks or to contain them before they spread abroad. The incidence of deaths due to infectious disease is rising. Twice the number of Americans (170,000) died of infectious diseases in 2000 as in 1980.²⁷ Of the roughly thirty new infectious diseases that have emerged globally over the past three decades, many—such as SARS, West Nile virus, HIV/AIDS, hepatitis C, and H5N1 avian flu virus—originated in developing countries that had rudimentary disease surveillance capability.

Growing population pressure impels people seeking arable land, firewood, and water to press more deeply into previously uninhabited areas. The risk of human exposure to zoonotic diseases consequently increases. Poor families in developing countries also often live in close proximity to their livestock, which provide sustenance and income. Chickens and pigs have proved the source of deadly diseases that jump from animal to human. H5N1 avian flu

is the most alarming recent example. Should that virus mutate into a form easily transmissible from human to human, the threat of a global pandemic becomes imminent. With mortality rates currently exceeding 50 percent, if a mutated virus retains the virulence of current strains, it could kill tens of millions worldwide. As of July 4, 2006, the H5N1 virus had been confirmed in humans or animals in at least forty-eight countries, including some of the most impoverished, remote, and poorly governed parts of Asia and Africa (for example, Burkina Faso, Cambodia, Côte d'Ivoire, Indonesia, Laos, Myanmar, Nigeria, Niger, Sudan, and Vietnam), adding to fears that the virus could mutate as a result of contact between animals and humans.²⁸ At the same time, if a deadly mutation first occurs in a country with a weak health care infrastructure, the odds of detecting and swiftly containing the outbreak are reduced.

The Democratic Republic of the Congo (DRC) is one of several Central African epicenters of disease. Congo experienced its first known outbreak of deadly hemorrhagic Ebola fever, which the World Health Organization characterizes as “one of the most virulent diseases known to mankind,” in 1976. The fatality rate was roughly 90 percent. More recent outbreaks in 1995, 2002, and 2005 killed at least 75 percent of their victims.²⁹ The Ebola strain that first emerged in the DRC spread to Gabon, Uganda, and South Africa. It has the potential to travel anywhere in the world because it is highly transmissible by contact with bodily fluids (including blood, sweat, and saliva) and has an incubation period of two to twenty-one days.³⁰

Congo is uniquely ill equipped to detect, treat, and contain disease. Its population is extremely vulnerable (with 71 percent malnourished in 2000–2, up from 32 percent a decade earlier and roughly 20 percent under-five mortality).³¹ The DRC's per capita expenditure on the health sector is the lowest of any country in the world (\$14 per person in terms of purchasing power parity).³² The continuing conflict in Eastern Congo and the presence of approximately 17,500 UN peacekeepers increases the possibility that foreign military, police, or aid workers could contract infectious agents and transport them abroad. For instance, a June 2006 suspected outbreak of pneumonic plague in the violent Ituri region, where UN forces have been active, sickened 100 and killed almost 20 percent of its victims.³³ If a disease is detected early enough, antibiotics can treat the disease, which is contracted through contact with infected rodents or fleas or by the airborne transmission of bacteria. Unfortunately, the DRC's poor surveillance and control mechanisms make early treatment less likely, particularly because conflict impedes access for international health workers.

Although Ebola and the similar Marburg virus have not yet spread beyond Africa, other new or reemergent infectious diseases have. These include polio, which was almost eradicated before spreading to Indonesia from northern Nigeria in 2004–05. The occasionally deadly West Nile virus, a mosquito-borne disease that originated in Uganda, reached New York City in 1999 presumably by aircraft, and it is now found throughout the continental United States. Rift Valley fever spread from East Africa to Yemen and Saudi Arabia in 2000, infecting hundreds and killing 11 percent of the people it infected in Yemen, and 19 percent of infected people in Saudi Arabia.³⁴ Lassa hemorrhagic fever, endemic to West Africa, particularly the Mano River region, infects an estimated 100,000 to 300,000 people each year with flu-like symptoms.³⁵ Fatality rates can reach 15 to 20 percent, especially among hospitalized patients, where human-to-human transmission can occur via blood or human secretions. There have been several fatal cases among UN peacekeepers deployed to bring stability to Liberia and Sierra Leone.³⁶ An estimated 20 cases of Lassa have been reported outside of Africa, including one American businessman who perished upon returning to the United States. Before he died, he came into direct contact with 188 people in the United States while his fever was believed to be contagious. None of them died.³⁷

Inadequate health care infrastructure hampers disease detection and containment not only in Africa, but also in the poorest, weakest states around the world. Bangladesh, which remains poor, has made important gains in some aspects of its social infrastructure but still spends relatively little per capita on health (about \$68 in terms of purchasing power parity as of 2003)—the same amount as Burkina Faso and less than North Korea.³⁸ Its lack of capacity in the health sector may have contributed to Bangladesh's difficulty in investigating five outbreaks of the Nipah virus since 2001, which first appeared in Malaysia and has resulted in fatality rates as high as 75 percent. The virus is not known to have spread from Bangladesh, though it is fairly contagious and has a relatively long incubation period.

In Latin America and the Caribbean, mosquito-borne dengue fever, including the deadly hemorrhagic variety, is resurgent, afflicting locals and foreign travelers in growing numbers. Dengue's global distribution and impact on humans is now deemed comparable to malaria by the Centers for Disease Control and Prevention, except in Africa. Dengue is believed to have first appeared in the Western Hemisphere in Brazil via mosquito-infested ships from South East Asia in the 1990s. Urbanization, population growth, and a deteriorating public health infrastructure have increased the prevalence of dengue in Central and South America.³⁹ The *Aedes* mosquito, which carries the

virus, is now common in parts of the U.S. South and Southwest. As the U.S. climate warms, dengue will likely spread further within the United States.

Environmental Degradation

The relationship between poverty, state weakness, and environmental degradation is complex and mutually reinforcing. Population growth is fastest in the developing world. Poverty can prompt families to produce more children to counter high infant mortality rates and to increase income. Population pressure, in turn, heightens the demand for arable land for subsistence and cash crops as well as for energy. Energy consumption in the poorest countries often takes the form of wood burning. The demand for arable land combines with firewood gathering and logging for precious hardwoods to accelerate deforestation. Weak states typically lack the will and the means to prevent peasants, farmers, or even foreign logging operations from chopping down forests and woodlands. Moreover, in war zones, like Liberia and Cambodia, precious hardwoods have been logged and sold in large quantities to fund conflict. The result is the loss of tree cover at alarming rates in many of the poorest states from Nigeria to the Congo River basin to Laos. According to the Food and Agriculture Organization, deforestation is costing the world an estimated 13 million hectares of forest (the rough equivalent of Panama or South Carolina) each year, mostly in South America and Africa.⁴⁰

Haiti and Madagascar dramatize the relationship between poverty and environmental degradation. With a per capita GDP of \$361 and an estimated 65 percent of its population living below the national poverty line, Haiti is the poorest country in the Western Hemisphere.⁴¹ One of the few sources of fuel there is firewood, and cutting down trees to make charcoal provides a rare source of income. Peasant farmers exacerbate the problem, as they clear land to try to feed their families. As a result, in stark contrast to the more affluent Dominican Republic next door, Haiti is now 90 percent deforested; 30 million trees are cut down each year.⁴² The tree cover in Haiti has plummeted from approximately 60 percent in 1923 to less than 2 percent at present.⁴³ The 2004 floods that resulted in mudslides that killed an estimated 3,000 Haitians after Tropical Storm Jeanne indicate the deadly short-term consequences of extreme deforestation. Though most of this logging is not legal, the fragile Haitian government does not have the resources to enforce its own laws.

In even poorer Madagascar, the practice of “tavy,” or slash-and-burn agriculture, by subsistence farmers and cattle herders has contributed to the loss of 80 percent of the country’s tropical rainforest cover. Erosion causes Madagascar’s rivers to run red into the Indian Ocean.⁴⁴ Logging, often illegal, of

valuable Malagasy ebony and rosewood intensifies deforestation. Between 1990 and 2005, Madagascar lost 14.3 percent of its forest and woodland habitat.⁴⁵ This rapid loss, now estimated to be 1 percent of remaining forests per year, is especially worrying, because the country is a tremendous source of global biodiversity. The island contains at least 13,000 different species of plant, of which 89 percent are endemic to it. A comparably high rate of its mammals, reptiles, and amphibians is unique to the island, and scientists are still discovering new species there.⁴⁶

The adverse global consequences of deforestation are multiple and serious. Erosion exacerbates flooding and causes the silting of waterways. Soil degradation reduces agricultural yields and thus increases hunger. Precious biodiversity is irreparably lost. Forests, which contain half the world's biodiversity, hold the key to curing many deadly diseases. For example, Madagascar's native, endangered rosy periwinkle plant is used to treat leukemia and Hodgkin's disease.⁴⁷ Deforestation leads to drought and disrupts the hydrologic cycle in tropical rainforests by reducing the evaporative cooling facilitated by moist canopy cover.

Finally, deforestation accelerates climate change. Though fossil fuel burning in developed and emerging countries accounts for the majority of global carbon emissions (totaling an estimated 6 billion metric tons a year), according to the U.S. National Aeronautics and Space Administration, deforestation is responsible for more than 25 percent, or 1.6 billion metric tons of carbon released annually into the atmosphere.⁴⁸ Forests are "carbon sinks" that store carbon from the atmosphere; their loss reduces global carbon absorption capacity. Cut and rotting trees or stumps, moreover, release additional carbon that joins with oxygen to become carbon dioxide (CO₂). Burning of trees for fuel and other purposes compounds CO₂ emissions. As global temperatures rise because of these atmospheric changes, coastal areas become more vulnerable to flooding, lakes dry up, and some landlocked areas grow more prone to severe drought, which, in turn, increases the risk of instability and intensifies poverty. Indigenous species get driven from their natural habitat, coral reefs become bleached, and disease vectors change, bringing once tropical illnesses into temperate zones.

Conclusion

Environmental degradation is but one of the several serious consequences of persistent global poverty and weak state capacity. The fact that the impact of poverty and weak states on U.S. and global security is not simple, linear, or

necessarily swift does not make the linkage any less real or significant. Efforts to illuminate the complex relationship between poverty and insecurity may be unwelcome to those who want assurance that global poverty and U.S. national security are unrelated. Yet we ignore or obscure the implications of global poverty for global security at our peril.

Notes

1. John F. Kennedy, "Address before the General Assembly of the United Nations," September 25, 1961.

2. United Nations Children's Fund, *State of the World's Children 2006: Excluded and Invisible* (New York: United Nations, 2006), 19–20.

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