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Governance and Food Security in an Age of Globalization

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Foreword

Whose responsibility is it to assure food security in an age of globalization? Is improved governance at the international level our greatest need, or are governance deficits most severe at the national level? When national governments lag in assuring food security for their own citizens, can outsiders help make up the resulting governance deficit? What role can bilateral donors and international financial institutions, such as the World Bank, play? Is it possible for NGOs to step in to do the job?

These and related pressing questions are addressed in this discussion paper by Robert Paarlberg. He argues that the problems of hunger and food insecurity urgently require a national, not global focus. Many national governments in developing countries still do not provide essential public goods, such as civil peace, rule of law, transport infrastructure, clean water, electrical power, and public research to generate new agricultural productivity—essential ingredients in the effort to boost incomes. For tackling hunger, the weak performance of nation-states remains most critical—and in most critical need of improvement. According to Paarlberg, the governance challenge as far as food security is concerned is to persuade sovereign governments to provide the necessary public goods that would ensure access to adequate food.

This paper was commissioned for IFPRI's 2020 Vision Initiative conference, "Sustainable Food Security for All by 2020," held on September 4–6, 2001, in Bonn, Germany. A summary version was presented at the session on "Whose Responsibility Is It To End Hunger?" The presentation sparked a long overdue discussion on who are the key actors in the effort to eliminate hunger, how their role has changed over time, and what their responsibilities are likely to be in the future. I hope that this paper contributes to continuing this much needed debate, so that we can work more effectively to assure a food-secure world.

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Director General, IFPRI

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1. Introduction

Globalization is said to be the "key governance challenge" for the twenty-first century (Reinicke and Deng 2000, vii). The forces of globalization, which include the spread of international markets for goods, services, capital, and labor and the emergence of new institutions and network organizations that operate easily across borders, are said to diminish the capacity of sovereign nation-states to govern their own affairs. According to a report commissioned for heads of government prior to the 2000 U.N. Millennium Assembly, "One of the chief characteristics of these globalizing dynamics is that they overwhelm the attempts of states to manage globalization alone or control its effects" (Smith and Naim 2000, 11).

A conclusion sometimes drawn is that governance activities must now be shifted to a level above the nation-state, into the jurisdiction of more cosmopolitan or global governance institutions (Held 1996). Others argue for a shift in the opposite direction, moving governance downward in the hope that "localization" of politics and policy will keep institutions accountable to communities (Hines 2000).

The need to globalize institutions of governance has become obvious in some policy areas, such as international money and finance, climate change, and even public health. Is the same true in the area of hunger and food security? This discussion paper argues that the greatest governance deficits in the food security area are still at the national level, not the global level.

Significant hunger persists in some regions largely because of governance deficits and failures at the national, not the global level. Too many national governments in the developing world fail to provide the essential domestic public goods—such as peace, rule of law, public research, and rural transport infrastructure—needed for sustained growth of farm productivity and rural incomes. Global governance institutions have at times tried to step in and fill these national governance deficits in the developing world. But most such attempts have ended in frustration since the traditional norm of state sovereignty continues to stand in the way. The governance challenge for food security is not so much to deliver more public goods at the global level, but instead to persuade existing sovereign governments to deliver the minimal public goods needed at the national level.

This argument for the continued centrality of national government goes somewhat against the grain of recent opinion. Czech President Vaclav Havel has forecast that in this new century most states will evolve into "far simpler, less powerful administrative units," while power will move "upward to regional, transnational and global organizations." Former U.S. Deputy Secretary of State Strobe Talbott sees the same trend: "All countries are basically social arrangements. [T]hey are all artificial and temporary. Within the next hundred years nationhood as we know it will be obsolete; all states will recognize a single global authority." Leaders of intergovernmental institutions often welcome and encourage this supposed trend. Speaking to the General Assembly in 2000, Secretary-General Kofi Annan asserted that the institutions of the United Nations ought to be viewed as having a direct mandate from the peoples of the earth, rather than a mandate derived from U.N. member governments (Thiessen 2001, 64).

Such hopes and expectations of globalized governance are certainly appropriate and accurate in some policy areas (for example, trade regulation, the battle against HIV/AIDS, open-ocean fisheries protection). Yet in the area of hunger and food security it is the performance of separate sovereign

nation-states that remains most critical—and in most critical need of improvement.

This paper emphasizes the continuing centrality of governance at the nation-state level in several steps. First, it reviews the dominant role that national governments still play in most food production, trade, and consumption activities around the world. Global markets and interstate institutions may be spreading and proliferating overall, but in the poorest countries where large numbers of people are still hungry, and particularly in the rural regions of those countries, international food markets and global institutions still tend to have weak influence relative to local or national food markets and local or national food governance institutions.

Second, it offers a concept of adequate governance for food security based on public goods provision and asks which institutions are currently doing the job well and which are doing it poorly. At the global level a range of international institutions have now evolved to provide a substantial number of essential food and agricultural public goods. Public goods delivery at the national level in some developing-country regions has been far less adequate, particularly in Sub-Saharan Africa. It is not primarily a global governance deficit that leaves Africa struggling to improve its food-security performance. Within Africa too many national governments still fail to provide their citizens with essential national or local public goods such as civil peace, rule of law, rural roads, clean water, electrical power, and public research to generate new agricultural productivity. Improved governance is needed at every level, but these governance failures at the national level now substantially outweigh governance failures at the international level.

A final section of this paper looks at some current options for improving the performance of national governments in countries where hunger remains a growing problem—again primarily in Africa. It reviews a number of supporting or gap-filling roles that governments from the industrial world or international governance institutions might attempt to play, and it reviews a range of options available to nongovernmental organizations (NGOs). Yet the conclusion reached is that in regions where hunger is still a serious problem, national governments on the scene must take the largest responsibility for solving the problem. Our fascination with the rapid pace of globalization and with the rapid evolution of global governance institutions in other policy areas should not distract us from the heavy responsibilities that traditional national governments continue to bear in the struggle to end hunger.

2. Dominance of National Governments Despite Globalization

Traditional nation-state institutions continue to dominate in the area of food supply and food security, particularly in poor countries where hunger problems are most acute. This dominance of nation-states is somewhat surprising, given the proliferation of so many powerful and influential public and private institutions both above and below the national level.

In the public sector, the second half of the twentieth century saw a dramatic increase in the numbers of intergovernmental organizations (IGOs) operating above the level of the nation-state. Some of these IGOs are regional (for example, the intergovernmental institutions of the European Union). But a number are genuinely global institutions (for example, the universal membership institutions of the U.N. system). In the private sector, two additional kinds of institutions have proliferated above the level of the nation-state: private multinational corporations (MNCs) and not-for-profit private international nongovernmental organizations (INGOs).

This emergence of multiple institutions above the nation-state dates in the modern era from the late nineteenth century. It became pronounced after World War II, and grew into a virtual explosion in the last two decades of the twentieth century. The number of intergovernmental institutions recognized by the Union of International Associations (UIA) in Brussels nearly tripled during this period, from 1,039 in 1981 to 3,019 by 2001 (Yearbook of International Organizations 1981 and 2000/2001). MNCs have proliferated as well. The number of multinational business firms in the world's 14 richest countries more than tripled, from 7,000 in 1969 to 24,000 in 1994. By 1992 the sales of each of the top-10 MNCs was more than the gross domestic product (GDP) of at least 100 nation-states.

Measured in global terms, in the 1960s and 1970s foreign direct investment (FDI) by MNCs increased at roughly the same rate as world output and trade, but then between 1985 and 1995, FDI increased eight times faster than output and more than twice as fast as trade (Reinicke 1997). In consequence, the stock of FDI around the world increased over six times, to reach $3.2 trillion. A number of developing countries shared in this growth. In the single decade between 1985 and 1995 annual inflows of FDI into the developing world increased from $18 billion to $99.7 billion (Vernon 1998). Private international financial flows grew even more rapidly than direct investments. Cross-border equity flows initiated by private firms increased by 300 percent in the last five years of the twentieth century, growing from $268 billion in 1995 to an estimated $1.1 trillion by 2000 (Persaud 2001).

INGOs also increased dramatically in number, activity, and visibility as the twentieth century ended. According to one count, the number of INGOs worldwide grew from fewer than 10,000 in 1978 to more than 40,000 by 1997 (Cusimano 2000). Growth in number and activity of INGOs was especially strong in the area of international development. During the 1980s, development assistance transferred through INGOs grew twice as fast as official development assistance (ODA) transferred government to government. By the end of the 1980s, some 4,000 development NGOs established in the wealthier countries of the Organisation for Economic Co-operation and Development (OECD) were disbursing billions of dollars a year for development, working with 10,000 to 20,000 "southern" NGOs in the developing world, thereby

providing assistance to an estimated 100–250 million individuals (UNDP 1993; Clark 1991).

This late twentieth century increase in the visibility and activity of IGOs, MNCs, and INGOs is only part of the story. Even as these international public- and private-sector institutions proliferated, other new challenges to nation-state authority arose as well. Private markets expanded, sometimes at the expense of state-owned enterprise. Under a combination of political and market pressures, including pressure from IGOs such as the World Bank and the International Monetary Fund (IMF), state institutions yielded more economic control within their borders to private markets and local private corporations. Not-for-profit institutions at the national level also grew stronger and more numerous in developing countries. Within a short space of time, 10,000 national and community-level NGOs were established in Bangladesh, 21,000 in the Philippines, and 27,000 in Chile. Observers have called this a "global associational revolution" which could prove "as significant to the late twentieth century as the rise of the nation-state was to the late nineteenth" (Salamon 1994, 109). At the most local level as well, the traditional institutions of the nation-state seemed increasingly under challenge. Local government authorities have demanded greater control over public revenue and greater decentralization of government regulation. These newly invigorated and diverse local institutions have proven harder for central state institutions to regulate, and a profusion of grassroots organizations, including community-based development or social service organizations have taken their own initiatives to balance or correct the perceived failings of the nation-state.

Table 1 maps this expanded institutional terrain, locating traditional nation-state institutions at the center of what is now a wide range of alternative institutions capable of challenging the nation-state for dominance.

This proliferation of institutional alternatives to the nation-state has visibly weakened the control of national authorities in many areas of contemporary political and economic life. Nation-states are finding it harder to act alone when they seek to govern international investment and finance, global environmental issues such as climate change, global commons issues such as ocean fisheries, and even public health issues like HIV/AIDS. Trade, international communications, and hard-to-contain cultural industries such as entertainment also elude the nation-state's grip. Yet traditional nation-state institutions continue to dominate in the less globalized policy areas of farming and food security. National political dominance over farming is conspicuous in the industrial world, where so many producers work under inducements provided by lavish national farm subsidy programs. In poor states as well, the food and farm sector tends to remain under considerable national political control. Even in "weak" developing-world states where national governance institutions lack key resources, they still tend to be stronger than any alternative institutions within the food and farm sectors.

Table 1—Institutional alternatives for governance of food and agriculture, by level and sector

Level	For-profit private sector	Public sector	Not-for-profit private sector
International	Multinational corporations (MNCs)	Intergovernmental organizations (IGOs)	International nongovernmental organizations (INGOs)
National	National corporations	National government	National nongovernmental organizations (NGOs)
Local	Local private tradespersons	Local authorities	Grassroots organizations

Source: Devised by author. For similar classification scheme, see Nye and Donahue 2000.

Industrial Countries

In the affluent industrial world, transnational and supranational globalization forces are strong, but traditional national authorities continue to dominate food and agricultural policy. Food production patterns and practices continue to be shaped by national agricultural trade restrictions or by national farm price support and income subsidy policies. In the case of the European Union, these traditional farm subsidy and protection policies have been aggregated into a regional policy. Nonetheless, the governance institutions of the Common Agricultural Policy (CAP) remain dominated by a council of national ministers of agriculture, and ultimately decisions are made through bargaining among the heads of separate national governments. IGOs such as the World Trade Organization (WTO), the OECD, and the forum for Asia Pacific Economic Cooperation (APEC) have repeatedly attempted to impose restraints on farm subsidy and price support policies in industrial states, but politically organized associations of farmers within those states have exercised enough influence to keep the lucrative subsidy systems in place.

Consider the relatively weak authority of the WTO in industrial country agricultural policy. The industrial country governments that have dominated multilateral trade negotiations in the WTO have not yet been willing to subject their national farm support policies to any significant international discipline. The obligations to reduce farm supports and limit direct export subsidies that emerged from the 1986–93 Uruguay Round of multilateral trade negotiations were so weak that they forced neither the United States nor the European Union to undertake any reforms beyond those already being considered for other reasons (such as budget constraints). The 1993 Agreement on Agriculture did require industrial countries to convert nontariff agricultural border protections to tariffs. But even for this technical change some important exemptions were made (Japan and South Korea were permitted for the moment to avoid tariffication obligations for rice). Moreover, the new tariff bindings were set so high that in some cases they implied an increase, not a reduction, in permitted border protection (this practice came to be called "dirty tariffication"). At the insistence of the European Union, nations unwilling to allow additional imports were permitted to bundle together sensitive with less sensitive products when calculating their compliance with the market access provisions of the Agreement. The most important cash income support payments to farmers in use at the time in both the United States and the European Union were exempted altogether from discipline, by placing them in a so-called "blue box." A number of other subsidy instruments were also excluded from discipline, because they were said to have either minimal market-distorting consequences, such as payments decoupled from market prices and planting decisions, or a public goods dimension, such as public research programs and payments supposedly linked to environmental protection (Orden, Paarlberg, and Roe 1999).

The financial resources of national governments in rich countries continue to dominate agricultural development assistance policy as well, despite the dramatic increase in IGOs, INGOs, and NGOs working in this area. NGOs emerged into the field of international development assistance in the 1980s not so much as challengers to donor state governments, but as adjuncts. In Norway, for example, 22 out of 70 INGOs engaged in development work obtained more than 80 percent of their budget from the state, and 39 more were state-dependent for at least 60 percent of their budget (Tvedt 1998). Nation-state tax revenues, not private voluntary contributions, are the major source of INGO funding in many donor countries including Sweden (85 percent), Belgium (80 percent), Italy (77 percent), Canada (70 percent), and the United States (66 percent) (Smillie and Helmich 1993; Riddell, Bebbington, and Davis 1995). The recent NGO revolution in the area of international development is therefore not so much a challenge to traditional nation-state dominance as it is an informal institutional extension of that dominance.

Developing Countries

Turning to poor countries, here as well food and farm production systems and development policies tend to be shaped by national government authori-

ties. In many cases this large role played by state institutions is a legacy of colonial rule. The public-sector export crop production and trade systems set up by colonizing powers in much of Africa and Asia did not disappear following independence. These national commodity production and marketing systems, dominated by state-owned corporations and state monopoly marketing boards, in most instances, were simply taken over by the newly independent national government and run for the purpose of generating state revenue. At times these developing-country governments taxed the farm sector so heavily as to impair agricultural productivity. Maurice Schiff and Alberto Valdes calculate that between 1960 and 1984 the net effect of direct and indirect state policy interventions in 18 developing countries was an enormous income transfer out of the sector, averaging 46 percent of agricultural GDP per year (Schiff and Valdes 1992). The newly independent governments of the developing world may indeed have been weak in some respects, but not in their ability to extract resources from their own farmers.

The biggest contrast between rich and poor countries can usually be seen not in the relative strength of national food and farm policies, but rather in the pro-farmer versus antifarmer bias of those policies. In wealthy industrial countries national policy has long tended to subsidize farming thus generating surplus production, whereas in poor countries governments have more often imposed explicit or implicit taxes on farming, causing a slowdown in productivity growth. It is a perverse irony that governments in rich industrial countries, where farmers are few in number and already productive, tend to support investments in farming more than governments in poor agricultural countries where hunger persists and productivity is lagging.

Scholars studying this different policy bias in rich versus poor countries have been able to link it statistically to the process of industrial development itself. When the comparative advantage of the agricultural sector tends to weaken relative to industry, the "national political marketplace" tends to shift from supporting an urban-biased policy of taxing farmers and subsidizing consumers toward a rural-biased posture of subsidizing farmers at the expense of consumers and taxpayers. Where the industrial sector has become most highly advantaged relative to agriculture, as in Japan or Europe, nominal rates of agricultural protection (measured as the internal-to-border price ratio) tends to be very high. Where the farming sector has not lost so much comparative advantage (as in Australia or New Zealand) nominal rates of farm protection still tend to be positive in the industrial world, but may actually be quite low.[1]

These differing biases in national agricultural policy tend to determine not only commodity market outcomes (surpluses in rich countries versus lagging production in poor countries) but also rural environmental outcomes. The threat that agriculture presents to the rural environment can depend on whether the sector is being taxed or subsidized by the state. In industrial regions where farmers are well-organized politically and where national governments tend to subsidize farming, the resulting inducement to boost crop yields often encourages excessive use of chemical fertilizers and pesticides. This is one reason why so many farmers in Europe, North America, and Japan overuse chemical inputs. The environmental outcome is chemical pollution of surface water and groundwater downstream from farms.

Meanwhile in nonindustrial regions where national policies impose heavy taxes on farming, a different kind of environmental damage occurs. Rather than applying too much chemicals in response to subsidy incentives, heavily taxed farmers in most poor countries do not use enough inputs and end up mining soil nutrients, so soil fertility declines. They may also underinvest in drainage and irrigation systems, leading to problems of waterlogging and soil salinity. When yields then

[1] Those who study this industrial transformation model of policy outcomes have used quantified measures of industrial comparative advantage within countries to predict 60 to 70 percent of all variation in nominal rates of farm-sector protection across countries (Honma and Hayami 1986).

start to lag the only way to boost production to feed a growing population is to expand irrigated or cropped area. This often leads farmers to plow and irrigate fragile grazing lands, to move onto poorly suited sloped lands, or to invade forest margins. The results are accelerating desertification, soil and forest destruction, and a rapidly shrinking habitat for native species (Paarlberg 1994).

Developing-country governments have been under pressure to reduce their interventions in the food and farm sector. Poor countries that borrow from international financial institutions such as the IMF and the World Bank have been told to lift national controls on internal commodity and input supply markets, relax restrictions on foreign currency exchange, privatize state-owned enterprises, and reduce wasteful employment in state bureaucracies (including food and agricultural ministries). These powerful international pressures to weaken the role of the state over the food and farm sector have been exercised in part through "structural adjustment" lending programs and policy reform assistance projects. Yet many national governments in the developing world have shown a remarkable ability to resist such pressures.

In 1994 the World Bank completed a comprehensive study of 29 Sub-Saharan African countries that had undergone structural adjustment. The study revealed that 17 of the countries did reduce the overall tax burden on farming. But some—because of persistently overvalued exchange rates—actually increased that burden, and only four of the 29 countries had eliminated parastatal marketing boards for major export crops. Pressures on governments to reform macroeconomic policies produced somewhat better results, but this study drew the telling conclusion that "no country [in Africa] has good macroeconomic policies and good agricultural policies" (World Bank 1994, 1–2; 76–88). This finding of incomplete reform was reinforced by the conclusion of an October 2000 IFPRI Food Policy Report on agricultural market reforms in Sub-Saharan Africa:

> The pace and extent of reforms have varied widely across countries and crop subsectors. For the most part, reforms were not fully implemented. For example, many governments liberalized internal trade but maintained a state monopoly over external trade. In other instances, although fixed prices were eliminated, price bands for food crops were imposed to limit market price fluctuations and protect consumers and producers from the allegedly "exploitative" behavior of private traders. State-owned enterprises remain active in several commodity subsectors, notably cotton in West Africa and maize in Kenya, Malawi, and Zimbabwe. Many countries reversed reforms as a result of external shocks or changing economic conditions (Kherallah et al. 2000, 9).

From the vantage point of the rural poor, the traditional powers of the nation-state remain surprisingly dominant in most developing countries. State powers continue to be exercised through a broad range of public-sector institutions: national or parastatal marketing boards that monopolize the purchase of commodities, national or parastatal seed and fertilizer companies that monopolize the supply of key inputs, nationally controlled co-ops and nationally managed agricultural credit institutions, national research and extension services, national commodity import or export authorities, national irrigation or land-titling agencies, national forest departments, centralized service delivery agencies in areas such as health and education, and nationally organized public works projects such as food for work and public relief. State power is also exercised in rural areas by local representatives of national ruling party organizations, by national taxation and revenue authorities, and of course, by national police and military forces. Even in supposedly weak states, such national governance institutions tend to dominate in the countryside. It is often where such national governance institutions most dominate that hunger problems are most severe.

Hunger and National Dominance

Poorly fed people are found in all regions of the world. But the greatest concentrations of hungry people today are in South Asia and Sub-Saharan Africa. Not coincidentally, traditional state institutions continue to be strong in the food and farm sectors of these two regions, particularly relative to global institutions.

South Asia and Sub-Saharan Africa stand out as the only two developing-country regions where both the incidence and prevalence of human malnutrition remain high and where trends toward hunger alleviation remain weak. Table 2 presents region-by-region estimates of levels of chronic malnutrition in the developing world by the Food and Agriculture Organization of the United Nations (FAO). The figures are based on highly aggregated data so they conceal some important internal and local differences. Yet only in South Asia and Sub-Saharan Africa do we still find more than 175 million hungry people, combined with a regional prevalence of malnutrition above 20 percent.

Table 2 reveals a large number of people still undernourished in East Asia, as might be expected given the region's large population and its still recent movement away from deep poverty. Yet the clear trend in East Asia is now dramatically away from hunger. Between 1980 and 1997 the percentage of East Asians experiencing undernourishment declined from 29 percent to just 12 percent. The prevalence of hunger also declined in South Asia (from 38 percent to 23 percent) and in Sub-Saharan Africa (from 38 percent to 34 percent). But even with these declines the prevalence of hunger remains high in both South Asia and Sub-Saharan Africa (FAO 2000). Moreover, high rates of population growth in these two regions meant that the total number of hungry inhabitants did not decrease at all between 1980 and 1997.

Persistent hunger in South Asia and Sub-Saharan Africa is again visible in parallel estimates (using different data sources) of child malnutrition by region in the developing world. As of 1995, the prevalence of child malnutrition was higher than 30 percent only in South Asia and Sub-Saharan Africa (Table 3). There was some decline in South Asia from an extremely high earlier level, but there was no decline at all in prevalence of hunger among children in Sub-Saharan Africa.

When considering the actual incidence of child malnutrition, South Asia and Sub-Saharan Africa stand out even more as the two developing-country regions farthest from solving their hunger problems. Table 4 shows that South Asia has more than twice the number of malnourished children as East Asia. Sub-Saharan Africa has fewer malnourished because less people reside in the region, but in Sub-Saharan Africa the absolute number of malnourished children has recently been rising rather than falling.

This prevalence of hunger and chronic malnutrition in South Asia and Sub-Saharan Africa cannot be explained through reference to rapid globalization or international governance failures because the most powerful forces of contemporary globalization have had only modest impacts on the food and farming systems of these two regions. Most South Asian and Sub-Saharan African states have opted to shield their food and farm sectors from the forces of globalization. Both are postcolonial regions where governments remain strongly nationalistic and eager to

Table 2—FAO estimates of the incidence and prevalence of chronic malnutrition in developing countries and countries in transition, 1996–98

Region	Undernourished	
	Number of persons	Share of population
	(millions)	(percent)
South Asia	294	23
Sub-Saharan Africa	186	34
East Asia	155	12
Near East and North Africa	36	10
Countries in transition (former USSR, Baltics, East Europe)	26	6
Latin America and Caribbean	55	11
Total	792	18

Source: FAO (2000, Table 1).

Table 3—Prevalence of child malnutrition in developing countries, by region, 1975–95 (percent)

Region	1975	1985	1995
South Asia	67.7	61.1	49.3
Sub-Saharan Africa	31.4	29.9	31.1
East Asia	33.3	26.5	22.9
Near East and North Africa	19.8	15.1	14.6
Latin America and the Caribbean	17.0	10.6	9.5

Source: Smith and Haddad (2000).

keep external market influences at bay. National institutions in these two regions have remained strong enough, despite globalization, to resist many IMF and World Bank demands for market-oriented policy reforms. It is not because the forces of globalization have remained ungoverned in South Asia and Africa that hunger has persisted; strong national governments in these regions have substantially resisted the forces of globalization.

We already noted the power of national governments in Africa to resist most IMF demands for durable liberal market reforms. The consequence of this resistance has been, for Sub-Saharan Africa, a growing disconnection from many international markets, including commodity markets. During the colonial period African agriculture was deeply integrated into the global commodity markets of that day, but more recently this deep integration has weakened. Africa's volume of exported coffee, groundnuts, palm oil, and sugar has actually been shrinking. It was smaller in 1997 than in 1970.

As with trade, so with international investment. National policy controls over investment in Africa are so strict that they help keep most private multinational corporate investors away. After gaining their independence in the 1960s, most African states embraced tax, regulatory, and trade policies that proved highly discouraging to new private-sector FDI. New foreign investment was also discouraged by the failure of some African states to preserve internal peace, enforce private contracts, or invest adequately in power, transport, and communications infrastructure. Thus at a time when MNCs were assuming a larger role in the economies of developing countries in East Asia and Latin America, their role in Africa scarcely grew at all. By 1991–94, when average annual FDI inflows into the developing world as a whole had reached $62 billion, total inflows into all of Sub-Saharan Africa (including South Africa) were still just $447 million, which was then less than 1 percent of the developing-country total (Cantwell 1997). All of Sub-Saharan Africa was taking in just $447 million in FDI annually at a time when China—nominally still a communist country—was taking in $125 million in FDI every day. Also, the scant MNC investments that did go into Africa almost never went into the farming sectors of the poorest countries in the region. Nigeria alone got 44 percent of Africa's the FDI total in 1991–94, mostly in its energy sector.

Table 4—Incidence of child malnutrition in developing countries, by region, 1975–95 (millions)

Region	1975	1985	1995
South Asia	90.6	100.1	86.0
Sub-Saharan Africa	18.5	24.1	31.4
East Asia	45.1	42.8	38.2
Near East and North Africa	5.2	5.0	6.3
Latin America and the Caribbean	8.2	5.7	5.2

Source: Smith and Haddad (2000).

In South Asia as well, national governmental institutions and policies have tended to keep the forces of globalization at a distance. In post-independence India, it was national policy for roughly four decades to pursue development essentially without foreign MNCs. A labyrinth of national policies barred foreign investors from some industries entirely, restricted them elsewhere to minority ownership, required extensive reviews and official

approvals, placed tight controls on their currency transactions and distribution practices, and restricted use of foreign brand names. In consequence, as late as 1988 the total stock of FDI across all sectors in India was worth only $1.2 billion. Not until 1991, when the government of Prime Minister Narasimha Rao began a number of sweeping investment policy reforms, did India's national regulatory grip on MNC activities at last begin to weaken.

South Asia's negligible use of international food markets is another indicator of its weak connection to the modern forces of globalization. The poor countries of South Asia are home to 21 percent of the world's population and an even larger share of those who are still hungry in the developing world (roughly 38 percent in 1997, according to FAO). Yet these South Asian countries together take in only 2 percent of the world's grain imports. The region's reluctance to use commercial international grain markets reflects a conscious policy choice by national governments to promote "self sufficiency" in food grains rather than depend on international trade.

India is again a case in point. India has recently accounted for roughly 10 percent of total world agricultural production, but less than 1 percent of world commodity trade. Some 2.7 million children die in India every year, 60 percent of them from diseases linked to malnutrition (Sharma 1999), yet national authorities tightly restrict the movement of foreign grain into the economy. India does occasionally import small quantities of corn, but it strictly controls these imports with a tariff rate quota that places a 60 percent duty on above-quota imports. The Government of India recently imposed an 80 percent duty on rice to curb the influx of what it called "cheap grain." For wheat, India allows imports only rarely, to offset specific internal transport cost problems (for example, to allow less expensive imported wheat to reach coastal flour mills in the southern part of the country). The country also exports very little wheat, despite its occasionally large internal surplus stocks.[2]

Table 5 provides additional evidence of globalization's weak impact in South Asia and Sub-Saharan Africa. While net private capital flows into low- and middle-income nations in Europe, Central Asia, and Latin America were increasing sevenfold to tenfold from an already substantial level during the 1990s, and while net flows into East Asia (despite the 1997 financial crisis) were more than tripling from an already high level, private flows into Sub-Saharan Africa and South Asia increased very little from a low base. FDI in South Asia and Sub-Saharan Africa also increased only slightly from very low levels, while private FDI in Latin America, East Asia, Europe, and Central Asia was exploding upward.

To summarize, globalization's impact has been relatively weak in the two regions of the world where

Table 5—Net private capital flows and foreign direct investment into selected low- and middle-income regions, 1990 and 1998 (millions of dollars)

Region	Net Private Capital Flows		Foreign Direct Investment	
	1990	1998	1990	1998
Sub-Saharan Africa	1,283	3,452	834	4,364
South Asia	2,174	7,581	464	3,659
Middle East and North Africa	369	9,223	2,458	5,054
Europe and Central Asia	7,649	53,342	1,051	24,350
East Asia and Pacific	18,720	67,249	11,135	64,162
Latin America and Caribbean	12,412	126,854	8,188	69,323

Source: World Bank (2000, Table 21, 315).

[2] In 2000, when India's excess wheat stocks reached 27 million tons, efforts were finally made to clear the stocks through export. These were frustrated in part by the presence of a wheat crop disease—"Karnal Bunt" fungus—in some parts of India, which has put India's wheat on the import ban list of some 30 countries (APBN 2000).

food-security problems remain most conspicuous. Traditional nation-state institutions remain strong in these regions, particularly relative to global-age institutions such as international markets, MNCs, IGOs, and INGOs. People remain hungry in these regions not because the traditional power of sovereign states has been undercut by global markets, but more often because the powers of traditional nation-states have not yet been properly used.

How should the powers of the nation-state be employed? Here disagreements abound, but fortunately the most important function of government is also the least controversial: to provide basic public goods such as national defense, social peace, rule of law, macroeconomic stability, public education, public health, a public infrastructure for power, transportation, and communication, and research. These are all goods that societies need to prosper, and they are goods that the private sector is ill equipped to provide. Where hunger is worsening today, it is usually because these basic public goods are not being provided by still-dominant nation-state institutions.

3. Public Goods Provision by Government

The quality of governance institutions can be rated in many ways. Here we stress a minimal component of good governance that enjoys wide acceptance. We assume that government's first task is to provide the public goods needed by societies to remain peaceful and prosperous, goods that are unlikely to be produced in sufficient quantity by private markets alone or by nongovernmental institutions.

Defining Public Goods

Economists define public goods as goods with benefits that are available to all (they are "nonexcludable") and which are not diminished in their availability even when consumed (they are "nonrival" or "nonsubtractable"). World peace is an example of a pure public good. It is nonexcludable in the sense that all can enjoy the consumption of world peace once it is achieved; and it is nonsubtractable in that one person's enjoyment does not reduce the total amount remaining for others to enjoy. Another example of a pure public good is a traffic light. The safety that traffic lights offer to drivers and pedestrians is available to all who drive or walk on public streets and sidewalks, so it is nonexcludable. It is nonsubtractable because the safety offered to one person does not diminish that provided to others crossing the same street or to drivers at the intersection in question (Kaul, Grunberg, and Stern 1999).

The provision of public goods such as these can be understood as the first task of government. At the national level, important public goods would include adequate national defense, a public infrastructure of roads, power, and communications, adequate public schools and public health services, a monetary system supplying a common currency of stable value, and a court system able to enforce laws and contracts and protect life and property. Some of these goods may be partly price-excludable or partly rivalrous (for example, public schools that charge fees or public health services with a limited budget), yet all must be provided primarily by government.

The nature of these goods is such that they are unlikely to be provided by business firms or private voluntary associations. Profit-seeking firms lack the incentive to invest scarce resources in the production of goods that are nonexcludable, since they cannot earn profits from goods available to nonpaying customers. While private business firms are generally not suppliers of public goods, they are nonetheless among the most demanding consumers of such goods. Private companies usually hesitate to locate new investments in nations where governments fail to provide peace, rule of law, or an adequate infrastructure for power, communications, and transport.

Voluntary agencies that do not work for profit (including NGOs) are often motivated to produce some nonexcludable public goods. But seldom will they have sufficient resources or authority to do so on their own. NGOs do many good things, but they do not build national power grids and trunk roads, create criminal justice systems (police, courts, prisons) to protect life and property, or establish the laboratories needed to carry out basic scientific and medical research. Public governmental institutions have traditionally held the role of provider of these more expensive public goods. Governmental institutions are more likely to have the financial means to provide such goods within their jurisdictions because of their exclusive sovereign right to raise revenues through taxation. Governments will also have an incentive to spend public revenues for public goods, because only through the increasing prosperity of their domestic societies (made possible through public goods provision) will their tax base

and hence their own revenue grow in the long run. Theorists of political economy argue that even nondemocratic governments thus have an incentive to use revenues to provide public goods, in order to maximize tax revenues for the state over the long term (Olson 2000).

Additional Components of Good Governance

Provision of essential public goods is, admittedly, only the first task of good government. A more ambitious vision based on an expanded view of economic or social justice would have to include provision of some nonpublic (subtractable or excludable) goods as well. In the area of food security, one such good might be a supply of cheap food made available to the poor through a public food-distribution system. In other cases the pursuit of food security might even require that private goods (such as land) be taken from a traditionally privileged category of citizens, with or without compensation, for redistribution to disadvantaged citizens. In still other cases food security might require government action to reduce racial prejudice or gender inequity. These are important tasks in some cases, and a more complete review of governance would have to address them. Yet public goods delivery is an essential task in all cases.

The public goods definition used here stops short of requiring governments to provide essential public goods through one particular kind of governmental system, for example, a democratic rather than an authoritarian system. There is evidence that democracies are more likely than authoritarian systems to provide essential public goods related to food security due to their institutionalization of social accountability through regularly scheduled competitive elections under the scrutiny of a free press (Sen 1985). Yet the statistical link between democratization and hunger reduction is simply not strong enough to focus on this characteristic of governance alone. Of the several independent variables offered and examined by Smith and Haddad in a multiple linear regression to explain reduced child malnutrition in developing countries between1970 and 1995, democracy had the weakest correlation to hunger reduction. Other underlying determinants, such as women's education, per capita food availability, women's status relative to men, improvements in the public health environment (such as access to safe water), and per capita national income, all emerged as more powerful explainers (Smith and Haddad 2000).

We will argue later that promoting the democratization of some political systems in the developing world (in countries with minimal internal ethnic conflict or at a more advanced stage of urbanization) is both a worthy and realistic objective for food-security purposes, because a democratic rule of law is likely to be better for the poor than nonaccountable rule by the strong or corrupt. Nonetheless, there is little evidence to suggest that democratization by itself can bring economic prosperity to poor countries. According to a 1995 review of 20 separate empirical studies, half of the studies had found no significant relationship between democracy and economic growth. Three did find a positive relationship, and five found a conditional positive relationship, but two actually found a negative relationship (Brunetti and Weder 1995). A subsequent review of 12 additional studies uncovered a slightly stronger link between democracy and growth, but only slightly stronger. Of these 12 more recent studies, only one found a negative correlation between democracy and growth, while seven found a positive relationship and the remaining four showed results that were either inconclusive or mixed (Goldsmith 2001). In Africa specifically, no studies have found the few emerging democracies in the region since the 1990s to be any more prone than their predecessors to adopt economic reform programs or do better than authoritarian regimes in the region in terms of economic growth, stable prices, or balanced budgets. African democracies in the 1990s on the whole did neither better nor worse than nondemocracies (Goldsmith 2001).

The important case of China suggests that it is entirely possible to increase food security without moving all the way to democracy. Beginning in 1978 a nondemocratic Chinese regime led by Deng Xiaoping introduced new market incentives and individual household land contracts into the nation's farming sector, thus giving farm families more secure

control over their land and labor. At the same time, it made substantial public investments in agricultural research and rural infrastructure, particularly roads. Over the next two decades China's total grain output increased 65 percent, from 305 million tons to annual levels averaging 500 million tons by 1999. The Chinese farmers who participated in this impressive feat saw their incomes rise markedly as well. Annual per capita net income for rural people in China increased from a destitute level of only 134 yuan in 1978 to 2,210 yuan ($276) by 1999. As a result, the absolute number of Chinese people living in poverty—unable to feed, clothe, or house themselves adequately—fell from 250 million in 1978 to only 34 million by 1999 (Chen 2000). This sharp decline in absolute numbers of poor people was all the more impressive given China's continued overall population growth. Never before in human history have so many people escaped deep poverty and food insecurity so quickly. China's leaders were not providing their citizens with a competitive electoral democracy, but they were providing essential public goods such as road and power infrastructures in rural areas, property security (including household control over land), access to a system of market-based exchange, and public investment in research.

National Public Goods versus Global Public Goods

In many sectors in today's age of globalization, the greatest public goods deficits are no longer at the national level, but rather, at the regional or global level (Kaul, Grunberg, and Stern 1999). In finance, trade, communications, transport, public health, monetary policy, and environmental protection globalization has increased the need for common international regulatory frameworks and mutual assistance schemes. The struggle has been to design and empower global institutions capable of delivering these global public goods. Yet in food supply and food security, today's most conspicuous public goods deficits are not found at the global level. While the demand for such public goods at the regional or global level has certainly increased in recent decades, fortunately the supply of these goods has also increased. It is at the national level that public goods deficits remain most pronounced. In order to make this point with adequate precision, we must first examine at some length the relatively strong performance of international institutions in delivering the global public goods most important to food security and hunger reduction in poor countries.

4. Performance of Global Governance Institutions

Global governance institutions for food security and hunger reduction are poorly funded and far from perfect. Nonetheless, they work well enough to provide an impressive range of tangible hunger-reducing global benefits. Function by function, the governance institutions currently in place at the international level have done a relatively good job of delivering the essential public goods they were designed to provide. Consider three global food-security functions in particular: the regulation of international commodity markets, the international delivery of food aid (including the provision of famine early warning and famine relief), and the supply of internationally usable agricultural research.

Regulation of International Food and Commodity Markets

Today's problems of malnutrition and food insecurity in Africa, and elsewhere in the developing world, are not strongly linked to the governance of global food markets. International food markets are not an especially important factor one way or the other. Local commodity markets are far more important than international markets in determining the nutritional circumstances of the poor. It is generally wealthy countries, not poor countries, that dominate international markets for food and animal feed, both as importers and as exporters. Genuinely poor countries tend to be less prominent exporters into these international markets, and only a few are heavily reliant as importers. International food markets do tend to be heavily used by some upper-middle-income developing countries in the oil-producing regions of the Middle East and by rapidly industrializing countries in East Asia. Yet these countries are not genuinely poor and their hunger problems are far less severe than those of Sub-Saharan Africa, South Asia, or even Central America.

If we consider only those developing countries that are genuinely poor (defined as those with a gross national product (GNP) per capita of $1,000 or less in constant 1987 dollars) and measure import dependence on world food markets as the ratio of annual cereal imports to annual national production, Table 6 shows average poor-county regional import dependence for 1973 and 1993. These data reveal that dependence on international cereal markets is quite low for most genuinely poor countries. It has been extremely low and declining for the genuinely poor nations of East and South Asia (this includes China, Indonesia, India, and Bangladesh under the definition of poverty used here).

This poor-country pattern of not relying heavily on world markets for grain imports goes against some of the expectations popularized by respected

Table 6—Poor country (GNP per capita less than $1,000) grain import dependence by region, 1973 and 1993 (percent)

	Import Dependence	
Region	**1973**	**1993**
Sub-Saharan Africa	10.0	13.6
South Asia	5.5	2.0
East Asia and Pacific	5.3	3.8
Latin America and Caribbean	17.6	36.5
Middle East and North Africa	22.5	8.3
All poor countries	6.4	5.2

Source: FAO (1973, 1975, 1985, 1993, and 1995).

analysts several decades ago. In 1977, IFPRI projected that India's food import dependence would increase rather than decline, and would reach 10–12 percent by 1990. IFPRI expected that by 1990 Bangladesh's food import dependence would be as high as 30–35 percent (IFPRI 1977). We can see in retrospect that these projections were off by several orders of magnitude. In the case of India and Bangladesh, analysts two decades ago badly overestimated the willingness of poor-country governments in South Asia to depend on the world market for imports. Nations in this region do have unsatisfied food needs, yet their restrictive food importing policies have kept reliance on world markets to a minimum.

Perhaps restricting imports is an excusable policy in countries where the prevalence of hunger is declining, as in South Asia. But it is difficult to understand how it could be acceptable in Sub-Saharan Africa. Table 6 shows that among the increasingly hungry countries of Sub-Saharan Africa, dependence on the world market for imports remains minimal. Sub-Saharan Africa imports a total quantity of cereals (combining both commercial purchases and food aid) equal to less than 15 percent of annual domestic production. By focusing only on grains, Table 6 actually overstates the import dependency of poor countries in Africa. Taking into account foods other than cereals (such as tubers and root crops, for example) Africa's dependence on imports from the world market is lower than 15 percent. The World Bank estimates that while more than 10 percent of Africa's total grain consumption may have been imported in 1988–92, only 6.5 percent of total calorie consumption in Africa came from imported grains (Ingco, Mitchell, and McCalla 1996).

Such averaged or aggregated estimates conceal significant variations within the region of course. If data from regional grain exporters such as South Africa and Zimbabwe are excluded, the import dependence of the rest of Sub-Saharan Africa is somewhat higher in most years. Yet even so past expectations regarding Africa's food import dependence have simply not come to pass. IFPRI in 1977 projected much higher import dependency ratios for all of Sub-Saharan Africa, including a 44–46 percent import dependency ratio by 1990 for the Sahelian countries in particular.

Only in Latin America and the Caribbean do we find a grouping of genuinely poor countries where import dependence on international cereal markets has been relatively high, and climbing. The genuinely poor countries in this region—Bolivia, Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, and Peru—imported 4.6 million tons of cereals in 1993, while producing only 8.0 million tons at home, giving them an import dependence ratio of 36.5 percent, well above the 17.6 percent ratio seen in 1973. These poor western hemisphere nations, rather than the poor nations of Africa, appear to have the largest interest in good governance of international grain markets, yet these are all relatively small nations with relatively small populations currently experiencing food deprivation. Together, these poor western hemisphere countries contain only 1.3 percent of the world's citizens, and they take only 2 percent of world cereal imports. So even if their import needs were suddenly to double or triple, the world market would be able to accommodate the increase.

Apart from the limited dependence of poor countries on global food markets, we must ask how well managed those markets are. Advocates of improved global governance might argue that dependence on world markets for imports is low among poor countries today precisely because of those markets' substandard performance. Perhaps if world food markets were better managed and more dependable, poor countries would be willing to depend more upon them. While there is certainly room for improvement, from the vantage point of importers international food and commodity markets have in fact performed quite well, often much better than internal food markets in most poor countries.

One way to judge the performance of international food markets from the vantage point of poor-country importers is to look at the changing purchase price of basic staple grains in those markets. Over the long term, these prices have fallen significantly. Adjusted for inflation, the price of wheat and corn available for export from the United States fell by 63 percent between 1910 and 1988. The price of wheat available for export fell

by 67 percent over this same period (Johnson 1991). Because ocean transport costs declined as well over these decades, the final import price for poor countries fell even more in real terms.

Economic models suggest that the import price of cereals on the world market will remain low even if some large developing countries should abandon their current practice of avoiding use of those markets. For example, if personal incomes in India were to grow rapidly, causing meat consumption there to double by 2020 over the currently projected level, and if India, in consequence, began importing much more meat and 26 million tons of cereals by 2020 (for livestock feed) rather than the currently projected 6 million tons, the impact on world cereal prices would still be quite small. World maize prices might increase by 5 percent rather than decline by 1 percent, and wheat prices might decline by 3 percent rather than decline by 8 percent (Rosegrant et al. 2001).

It could be argued that the low price of cereals on the world market is partly a consequence of subsidized food production in rich countries and that it indirectly weakens food security by allowing governments in poor countries to skimp on agricultural investments and instead rely on imports from abroad. This would be a stronger argument if the poor countries in South Asia and Africa—those with the most acute food-security problems today—had in fact allowed themselves to become significantly reliant on food imports. But as noted above, most of these very poor countries have decided not to rely on imports, in hopes of being able to claim "national self-sufficiency" in basic food supplies.

The price of food on the world market has been low and declining overall, yet importers do suffer from occasional price spikes. One example was the relatively sudden increase in international wheat prices between 1994 and 1996, from an average $157 per ton in the 1994/95 season to a momentary high of $271 per ton in early May 1996. These price spikes have sometimes been caused by malfunctions from well beyond the food and farm sector, such as inflationary or deflationary macroeconomic policies or adverse trends in international financial confidence. Yet sometimes world market price spikes do reflect the poor governance of international food markets. One reason for the price increase between 1994 and 1996 was a destabilizing policy switch within the European Union away from subsidizing exports toward imposing duties on exports as international markets tightened. As noted, the disciplines of the WTO have yet been insufficient to block all such market-destabilizing rich country policies. Such flaws not-withstanding, international markets provide important and mostly dependable options to importers, and when prices go up suddenly it usually does not take long for an offsetting global production response to follow. The 1996 price spike in international wheat markets triggered so much added global production that by 1998 the export price of wheat on the world market had fallen back down to below the 1994/95 level.

There are reasons to believe that price stability in world food markets will in any case improve in the years ahead, as the volume of food traded on those markets continues to grow (international cereal markets today are already 50 percent larger than they were in the 1970s) and as the agricultural policies of the nations that dominate those markets continue to move gradually away from the use of destabilizing illiberal practices. The industrial countries in Europe, North America, and the Far East that have long been the shapers of world food markets continue to subsidize their own farmers heavily. Yet they have now taken at least some steps to restrict the use of highly trade-destabilizing policy instruments, such as nontariff import restrictions and export subsidies. The international Agreement on Agriculture that emerged from the Uruguay Round negotiations is designed to add further stability to international prices by converting nontariff barriers to tariffs, and also by reducing permitted export subsidy use. Under the Agreement, permitted budget expenditures for export subsidies were reduced by 36 percent and the permitted volume of subsidized exports was reduced by 21 percent over a 10-year period (Dixit 1996). These disciplines are relatively weak, as noted earlier, but they do move the governance of international food markets in the right direction.

International grain market price fluctuations receive considerable attention, and they are an important issue for the heaviest users of international

grain markets (mostly the nonpoor). But these price fluctuations have never been the main source of food insecurity among genuinely poor developing countries. This can be said even for the so-called "world food crisis" period of the 1970s, when world market conditions were badly disrupted and then widely blamed for a perceived increase in hunger. At that time when the price of internationally traded food rose sharply, it was simply assumed that hunger in poor countries probably would increase. Yet there was never much evidence to support this conclusion, and in most cases it was an erroneous inference to draw. Most genuinely poor countries relied so little on the international market, or their internal markets were so segmented by policy from the world market, that their own domestic food prices moved up much less than the world market prices. Also, while international food prices did rise on this occasion, the principal reason was not a global food production failure. High-income growth around the world, due to easy credit and inflationary macroeconomic policies, had driven the price increases, and these were macroeconomic circumstances under which most people actually found themselves better fed.

Between 1971 and 1974 the real export price of U.S. wheat increased by 103 percent and the real export price of U.S. maize by 58 percent. World food reserves simultaneously declined from 71 days worth of grain consumption to just 33 days (Johnson 1991; Hopkins and Puchala 1978, 7). Many analysts assumed that under these tightened world market conditions only the rich would be able to sustain their accustomed consumption levels. In fact, it was the rich who cut back most during this crisis, by reducing their per capita meat consumption. Per capita food consumption in most genuinely poor countries did not decline. FAO estimates of 1971–74 per capita grain consumption levels by country and region (Table 7) show no overall pattern of decline. While per capita consumption did decline slightly in some nations or regions, elsewhere in the developing world per capita cereal consumption either remained steady or actually rose while the "food crisis" was at its worst.

Consumption adjustments were small in poor countries in part because the world market worked well enough to trigger large adjustments in rich countries. In 1973–74 when grain prices rose, the feeding of grain to livestock declined in the United States by 37 million tons, or approximately 25 percent. Canada and Australia also cut feed use in response to high prices. Use of feed grains declined so much in key exporting states in 1973–75 that it was possible at the height of this so-called world food crisis for the rest of the world to continue increasing grain consumption, not only by people but also by animals (Johnson 1991). Reduced feed use of grains in wealthy exporting countries did not result in food insecurity among the wealthy, of course; it led to higher meat prices and reduced consumption of red meat, which was on balance a nutritional benefit.

The later increase in world cereal export prices in 1995–96 also failed to produce any noticeable decline in per capita consumption in genuinely poor countries. Between 1994/95 and 1995/96 U.S. wheat export prices increased from $157 per ton to $216 per ton, and world cereal stocks

Table 7—Consumption of all cereals—wheat, maize, rice, other coarse grains—by IFPRI IMPACT regions, 1971 and 1974 (kilograms per capita)

Region/Country		1971	1974
Latin America	Mexico	167	168
	Brazil	96	102
	Argentina	131	127
	Colombia	76	81
	Other Latin America	108	107
Africa	Nigeria	64	61
	Central and West Africa	66	65
	Southern Africa	115	117
	East Africa	70	78
	Egypt	165	174
Asia	West Asia/North Africa	155	167
	India	130	126
	Pakistan	115	125
	Other South Asia	96	99
	Indonesia	125	135
	Malaysia	157	160
	The Philippines	114	119
	Myanmar	176	175
	Other Southeast Asia	161	168

Source: FAO (2001) compiled into regions used for IFPRI's IMPACT model.

as a percentage of world consumption fell from 17.8 percent to just 14.1 percent, generating talk of another world food crisis. Yet the imports of most developing countries were sustained and average per capita food use of cereals in developing countries overall continued to increase. Average annual per capita cereal consumption in the developing world as a whole actually increased from 170 kilograms in 1994/95 to 171 kilograms in 1995/96, and then to 172 kilograms in 1996/97, despite much higher world grain prices (FAO 1998).

In many poor countries food consumption circumstances were actually better in the mid-1970s and then again in the mid-1990s when grain export prices were high, than in the mid-1980s when grain export prices were low. Over the "food crisis" decade of the 1970s, the share of the population that was chronically malnourished significantly dropped in Latin America from 19 to 13 percent, in the Near East from 22 to 12 percent, and in Sub-Saharan Africa it remained steady (at roughly one-third) despite exceptionally rapid population growth in that region (USDA 1995, 46).

During the 1980s, in contrast, when world grain markets were slack, export prices low, and world stocks abundant, food consumption circumstances in many poor countries actually worsened. In Africa overall, rates of dietary improvement fell by two-thirds during the 1980s compared to the 1970s, and FAO estimated that the number of chronically undernourished people in Latin America and the Caribbean grew from 46 million around 1980 to over 60 million by the early 1990s, reaching roughly 14 percent of the population (Alexandratos 1995; FAO 1991). The 1980s were marked by low international grain prices (described as a world food glut at the time). Yet this decade was one of severe food crisis within both Africa and Latin America due to the onset of a world recession. High interest rates after 1980 and lower world demand brought reduced income and export earnings to these developing regions, unserviceable external debts, and almost no income growth. For Latin America and the Caribbean, real GDP growth rates fell from a 1970s annual average of 5.7 percent to just 1.2 percent in the 1980s. For Sub-Saharan Africa, real GDP growth fell from a 1970s annual average of 3.4 percent to a 1980s annual average of just 1.8 percent (Grindle 1996, 20). Under these circumstances hunger increased, despite the abundance of grain on the world market (Paarlberg 2000).

Fluctuating world food market conditions are therefore not by themselves a reliable indicator of food insecurity or hunger in most poor countries. Internationalists have repeatedly sought to improve world food security by imposing tighter regulations on price movements in international markets or by creating grain reserves and compensatory finance mechanisms to assist importers. But the evidence suggests that little would be gained by adding such supplementary governance features to world food markets. International markets for other kinds of goods, such as currency exchange and finance, are clearly in need of improved global governance. The free international flow of capital promoted in the 1990s by institutions like the IMF has at times imposed needlessly harsh adjustment burdens on the poor, leading in East Asia after 1997 to a temporary increase in hunger. Yet by comparison, international food and commodity markets have operated remarkably well. The poor countries in the developing world that have been willing to use these markets, rather than impose arbitrary anti-trade restrictions in the name of self-sufficiency, have found them to be an affordable and mostly reliable supplementary source of food supplies.

Yet developing countries with food-security problems require more than well-functioning international markets for the import of food. They also need effective international markets for their own farm commodity exports, and here the international market does less well in providing for the needs of poor countries. Especially for developing countries able to export value-added products in competition with industrial country farmers, the international marketplace remains marred by serious protection. Industrial countries have at times been able, despite WTO rules, to impose restrictions on commodity imports, reducing export earnings for the developing world and harming the income prospects of poor farmers.

For example, in 1998 the European Union established a new regulation limiting the amount of aflatoxins in imported food. This new regulation set

an aflatoxin standard tighter than that suggested by several international food safety governance bodies, including the Codex Alimentarius Commission in Rome, FAO, and the World Health Organization. Moreover, the health benefits that E.U. citizens can gain from this higher standard are likely to be trivial. The World Bank estimates that the difference between the new E.U. standard and the Codex standard may help Europe to avoid only 1.4 deaths per year for every one billion consumers. Yet it could reduce cereal, dried fruit, and nut exports to Europe from nine African countries (Chad, Egypt, Gambia, Mali, Nigeria, Senegal, South Africa, Sudan, and Zimbabwe) by 64 percent, costing these exporters $700 million each year (Otsuki, Wilson, and Sewadeh 2000).

Such restrictive measures by importers are serious market malfunctions. Still, evidence suggests they are not the chief reason why most commodity producers in Africa have lost export sales. Africa's agricultural exports have dwindled not so much because of import protection by rich countries as due to prejudicial sectoral and macroeconomic policies imposed by African governments at home. Between 1962–64 and 1991–93, Sub-Saharan Africa's share of various agricultural commodity exports (such as vegetable oils, palm oil, palm nuts and kernels, and groundnuts) dropped 47–80 percentage points below earlier levels. Between 1955 and 1990 Sub-Saharan Africa's share of global exports of all products fell from 3.1 percent to just 1.2 percent, implying substantial annual trade losses. Yet the World Bank determined that this disappointing export performance could not be explained by industrialized country import policies. African exporters have tended to face lower average tariffs than other exporters. Nontariff protection against African exports is also generally less restrictive than that facing other developing countries. The overall external environment for exports facing Africa today (tariff and nontariff) is actually more favorable than that which today's more wealthy East Asian economies previously faced and overcame (Yeats, Amjadi, and Reincke 1996).

Africa's damaging marginalization in world commodity trade more nearly reflects impediments within the region itself to efficient commodity production and export. Africa's shrinking share of world trade is most accurately described by Jeffrey Sachs as a "self-imposed economic exile" (Sachs 1996). Most African states have not actively pursued a trade-linked growth strategy. Trade policies in most other regions have moved slowly toward greater liberalization within the WTO, but during the recent Uruguay Round of trade negotiations the African continent mostly sought exemptions from trade-liberalizing obligations (Hertel, Masters, and Elbehri 1998).

Governance deficits at the international level are thus not the principal reason why some poor countries are failing to make gains from international commodity markets. These markets offer importers, in particular, an abundant supply of food commodities at prices low and stable enough to make the risks associated with dependence on commercial imports acceptable. Some poor and food-insecure countries remain reluctant to engage in commercial imports but the markets are nonetheless available as a valuable global public good for those that opt to use them.

International Food Aid

The availability of sufficient international food assistance might be viewed as a second important international public good. Arranging adequate food imports on commercial terms can be difficult for poor countries with large external debts and lagging foreign exchange earnings. The poor citizens of such countries, particularly those living in urban areas, may require a well functioning global concessional food assistance system to supplement commercial food markets. Concessional food aid since the late 1980s has in fact provided more than 40 percent of total cereal imports for over 40 recipient countries, mostly in Africa (FAO 1996). Fortunately, food aid is another area where existing global governance institutions have generally performed well.

The international food assistance system is still dominated by national governmental institutions at both the donor and the recipient end. Virtually all international food assistance is financed by industrial world governments. NGOs do play a visible role in channeling food aid, but 97 percent of the

food they deliver is financed either by the United States, the European Commission, or by other individual national governments in Europe, Canada, or Japan. Only 3 percent of food aid delivered by INGOs is actually financed by the INGOs themselves (WFP 2001a). Governmental donors coordinate their efforts through a variety of international governance institutions, particularly the international Food Aid Convention (also called the London Convention). This Convention is a legal international agreement that lays down minimum annual food aid commitments, donor by donor, either in terms of total tonnage or market value. The 1999 version of the Food Aid Convention set an aggregate minimum annual commitment from donors of 4.895 million tons of food assistance, plus a total value commitment of €130 million. Commodities considered eligible for these commitments include grain, pulses, edible oil, root crops, skimmed milk powder, sugar, and seed for eligible commodities. The United States and the European Union dominate as food aid donors. Since 1995 these two have coordinated their actions separately under a food-security coordination program, as part of the U.S.–E.U. Transatlantic Agenda consultation process (Christensen 1999).

Food assistance is delivered through a wide variety of channels, but again national governmental institutions tend to dominate. More than half (55 percent) of all global food aid moves directly from donor institutions to recipient governments. Another 29 percent moves through multilateral public-sector channels (almost entirely through the World Food Programme), and 16 percent is channeled through INGOs. Some food aid channeled internationally via multilateral public-sector agencies such as the World Food Programme is subsequently distributed by INGOs or NGOs within recipient nations.

Food assistance is delivered to recipient nations in three general forms: as emergency relief, as project assistance designed to improve nutrition and support development (project aid), or through a continuing government-to-government commodity transfer program (program food aid). In 1999, 32 percent of all global food aid deliveries were for emergency relief (almost half of that went to Asia, in particular North Korea), 17 percent were project food aid deliveries (40 percent of which went to Sub-Saharan Africa), and 51 percent were program food aid deliveries, where Russia was the main recipient.

The adequacy of this global food aid delivery system was twice briefly called into question in the mid-1990s: following completion of the 1994 Uruguay Round Agreement on Agriculture in the WTO and following the 1996 enactment of new agricultural legislation in the United States. The 1994 Uruguay Round Agreement raised concern among some developing-country officials that reduced domestic support to farmers in exporting countries could result in lower surplus stocks, increased international price variability, and reduced incentives on the part of exporters to provide food aid (Ballenger and Mabbs-Zeno 1992). These anxieties were aggravated when the U.S. Congress in 1996 enacted a new farm law designed to support agriculture with cash payments to grain farmers—payments substantially decoupled from traditional production incentives (Orden, Paarlberg, and Roe 1999). Roughly half of all international cereal food aid traditionally came from the United States, so this policy move away from strong direct production incentives to farmers suggested that a traditional foundation of food aid—surplus production in wealthy countries—might be eroding.

From today's vantage point, these concerns appear to have been exaggerated. The Uruguay Round Agreement on Agriculture actually took great care to protect the functioning of international food aid systems. First it restated donor countries' obligations to set their commitment levels to the Food Aid Convention high enough to meet the reasonable needs of developing countries during the trade liberalization process. Second, it exempted food aid shipments from the tightened restrictions on export subsidies imposed by the Agreement. Even program food aid shipments arranged through long-term credit agreements, such as the substantial U.S. grain exports funded under Title I of Public Law 480, were exempt from any new restriction under the Agreement (Christensen 1999). In the case of the new 1996 U.S. farm law, while it did promise to contain the size of publicly held food stocks, in

some other respects the new law was actually good for international food abundance because it increased commercial production potential in the United States by eliminating the authority of the U.S. Department of Agriculture to impose annual acreage reduction requirements (called ARPs) on farmers receiving income support payments.

Since the mid-1990s food aid shipments have in fact been sustained above World Food Programme minimums, despite the new WTO agreement and despite the new U.S. farm bill. World Food Programme data show that international food aid deliveries did dip briefly in 1996–97, at a time when momentarily higher world grain prices discouraged large donor contributions. But total donor contributions never fell below the annual minimum of 5.4 million tons of cereals then prevailing under the Food Aid Convention. By 1998–99, as world grain prices fell, donor contributions climbed once again. Table 8 shows the total tonnage of global food aid delivered over 1990–99.

Recent trends in Sub-Saharan Africa specifically provide additional reassurance that the international food aid system can continue to provide adequate concessional flows. Program food aid to African governments has generally declined over the past decade, but project food aid for nutrition and development purposes has substantially increased, and emergency relief has been able to increase when necessary, as it did following the severe southern African drought of 1991–92. Table 9 shows recent trends in food aid deliveries to Sub-Saharan Africa.

The availability of international food aid for emergency relief has played a significant role in containing some kinds of hunger, particularly in Africa. Emergency food aid is not always able to contain famine in Africa, but when failures occur the international governance of food aid is usually not the problem. Ethiopia's difficult experience helps put such issues in perspective. Food aid arrived too late in Ethiopia to prevent famine in 1984. Most PL-480 shipments from the United States arrived in 1985 and 1986, and by then the worst of the famine had passed and a recovery of local production was already under way (Barrett 2001). Yet in this case the tardy arrival of the food aid could be blamed mostly on reluctance by the

Table 8—Global food aid deliveries, cereals in grain equivalent, 1990–99 (million tons)

Contribution	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Relief	2.0	3.4	5.0	4.2	4.5	3.5	2.7	3.3	3.0	4.7
Program	8.4	6.9	7.7	10.6	5.7	4.3	2.9	1.8	2.7	7.4
Project	2.7	2.5	2.6	2.5	2.7	2.3	1.7	2.3	2.6	2.4
Total	13.1	12.8	15.3	17.3	12.9	10.1	7.3	7.4	8.3	14.5

Source: WFP (2000).
Note: 1999 data are provisional.

Table 9—Food aid deliveries to Sub-Saharan Africa, cereals in grain equivalent, 1990–99 (million tons)

Contribution	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Relief	1.5	2.4	3.7	3.0	3.0	2.0	1.6	1.3	1.6	1.6
Program	0.9	1.0	1.9	1.2	0.8	0.7	0.5	0.5	0.6	0.3
Project	0.5	0.6	0.6	0.7	0.7	0.6	0.4	0.6	0.7	1.0
Total	2.9	4.0	6.2	4.9	4.5	3.3	2.5	2.4	2.9	2.9

Source: WFP (2000).
Note: 1999 data are provisional.

Ethiopian government, earlier in 1984, to allow any international reporting of the severity of its growing internal food crisis. In 1999–2000, international food aid shipments again arrived too late in Ethiopia to prevent famine deaths amid a damaging drought. Significant international humanitarian intervention began only in April 2000, by which time more than 70,000 people had already died. Yet World Food Programme officials point out that while some lives were lost before April, many more lives were subsequently saved by food aid. The World Food Programme eventually provided food to 2.5 million people in Ethiopia's Somali region. Had there not been civil unrest in this region, even more could have been reached.

When recipient governments are prepared to cooperate and when there is no violent internal conflict underway to obstruct an international relief effort, the international food aid system is usually able to provide timely assistance. One recently developed international governance instrument that has helped speed food aid relief has been the World Food Programme's $20 million Immediate Response Account (IRA) system. Since 1993, this funding mechanism has given program officials working in developing countries the option to launch food aid operations immediately, on their own initiative, at funding levels up to $200,000 each. In 2000, country directors used this authority 11 times in countries such as Nicaragua, Zambia, Mozambique, and Viet Nam. IRA funds were also used to initiate larger emergency food assistance operations in Eritrea, Ethiopia, and Kenya (WFP 2001b).

Improved international famine early warning systems have become another important feature strengthening international food aid governance. These systems use a combination of market-price and meteorological data monitoring, plus increasingly sophisticated remote sensing satellite information, to plan and mobilize responses to food emergencies before they become acute. To illustrate the potential of these systems, consider the effective international response when widespread drought hit southern Africa in 1991–92. The drought cut aggregate cereal production in the region by more than 50 percent on average; and in Malawi, Namibia, Swaziland, and Zimbabwe cereal production actually fell by 60–70 percent. Because of already depleted maize stocks in the region, the drought put 17–20 million people at risk of starvation. Yet famine deaths were reported only in Mozambique, where relief was politically and logistically impossible because a civil war was still under way. Starvation was avoided in the rest of the region because per capita food aid increased quickly and dramatically, from an average of less than 10 kilograms per person in the 1980s to a peak of more than 25 kilograms per person in 1992 (Pinstrup-Andersen, Pandya-Lorch, and Babu 1997).

Improved international early warning systems played a key role in facilitating timely delivery of this assistance. In December 1991, famine early warning systems supported by FAO picked up the developing drought, and by the end of February 1992 the systems confirmed the situation was critical. In March and April, FAO and the World Food Programme sent joint crop and food-supply assessment missions to the region, to judge food import and food aid needs for the coming year and to complete a comprehensive logistics assessment, including a review of port capacities in South Africa. FAO/World Food Programme coordination with national governments was accomplished through a regional institution, the Southern African Development Community (SADC). To ensure adequate financial and commodity support from the international donor community, FAO's Global Information and Early Warning System (GIEWS) issued a special alert in April 1992, which was followed up by a joint U.N.–SADC consolidated appeal for assistance. Donor response to this appeal was gratifying, as pledges received covered 82 percent of all targeted food aid requests and 89 percent of all programme food aid requests.

To move the assistance, SADC formed six different "corridor groups" to handle port, rail, and road transport through the region. Contributions to transport and logistics were roughly twice the amount requested by SADC and came from a wide variety of donors including numerous NGOs and other concerned institutions that participated actively and effectively in the various relief activities (FAO 1996, Volume 3, 42–45). Donors then worked through the World Food Programme to create a logistic advisory

center to collect and share information related to potential port and transport bottlenecks. Both FAO's GIEWS and the U.S. bilateral Famine Early Warning System Network (FEWS-Net) developed and made use of extensive networks of on-the-ground informants to gather and then disseminate information. The international response in southern Africa was a remarkable achievement in providing the global public good of famine early warning and prevention.[3]

International food assistance efforts have been far less successful in cases where recipient governments either deny information (as did Ethiopia in 1984) or block international access (as with the North Korean famine after 1995) or where violent internal conflicts prevent relief from reaching the individuals in need. Violent conflicts are not only a leading cause of short-term food emergencies in much of the developing world, they are also a leading barrier to effective international relief. The temporary interruption of World Food Programme overland relief to vulnerable populations in Afghanistan following the onset of a U.S. bombing campaign in October 2001 is the most recent case in point, but a number of African examples are also illustrative:

- Widespread drought in eastern and western Sub-Saharan Africa in the mid-1980s led to failed harvests for three consecutive years in a number of countries, threatening the survival of vulnerable populations. More than 35 million people were directly affected, and some 10 million eventually left their homes in search of food and water. Yet in the affected countries where peaceful conditions prevailed, international food relief was provided with gratifying success (Deng and Minear 1992). As Jean Dreze later observed, "Though drought threatened a large number of African countries at that time, only some of them—notably war-torn ones—actually experienced large-scale famine" (Dreze 1995).
- When northern Sudan faced a severe drought in the mid-1980s, it managed to avoid widespread starvation thanks in part to the acceptance and distribution of $1 billion in external assistance. Yet when violent civil conflict later escalated in southern Sudan, relief could not be delivered to areas still being affected by drought so hundreds of thousands starved between 1986 and 1988. By 1988 roughly half of the population in southern Sudan had been displaced by fighting, and famine deaths in that year alone reached 250,000. A new international relief effort (Operation Lifeline Sudan) was mounted in response to this conflict-linked emergency. But it was far less successful than the earlier international drought relief effort in the north, due in part to armed attacks on food shipments by the warring parties (Deng and Minear 1992).
- Somalia, Ethiopia, and northern Kenya were all devastated by the same widespread drought beginning in late 1991. Yet in the latter two countries there were few deaths because international relief efforts were able to get food to those at risk. In Somalia, however, food relief shipments were blocked by armed subclan militia groups engaged in a struggle for political control, leading to significant starvation. Minimum food security was temporarily restored in Somalia only after U.S. military intervention late in 1992 afforded protection to international food relief shipments (Natsios 1996).

International food assistance can thus be viewed as an area where coordination and governance mechanisms at the international level are quite advanced. The global governance achieved is certainly far from perfect. Food aid availability is still too closely tied to donor country agricultural surpluses, implying that too much is sometimes given

[3] Africa's food problems are sometimes blamed on the region's weak capacity for regional cooperation. Yet for food aid, competent regional governance institutions are already in place. In the eastern part of Africa and in the horn of Africa, food aid can now be coordinated either through a fifteen-country regional institution—the Greater Horn of Africa Initiative (GHAI)—managed by USAID, or through the seven-state regional Intergovernmental Authority on Development (IGAD), consisting of Djibouti, Eritrea, Ethiopia, Kenya, Somalia, Sudan, and Uganda (Christensen 1999).

when it is least needed, depressing incomes of farmers in recipient countries. Donors should purchase more of their food aid supplies from farmers in the developing world ("triangular" food aid), thereby giving income to the producers in greatest need. Nonetheless, these flaws have not prevented the current international food aid system from offering substantial benefits to poor countries, particularly in times of famine emergency. The current food aid system works surprisingly well, as long as local governance problems within individual recipient countries do not get in the way.

International Agricultural Research

Agricultural research is another area in which the governance deficits of concern to poor countries are less pronounced at the international level than at the national level. At the international level, an expanded and highly capable Consultative Group on International Agricultural Research (CGIAR) has been operating for several decades now to provide the global public good of research available for use by farmers in poor countries. Unfortunately the national agricultural research systems (NARS) of many poor countries are simultaneously deteriorating in terms of budget resources and useful research outputs.

The emergence of the CGIAR is further testimony to the capacity of international public institutions to provide some important global public goods. When the CGIAR was officially formed in 1971, it brought together under World Bank leadership four international agricultural research centers that had originally been established by the Ford and Rockefeller foundations. Today it has evolved into a 16-center system that carries out technical and policy research relating primarily to production of the major food commodities consumed by the world's poor people, but now with an eye toward protecting rural natural resources and biological diversity as well. International coordination for these 16 centers is provided through the World Bank by the CGIAR Secretariat, a chairperson, and the FAO-staffed Technical Advisory Committee (TAC). This coordination system is loosely knit and decentralized. The CGIAR as a whole has no constitution and no by-laws and it reaches decisions by consensus. Individual centers are autonomous organizations with independent legal status and finances. Their research programs are separately directed by each center's board and management (Anderson and Dalrymple 1999).

The research mission of the CGIAR is precisely and explicitly to create global public goods. The centers focus on problems that cut across national borders or which lend themselves to international solutions. Of the 16 international centers, 13 are located in the developing world, yet they are constituted explicitly as international centers with mandates and programs intended to be independent from purely national or regional influences. The centers' germplasm resources are internationally mobile and research results are made accessible to all interested parties.

The CGIAR has an annual budget of roughly $340 million, financed through voluntary contributions from 55 separate donor governments and foundations plus the World Bank, FAO, the United Nations Development Programme (UNDP), and the United Nations Environment Programme (UNEP). Some 35–40 percent of all CGIAR expenditures go toward research in improved crop, livestock, forest, and fish productivity, with other CGIAR research investments going to environmental protection, improved policies, biodiversity protection, and assistance to NARS. Despite its relatively small total budget, the system has been able to generate a stream of internationally useful research results. Since the goal is to generate results that are usable in more than one country, the CGIAR has traditionally focused either on food crops that are widely grown or those grown in different places under relatively uniform conditions, such as wheat, maize, and irrigated rice. Here the centers have enjoyed early and continuing success. By the 1980s, germplasm improved by the CGIAR was found in more than 80 percent of all spring bread wheat grown in the tropics, 72 percent of all rice varieties, and more than 75 percent of maize varieties. By 1997, CGIAR-improved varieties of wheat and maize were generating, respectively, an extra $1.8 billion and $1.0 billion worth of production every year (Anderson and Dalrymple 1999, 54). By one esti-

mate, some 80 percent of the calories and protein required in tropical countries now derives from commodities whose productivity has been enhanced by CGIAR-generated agricultural technologies.[4]

The demonstrated ability of the CGIAR system to provide internationally usable public research goods is a significant achievement for global governance. Yet it runs against two serious limitations, both of which derive from the underperformance of individual national governments. Some key governments among the donor community have recently failed the CGIAR by cutting back on their financial contributions; and many governments in the developing world have fallen short by not making parallel investments in their own agricultural research programs.

Weak donor support has recently put the CGIAR at risk. In its early years, the CGIAR could depend on bilateral assistance from leading donor countries, particularly the United States. As recently as 1987, about two-thirds of all core funding for the system came from bilateral foreign assistance, with 25 percent (about $47 million a year) coming from USAID alone. But during the 1990s, USAID's contributions fell sharply, to a low of just $22.5 million in 1996 before leveling off at about $26 million annually by 2001. This fall in U.S. contributions was not compensated by other major donors, so during the mid-1990s the system faced a wrenching financial crisis, one that was solved in part by a temporary increase in contributions from another international organization, the World Bank (which contributed $10 million extra in both 1994 and 1995). This recent weakness in donor-country support for the CGIAR is part of a much larger pattern of declining international assistance to agriculture. Annual foreign aid by governments to all forms of agriculture in poor countries fell by 57 percent between 1988 and 1996, from $9.24 billion to just $4.0 billion. The World Bank officially bemoaned this decline, yet annual World Bank lending for agriculture and rural development also fell sharply, from $6 billion in 1986 to $3.2 billion in 1998.

It is hard to justify this evaporation of donor assistance to agriculture in poor countries given the high rates of return on past investments, particularly in re-search. More than 60 percent of all internationally assisted agricultural research programs in Asia have yielded annual rates of return above 50 percent. Even in Africa and Latin America more than 40 percent of such programs have had rates of return above 50 percent (Anderson, Herdt, and Scobie 1988, 88–97).

Overall, we can still argue that in international commodity markets, international food aid, and international agricultural research, the provision of essential international public goods has been substantial. Failures by international institutions to provide global public goods have not been the principal cause of persistent hunger today in regions such as South Asia or Sub-Saharan Africa. More serious governance failures can usually be found at the national level. The discussion that follows examines this problem of national public goods provision in Sub-Saharan Africa. It shows that an underprovision of key public goods by national governments in Africa has significantly retarded agricultural productivity in the region, contributing significantly to the region's deep and worsening food crisis.

[4] Letter from Lewis T. Preston, President of the World Bank; Jacques Diouf, Director General of FAO; and James Gustave Speth, Administrator of UNDP, to Brian J. Atwood, Administrator of USAID, April 21, 1994.

5. Africa's National Governance Crisis and Food Security

Food consumption deficits in Sub-Saharan Africa are large and have recently been growing, as shown earlier in Tables 2–4. Most expect these adverse trends to continue, at least into the immediate future. FAO's 1996 World Food Summit projected the number of malnourished citizens in this region to increase to 264 million by 2010 (FAO 1996). IFPRI's IMPACT model also projects an increasing incidence of malnutrition in Sub-Saharan Africa. IFPRI forecasts the incidence of child malnutrition to decline in every other region of the developing world, but it is expected to increase in Sub-Saharan Africa, reaching 40 million by 2020, an increase of roughly 30 percent from the 1995 level (Pinstrup-Andersen, Pandya-Lorch, and Rosegrant 1999).

What is the source of this severe and worsening African food crisis? It largely reflects a failure of governance within Africa itself, specifically a failure by individual sovereign governments in the region to provide essential public goods at the national level such as internal peace, rule of law, and adequate public investment in rural infrastructure and agriculture research. These goods are all essential to farm productivity growth, and lagging rural income linked to lagging farm productivity has been the most conspicuous element of Africa's hunger crisis.

Africa's Hunger as a Farm Productivity Problem

Recent production trends indicate a serious farming lag in Africa. In the developing countries as a whole between 1970 and 2000 per capita food production increased by 51 percent. In Asia's developing countries in particular per capita food production increased by 73 percent. Yet in Sub-Saharan Africa per capita food production decreased by 9 percent (FAO 2001). So Africa stands alone not only because hunger is still on the rise, but also because food production per person is actually falling.

When explaining hunger and food insecurity, some analysts don't like to start with agricultural production data. Particularly in some NGO circles it is fashionable to argue that "production is not the problem." Poverty, they say, is the real problem, because it weakens the capacity of the poor to purchase food even when production is adequate and prices are reasonable. Others prefer to view the problem as one of "distribution," again suggesting that more production alone will be inadequate. These are strong and valid arguments in many parts of the developing world. In some parts of India, for example, producing still more grain on good irrigated land may do little to relieve the widespread hunger found among rural communities elsewhere in the country, where the means to purchase adequate food is lacking even when there are large surpluses in the commercial marketplace. Likewise in Latin America, producing still more soybeans on large commercial farms in southern Brazil will do little to help feed the landless or nearly landless poor farmers who are struggling to produce tropical or subsistence crops in the dry northeast. In Brazil, resolving distribution problems (including inequitable land distribution) may be more important than overall farm productivity for the purpose of ending hunger.

Yet Africa is different. Landlessness is a less severe problem in most of Africa, compared with Latin America. Many Africans with access to land remain hungry because the productivity of their

labor on that land remains low. Viewing Africa's hunger problem as a poverty problem is correct, but it is usually the low productivity of farm labor in Africa that leaves people poor—and hence hungry.

Africa's poverty is undeniable. In 1995, the average per capita income in Sub-Saharan Africa (excluding South Africa) was only $280 per person, less than a dollar a day, while average personal incomes in East Asia were three times higher (Pinstrup-Andersen Pandya-Lorch, and Rosegrant 1999). But in Africa, poverty cannot be separated from low farm productivity. Two-thirds of all Africans still live in the countryside and remain heavily dependent upon farming, grazing, and other agriculturally linked activities for their employment and cash income. These Africans are still poor (and hence hungry) because their efforts at agricultural production have so far failed to generate significant productivity gains. Farm production has increased somewhat in Africa, but mostly as a function of population growth (that is, as a consequence of more labor input, not more productivity per unit of labor). So the per capita income growth benefits have been negligible.

Comparisons to East and Southeast Asia are revealing. Agriculture is a dominant activity among the poor in East and Southeast Asia, just as it is in Africa. But in these Asian regions higher productivity growth in farming has helped hundreds of millions escape poverty and hunger. In East Asia in the 1970s and 1980s, the successful introduction of Green Revolution farming technologies increased labor productivity, creating important opportunities for income growth for most who worked the land. Between 1980 and 1997 in China, the productivity of an average farm worker increased from $161 to $307 in real terms. In Thailand productivity increased from $634 to $932. But in Sub-Saharan Africa during the same period, average agricultural value added per farm worker actually declined, from $418 to $379 (World Bank 2000, Table 8, 288–289).

Productivity growth in farming usually helps to stimulate economic growth overall, by creating more income, savings, and investment. But it improves the welfare of the rural poor even when the rest of the economy is not growing rapidly. India made significant gains against poverty in the 1970s and 1980s because agricultural productivity growth was high even while overall economic growth remained relatively low. By the same token, India's more rapid overall economic growth in the 1990s has been slow to reduce poverty because agricultural productivity growth (especially yield growth in food staples) had slowed (Lipton 1999).

Africa's lagging agricultural productivity in part reflects the region's failure to find and adopt more productive farming technologies. New technologies helped farmers in Asia and Latin America achieve significant yield gains accompanied by income improvements during the Green Revolution of the 1960s and 1970s. But most farmers in Africa did not participate in this important technology upgrade. Between 1970 and 1983, new high-yielding rice varieties spread to about half of Asia's vast rice lands but only to about 15 percent of rice land in Sub-Saharan Africa. Improved wheat varieties spread to more than 90 percent of wheat lands in Asia and Latin America but only to 59 percent in Sub-Saharan Africa. By 1998 the overall rate of adoption of new varieties (of all crops, as a percentage of area) was 80 percent in Asia and 52 percent in Latin America, but only 26 percent in Sub-Saharan Africa (Tuskegee University 2001). This is the main reason why today's average cereal yields in Africa remain less than half those in Asia and Latin America. The inability of African farmers to access more productive technology has led them to use other, more destructive methods to boost production in pace with population growth. One example is shortening fallows, a practice that mines soil nutrients and can eventually lead to an actual decline in crop yield per hectare.

How can we explain this African failure to increase agricultural productivity and hence provide the higher incomes needed by most rural communities as a path to improved nutrition? Natural constraints on farming in Africa are certainly part of the problem. The continent's farmers face soil and climate constraints that are noticeably more severe than those found in most other developing regions. This has created a burden for African agriculture that even the best national governance institutions might have trouble removing.

Natural Soil and Climate Constraints to Farm Production in Africa

It is no accident that only 6 percent of the African continent is currently being used to plant arable crops. Soils in Africa tend to be poor, even by the standards of tropical countries, as they are highly weathered, acidic, and generally low in fertility. Rainfall tends to be either scarce, unreliable, or excessive. An estimated two-thirds of the continent is subject to high risk of drought. Some 46 percent has less than 75 days of rain a year, too little to grow even millet. Tree planting, normally an option for soil conservation, is problematic in the large parts of Africa that receive less than 1,000 millimeters of rainfall each year. Compared with other tropical regions, a much smaller part of Africa's land mass is moderated by proximity to oceans. Most of Africa lacks the monsoon effects that provide more abundant rainfall in much of Asia (Sachs and Bloom 1998). Where water is uncertain, farmers tend to concentrate on reducing risks rather than boosting yields. Water and weather risks diminish the attraction of purchased inputs such as fertilizers that might be used to increase yield. Fertilizer use in Africa, at 12 kilograms per hectare, is only one-quarter the level in India and just one-thirty-sixth the level of Japan.

Temperature and topography also complicate Africa's farm productivity challenge. High temperatures cause excessive evaporation in semi-arid zones and depletion of soil organic matter in deforested humid zones. Africa's farming regions are seldom variable enough in altitude (except in parts of East Africa) to provide relief from the sea-level heat and sustain a wide mix of crops. Local topography also tends to be highly irregular, complicating the engineering of irrigation systems while boosting road construction and other rural infrastructure costs. Irrigation costs in Africa are roughly double those of other continents. This is one reason why irrigation covers only 4 percent of cultivated area in Sub-Saharan Africa, compared with 26 percent in India and 44 percent in China.[5]

The many pests and diseases in Africa that attack crops, livestock, and farmers are another natural impediment to higher productivity. As one example, stem borers are a major pest problem for Kenyan maize farmers, causing estimated losses of 15–45 percent of each maize crop, reducing Kenya's annual farm earnings by an average of 6.3 billion shillings (Obure 2000). In West Africa, cowpeas grown by women farmers on small plots are a major source of protein and cash income for 200 million people. Yet insect damage from pod borers and weevils can affect up to 95 percent of the crop, depending on the location and year (Murdock 1999). Farm size tends to be small in Africa partly because of the difficulty of keeping fields free from the invasive weeds that grow rampant. Parasitic weeds such as striga attack cereals and food legumes in the arid savanna zones, while perennial grasses force farmers to abandon prime lands in the moist savanna (Akobundu 1991). As much as a third of tropical Africa remains underexploited because of the presence of trypanosomiasis, a parasitic disease that affects both people and livestock.

Because of these difficult natural conditions, it is perhaps inevitable for farm productivity growth in Africa to lag. Green Revolution crop varieties were successful in Asia partly because of the greater abundance of water, soil nutrients, and favorable cropping terrain. Efforts to introduce improved varieties in Africa, even for crops that are already grown in the region such as sorghum, millet, and rice, have often met failure (Dommen 1988).

Given such natural disadvantages, it might seem unfair to attribute any of Africa's lagging farm productivity to poor local governance. Yet the constraints mentioned do not have to block all improvements in Africa. As the frontier of science moves outward and the ability of institutions to engineer

[5] Most of Africa's potential for added irrigation is also distributed unevenly, in just four large countries (Angola, Democratic Republic of the Congo, Mozambique, and Zambia). Yet these are countries with relatively abundant rainfed land, where irrigation tends to be less needed. The countries of the Sahel, which desperately need more watered farming land, have scant additional irrigation potential.

responses to natural constraints expands, climate no longer has to be destiny. Africa could be doing much better in working against these natural constraints if governments in the region were willing to invest more in essential public goods such agricultural research and rural infrastructure. We have seen that public research and development expenditures can raise productivity in almost any environment (Masters and Wiebe 2000). Economic returns to agricultural research tend to be high; even in Africa rates of return above 50 percent are not unusual. Yet most governments in the region have long skimped on public spending for agricultural science (Alston, Pardey, and Roseboom 1998). Investments in rural infrastructure can also increase farm productivity (Antle 1983), but once again Africa's governments have tended to put priorities elsewhere.

Africa does not have to wait for dramatic research breakthroughs. There is today considerable potential on much of the continent to increase farm productivity simply by increased use of conventional inputs, such as fertilizer. This could be achieved with improved delivery of essential public goods such as rural roads, education, agricultural research, and conflict reduction (Wiebe, Soule, and Schimmelpfennig 1998). It is the undersupply of public goods such as these, rather than any inherent soil or climate constraint, that has most constrained farm productivity in Africa, thus compromising the food security of the rural poor.

National Governance Deficits in Africa

Despite serious soil and climate constraints, low farm productivity and the persistence of hunger and food insecurity in Sub-Saharan Africa must, at some point, be understood as a failure of governance at the national level. Many governments in the region fail to provide essential public goods such as civil peace, rule of law, and investments in public infrastructure, services, and research.[6] So long as these essential public goods remain underprovided by national governments in Africa, remedial efforts by others—including governments of countries outside of Africa, NGOs, MNCs, and IGOs—will have limited impact.

When measuring good governance, surprisingly few analysts focus directly on public goods provision. Some focus on larger values such as the degree of freedom guaranteed to society, indicated by the adoption of basic democratic practices (for example, as surveyed by Freedom House in its "Freedom in the World" ratings). Others focus more narrowly on degrees of political risk to private investors (as in the country risk reviews prepared quarterly by Standard and Poor's DRI) or on the level of perceived governmental corruption (measured by the Corruption Perceptions Index prepared by Transparency International). Some of these measures derive not from objective indicators of actual governmental performance but instead from subjective responses to expert or citizen survey questionnaires, and such reputational measures always risk being influenced by a respondent's prior knowledge of what others believe, or by prior knowledge of good or bad economic and political outcomes. States with good reputations or good economic outcomes often get high subjective ratings for governance whether they deserve them or not.

Whatever the measure being used, the scores for good governance that emerge in Africa tend to be extremely low. This is one finding from an Aggregated Governance Indicator technique developed by Kaufmann, Kraay, and Zoido-Lobaton (1999), which uses a variety of survey sources to construct aggregate indicators of bureaucratic quality, rule of law, and graft, for a large sample of 160 countries. When African governments were

[6] Some of the public goods needed for food security in Africa today go well beyond the traditional and cannot be covered adequately here. Public health services fall into this category, given the magnitude of Africa's HIV/AIDS crisis. FAO estimates that in the 25 African nations most affected by HIV/AIDS, 7 million agricultural workers have already died from AIDS-related complications since 1985. Those countries could lose an additional 16 million farm workers to AIDS by 2020. At current rates of infection, nearly a quarter of Africa's agricultural workers could be sick or die from AIDS or related complications within the next 20 years (Future Harvest 2001).

Table 10—Global distribution of good governance

Region/Country	Share of sample	Governance quintiles: Lowest	2nd Lowest	Middle	2nd Highest	Highest
	(percent)	(percent of quintile)				
OECD countries	14.4	0.0	0.0	0.0	5.7	65.7
Non-OECD countries						
East Asia	3.4	0.0	2.9	2.9	2.9	8.6
Sub-Saharan Africa	25.9	42.9	32.4	38.2	14.3	2.9
Middle East and North Africa	10.9	14.3	5.9	11.8	25.7	0.0
South and Southeast Asia	10.9	14.3	17.6	8.8	14.3	0.0
Europe and Central Asia	19.5	22.9	20.6	14.7	17.1	14.3
Latin America and the Caribbean	14.9	5.7	20.6	23.5	20.0	8.6

Source: Data from Kaufmann, Kraay, and Zoido-Lobaton (1999) as presented in Wolgin (2001, Part 6, 17).

measured in 1997–98 alongside other governments using this method, they compared unfavorably. African countries constituted 26 percent of all states sampled, yet they made up 43 percent of the states that fell into the lowest quintile in terms of governance, and they constituted only 3 percent of those that fell into the highest quintile.

Good governance in Africa may be scarce relative to other regions, but by some measures it is at least increasing. The number of Sub-Saharan African countries rated as "free" by Freedom House increased between 1990 and 2000 from only 2 to 8, and the number of "partly free" countries increased from 15 to 24. Meanwhile, the number of "nonfree" countries in the region declined from 26 to 13 (Wolgin 2001). Peaceful transfers of power took place over the past decade in a number of African countries, including Senegal, Ghana, South Africa, and Zambia. If constitutional governance continues to spread to more states in Africa, public policies could become more accountable to the rural poor and more public goods essential to rural income growth might be provided.

In addition to democracy and constitutionalism, another measure recently offered as an indicator of good governance is decentralization. To be responsive to the needs of local communities, particularly those that are rural and remote, government officials may have to deliver social services from more than just a single, central location in the capital city. Despite the rural and highly dispersed nature of most communities in Africa, national governments there are among the most centralized in the world. Local government employees in Africa constitute just 10 percent of all government employees, only half the typical ratio in Latin America or Asia (UNDP 1993). In terms of service delivery, governments in Africa also tend to be highly urbanized. In one study of 19 developing countries, including six countries from Sub-Saharan Africa, four of the five most urbanized countries in terms of service delivery were African (Nigeria, Côte d'Ivoire, Burkina Faso, and Senegal), while the seven most decentralized service-delivery countries were all non-African (Tuskegee University 2001).

Indirect measures of good governance such as these can be useful, but to advance our present argument we must return to the issue of public goods provision. Consider four public goods of particular importance to agricultural productivity growth and rural poverty reduction: internal peace, rule of law, rural infrastructure, and agricultural research. National governments in Africa have too often faltered in their efforts to provide these basic public goods.

Internal peace

Poverty reduction through agricultural productivity growth is difficult in Africa partly due to the failure of so many governments in the region to preserve

internal peace. Violent conflict reduces agricultural productivity and compromises secure access to food in multiple obvious ways. In rural farming communities, the recruitment of able-bodied young men into armies and militias first takes labor away from food production thereby reducing rural incomes. In areas of conflict, predatory activities by both militias and regular armies then diminish food availability and access directly. These armed groups tend to subsist by eating whatever they can take from the unarmed rural population, and they are frequently motivated to destroy any food they cannot use immediately in contested areas, so as to deny it to their adversaries. Fearing theft and destruction of this kind, rural dwellers naturally chose to invest less energy in farming. They may leave their land entirely and begin moving as internally displaced people toward cities or emergency feeding centers set up by relief agencies.

For all these reasons, countries experiencing conflict in Africa also tend to experience a significant drop in food production. They produce on average 12.4 percent less food per capita in war years than in peacetime. A comparison of actual historical food production in Africa after 1980 to a "peace adjusted trend" shows that peace would have added 2–5 percent to the continent's total food production per year (Messer, Cohen, and d'Costa 1998).

Violent internal conflicts have been common in many African states since independence from colonial rule four decades ago. Over the past three decades, 13 of the world's 20 worst violent military conflicts were in African states (Easterly and Levine 1994). Between 1975 and 1995, 12 countries in Sub-Saharan Africa representing a quarter of the region's population were war-torn, usually for prolonged periods (Freeman and Lindauer 1999). At one point in 1993, a 17-year civil war was still under way in Angola; a three-sided military conflict was being fought in Liberia; a tenuous peace that followed a 16-year civil war was only beginning to take hold in Mozambique; a long-standing violent conflict between Hutu and Tutsi was again raging in Rwanda (soon to produce a tragic genocide in 1994); more than 230,000 refugees were fleeing fighting in Togo; rebels in the mostly Christian and animist south of Sudan were fighting the Muslim-dominated government; and U.S. forces had just entered Somalia to protect food relief shipments from violent attack in that country's civil war. The level of violence has moderated only slightly in the years since. As of 2001, serious military conflicts were still ongoing in Angola, the Democratic Republic of the Congo, Sierra Leone, Sudan, and Uganda.

Because of military conflict, many Africans are forced to cross national borders and become refugees, living in camps and depending for their survival on international food aid. For those who are internally displaced, food security can be even more tenuous, since these people are often cut off from access to international assistance. Sub-Saharan Africa accounts for only 10 percent of the world's population, yet it recently harbored 46 percent of the world's refugees and persons internally displaced by war (Haughton 1997).[7]

What explains such widespread internal violence in Africa? One enduring source of conflict has been the mismatch between nation-state boundaries and the distribution of contending ethnic groups. State borders in Africa south of the Sahara were drawn up by European colonial powers (in Berlin in 1885) mostly for the purpose of keeping peace among Europeans, not among Africans. When the colonizers finally departed in the 1960s, the diverse African ethnic groups contained within these poorly drawn national boundaries naturally began to struggle to control what the Europeans left behind, not only the valuable natural resources, such as diamonds, copper, gold, and petroleum,

[7] In Angola, more than 20 percent of the population was recently internally displaced. In the Democratic Republic of the Congo, more than 450,000 are internally displaced. In Sierra Leone, rebel activity has prevented the return of about 500,000 refugees from Guinea and Liberia and has blocked relief shipments to roughly 500,000 internally displaced people. Sudan continues to have by far the largest number of internally displaced people due to violent conflict—an estimated 4 million as of 1999 (NIC 1999).

but also the potentially valuable political institutions of the state itself. In Africa, where the private economy is weak, most wealth and power continues to flow through or be generated by the public sector, through institutions such as the army, the police, state-owned companies, job-creating state bureaucracies, or state agencies empowered to tax or regulate imports and exports. Resources now also flow into African states through the financial, developmental, and diplomatic ministries that receive foreign assistance from donors or loans from international financial institutions. Struggles between contending ethnic groups to gain control over these wealth-monopolizing institutions often evolve into violent internal conflict. It is said that because state institutions control so much in Africa, "the stakes of politics are too high" (Diamond 1993, 218).

The great diversity of ethnic groups in Africa would have made the problem of nation-state formation and pacification difficult even if Africans themselves had drawn their national boundaries. Fourteen of the fifteen most ethnically diverse societies in the world are located in Africa.[8] By one count, Sub-Saharan Africa has 74 different ethnic minorities, compared to only 43 in all of Asia, where the population is much larger overall (Gurr 1993). In Sub-Saharan Africa, minorities comprise 42 percent of the population, versus the global average of 17 percent. Ethnopolitical groups in Africa also tend to have a stronger sense of group identity than comparable groups elsewhere. Fifty-seven percent of the African minorities on which data are available are strong identity groups, versus the global mean of 37 percent. Much of this strength in group identity is actually recent in origin, having emerged under colonial influence or during anticolonial and postcolonial struggles.

Under these fractious circumstances, asking governments to provide the public good of internal peace is certainly asking a great deal. Yet it is sometimes unlawful behavior by government itself that triggers the violence. In such cases the public good of internal peace is linked to a second important internal public good: rule of law.

Rule of law

Societies, including rural agricultural societies, need protection against more than just violent conflict. They also need safeguards against loss of property and breeches of contract. Well-functioning national governments provide such safeguards by operating capable and noncorrupt civil and criminal justice systems. Ill-functioning governments may either fail to provide these safeguards, or in extreme cases, they themselves may break the law and prey on their own citizens.

Governments in Africa have often fallen short of providing secure rule of law to all of their citizens. Sometimes this is due to governmental breakdown, as in Somalia which has been without a functioning central government since 1991. In other cases, rule of law may be compromised when a government loses control over significant portions of its territory. For example, in the Democratic Republic of the Congo, Sierra Leone, and Liberia the central government is capable of maintaining order in only relatively small portions of the country. Armed opposition groups or intervening foreign armies dominate elsewhere. Rule of law can also be compromised by unconstitutional political interventions by military leaders. Or a government may drift away from constitutional rule under the leadership of a corrupt entrenched party organization, or a single dominating leader (often the founding president). "Rule by the party" or "rule by the leader" often degenerates into predatory governance, where the power of the state is employed narrowly and unconstitutionally to enrich the leader's family, friends, and ethnic compatriots, or to keep political rivals at bay. Public resources then

[8] Easterly and Levine (1994, 12) use a measure of ethnic diversity based on the probability that two randomly selected individuals in a society will belong to different ethnolinguistic groups. The only non-African society on this list is India.

become, in Richard Joseph's words, "a national cake to be divided and subdivided among office-holders" (Joseph 1996: 195).[9]

The tendency in Africa toward rule-by-the-leader rather than rule of law has been difficult to overcome, even in cases where elections are initiated. Between 1989 and 1999, 18 African countries seemed to be moving toward democratization in the sense that they moved up at least one category in the rating system used by Freedom House. Yet despite elections, a disturbing number of entrenched African chief executives held on to their office and control of the state. As of 1996, there were still only two African countries (Botswana and Mauritius) with enough free electoral history to be classified as fully democratic (Derbyshire and Derbyshire 1996).

Another indicator of weak rule of law in Africa is government corruption. Since 1995 the private organization Transparency International has ranked countries according to the degree of corruption that is perceived to exist among public officials and politicians. The ranking uses surveys that capture the perceptions of business people, the general public, and country analysts. Countries get a score from 0 to 10, where a score of 0 means highly corrupt and a score of 10 means highly clean.[10] Transparency International's rankings confirm African governments' reputation for being less likely to enforce rule of law than governments in other developing-country regions. The average index score of the 18 African countries ranked by Transparency International in 2000 was 3.0. By comparison, the 11 Latin American countries ranked had the higher average score of 3.9 and the 10 non–OECD Asian countries ranked had the even higher average score of 4.3.[11]

Another indirect measure of how well African governments provide rule of law can be found in the Index of Economic Freedom compiled yearly by the Heritage Foundation and Wall Street Journal. One dimension this index measures is the protection of property rights, defined as security from government expropriation, the presence of an efficient court system to enforce contracts, and a justice system that punishes those who unlawfully confiscate private property. Using information gathered by the Economist Intelligence Unit, the U.S. Department of Commerce, and the U.S. Department of State, this index ranks 155 countries according to the degree of protection they offer to property rights. Scores range from 1 (strongest protection) to 5 (weakest protection). Of the 36 Sub-Saharan African countries ranked in 2001, none had a score of 1, five had a score of 2, 13 had a score of 3, and the remaining 18 had scores of 4 or higher, resulting in a regional average of 3.5. This high average score would have been far worse if coverage had been given to those countries in Africa that were experiencing full internal breakdown and violent conflict. Six such countries were not even ranked in 2001 (Angola, Burundi, Democratic Republic of the Congo, Sierra Leone, Somalia, and Sudan) because of "the unreliability of available data caused by political instability, outright civil war, or lack of central government" (O'Driscoll, Holmes, and Kirkpatrick 2001, 4).

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[9] Wolgin (2001, 17) describes this pattern as follows:

> African states became characterized by the identification of the leader and his party with the nation-state itself, ethnic tension, lack of a coherent national vision, the use of the state to dispense political favors, the expansion of the state's role beyond its administrative capacity, and the erosion of the professionalism of the civil service. Without a tradition of strong institutions of accountability, it became commonplace in many countries for both politicians and bureaucrats to use the power they controlled to enrich themselves.

[10] Transparency International uses a composite index to rank countries and it builds this index only for countries on which it has data from a minimum of three recent independent surveys. The 2000 Corruption Perceptions Index (CPI) ranks 90 countries based on surveys conducted in 1998–2000. See <http://www.glogalcorruptionreport.org/>

[11] Some individual Latin American and Asian governments (for example, Indonesia, Viet Nam, Ecuador, Venezuela, Bolivia, the Philippines, and India) had lower corruption index scores than the African average, and the transitional states of the former Soviet Union had the lowest average index scores. Yet the index of perceived corruption provides more evidence that African states have difficulty supplying rule of law as a national public good.

Weak property protection in Africa is particularly important as a key to understanding the persistence of slow economic growth in the region. Economic growth in Africa would be higher if the level of investment were higher. But the incentive to invest is weak because essential public goods such as peace, property protection, and contract enforcement are so often missing. One of the few African countries to provide strong guarantees of property protection to foreign investors, Botswana, has attracted one of the highest rates of FDI per capita on the continent. This is no accident. Botswana has the lowest "political risk" of any nation in Sub-Saharan Africa, including South Africa, as revealed in surveys of risk analysts, risk insurance brokers, and bank credit officers (Coolidge and Rose-Ackerman 2001).

It is significant that Africans as well as non-Africans have been reluctant to invest in the region. A study by Collier and Gunning (1997) compares the portfolio choices of wealth holders across all regions, using data on capital flight and domestic capital stocks. They find that wealth owners in Africa relocated 37 percent of their wealth outside the continent. This compares to a 17 percent capital flight rate in Latin America and only 3 percent in East Asia. It leads Collier and Gunning to conclude that if Africa reduced its own total capital flight to the level of Asia, its capital stock might increase by half.

When war, government corruption, and weak property protection discourage new investment, gains will be limited even if government performance improves in other areas. African governments have improved their performance in some policy areas recently, including macroeconomic policy and public education. With regard to macroeconomic policy, partly because of better public spending disciplines, inflation in the region has fallen from an average 13.6 percent in 1980 to 8.4 percent in 1997. Reduced inflation is an important public good, especially for the poor who tend to hold their assets in cash (Wolgin 2001). In recent decades, African governments have also made substantial investments in primary and secondary public education. Between 1970 and 1992 the primary school enrollment rate in Africa increased from 50 to 72 percent, and the secondary school enrollment rate increased from 7 to 24 percent (Freeman and Lindauer 1999). Yet economic growth has remained disappointing, and per capita income in many African countries has continued to decline. In 1995, 83 percent of Africans lived in countries with a per capita income below the level that prevailed 15 years earlier, in 1980. As population has grown, the total number of the poor (and hence hungry) in Africa has grown as well. Between 1990 and 1998 the number of people living in poverty in Africa increased from 242 million to 291 million.

Why hasn't Africa experienced the economic growth that so many other developing regions have experienced? Freeman and Lindauer argue that there is a natural ordering to the determinants of economic growth, and political stability and property rights protections come first.

> Without this base, investments in education, openness, and levels of income equality have little effect on growth. The reason returns to schooling are low in Africa, that capital flight is high, and that the shift toward free trade has not created growth miracles is that schooling, investment, and trade operate successfully only in a peaceful, stable, environment for economic activity (Freeman and Lindauer 1999, 20).

Rural infrastructure

Throughout the developing world, the deep poverty of rural areas tends to be associated with a lack of infrastructure to ensure access to markets and fundamental public services including water and sanitation, education, and public health. Data from one survey covering 55,500 households in 15 different countries (African and non-African) reveal the magnitude of several important rural-urban infrastructure gaps. Compared with urban households, fewer rural households had electricity (46 versus 89 percent), in-house water taps (12 versus 59 percent), sewer connections (7 versus 61 percent), and telephones (8 versus 38 percent). Given this pervasive lack of rural infrastructure, it is unsurprising that when the sample of households in this survey was broken down by wealth, more than 91 percent of those in the poorest quintile were living in rural settings. Among these lowest quintile rural dwellers, infrastructure coverage was even weaker than the overall rural average. Almost none of these poorest rural households had in-house water (2 percent),

sewers (1 percent), or telephones (2 percent). Even for the less impoverished rural households—those with incomes up to $2,400 per year—coverage of these basic public services remained under 10 percent (Komives, Whittington, and Wu 2001).

In Africa, one rural infrastructure deficit especially prejudicial to agricultural productivity and rural income growth is the shortage of well-maintained or paved rural roads. Total road coverage in Africa is sparse, with only 0.06 kilometers of roads per square kilometer, compared with a density three times higher in Latin America and six times higher in Asia (Wolgin 2001). Of this scant road coverage in Africa, very little is paved to ensure passability during the rainy season. Paved roads comprise only 7 percent of total road coverage in Uganda, and in the Democratic Republic of the Congo the paved share is just 2 percent. The paved and unpaved roads that do exist in Africa also tend to be poorly maintained. At a given time, 50–90 percent of Africa's rural roads are in need of repair (Calvo 1998). Partly because Africa's rural transport infrastructure includes so few paved roads suitable for vehicles (or even bicycles), 87 percent of all household travel is still by foot.

A farm productivity revolution will be difficult to launch in Africa as long as transport costs remain high due to the underdeveloped rural transport infrastructure. High costs of transport impede farmers from getting needed inputs (such as fertilizer) at an affordable price. Fertilizer costs 2–6 times more at the farm gate in Africa than in Asia, Europe, or North America. High transport costs also reduce the ability of farmers to sell their produce for higher prices in cities. Marketing costs for agricultural products are higher in Africa than anywhere else in the world, and this hurts the rural poor both as sellers and buyers of food. Many poor households are actually net purchasers of food, using the small incomes they gain from cash-crop production or remittances. High rural transport costs also tend to constrain rural credit availability and severely reduce the growth of nonfarm employment as a supplementary income option in the countryside.

Africa's poorly developed rural transport infrastructure is particularly damaging to the interests of rural women, since it is they who traditionally bear the larger share of transport burdens. Throughout Sub-Saharan Africa, women contribute at least 65 percent of the household time spent on travel and transport and well over 65 percent of the effort. African women learn from an early age how to head-carry heavy loads (sometimes exceeding their body weight) over remarkable distances. Surveys conducted in rural Zambia, Uganda, and Burkina Faso indicate that the carrying burden (measured in ton-kilometers per person per year) taken on by women in rural Africa tends to be almost four times greater than the burden taken on by men (World Bank 1997). The physical burden on these women could be eased and rural transport efficiency dramatically improved through larger public investments in a rural transport infrastructure, especially feeder roads capable of taking vehicles and bicycles into remote rural communities.

Adequate public investments in rural transport infrastructure have been critical to farm productivity growth in other developing-country regions, most notably in China and Taiwan. Rural roads not only open new areas for production, they also increase labor efficiency (Craig, Pardey, and Roseboom 1997). Investments in rural roads are nonetheless meager in much of Africa, in part because the physical dispersion of the population often renders road projects nonviable once economic rate of return criteria are calculated. Such traditional economic criteria can, unfortunately, be blind to parallel concerns such as social and gender equity and absolute poverty reduction, which are also key to the reduction of rural hunger. If more criteria highlighting social benefits to the poor were taken into account, rural infrastructure investments might emerge as cost-effective even in some of Africa's most sparsely populated areas. The rural poor in Africa also can benefit from the process of road construction and maintenance through the creation of local wage employment (Liu and Gannon 1999).

Agricultural research and extension

Governments in Africa have also fallen short in providing adequate public investments in agricultural research. We earlier discussed the role of the CGIAR in providing global public goods in the

research area, but the CGIAR cannot do the job alone. Without competent teams of agricultural scientists at the national level able to adapt CGIAR crop varieties and innovations for local use and respond to local needs, the breakthroughs made at the international centers are likely to sit unused. Research contributions from national scientists may actually be more important in the African setting than in other developing-country regions, given Africa's distinctly difficult agroclimatic environment plus the lower involvement of private-sector research enterprises in Africa (Johnson and Evenson 2000).

During the Green Revolution in Asia, strong national agricultural research programs within the adopting countries were critical to move improved traits into local germplasm and to move the new seeds out to farms. Yet since the 1980s, many proven national programs have struggled due to a lack of public funds. IFPRI's 2020 Vision initiative, since 1995, has advised low-income developing countries to set an immediate minimum target for spending on agricultural research equal to 1 percent of the value of total agricultural output, with a longer term (5–10 year) target level of 2 percent (IFPRI 1995, 29). Unfortunately, most governments in low-income developing countries have spent only about 0.5 percent of their agricultural GDP on agricultural research. A few middle-income developing countries, such as Malaysia and Thailand, have spent 0.6–0.7 percent, with other less wealthy countries, such as Pakistan and the Philippines, spending only about 0.2 percent.

Governments in Africa have also skimped in funding agricultural development more broadly. Most have invested less than 5 percent of their annual budget in any kind of agricultural development, even though up to 75 percent of their citizens—and an even larger share of their poorest citizens—still depend on farming. These small agricultural development budgets leave little room for research. Since the 1980s, research spending in Africa increased at only a sluggish 0.8 percent annual rate, well below the 2.5 percent annual increase registered in the 1970s when agriculture still received high priority from a number of governments (Alston, Pardey, and Roseboom 1998). Between 1971 and 1991, in 44 Sub-Saharan African countries public expenditures on research and development for agriculture increased by only 35 percent, versus a 166 percent average increase in all 131 developing countries together (Pardey et al. 1999 cited in Tuskegee University 2001). This was at a time when Africa's population was roughly doubling and food production per capita was stagnating. It is thus unsurprising that Africa has only 42 agricultural researchers per million persons economically active in agriculture, compared with 2,458 in industrial countries.

Of course the donor community is in part to blame for this underinvestment in research. Agricultural research in Africa has long been heavily dependent on donor funds—traditionally 61 percent is donor funded in francophone countries and 36 percent in anglophone countries outside of South Africa. When donor funding declines, as it did in the 1990s, national governments find it hard to make up the difference. Yet the donor community cannot be expected to carry the burden on its own. Since 1981 the World Bank has lent $3.8 billion for agricultural research purposes in developing countries, either through specialized agricultural research loans or broader loans with an agricultural research component. Over the same period, the World Bank also provided roughly $3 billion in direct support for agricultural extension in the developing world. Yet these global investments in agricultural knowledge creation and public dissemination have not been matched by sufficient public investments by governments in the poor countries themselves.

6. Strategies to Correct National Public Goods Deficits

When governments fail to deliver the minimum public goods needed to provide food security for their own citizens, what can be done to correct the resulting governance deficit? To what extent can national governments in rich countries, or IGOs, or perhaps national or international NGOs step in to provide the public goods and services that local national governments fail to supply? This section provides some illustrative answers, once again focusing primarily on the difficult case of Sub-Saharan Africa. We specifically ask how governance deficits might be corrected in such areas as internal peace, rule of law, and investment in research and rural infrastructure. Where opportunities exist for outsiders to provide more help, their obligation to do so rises accordingly.

Can Outsiders Restore and Preserve Internal Peace?

International norms and laws of state sovereignty have traditionally restricted the freedom of outsiders to intervene in the internal affairs of foreign states, even when those states fail to provide their own citizens with internal peace. This norm of nonintervention has been useful for protecting weak states from domination or conquest by the strong, so it has traditionally been defended most vociferously by the leaders of weak states, and it has been written into the charters of many state membership IGOs, including the United Nations and various regional organizations. In Africa, when the Organization of African Unity (OAU) was founded in 1963, the continent's new leaders agreed before all else on the impermissibility of outside intervention into the "internal affairs" of member states.[12]

The traditional norm against intervention has recently weakened a bit, with the colonial era receding into history and then with the end of the Cold War. As national independence has become more secure over time and as the danger of competitive Cold War superpower interventions lessened, new political space has opened to permit more frequent peacekeeping and international humanitarian interventions. Beginning in the 1980s, the U.N. Security Council became more active in authorizing interventions into the internal affairs of states, as it was no longer paralyzed by a veto-casting competition between the United States and Russia. The Security Council has increasingly authorized interventions in at least three important circumstances: when a state engages in systematic human rights violations, when a state is incapable of protecting human rights due to a breakdown in state authority, and when a government in power is unlawfully constituted. When these conditions are present, the Security Council has become more willing to consider the situation a threat to peace, and it has exercised its legal powers to authorize international enforcement measures under Chapter VII of the U.N. Charter.

This weakening of the state sovereignty norm has unfortunately not yet been accompanied by any significant strengthening of the institutional or military capacity of legitimate international institutions (such as the Security Council) to carry out enforcement

[12] In 2001 the OAU changed its name to the African Union (AU).

actions to preserve or restore internal peace. For the purpose of peace preservation, it remains extremely difficult for the Security Council or the secretary-general to authorize an intervention prior to an actual outbreak of violence. A former special representative of the United Nations in Somalia, Mohamed Sahnoun, has described at length his frustration in seeing several opportune moments for preventive diplomatic intervention pass in that country between 1988 and 1991, leaving the country to spiral into anarchy, clan violence, and finally a widespread famine. Sahnoun largely faults the weak institutional structure and capacity of the U.N. system itself (Sahnoun 1994).

On other occasions the weak capacity of the United Nations to operate independent of the preferences of great powers has blocked timely peace-preserving interventions. A mission from the U.N. Department of Peacekeeping Operations recommended that an international peacekeeping force of 8,000 troops be stationed in Rwanda in 1993. But this recommendation was blocked by the U.S. delegation, which had become fearful of participating in U.N. peacekeeping operations since the deaths of 18 U.S. soldiers in a belated effort to restore peace by intervention in Somalia. Consequently the Security Council sent only a small 2,500-troop force to Rwanda in 1993, a force with no budget, no intelligence capacity, only one functioning armored personnel carrier, and rules of engagement that were strictly reactive. When subsequently attacked by contending forces in Rwanda's internal political war in the spring of 1994, this token force simply withdrew, clearing the way for resumption of an internal war that was marked by genocidal violence, massive population dislocations, and again famine (Jones 1999).

As currently constructed, IGOs such as the United Nations are also poorly equipped to restore peace after internal fighting breaks out. Once hostilities are under way, the international community has usually intervened only for the purpose of extracting foreign nationals from physical danger or delivering emergency relief. International assistance agencies and NGOs often attempt humanitarian interventions to deliver food and medical relief to the victims of war, but while fighting persists these interventions, too, are prone to failure. In Somalia after violence broke out early in 1992, up to 80 percent of the food aid delivered to the country was routinely stolen by armed militias.

Discussions continue within the international community over the legal and institutional innovations that might be required to empower the United Nations to conduct successful peace preservation and restoration missions within sovereign states, in Africa or elsewhere. Several proposals could be acted on quickly, if the secretary-general were to take the lead with support from the permanent members of the Security Council. Without having to amend the Charter or alter the power or composition of the Security Council, the United Nations might be able to provide more effective international preventive diplomacy and peacekeeping if five conditions were met:

- If the secretary-general were to exercise more often his authority under Article 99 to "bring to the attention of the Security Council any matter which in his opinion may threaten the maintenance of international peace and security."
- If the General Assembly were to exercise more often its right to address problems that the Security Council is avoiding.
- If larger national contributions were made to the Fund for Preventive Action (established by Norway in 1996), which provides the secretary-general with resources to train, support, and expand a roster of people to serve as envoys and special representatives in real or suspected crises.
- If contributing member governments gave the secretary-general and Security Council more capacity to react quickly to imminent conflicts, in the form of rapid-reaction and standby military forces on call for U.N. duty. Member states—particularly nonsuperpowers—could designate forces from their own military services as dedicated to the support of such rapid-reaction missions.
- If the secretary-general and Security Council had authority over a small standing police force for internal conflict prevention purposes. Conflict prevention policing actions are often best carried out with trained police rather than regular army troops. Yet police personnel are

seldom in ready surplus among member countries. A standing force under U.N. control could be necessary to ensure timely action (Smith and Naim 2000).

It will strike some as potentially dangerous to give the admittedly nondemocratic and frequently nonaccountable institutions of the United Nations any increased capacity to violate traditional norms of sovereignty in the name of preventive diplomacy or internal peace preservation. Yet the only alternative, until now, has been to leave this task by default to disproportionately powerful individual states (sometimes states with hegemonic or neocolonial ambitions) or to ad hoc alliances of such states, sometimes with Security Council endorsement and sometimes without. This evolving ad hoc intervention system has not prevented internal wars or mischievous foreign interventions (in Africa, witness the multiple international military interventions recently in the Democratic Republic of the Congo). Institutionalizing a stronger intervention capacity within the U.N. system might thus be the only way to preempt even less desirable interventions. Moreover, an increased likelihood that the Security Council will act might deter some of the worst internal excesses in the first place. As Secretary-General Kofi Annan re-marked in his 1999 annual report on the work of the United Nations, "Even the most repressive leaders watch to see what they can get away with…. The more the international community succeeds in altering their destructive calculus, the more lives can be saved" (cited in Smith and Naim 2000).

Some institutional innovations within Africa itself might increase prospects for internal peace. Governments in the region could experiment with institutional arrangements that depart from the unified territorial nation-state model left to them by the European colonizers. In some cases, the diversity of Africa's many contending ethnolinguistic minority groups might better be accommodated—and peace better preserved—through national governance institutions designed to grant explicit regional autonomy, shared powers, or conditional rights of secession to some regions or groups. Such innovative constitutional redesigns may be difficult to undertake, with international legitimacy now conferred so exclusively on individual leaders of traditional unified states, via diplomatic recognition, IGO membership, and access to public-sector international borrowing privileges or financial support. Because of such international benefits, some African politicians may find it more advantageous to rule a unified state torn by war than to innovate an internal division or sharing of power in the interests of peace (Herbst 2001).

We may ask if promoting democracy is a way to build internal peace in Africa. Promoting democracy may be good for advancing the rule of law once states are free of violent conflict, as we shall argue below. But movement toward highly centralized majoritarian democratic systems in ethnolinguistically divided countries can be dangerous if peace has not yet been secured. As Timothy Sisk argues, "Simple majoritarian democracy contains special problems for ethnically divided societies. Minority ethnic groups expect to be permanently excluded from power through the ballot box and fear electoral contests when the principle of simple majority rule is operative" (1996, ix). Particularly in societies that have recently experienced internal violence, competitive winner-take-all elections contested along ethnic or regional divisions may be an unlikely path to peace and national unity.

Can Outsiders Promote Rule of Law?

The norm of state sovereignty can also block outsiders from promoting rule of law. Yet the poor and the hungry would seem entitled to some external help, particularly where a government has become predatory against its own people. How can outsiders work against the tendency of regimes in so many states to impose arbitrary taxes, steal state funds, appropriate private property, and fail to punish crimes or enforce contracts? In societies not too badly divided by ethnic conflict, international efforts to promote democracy can play a positive role. Genuinely competitive elections carrying a significant threat of electoral removal can be a strong protection against entrenched and corrupt regimes. Democratic competition is one reason for Botswana's relative success in maintaining a rule-of-

law approach toward public affairs (Coolidge and Rose-Ackerman 2001).

Outsiders concerned with rule of law in Africa sometimes hesitate to call for the full democratization of political systems in the region, knowing that such a stance might compromise their various diplomatic or economic relationships with nondemocratic regime leaders. In deference to the norm of state sovereignty, international financial institutions such as the World Bank are actually proscribed from conditioning their loans on the adoption of any one specific form of government. Until now most international institutions have been willing only to seek greater discipline over the most extreme outcomes of nondemocratic rule, such as human rights abuses or state corruption. For example, efforts are now being made by outsiders to reduce bribe-taking by officials in the developing world. These efforts have been pursued most energetically by NGOs such as Transparency International and the International Chamber of Commerce, now supported by IGOs like the Organization of American States and the Commonwealth Heads of Government. The conditioned lending activities of key international financial institutions such as the World Bank and IMF have also played a role (Commonwealth Secretariat 2000).

External efforts to reduce bribe-taking in poor countries are no doubt useful to the international private sector, yet agricultural productivity and food security in Africa is more often compromised by other rule-of-law deficits, such as a general failure to enforce private contracts, or the outright appropriation by the state (often by rulers, their family or their supporters) of private lands or wealth. External interventions to prevent this sort of governance failure are routinely avoided by the international community, partly because they are hard to justify under current international law.

It is an irony that Africa's one-man rule regimes are protected from international interventions for good governance purposes, given the frequency of international interventions over the years to prop up such regimes. Some of these interventions were Cold War motivated, as in the case of U.S. support for the anticommunist but disastrous Mobutu regime in Zaire. In some cases the external intrusions reveal postcolonial motivations as one-man regimes in Africa have often been given foreign economic and military aid by former metropolitan governments for the dubious purpose of preserving diplomatic influence or exclusive commercial access. External interventions that sustain one-man rule in Africa also come inadvertently from international financial institutions such as the IMF and World Bank. When IGOs such as these extend loans to struggling African governments, they breathe political life into the failed nondemocratic leaders of such regimes. Without the legitimacy gained through international diplomatic recognition and representation, and without the intergovernmental lending and assistance automatically enjoyed as a result, some failed governments in Africa might be easier to replace (Clapham 1996).

Some of this international support for one-man rule in Africa weakened when the Cold War ended, and more political space is now open for appropriate international scrutiny and criticism. For example, when the U.S. Secretary of State visited Africa in May 2001, he directly asked the president of Zimbabwe (who had headed the country as either president or prime minister for more than two decades) and the president of Kenya (who had ruled the country as a one-party state for nearly as long) to step aside and allow new presidents to be elected. In the case of Zimbabwe, outsiders have also frozen most economic assistance pending improved governance.[13]

A mix of outside pressure and assistance might help move more of Africa (or states in equally nondemocratic regions, such as the Middle East)

[13] While regime leaders naturally resist such external pressure, ordinary Africans do not seem to be offended. In Zimbabwe, where two decades of one-man rule finally brought the nation a shrinking economy, 60 percent unemployment, and state violence against the organized democratic opposition, one opinion survey conducted by the Helen Suzman Foundation found that only 2 percent of all citizens thought whites were most to blame for Zimbabwe's problems, while 41 percent blamed the president's government and 28 percent blamed the president himself (Johnson 2001).

toward political systems grounded in rule of law or competitive elections. Explicit bilateral pressure by influential states can produce results over time. Consider the dramatic shift toward democracy that took place in Latin America between 1974 and 1990, in part because of bilateral pressures imposed from the United States. In 1974, when the United States shifted the focus of its diplomacy in Latin America (mostly at congressional insistence) in the direction of advocating democracy, eight out of the ten states in South America had nondemocratic governments. Sixteen years later, in 1990, nine of these same ten states had governments that were democratically chosen (Huntington 1991).

This transformation was partly the result of consistently strong diplomatic pressures applied in the region by United States, most obviously during the presidency of Jimmy Carter (1977–80). These pressures included official statements endorsing democratization, the publication of annual ratings of human rights protection in individual countries by the U.S. Department of State, direct advocacy through the U.S. Information Agency, economic pressures and sanctions (for example, congressional limitations on assistance, trade, and investment), material support for democratic forces, and even military actions. In 1978 the Carter administration deployed American warships off the Dominican Republic to ensure a fair election count, and in 1980, 1983, and 1984 the United States intervened to prevent planned military coups in El Salvador, Honduras, and Bolivia. In 1989 U.S. diplomacy prevented a military coup in Peru, and the United States staged a military invasion of Panama to reverse a coup against free electoral processes. External pressures were only part of the story, to be sure. Longer term demographic trends, such as the growth of a larger and better informed urban middle class, plus some key nonstate influences such as radical Catholic priests promoting a new "liberation theology," also helped to banish traditional authoritarian regimes from the region.

The spread of democracy in Latin America in the 1970s and 1980s helped to inspire parallel changes elsewhere, including in Central Europe, East and Southeast Asia, and even the former Soviet Union. Sensing the power of this trend, a number of industrial democratic states in the 1980s began to incorporate formal democracy promotion programs into their traditional assistance policies. At first these programs concentrated narrowly on electoral assistance, such as funding election administration projects or sending international observers to monitor the conduct of elections in transitional states. Also playing a role in these efforts were IGOs, including the United Nations (under a somewhat expanded definition of peacekeeping) and regional institutions like the Organization of American States and the Organization for Security and Cooperation in Europe. When it became clear that merely holding elections might not be enough, these external efforts broadened to include a strengthening and reforming major state institutions such as legislatures and judiciaries, and the creation of stronger "civil society" institutions to assist in holding state institutions to account. Considerable resources have now gone into such international democracy promotion assistance programs. In 2000 the U.S. Government devoted more than $500 million to democracy promotion abroad, principally through USAID but also through a number of publicly funded NGOs such as the National Endowment for Democracy, the Asia Foundation, and the Eurasia Foundation (Carothers and Ottaway 2000, 5).

In Africa, international pressures and rewards for democratization have so far produced mixed results. In some cases where elections were already scheduled, such as Zambia, international assistance helped bring an end to an entrenched regime without any coercion.[14] Yet in other cases, such as Kenya, success has been elusive. In Kenya coercive diplomatic pressure from the donor community, including threats to suspend assistance, were

[14] Zambia held multiparty elections in 1991 for the first time since 1968. Western donors strongly supported the elections, and to ensure their credibility they provided international observers and promoted domestic monitoring efforts. President Kenneth Kaunda, who had ruled the country since independence, was defeated (Ottaway 2000, 82).

required simply to persuade the regime to hold elections, first in 1992 and then once more in 1997. These elections did not end entrenched rule, however, as partisan divisions among the political opposition enabled the incumbent party to win.

In contrast to Latin America, where U.S. diplomatic leadership was an external contributor to the democratization process, in Africa European leadership will be more critical. European governments enjoy stronger political and cultural ties to the region. They have a larger diplomatic presence, and they are also usually more engaged in terms of corporate investments and bilateral assistance. Within Africa itself, the government of South Africa has a crucial leadership role to play. Having recently secured its own transition to democratic rule, South Africa has a chance to project greater expectations of democratic governance onto neighboring states in the region.

Even with such external pressures and rewards, Africa's transition to democratic rule is likely to be slow and hesitant at best. While awaiting the completion of that transition, outsiders should help compensate for other public goods deficits in the region, such as public investment in rural infrastructure and agricultural research.

Can Outsiders Increase Investments in Rural Infrastructure and Agricultural Research?

Intervening from the outside to help bring about internal peace and rule of law is sensitive and difficult. But offering help to compensate for deficits in rural infrastructure and research investment should be much easier, since this task only requires adequately funded and properly targeted external assistance. The straightforward challenge is to mobilize sufficient external resources to make the additional investments in rural infrastructure and agricultural research that are needed.

Public assistance is needed because the private sector is unlikely to get involved. International companies have vast financial and technological resources, but they are uninterested in investing those resources in Africa for the creation of public goods such as rural roads or for research on improved varieties of subsistence crops for which there is no commercial seed market. This would be true even if Africa were peaceful and democratic. Neither Africans nor outsiders should wait for the private sector to make these needed investments in public goods. The international public sector offers an attractive alternative.

Public-sector assistance to Africa has been substantial over the years. According to data compiled by the OECD Development Assistance Committee (DAC), in 1998–99 Sub-Saharan Africa received a yearly average of $11.3 billion in net ODA through bilateral and multilateral channels (OECD 2001, Table 32). For 1993–97, net ODA receipts in Africa had totaled $86.5 billion, which was roughly nine times the total net foreign direct investment of private companies in the region during the same period (Goldsmith 2001). Africa receives more ODA than any other developing region in absolute terms, in per capita terms, and also as a share of GNP and gross domestic investment. Governments in Africa have also benefited from repeated rounds of debt forgiveness. From 1989 to 1997 the 41 Highly Indebted Poor Countries (not all in Africa) received roughly $33 billion in debt forgiveness (Easterly 2001).

Yet much of this public-sector lending, assistance, and foreign debt forgiveness has recently been linked not to local public goods investments, but instead to an elusive goal of "policy reform." During the world debt crisis of the 1980s, when many developing-country governments ran out of money and were forced to turn to the IMF and the World Bank for emergency loans, the policy advice they got along with the loans was to embrace a set of "structural adjustment" policy reforms. These included not only monetary policy discipline, trade liberalization, market deregulation, and privatization of state-owned enterprises, but also fiscal policy discipline in the form of reduced public-sector spending. The World Bank thus began lending not to expand state investments in poor countries, but instead to shrink state spending in the name of market efficiency and fiscal discipline. During the 1980s, the share of World Bank lending worldwide

that was invested in agricultural and rural development projects fell nearly by half, while the share of total World Bank lending for the purpose of inducing policy change increased from almost nothing to more than 20 percent (Lipton and Paarlberg 1990). The goal was to shrink wasteful public-sector spending on unneeded consumer and producer subsidies, inefficient state enterprises, and large state bureaucracies. But one unintended side-effect of the structural adjustment lending strategy was a collateral shrinkage of spending on much-needed public goods investments in areas such as rural health, education, infrastructure, and agricultural research.

The World Bank's policy reform lending strategy produced different results in different borrowing countries. In some countries it fell short because very little durable policy reform was achieved despite the large loans that were made. In other countries it fell short because good policy changes undertaken in some areas were counterbalanced by damaging cutbacks in important state investments and public services. In Africa, the most conspicuous setbacks for policy reform lending were of the first kind, where borrowing governments took the money but then failed to undertake the prescribed reforms. As noted above, a 1994 World Bank review of 29 Sub-Saharan African countries found significant backsliding on promised reforms in the areas of monetary policy and agricultural market deregulation (World Bank 1994). This same pattern was revealed in a 2000 IFPRI study which found that "for the most part, reforms were not fully implemented… Many countries reversed reforms as a result of external shocks or changing economic conditions" (Kherallah et al. 2000, 9). A 2001 World Bank study of policy-conditioned foreign aid conveys the same message. This study looks at bilateral and multilateral assistance to 10 African countries (Ghana, Uganda, Ethiopia, Mali, Tanzania, Côte d'Ivoire, Kenya, Zambia, Democratic Republic of the Congo, Nigeria). In the end it could classify only the first two—Ghana and Uganda—as "successful reformers."[15] Another study, which looks at Ethiopia, Kenya, Malawi, Zambia, and Zimbabwe, concludes that in these states after years of structural adjustment "the policy environment is not clearly more hospitable toward private investment than it was before the liberalization process began."[16]

The reluctance of African governments to persist with liberal reforms prescribed by the World Bank and other lenders or donors partly reflects a regional and historical culture of mistrust toward private markets. It mirrors the public sector's desire to continue managing food and farm commodity markets and input-supply industries for narrow political patronage (often bribe-seeking) purposes. Yet there is also genuine concern that policy reforms requested by the World Bank will—in the short run at least—cause problems for the poor. Some basis for this concern is seen in the difficult experiences of the few African states that have worked hardest to adhere to the World Bank's structural adjustment formulas. These countries often regained the sound macroeconomic foundation needed to revive overall growth, but at a high price in terms of withdrawing other kinds of public goods. Reforming states are often under powerful pressure to continue public investments and state services for favored urban constituencies, so they are sometimes inclined when cutting spending to disinvest in programs for the less visible, less powerful rural poor.

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[15] The study found that in Côte d'Ivoire and Ethiopia significant policy reforms were recently undertaken, but it is too soon to judge their sustainability. In the other six countries, according to the study, "policies changed little or even got worse" (Devarajan, Dollar, and Holmgren 2001, 1). The study remarks on the substantial quantities of foreign assistance spending that were made available in Africa to "buy" policy reform ($3 billion went to Kenya alone for this purpose during 1970–96) with little actual policy change to show in the end.

[16] Jayne et al. (2001, 2) shows that Zimbabwe reimposed price controls in 1998, the government of Zambia got back into fertilizer distribution in 1997, Ethiopia curtailed marketing board operations but then permitted creation of regional holding companies, Kenya continued to intervene in its maize sector, and Malawi allowed its state-owned marketing board to continue operating as the nation's dominant maize buyer.

In Ghana, the government began implementing structural adjustment in cooperation with the IMF and World Bank under an economic recovery program in April 1983. Ghana took the adjustment process seriously, and its subsequent macroeconomic performance emerged as a point of pride for advocates of policy-based lending. Inflation came under control and currency exchange rates were successfully realigned, triggering a revival of economic growth and exports, including cash-crop farm exports. But at the same time Ghana reduced important state investments in agriculture. The real purchasing value of its total state expenditures on agriculture declined from an index value of 100 in 1981 to a low of 35.8 in 1984. Some of the state outlays cut were wasteful subsidies for inefficient state farming projects, but the index value of real development expenditures on agriculture—mainly capital investment outlays—also dropped significantly, from 100 in 1981 to 60.7 in 1984. Under the economic recovery program Ghana did initiate a public investment program, which included a number of infrastructure investments. But the selection of projects for investment was based on straight economic rates of return rather than on numbers of people brought out of poverty or hunger, so too much of this investment ended up going to urban areas. Public investments in agriculture under the program were only 13.6 percent of the total, and public investments in education and health together received only 6 percent (Sarris and Shams 1991).

Sometimes nations undergoing structural adjustment have fallen short in both policy reform and public investment. Kenya, as noted, was prone to repeated backsliding from its policy reform promises in the 1980s, and its public-sector investments in rural infrastructure slid at the same time. Between 1982 and 1988, Kenya's spending on rural roads declined by more than 40 percent. This was a time of extreme budget stringency for the country because of low coffee prices, but spending on roads fell even as a percentage of government expenditures, from 10.8 percent in 1980 to 3.0 percent by 1989 (Grindle 1996).

Responding to such frustrations in the late 1990s, the World Bank began moving toward a semiofficial "new Washington consensus" that looked beyond market-distorting policies to deeper problems such as weak public goods provision (Goldsmith 2001). The World Bank has been somewhat restricted from direct pursuit of better governance through conditioned lending, because as noted earlier its mandate precludes it taking stands for or against any particular type of political regime. If the World Bank continues to encounter frustration in Africa when lending for good policy, and if it is indeed constrained from lending explicitly for good government, then it might consider a compromise option of returning to its earlier tradition of lending for good investments in some of the more "policy proof" public goods areas that suffered during the structural adjustment era, such as rural infrastructure and agricultural research. A return to this kind of investment-based lending would help the World Bank again become a part of the solution in Africa, rather than either seeming irrelevant or (in some cases) as part of the problem.

The agricultural sector is one area in which the World Bank could resume larger investment lending. Between 1986 and 1993, total annual World Bank lending for agriculture and rural development fell from nearly $6 billion to only $4 billion (in constant 1996 dollars). This decline then continued through 1996, falling to just $2.7 billion (Paarlberg 1999). The World Bank went into the 1990s with 23 rural development projects in Sub-Saharan Africa valued at $1.0 billion. By 1999 it was operating only eight such projects valued at just $224 million (Wolgin 2001).

If the goal is to offset underinvestment by African governments in rural public goods such as transport, water, power, and agricultural research, a move toward more investment lending by the World Bank would seem to be in order. Using loans to buy tangible public goods such as roads and power can do more good for the rural poor than trying to buy (or rent) some kinds or policy reform. Such traditional public goods investments can also reach indirectly into other areas of priority concern, such as gender equity. In rural Africa it will be women as farmers and as family caregivers who benefit first from improved feeder roads, stronger marketing infrastructure, better access to health

services, clean water and electricity, and new breakthroughs in publicly funded agricultural research. Supplemented by programs specifically targeted at women—including child and maternal health clinics, women's microcredit lending programs, greater support for women's participation in research and extension, and membership in rural cooperatives—basic investments in rural public goods in Africa may be one of the best ways to pursue greater gender equity (FAO 1997).

7. The Role of NGOs in Supplying Missing Public Goods

When national governments fail to deliver the public goods essential for domestic food security, can NGOs or INGOs step in to fill the gap? Naturally many have tried to do so. Scholars debate whether this has been a spontaneous civil society response to government failures in the developing world (Brown and Korten 1991) or a phenomenon guided and sponsored by governments within the donor community (Tvedt 1998). Consistent with the second view, NGOs can offer donor governments a convenient alternative channel for providing some kinds of assistance, plus valuable political support to the aid bureaucracies of donor governments, once the NGOs become dependent on public financing. NGO activities are convenient to national governments in the developing world too, as governments under budget pressure welcome an alternative means for delivering some of the social services that the state no longer can supply.

The private organizations that seem to work best in developing countries in filling gaps in social service delivery are local grassroots people's associations, those that live as well as work among the rural poor. While such organizations are widely appreciated in the abstract by donors and larger NGOs, they nonetheless tend to be overlooked for funding and often remain disconnected from larger national and international NGO networks. This is partly because so many are rural rather than urban (and hence hard to reach). It also reflects their lack of the administrative capabilities that most donor bureaucracies demand, such as professional leadership, a formal mission statement, and the ability to produce—often in English or some other European language—a regular stream of accounting reports, project information, and grant proposals.

Even without donor funding, these local rural groups have often been capable of stepping in to fill at least some of the gaps left by public-sector governance failures. They usually do best where local collective self-help activities can substitute for the delivery of government services. For example, they may play a valuable role in local infrastructure maintenance and protection of natural resources, helping to maintain walking paths or water-harvesting tanks, or protecting trees, grazing lands, ponds, and riverbanks. Traditional village-level organizations often do a better job than the modern state in managing such local common-property resource systems (Jodha 1991). Irrigation management is another function that is often better performed by local associations than by the centralized organs of the state (Uphoff 1996).

There is a limit, however, to what local grassroots organizations can provide. While they can manage natural resources or maintain and manage some infrastructure systems already in place, they usually lack the financial clout or the wide reach needed to create new and broadly connected rural infrastructure systems. Local groups can manage water-sharing and field channel maintenance once an irrigation scheme is created, but they do not ordinarily have the resources to construct such a scheme from scratch. While they can help manage the maintenance and repair of local rural road systems, they do not ordinarily have the resources to build modern paved all-weather roads. Or at best they can provide the labor needed to build some kinds of rural roads, but not the wages needed to pay the laborers.

National NGOs tend to have a wider reach and more abundant resources than their local grass-

roots counterparts. They typically work from a central office in the capital city, enjoy access to key ministries, stay connected nationally and internationally using modern communications capabilities, and often have their own small fleet of vehicles suitable for trips upcountry. These assets give them credibility in the eyes of international donors and the INGO community, often their most important sources of funding. National NGOs might thus seem better positioned to make up for national governance deficits, such as providing investments or services that governments fail to supply. In fact, national NGOs can play this role in a wide range of areas—certainly including delivery of child and maternal health services, family planning services, emergency relief, school-based feeding programs, child inoculation and oral rehydration programs, and microcredit schemes. Microcredit lending projects, moreover, can contribute directly to food security, since 60 percent of such funds typically goes to the rural poor (often women) to support agriculture. NGOs have these significant capabilities, and in some emergency cases where the authority of a central government has collapsed entirely due to ethnopolitical conflict (for example, in southern Sudan), virtually all public services have had to be turned over to them.

Yet even in these extreme cases, the goods that NGOs deliver are usually private services to individuals rather than genuine public goods investments. NGOs are good at reaching individual communities with valuable services, but they are not as good at, for example, creating regional water, power, or rural road systems or sustaining agricultural research programs. Also, many NGOs as currently constituted fall prey to some of the same limitations found within developing-country governments. Just as national governments in many poor developing countries tend to be urban-biased, overly centralized, and not directly accountable to rural communities, so too do many NGOs. When headquartered in the capital city, NGOs may be just as prone to domination by urban-dwelling elites. In terms of organizational structure, many national NGOs are just as centralized and top-down as governments, having adopted this organizational style partly to carry out the standardized reporting and financial accounting demanded by donors. As a consequence, some NGOs working on rural development projects in Africa have begun to slip into the same trap of excessive centralization and expatriate management that previously characterized public-sector projects in rural areas (Cleaver 1997). NGOs usually want to be accountable to local communities and work in genuine partnership with local grassroots organizations. But they must also be accountable to the foreign donors that provide them with funds and to the national governments that grant them political space to operate. Sudden budget constraints imposed by donors or sudden shifts in policy by national governments can force NGOs to unilaterally abandon projects in local communities (Tvedt 1998).

NGOs also face limits in democracy promotion. Donors like to assist local NGO "society organizations" that engage in prodemocracy actions such as voter education and election monitoring, advocacy for government transparency, or support of political and civil rights more broadly. The attraction of such prodemocracy NGOs is the fact that they are not political parties engaged in explicit competition for political office, so donors can support them without being accused of working for or against any one particular local partisan faction. Yet the disadvantage of these NGOs is, once again, their tendency to operate somewhat apart from civil society. They are seldom closely linked with local grassroots organizations or with the most important local social movements or voluntary associations such as religious associations, social networks, and sports clubs. They tend to be urban-based and urban-biased and depend so heavily on donor support that they risk appearing foreign-sponsored and hence inauthentic (Ottaway 2000).

In food security and agriculture, NGOs work best when they are partnering with governments rather than trying to replace or challenge them. If governments want to pursue rural infrastructure investments, NGOs can help to mobilize the essential local participation in both planning and construction of, say, rural road, water, and power projects. Local participation is usually the key to ensuring affordable maintenance and successful management via a greater sense of local ownership.

NGO participation can also help governments target public infrastructure investments effectively toward the poor. But the resources themselves usually have to come through the public sector.

In agricultural research, NGOs are valuable once again for bringing a participatory dimension into the development of new farming technologies, and they often play a key role in the transfer of new technologies from research institutes into farmer's fields. But NGOs in poor countries will seldom be equipped to provide the laboratory, greenhouse, and field station work so often necessary to develop effective farming technologies. In some countries, where funding within national research systems has declined, NGOs have sought to hire the scientists leaving the public sector, but once they are separated from their laboratory facilities, these scientists are often reduced to much less productive kinds of research. To solve this problem, there can be no substitute for improved funding through the public sector.

In sum, asking NGOs to provide essential public goods where national governments have failed to do so is usually asking too much. NGOs are good at many things, but they have not yet demonstrated an ability to keep or restore the peace in divided societies, and they are unable to push governments to embrace democracy or to make the research and infrastructure investments needed to supply the rural poor with better transport, power, water, or technology options. NGOs can help with all of these tasks if governments are doing their job. But when national governments fail or abdicate, NGOs can compensate only to a limited degree. Recall that in the most successful East Asian developing countries, where hunger has been reduced most rapidly, the essential public goods have almost always been provided by governments, not NGOs.

8. Conclusion—Assigning Responsibilities

We began by asking how the challenge of providing improved nutrition and food security for all has been altered by globalization. We end with a conclusion that the forces of globalization have not necessarily shifted responsibility for ending hunger away from traditional governance institutions such as nation-states. National governments in many regions of the developing world (particularly East and Southeast Asia) have managed, despite globalization, to act effectively to reduce the hunger and malnutrition problems facing so many of their citizens. They did this by establishing and maintaining internal peace, by providing rule of law, and by making the public investments in rural infrastructure and agricultural research needed to support farm productivity growth and facilitate rural poverty reduction. Providing such public goods is easier in some regions than in others, due to different colonial and demographic histories plus differing agroclimatic endowments. Yet in states where these minimal public goods are not yet provided by government—particularly in Sub-Saharan Africa—violent conflicts and property insecurity have undermined investment and growth, and lagging farm productivity has deepened rural poverty and worsened hunger.

These divergent food security outcomes in different developing-country regions remind us that the world's food system is not really a single global system after all. The most important forces producing persistent hunger today tend to be local or national rather than global, and they are still governed best at the local or national level rather than at the global level. Where national governments have responded well to this challenge, hunger has come under better control. Where national governments have not yet responded appropriately, hunger has persisted or even worsened.

Hunger persists in nations and regions suffering from inadequate national governance despite the recent emergence in some areas of more effective "global governance" for food-security. In areas such as international food trade, international food aid, famine early warning and relief, and international agricultural research, an impressive set of international governance institutions capable of providing significant global public goods has already been created and continues to evolve. These institutions should be improved and certainly be better funded by national governments, but governance deficits at the global level are neither the first nor the most obvious cause of persistent hunger in some regions of the developing world. It is an underprovision of public goods at the national level, not the global level, that remains our central food-security governance problem.

Improving the public goods delivery performance of governments within the developing world is a difficult job for outsiders to assume, given the powerful norms of nation-state sovereignty and nonintervention. Still, those genuinely interested in improving governance in developing regions such as Africa have a number of practical options to follow.

First, they can do a better job of helping with internal peace preservation and peace restoration, by strengthening the capacity of legitimate intergovernmental institutions (such as the U.N. Security Council and secretary-general) to intervene in conflicts or in preconflict situations with timely diplomatic initiatives or sufficient military force.

Second, they can do a better job from the outside of promoting rule of law and democratic governance through a disciplined use of the political and diplomatic influence at their disposal so as to isolate leaders unwilling to hold competitive elections or govern in an accountable fashion.

Third, and perhaps most important, they can be far more generous in the way they provide international economic and financial assistance. Instead of cutting back on international assistance to agriculture at a time when hunger is a growing problem in some regions, they can increase that assistance. The political credibility of all other external efforts and criticisms will be undercut if the funding that donors provide continues to decline.

Finally, instead of linking so much aid and lending to the abstract pursuit of "policy reform," the donor community should rediscover the value of financing tangible investments in rural infrastructure and research.

Outsiders concerned about hunger have little room to complain about the weak performance of national governments in the developing world as long as they fail to shoulder these important responsibilities. Among those who accept these responsibilities, however, there should be no reason to refrain from criticizing governance failures within the developing world. In too many international development settings a code of silence prevails regarding governance failures in poor countries. This culture of noncriticism is useful to support the harmonious conduct of international meetings, but it does little to advance the interests of the poor and hungry. If the donor community, out of a misplaced sense of politeness, fails to critique the substandard performance of developing-country leaders in policy areas such as public goods provision, the poor are not being helped. Outsiders are obligated to speak and act when national governments persistently fail to advance the interests of their own people.

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