ENDING HUNGER IN AFRICA:

THE ROLE FOR US FOOD AID

A report to the office of
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Executive Summary

Prospects for the use of US food aid in Africa have been significantly enhanced in light of President Reagan's Initiative, announced on March 11, to End Hunger in Africa by the year 2000. The Executive Order, establishing a Coordinating Committee for Sub-Saharan Africa and mandating greater integration and flexibility in overall aid, targets US efforts toward those countries that adopt or follow satisfactory economic policies and provides for new procedures and rules for the use of US food aid aimed to enhance its value and impact.

This report examines prospects for achieving the success sought. It begins by a review of the African food situation. It then argues that in programming food aid constraints and opportunities exist in individual food situations that must be taken into account. The report offers two types of suggestions. First, levels and forms of food aid provided a particular country should be related to effective food policy reforms and improved food markets, while being subject to fairly quick, bureaucratically easy alteration in the light of economic problems that can arise from unforeseen variation in food needs and in the ability to substitute among commodities. Second, certain concrete practices are proposed for utilizing the authority created by the new Coordinating Committee and the new multi-year, highly concessional commitments that are contemplated. These include: (1) the use of shadow pricing for optimal commodity selection; (2) the substitution of cash for food and vice versa to a country involved in a multiyear reform program in order to be responsive to production changes; (3) the establishment of food aid donor-recipient working groups in selected

countries for planning logistical, pricing and transport decisions; and (4) the nurturance of incentives in food assisted activities, particularly by the minimization of free food programs.

Title II and other totally free food have in US legislative and administrative history traditionally been seen as principally humanitarian and emergency aid. Such a view is not held in other donor countries. The US should adopt more the principal of helping those who help their own. Except for situations where local or national governments contribute a large component to humanitarian assistance programs, future food aid should not be provided for the direct feeding of the poor. Rather it should seek to institutionalize mechanisms for food trade and distribution within and among African states and should reward policies that are both efficient in this respect and humanitarian in giving priority to the most deprived population. To end hunger requires strengthening African peoples' capacity to grow food and strengthening African states' capacity to import and redistribute food in the face of changing circumstances and a vulnerable population.

I: The African Food Situation

The African food crisis of 1983-85 galvanized political commitment, both among African governments and in industrialized states to alleviate the chronic problem of hunger in Africa. One result is the US Presidential Initiative for Ending Hunger in Africa, announced March 11, 1987. This step, following a task force study, paralleled steps by African states to allocate greater resources to agriculture and food production and by the World Bank and other donors to help increase their assistance targeted toward the relief of hunger and the establishment of food security. After years of lip service about priorities to agriculture or the pursuit of agriculture development through investments that were biased toward both large-scale and production-oriented projects, African governments, in preparing for the 1986 Special Session of the UN that focused on Africa's economic crisis, exhibited genuine shifts in their policies toward agriculture.

The US ability to help African states in their new efforts is unique. Because the US has extensive experience with providing food aid, because the US is the world's major exporter of food, and because the US is the world's leading innovator of improvements in food production, processing and nutrition, the US is, therefore, in a central position to identify and support the policy reforms, private sector initiatives and multi-year conditions for aid that will address complex causes of hunger.

Food Aid Should Focus on the Food System. In planning the level, type of commodity, duration and flexibility of food aid commitments, the US government officials should attempt to foresee both the first and the

second order impacts of food aid upon the entire future food system of a recipient country. The role of food aid should be to lift constraints and fill gaps in the food system. Such gaps are likely to arise because of complex factors that buffet African agricultural systems: weather variations, shifts in consumer taste, or changes in the composition of the labor force (see Mellor, et.al., 1986 and Glantz, ed., 1987). Even if US food aid does not increase above 1987 levels, which are quite high compared to the 1970's, other donors' food aid to Africa may increase. Thus overall, a key issue for the US is to see to it that not only its own but also all food aid is coordinated toward the central objective of ending hunger.

Can or should food aid to Africa increase? The need for food imports for Africa, as forecast in most projections, is rising. An IFPRI study projects import cereal demand in Africa growing from six million tons in 1980 to over 45 million tons in 2000 (Paulino, 1986). Ezekiel of IFPRI estimates that 44 million tons of food aid are needed by 1990 by LDC's generally, with major growth in Africa. The capacity for food aid to increase, at least in the next few years, seems substantial, in spite of recent favorable production in Sahelian countries and Zimbabwe. Thus the early 1990's currently may be viewed as continuing the trend toward the need for increased food aid to Africa just to maintain current low levels of consumption. Food aid may also grow as a fraction of all aid to the continent, including aid from other donors who look to the US for leadership and coordination on such broad issues. The past trends may be seen below in Table 1.

TABLE 1

Net Official Development Assistance to Sub-Saharan Africa

(In US $ billions)

	World ODA	ODA to SSA	Food aid as a % of World ODA	Food aid as a % of SSA's ODA
1960	4.7	NA	20.0	---
1970	6.8	NA	18.5	---
1975	13.8	NA	15.4	---
1980	27.3	8.08	9.6	7.7
1981	25.5	8.06	11.5	9.4
1982	27.7	8.05	8.9	7.1
1983	27.6	7.70	9.1	7.3
1984	28.7	8.20	10.2	14.4
1985*	29.3	7.50	11.8	21.7

Source: Figures are from the OECD (Paris) and include only DAC countries. Figures are in current prices, i.e. not corrected for inflation. Since food prices have been quite low in the 1980's by historical standards, the decline in food aid's importance in ODA in "physical" terms may be less than suggested.

*estimated

Aside from "demand" based justifications for food aid, nutritional deficiencies in Africa are a problem which may increase with continuing high population growth and ecological deterioration. Demand and nutritional growth coincide with pressure created by domestic grain and dairy surpluses in North America and Europe to expand exports. This makes substantial food aid to Africa feasible and even more desirable in the period FY 88-90. US and European farm policies have stimulated production to the point that government intervention agencies have been forced to hold large stocks. Commercial grain competition has become rancorous as prices have fallen. Since 1983, the US and Europeans have battled for market shares. This situation is forecast to hold for some time. Food aid, although only a modest mechanism to relieve the pressure of large stocks, generally has been more available when such surpluses occur. During the 1960's and 70's the US, Japan, Canada and the European Community all provided more food aid whenever their domestic stocks grew. For the US, on the average when rice stocks grew by 100 tons, an extra 10 tons of rice aid was provided, while for wheat a 100 ton stock increase was followed by a 5 ton increase in food aid. With this historical experience in mind a political commitment of food aid to end hunger in Africa has a natural ally in farm interests; to be truly successful, however, it must also be tied to a set of policies by donors and recipients that specialists in development in AID, Congress and the private sector find persuasive. This would then make legislative and government-to-government commitments work.

As the major supplier of food aid the US should exercise leadership. The United States, Canada and Europe, along with the UN multilateral

agency, the World Food Programme (WFP), provided 86% of SubSaharan Africa's food aid in the period of 1985-86. The US share alone was 45%; Europe's was 21%, WFP's 15%, over 20 other donors provided the remaining 14%. The leading donors, working in collaboration with African leaders, are best suited to develop the working arrangements that utilize the multi-year, flexible framework envisaged by the US African Hunger Initiative to make food aid work better. Africa's economic development is probably the most difficult development task facing the world. It begins late with a trade structure and comparative advantage situation that locks small countries into a natural dependency on primary product exports, it has human resources and technological ability and its physical infrastructure is in decline. Many countries now have high overseas debts, have been running large domestic deficits, and have created patterns of state control, extortion and corruption. To change this administrative innovation will be needed. Some essential experience and lessons to accomplish this are already in hand from countries where public and private sector bureaucracies have proved adaptive, as in Ivory Coast and Zimbabwe. Unfortunately, bureaucratic inertia, anachronistic rules and short-sighted political considerations have often plagued food aid's uses. In addition, the legacy of these, plus the trauma of draughts and famine contribute to current widespread skepticism about and devaluation of food aid. While this review paper recommends more food aid to Africa, critics who prophesy that continuing food aid to Africa will be bad may yet be right. Their doubts are especially likely to become a self-fulfilling prophecies if the US is unsuccessful in its bold aims to use the leadership and flexibility

created by the new hunger initiative to make its food aid more efficient in the quest to end hunger.

Food is Central to Africa's Development. Per capita food production declined in Africa from 1970 to 1983 by 17%. This was a major factor in the general economic malaise of that period. Food aid can help solve the food problems that hinder development. To do so it must be designed to serve effectively four general goals. These are (1) improving national food markets, (2) reducing vulnerable group malnutrition, (3) fostering local development actions and (4) assisting in structural adjustment. Accomplishing these four goals would prevent emergencies from arising like those of 1973-74 and 1984-85.

The reasons that emergencies can be prevented are three-fold. First, increasing productivity by rural food and agricultural producers is not only critical for general economic development, it also provides income to some of the poorest, most vulnerable groups. Second, reducing variations in food supply in Africa would avoid debilitating instabilities in price which cause harm to the economy as a whole and misery for the poorest part of the populace. Third, establishing a security floor under hunger is a highly effective and equitable approach to improving general well-being.

Increasing the productivity of those who labor in food production is critical for economic development for several reasons. This point has been well argued by several economists, most notably Sir Arthur W. Lewis. First, subsistence agriculture is the largest single source of employment in Africa. It establishes the minimum wage in effect. This also means it sets the minimum income standard; below this group there is now an even

poorer and growing landless group who, denied even subsistence plots by legal rules or the cruelty of nature, increasingly populate permanent squatter encampments. Second, food surpluses from the rural population are crucial to freeing labor to grow cash crops and work in non-agricultural sectors. Food grown by these people is an important wage good. In general food accounts for 50 to 70% of most Africans' household income, whether purchased or used as a direct consumption item. The higher the income of food producers, the higher will be the wages in other sectors of the economy, and the more pressure will be put on these sectors to use labor efficiently. Linkages between increasingly efficient rural food producers and small-scale rural industries can further stimulate mutual growth.

Major price instabilities strike the economies of African states when food production varies much over 10%. During the recent drought, cereal production fell as much as 50% in some countries and overall staple food production by 15 to 25%. Food productivity in Africa is not only the lowest in the world, but normal variability in production is high, exceeded only by the Soviet Union.

In developed countries, such as the US or Australia, with their many possibilities for making adjustment in their diets and government safety-nets for the poor, it is easy to cope with such variation. In 1983, drought reduced the US corn crop over 50%. It was barely noticed by those outside the farm community even though corn prices rose dramatically. Australia, a major wheat producer, lost over half its wheat crop that same year in its worst drought in this century. In response Australia bought wheat on the world market to meet its commercial export and food aid

commitments, and bore the burden of this adjustment in a rather pragmatic fashion.

In contrast, in Africa, because of the importance of food in employment and in household expenditures, instabilities in production wreak havoc in national economic life and in individual lives. Populations in areas hardest hit by shortages migrate, burdening other regions and causing the loss of capital resources. Terms of trade are drastically alterred; wealthy herdsmen become impoverished. Employment shrinks, demand for non-food goods falls and the formal economy is increasingly circumvented by informal exchanges. Even in years when national food production is normal, large numbers of Africans can be affected by regional variations.

In addition to national and regional production shortfalls, seasonal variations in the price of food can be a burden on African countries' economy. Especially in rural areas prices tend to fall in the post season time. Producers sell food at low prices, but then they face high prices later, just when they need food the most to provide sufficient calories for the hard work they do just before and during harvest. Reducing such seasonal variations has been a major rationale for the activities of state purchasing agencies, although in only a few cases such as Zimbabwe is there evidence that marketing boards have actually achieved an effective smoothing in major markets of excessive seasonal and regional price swings. Moreover, there are many stories of state boards exacerbating swings in informal market prices through thinning the market.

Finally, besides being a stabilizing force, food aid to Africa can attack the problem most central in the public's mind - chronic hunger. The

day-to-day grinding poverty that is at the core of hunger is the central aim of food aid projects. The point of projects, whether they be feeding programs in schools and health clinics or food-for-work projects to rebuild forests or repair roadways, is to provide additional food to families whose income is too low to afford adequate nutrition and who have time to spend travelling to the feeding centers, attending school or working on an asset creating project. To be effective food-for-work projects in Africa should allow voluntary labor to work in seasonal activities. Part of the year rural populations are fully engaged by their farming tasks. Unlike Asia food as a work payment is less often already established as a norm. One alternative is a food-and-work project in which donor and recipient would seek to ensure: (1) that a fairly priced, locally available food reliably existed, (2) that seasonally food needy laborers were employed and were paid in local currency, (3) that the project used their labor to create public goods, or if private goods or benefits resulted they were ones that some portion of their value would be capturable through taxation, directly or indirectly, and (4) that proceeds from food aid sales were used to achieve the above. Such a project might be more effective than the conventional model of a food-for-work scheme that aimed at using imported food directly in projects. Public goods such as roads, water catchments and new forests do not help all equally, but they are sound rural projects in Africa and provide vital access to food through the employment created. The final product of reducing hunger in ways such as school feeeding or food-and-work projects is a more healthy, better trained population and, when things go well, they create genuine assets for the country such as a

better educated populace and more arable land. Such on-going projects with preplanned food inputs can also help solve national food stability problems. These projects establish institutional arrangements which allow for expansion in times of shortage and through which even relief aid can be channelled if the situation warrants it.

To end hunger in Africa requires increased productivity, reduced market instabilities, redistribution of access to work or other social bases for gaining exchange rights to food, and institutions which will sustain such changes. The specific uses of food aid must be designed around a recognition of these central elements in each country's food system and must anticipate the changing needs of the food system with respect to satisfactory performance of these features.

II: Levels and Terms for Food Aid

In FY 1987 US food aid to Sub-Saharan Africa is likely to be about $295 million, exclusive of transport costs and maritime subsidies. Section 416 commodities, included in this $295 million estimate, will not be as reliably available over the coming decade as regular Title I, II and III programs since they depend on government owned surpluses. Would it not be possible to lock in a minimum (inflation-proof) figure for Africa encompassing all these programs, much as Title II now has its tonnage minimums?

In planning how much food aid Africa could absorb without disincentive effects, one conservative approach would be to examine the average level of commercial imports in the 1980's. While it is impractical to assume that

all additional food aid could substitute for commercial imports, past imports requiring foreign exchange are a good indicator of economic demand and hence absorptive capacity not created by displacing local production. Market and political factors make it implausible that food could actually substitute completely. Nevertheless, these past levels, assuming an equilibrium expansion between domestic production of food and domestic demand, give a rough "shadow" estimate of how much food aid can be absorbed. Column IV of Table 2 indicates this figure and allows a quick comparison with current US food aid levels shown in column V. Take the differences one can calculate as you wish; clearly more food aid can be used!

TABLE 2
Food Aid and Total Food Imports in Cereals to
SELECTED AFRICAN STATES, Average 1980-86

	I Cereal Imports	II Food Aid	III Commercial Imports	IV Value of Commercial Imports 1980-86	V Projected US Food Aid FY 1987
	(in 1000 metric tons)			(in $ million	
Chad	90	64	26	5.2	2.4
Ethiopia	602	444	158	31.6	5.2
Ghana	202	77	125	25.0	25.1
Guinea	147	40	107	21.4	8.9
Kenya	418	178	240	48.0	9.8
Liberia	113	45	68	13.6	10.1
Madagascar	265	82	183	16.6	11.0
Mali	210	111	99	19.8	5.1
Mauritania	213	109	104	20.8	4.3
Mozambique	449	228	221	44.2	8.9
Niger	126	70	56	11.2	1.6
Senegal	574	121	453	90.6	9.2
Sudan	756	477	279	55.8	52.1
Tanzania	345	174	171	34.2	5.5
Uganda	40	28	12	2.4	2.8
Zaire	317	96	221	44.2	10.0
Zambia	232	90	142	28.4	3.2
TOTALS	4,986	2,389	4,597	$499.4	$175.2

Source: FAO, March 1987, Commodities Division, and USAID, February 24, 1987
* The C.I.F. of grain to African countries over this period has been roughly estimated as averaging $200 a ton; 1987 prices are lower; delivery costs for land-locked countries, however, would make estimates higher.

Based on the figures in columns IV and V of Table 2 food aid to Africa could be doubled, at least for the countries picked for this illustration, most all of which are moving in the direction urged by US and World Bank. For these countries US aid could increase by about $175 million per year. I would recommend this figure be used on a requested matching of the food aid increases from other donors, especially in Europe. This would yield, in the example at least, a coverage by food aid of $350 million of the existing commercial imports of approximately $500 million (but which may grow ceteris paribus). The result would be truly significant foreign exchange savings for the African states. In fact commercial substitution of the additional aid would probably not be 100%, the actual foreign exchange saving is more likely to be on the order of 50 to 80% of the value of the food aid. This reduction from a complete substitution effect is likely to occur either because elasticity to consume will expand as total demand grows, both rising as a result of the employment and/or price effects of the import of food aid and because some rigidities exist in commercial imports, arising from institutionalized and special demands, so that the commercial import levels will not shrink commensurately with the inverses in food aid. Overall, this analysis suggests that one can "stuff" more food aid into Africa, but to do so in a truly helpful way it should be principally as a substitute for commercial imports (not necessarily those from the US, of course). This would be useful, of course, only if the uses and conditions of the aid are well planned to avoid pitfalls of disincentives and overly inefficient projects.

The types of food aid related to economic reform and targeted to end

hunger through growth may conveniently be categorized into four general types. Each requires multi-year commitments and each would work best if the agreement regulating the aid allowed the resource flow to change from year to year in size, type of food commodity and even between food and cash. For example, if Guinea or Madagascar were to have a banner year in rice production, then a switch to allow the US to send them less rice and some wheat or cash might be appropriate as a reward for their "success." Such a flexible arrangement, approved in advance, would not require the food aid subcommittee of the DCC to approve it, although they might review and try to alter it if they chose to do so.

Figure 1 summarizes the major features one may envisage in planning US food aid use in Africa over the next decade or so. Some current US programs are given as examples to make the typology concrete. These examples are not all as generous in their terms offered the recipient as those needed and envisaged for the future.

FIGURE 1

Types of US Food Aid Uses

to Support African Economic Growth and to End Hunger

	Extent Monetization is Used	Reform Target	Years Committed	Coordinated with Other Donors	Aid as Substi-tution for Imports	Past Examples
Type I Policy Adjustment	Highest Value Commodity for Cash	Macro-economic Policies	2-3	No	As much as possible	Guinea Madagascar
Type II Sectoral Policy Reform	Partial to Total	Food and Agricultural Sector Reform	3-5	Yes	Partial -Variable by year	Mali Senegal
Type III Sectoral Production Enhancement	Partial	All Sectors-Related to Increased Production and/or Increased Employment	2-3	No	Partial	Kenya Food for Work
Type IV Targeted Compensation Program	Partial to None	Food consumption by poor adversely affected	3-5	No	Additional to meet non-market demand	Morocco Zaire Tanzania (CRS)

US projects using Type III forms of food aid are not particularly prominent. This suggests that perhaps the US should do more to encourage voluntary agencies and the WFP to make more "investments" using food aid of this type. Alternatively, it may be that critics have a point; projects of this type are cost ineffective as development tools and from the point of view of the efficient use of resources the US and other agencies should redesign and be cautious of using this form. If the latter is the case the US attitude toward Food For Work and other direct project aid should be rethought in light of efficiency criteria and monetization for indirect feeding rather than direct feeding should be the norm for the project investment category.

The column indicating coordination with other donors also reveals a problem, I believe. Clearly donor coordination outside Type II cases is weak. It would be desirable to use the new Committee to press forward the progress made, especially in Africa, over the last few years on this issue. Coordination of donors on debt issues is well advanced compared to that on food aid. In any event coordination will not necessarily result in the harmonizing of priorities and activities, but it could lead to realizing greater impact where donor/recipient agreement does exist; it can also mean the avoidance of donors working at cross-purposes, and can result in lowering burdens on already over stretched African governments.

A high priority for food aid should be as a resource for improving African states' food markets (Type II assistance). With past rules and practices regarding food aid this has been difficult to accomplish. First most overseas donors have had inadequate information about failures in food

policy and insufficient leverage or assurance of covering risks in policy change to nurture market improvement. The case of food aid in helping the grain market restructuring in Mali is the major exception to this conclusion. The classic roles for food aid to Africa have been untied program (politic aid, famine relief and project feeding. Even in 1987 they remain major uses. Table 3, for example, shows food aid to African states that are substantial commercial importers. Among these states receiving "program" food aid where the aid might have been useful for sector policy reform, few such conditional linkages were being made. This is precisely the area for major impact if the goal is to help governments responsive to the US initiatives designed to end hunger. In many of these recipient states, unfortunately, policy reforms to improve the food system have been lacking or reluctantly made. Reluctance to move toward greater reliance on small farmer incentives and private market transactions coupled with fewer food subsidies and trade restrictions results from a legacy of socialist ideology, colonial-period market controls, efforts to restrict pariah entrepreneurs and a demand that the state assure food security to key political groups. This analysis leads to the second major conclusion regarding food aid in the Presidential initiative.

TABLE 3

Program Food Aid Estimates, Total Food Aid and Commercial Sales to Selected African States, 1984-85

(Thousands of tons)

ansactions by incipal Donors	Recipient Countries: Angola	Ethiopia	Kenya	Liberia	Mali	Mozambique	Senegal	Somalia	Sudan	Tanzania	Zambi
mmercial Sales											
USA	0.0	0.0	135.0	14.7	13.0	41.7	95.4	5.9	65.1	0.0	0.0
Canada	4.0	0.0	0.0		0.0	0.0	0.0	-	0.0	0.0	0.0
EEC	0.0	0.0	0.0		0.0	3.0	0.0	0.0	0.0	0.0	0.0
Australia		0.0	15.0		-	0.0	-	0.0	-	0.0	0.0
Other	246.1	150.7	384.5	____	3.0	41.0	310.0	8.0	33.0	249.2	122.1
TOTAL	250.1	150.7	554.5	14.7	16.0	85.7	405.4	13.9	98.1	249.2	122.1
tal Food Aid											
USA	11.6	410.6	262.0	43.4	96.6	180.5	26.7	65.3	994.3	21.9	81.3
Canada	0.0	113.0	46.1		20.7	31.1	19.0	-	72.5	10.0	24.6
EEC	24.2	364.0	26.0		42.0	122.8	17.0	43.5	48.4	39.0	74.0
Australia		26.1	20.0			6.8	-	8.0	-	21.9	14.0
Other	54.4	384.1	79.1	____	108.6	104.3	36.3	125.1	306.6	67.8	28.1
TOTAL	90.2	1,106.8	433.2	48.4	268.7	535.5	99.3	241.9	1,421.8	160.6	220.3
ogram Food Aid											
USA	5.3	23.0	96.2	47.4	13.7	148.9	10.7	15.9	361.9	17.3	75.4
Canada	-	6.2	16.9	-	2.9	25.7	7.6	-	26.4	7.9	22.8
EEC	11.4	9.0	9.5	-	6.1	101.3	6.8	10.6	17.6	30.7	66.8
Australia	-	1.5	7.3	-	-	5.6	-	1.9	-	17.3	13.0
Other	24.8	21.2	29.1	-	15.5	159.7	14.8	30.4	111.6	53.4	24.4
TOTAL	41.5	60.9	159.0	47.4	38.2	441.2	39.9	58.8	517.5	126.6	204.2

urces: WFP Policy Dovelopment Unit field-report data base
FAO Global information and early warning system on food and agriculture

US Food Aid Should Increasingly Be Linked to Food Market Reform. This should be a key orientation regardless of whether the primary use of the food aid is also to bring balance of payments relief or generate revenues for a development or targeted feeding project. To be sure, some reform changes have occurred, most prominently the cereal market restructuring undertakings in Mali, Senegal and Madagascar. Nevertheless, in Kenya, Niger, Ghana, Tanzania, Ethiopia and other countries little fundamental "reform" has occurred. The price rises to stimulate production that have occurred seldom seem to have been the result of food aid inducements. Moreover, the continuation of food aid, at least in a case like Kenya, seems in direct contradiction to official proclamations as to the intentions of the US to support reform. In negotiating reforms of the Type II, using of food aid alone or in combination with some other assistance will not be easy. Coordination, as already called for, will actually have to occur.

The resistance of African states to actual reform efforts will prove substantial, in spite of the compliant rhetoric of the last few years used by African leaders. Nevertheless, donors often underestimate their capacity to be helpful and influential. The weak state in Africa leans heavily on donor agencies as a powerful force in legitimating the state. The US and other donors need to offset Africans' desire to control unpopular marketing intermediaries. They can do this by providing more assured stocks and a guarantee to the state of potency with respect to the food supply. Avoiding food calamities is an important symbolic demand on government by the population. Indeed in some countries, such as Sudan, a

form of "social contract" may have emerged which mandates a major responsibility to the state for supplying basic food staples at low cost at least in key urban areas. US food aid, to accomplish its food policy reform ends, must reduce the risks and costs of lowering through such reforms the level of subsidies that are bankrupting governments. One example often cited is the cereal market restructuring arrangement in Mali. There food aid provided a source of financial income as proceeds from its sales went into a special fund to help pay expenses caused by subsidies of the deficit-ridden Board. In turn, the marketing board, OPAM, reduced its staff by about 25%, along with streamlining its transportation and storage facilities. Food aid also gave the Malian government a level of food security that made it politically acceptable to reduce the size of required purchases from the country's major rice growing schemes and eliminate required sales in other cereals. Unfortunately, the 1984 drought that led to a large extra inflow of emergency food aid, followed by a bumper harvest in 1985, has postponed the planned step-by-step set of policy changes and the expected rise in producer prices. This sectoral project, however, which has food aid support from the US, Canada, the European Community and the WFP, along with technical assistance from the World Bank, is an example of a way to design the use of food aid with a feeding objective that supports economic adjustment sensibly.

Since 1985 Senegal, Somalia and other countries have begun food policy steps in a similar direction, but none are as well laid out or coordinated. Many others have done little to change from state control to market signals with respect to cereals. The puzzle is why little action has occurred on

previous recommendations as this one, aimed at making food aid better serve the policy adjustment process, perhaps offering "security" terms in exchange for policy reform. Again, many explanations are possible including disdain for food aid by many AID economists, a history of separating financial and food aid in the World Bank's coordinating actions going back to 1960, opposition within State to such policy linkages, and finally disinterest or distrust among recipients who perhaps see little gain when long run guarantees by the US have been so limited by annual budget appropriations. The new Coordiinating Committee may be an opportunity, then, to overcome most all of these past sources of inertia.

One nutrition "reform" that may appropriately be developed in the context of food aid deals with the type of commodity supplied and the type used in feeding efforts tied to the aid. Special programs using foods eaten by the poor, such as sorghum, millet or maize, can be made available, perhaps in rationed amounts at low prices, even while prices of preferred cereals, such as imported wheat and rice, rise dramatically. This could be a way to protect nutritional goals in the economic adjustment process. Because food aid often is available as wheat or rice, commodity swap arrangements might allow a donor's wheat, for instance, to be traded for an appropriate larger amount of lower cost, domestically produced coarse grain, using open market pricing to set the actual amount: "swapped" each grata. This coarse grain would then be milled and used for special nutrition projects and/or sold at low prices to poor, often urban-based consumers. By increasing demand for local cereals through low consumer prices in this way, rural producers are also likely to get positive price

incentives since the food aid becomes a kind of price incentive payment for them. These solutions require negotiations, cooperation, and policy planning by cereals boards or marketing agencies.

III: Recommendations for Use Based on Cost-Benefit Calculations

Food aid should be provided so as to maximize its economic gain in the transaction. A classic trade-off exists between the two economic desiderata of efficiency - i.e. minimizing costs per unit - and effectiveness - i.e. getting the job done. This trade-off is especially germane to food aid. To be effective in stabilizing food supplies in African states and expanding access of the hungry to food, without creating disincentives, the amount and type of food aid provided a recipient country needs to vary from season to season. This requires more administrative oversight than sending a fixed amount annually. It is hard, therefore, to minimize costs and still meet such needs effectively. If world food prices are high when needs increase, then donor budget costs must grow or effectiveness is lost as the volume of food shrinks, failing to prevent destabilizing price rises in a recipient's food system and the growth of hunger in the population. From the point of view of effectiveness in getting caloric supplies to the most hungry and generating resources for development, a country, and the right people within it, must receive the right amount of the right kind(s) of commodity, at the right time. When this happens purchase costs, transport costs and storage costs may all be higher than under a plan to deliver food at the cheapest possible cost per ton. Since saving money and saving lives are both worthwhile goals, some

solution seeking to minimize costs and maximizing benefits is needed. A simple example of ways to strike a balance in light of changing food situations is the case of Niger. In 1985-86 grain production in Niger doubled. By 1987 storage was at full capacity just a year or so after many people in Niger were facing starvation. The US should in this case notice that the 1983-85 drought reduced cattle and hence milk production. Rather than supply or tolerate other donors supplying sorghum or other grain to a country stuffed with millet, the US should switch to milk or other commodities and urge other donors to follow its lead in helping stabilize grain and overall food supplies.

Learning from this case, I would argue that the rationale for allocating food aid ultimately requires that benefits exceed costs for both donors and recipients. Beyond this one begins to look for improved benefit/cost ratios for donors and recipients in situations where different food aid levels may result in greater benefits for one but greater costs for the other. This search need not be a zero-sum situation, i.e. where any gain to one is a loss, however minor, to the other. Hence, improvements in the cost/benefit ratios of both donors and recipients can be sought together. Although "optimal" outcomes for donors and recipients simultaneously are unlikely, there are likely to be choices, especially when surpluses exist in donor states, such that greater food aid improves relative benefits for both.

The "costs" of food aid provided to particular individuals and projects include the expenditures and opportunities foregone of a donor government, those also of a recipient government, and those of voluntary

agencies (if any are involved). Benefits are the value(s) gained by those affected. Benefits might include additional income, time saved, or losses prevented. Money is the typical denominator in cost/benefit analyses. Benefits could be assessed by calculating, for example, the additional earnings of a group receiving food compared to a comparable group without it, or the reduced health costs to such a population. Thus costs are calculated for providers and benefits adduced to recipients and should include "both favorable and unfavorable, present and future impacts on all of society" (Stokey and Zeckhauser, 1978, p. 136).

The costs of food aid to the US are usually less than nominally stated since the export of food reduces downward pressure on domestic prices and creates a savings in the agriculture department's expenditures for commodity programs. From AID's standpoint, however, the best way to price the benefit food aid brings is to use the "shadow" price of the equivalent food on the local market, that is to calculate what the food would sell for in the African recipient in the absence of any government regulation which artificially lowers (or occasionally raises) prices. In comparing alternative commodities to be used as food aid, the way to optimize the value of the transfer is clearly to choose that mix of commodities that can be obtained at the same cost but yield the highest local sales possibilities in the recipient, thus reflecting relative demand. Cooking oil rather than grain may be the key commodity on occasion, for example. Market distortions might make this judgment difficult, but local AID economists, perhaps working with host government and other donor officials, should be able to reach judgments on this issue fairly easily every three

to six months. The simple point is that AID should provide the food commodity that yields the highest benefit in sales terms in the recipient relative to the procurement costs in the US. Unless the Treasury or Agriculture are willing to price commodities for AID management at prices reflecting Treasury savings or sunk costs, as 416 commiodities are in fact priced, then the nominal price to the 150 account compared to the expected yield if sold would be the best formula for achieving efficiency in food aid allocations to Africa. This is true whether the food is to be sold, to be "exchanged" or to be used directly in projects and not marketed.

Agreements should maximize recipients' net benefits. Direct costs to recipient countries are virtually nil, beyond the cost of transportation and internal delivery which, under the new African hunger initiative, will also be born by the US. Indirect costs resulting from various negative effects, however, may be substantial. Indeed the major attack launched against food aid by neo-classical economists and humanitarian-oriented social critics has pointed to a series of side effects of food aid including disincentives for production, mal-distribution, corruption and waste, which, they suggest, may outweigh any benefits (Schultz; Jackson). A discussion of net benefits, therefore, of receiving food aid, has to clearly examine these potential indirect costs that food aid may have. Remember that these indirect costs disappear, however, the more that food aid substitutes for commercial food imports and its availability affects only balance of payments and not the size and mix of imports. Where food aid is additional, it may create disincentives, though no African case where this has occurred has been documented and Simon Maxwell's study of

Senegal finds no significant disincentive effect (1986); neither did Stevens' study of four African countries seven years ago. Even in India the evidence is slight that the massive food aid received in the mid-60's had serious disincentive effects. In Africa, however, when official consumer prices are not lowered, food aid probably does affect the price and number of transactions occurring through barter or informal markets. If tight food supply situations continued (in the absence of food aid) farmers or those holding grain would receive considerably more in the way of windfall profits than in cases where food aid expanded the supply of food available in the market, or shifted supply lines from port to inland rather than from poor rural production areas to the more powerful deficit areas of the country. The extent to which food aid in the 1990's might lower returns to producers is indeterminate; its negative effects or costs for otherwise efficient production in the African recipient would still depend on: 1) the general circumstances of particular countries; 2) the particular conditions before and after the period in question; and 3) the assumptions one makes about the degree to which food aid maintains market stability and can help stabilize farm and total real income rather than distort markets. In short, production disincentives can be real, but the effect of world markets prices for commercial trade are far more important as a source of disincentive than is food aid (Christensen, 1979).

Another kind of disincentive cost that food aid must avoid is on policy. Too easy food aid may encourage a return to policies of inadequate investment in agriculture, inattention to the value of domestic self-sufficiency, and excessive subsidization of food for consumers, a benefit

that tends to advantage the middle income and affluent in cities and that a poor country can ill afford. Such features may have been perpetuated by food aid in Tanzania, Zambia, Somalia and even Ethiopia. In such countries the initial cause of food crises does not seem to have been food aid. It was not the arrival of food aid that led to inattention to food and agriculture but rather its arrival reflected the result of previous urban bias and other factors in a nation's policies. In this case a low priority for agricultural investment, inefficiency of marketing, and weak incentives to producers thanks to low prices as set by the government occurred prior to, independent of, and separate from food aid. As argued earlier, the food aid should be a resource to help induce in less painful and abrupt ways needed adjustments toward greater priority and emphasis on efficient markets and general agricultural development.

Another way to insure net benefits to recipients is in efficient design of end use. Where reducing malnutrution through feeding programs is a major goal of food aid, bulk project type shipments which are monetized may still be the most effective form for the aid itself. Commercial or government shop distribution is the most efficient distribution system given the superior facilities in urban areas to handle bulk movements of imported grain. Using these can have the effect of increasing the food supply to the rural poor if urban centers draw less food from the countryside. This "secondary" effect is important. It is cheaper to have the physical distribution of food occur where the food aid is consumed.

If food aid is sent, under this recommendation, as preferred cereals or oils eaten by already relatively advantaged urban groups, a criticism

arises that such aid increases maldistribution and is a "cost." But the secondary effects of such practices will be the lowering rural prices and making more food available. These can serve both equity and economic development goals, especially if rural market producers' incomes are protected through a price wedge on non-preferred cereals and as parallel projects to rejuvenate small holder export agriculture. Another possibility is to purchase food in rural areas for use in food-for-work projects and school feeding with food aid proceeds. Such approaches then are the most efficient designs. If the food sold to urban consumers is priced appropriately high compared to millet, sorghum and other "rural" foods, then the total calories and even protein added to the diets of rural and urban poor will be greater than in direct feeding projects.

Shipping "preferred cereals" does not create false tastes if done with discrimination. Tanzania, for example, will have a hard time growing sufficient wheat to meet local demand given the terrain and climate available for wheat production in the country. It could become self-sufficient in wheat only at the expense of foregoing other valuable crops, and growing wheat at a cost likely to be always far above that of world market prices. It is, therefore, in the interest of Tanzania and similar recipient countries to prevent demand for such imported commodities as wheat from rising artificially. It should accept food aid under arrangements that will encourage consumption of domestic food crops, only maintain current proportionate levels of wheat and rice, and have consumption occur through commercial import substitution. This should discourage a food aid caused shift in preferences and effective demand

within their countries. At some point in the development effort it may be argued that the shift to imported wheat or rice, as in Colombia in the 1970's, could be beneficial by moving resources from inefficient to more productive export or domestic production, while not creating an unreasonable level of import dependence on wheat or industrial country food as a portion of total food consumed in the country. In this light, for example, Canada's wheat farms in Tanzania, financed partly by food aid, need to be evaluated to see if they are truly a useful investment compared to other products the land might grow.

Food aid from sales can be efficient revenues if problems of waste and mismanagement are avoided. These can erode apparent benefits. It is not uncommon for recipients to treat food donations with less care than goods and services for which a full market price must be paid. Recipient government corruption can be minimized by demanding transparency in the total food system. Of course, some governments and officials are simply hopeless. In the 1970's food aid to Ghana, for example, and to Nigeria, disappeared from storage. In the case of Ghana, donors stopped shipments until a modicum of discipline was promised. In Nigeria, the then oil-wealthy government of the 1970's simply repaid losses owing to thefts from warehouses. In 1986 WFP relief shipments bound for Zaire from Zambia simply disappeared. Over the years a variety of recipient government officials or local transporters have been involved in the illegal diversion and sale of food within their country; and there have also been instances of foreign sales of food aid shipments. The total amounts involved, however, constitute but a small fraction of the total flow of food aid.

Whether the amount of waste and diversion of food aid through mismanagement and corruption exceeds that which occurs with cash aid is hard to determine; in any event no one has attempted to do so. As a general rule, food aid is harder to divert into private or illegal channels than cash or other commodities, and it does not lend itself to direct consumption by the privileged elite, at least not in any significant way. Furthermore as food aid should flow to more countries facing shortages, incidents involving its diversion and wasteful or corrupt use strike observers as much more poignant. Blatent misuses, therefore, tend to create anger and disaffection and corrective action by segments of the government.

Food aid can be particularly beneficial if it smoothes out short-term fluctuations in recipient country domestic supplies. Intermittent supply shortages, and price instability associated with these, are generally especially harmful in poor countries, accentuating the vulnerability of poor peasant farmers and reinforcing risk-adverse production strategies by them. It is their income which is most impacted by downward price fluctuations, while it is those dependent on commercial purchases of food but whose buying power is limited, often poor urban dwellers, who are most hurt by price rises. Food aid can act, thus, as a stabilizer not only for domestic nutritional needs but also as a tool to prevent redistribution towards the privileged, which tends to occur in situations of erratic prices. Partly because of the bad effects of such swings, economists such as D. Gale Johnson have proposed using food aid as insurance, tying its flow directly to shortfall needs in recipient countries (Johnson, 1976). The IMF food facility, created in 1981, was designed to meet this need, but

has proven to have too short a time for repayment, however concessional, and not attractive to the poorest countries.

To address these problems, some food aid has been provided to increase recipient countries'stockholding capacity and as emergency reserves. Unfortunately, stocking in Africa is expensive and periods of need are hard to predict. The Mali project in which producer price incentives and grain stabilization goals were sought through food aid looks like a better way to meet security needs, but not emergency needs. A food credit facility for larger zones in Africa might also be a great help. Food is expensive to store in Africa and the precise need of a country or region is hard to predict very far in advance. Therefore, storing food aid as futures market holdings within the framework of a multi country sharing arrangement that maintained cash or food drawing rights over several years could go a long way to helping Africa's food security in the 19[illegible]'s as production gains grow, but probably not as fast as demand. This approach parallels in a modest way the techniques Japan, a major food deficit country, uses to assure its own food security.

Such a flexible arrangement as drawing rights for several countries, lasting over several years would be a special Type II use of food aid. It could also be tied to marketing reforms and inter African trade expansion (triangular transactions). By reducing the amount of grain the government has to secure from domestic production or commercial imports to maintain food supplies at prices acceptable to key groups, food aid allows more grain to be sold in informal markets at higher prices and with greater incomes for domestic producers. Higher prices in markets that are

egulated only by government purchases at "market" prices and not by official prices will benefit African states by leading to higher income for producers either from the sale of crops not used to subsidize urban consumers, or from other crops, as farmers are able to switch to higher income producing crops once production quotas are removed or reduced.

In countries where food controls leading to subsidies are deeply institutionalized and politically too sensitive to be ended, and this increasingly seems to be the case in Sudan, Zambia and Kenya for example, food aid can assist agriculture by tying food aid allocations to agricultural development efforts. It also should be tied to the minimization of subsidies, quotas and price ceilings in order to allow domestic production prices to move within a band of import and export parity prices.

Finally, the taxation benefit to African states of the revenues from food sales should be fully appreciated. These can amount to cheap, efficient and progressive taxation. True, in extreme cases it has been suggested that food aid might act as a "drug," encouraging governments to become increasingly reliant upon it either as a way to cover large deficits in food subsidy programs or as as source of important revenue which might better be raised through a more eqalitarian and efficient taxation system. Bangladesh, for example, depends for a large proportion of its government budget on food aid. In the mid-1970's, revenues from food aid sales were equal to 75% of government development expenditures. Instead of developing a more efficient and effective taxation system, Bangladesh, some argue, was allowed to develop a dependency on earnings derived from its food sales,

earnings which would disappear if either domestic or commercially imported food were used in its ration shop sales instead of food aid. Further, there have arisen politically important groups that have a stake in the food shop system being continued (Clay, 1979). Thus, it will be important for African states to use revenues from food aid to assist agricultural development and not principally to run food subsidy programs.

The creation of a relatively efficient and inexpensive tax system is especially useful in Africa where government capability in many countries is weak. To institute and maintain an honest and fair tax structure based on direct contributions from citizens often is practically impossible. Attempts to tax citizens directly put a large burden upon the government, and increase the probable level of corruption. Where some African governments, for reasons of equity or human resource economics (alleviating malnutrition), have developed food distribution systems, food aid can also serve as an effective instrument for reducing government costs. Alternative tax systems, particularly those based on individual returns, are subject to enormous administrative costs and a high frequency of diversion and extortion by officials.

Donor coordination. Recent development reviews by the World Bank, UN agencies and bilateral donors have all called for greater coordination among donors. The multiplicity of projects, especially in small countries like Lesotho and Borkino Faso have been noted as creating unproductive burdens on governments, not to mention the cost of dealing with project design, review and evaluation experts from fifteen or twenty donor agencies. Perhaps even more important for food aid is the prospect that

failure to coordinate aid may (1) waste resources in clogged transport routes, warehouse spoilage, demurrage charges and (2) allow procyclical arrivals of food, especially egregious if duplicative rather than complementary commodities arrive as food needs decline. Every country eligible for the resources of the new initiative to end hunger, therefore, should have a working level food aid group that meets once a month to review the local food situation and assess future commodity needs. Officials of the recipient government in the marketing boards and treasury should join this working group. Its discussion and analysis should be considered transparent, excepting only diplomatic details of negotiations under way for future aid that are appropriately kept confidential to improve negotiating prospects. Price assessments of key crops, regional price differentials, transport networks, on-farm storage levels, and crop and import forecasts should be among the items discussed. This group would be the primary source of monitoring performance of the recipient on policy reform measures as well as proposing adjustments to the commodity types and amounts to be supplied in future months. Where local US officials lack skills in these areas, AID should make a point of hiring, on a 2-3 year contract, a competent and experienced food policy analyst, perhaps to serve more than one country as an adviser to the mission directors and food aid direct hire personnel. Regional Food-for-Peace officers in Nairobi and Abidjan, while experienced in PL480 and logistics, are not experienced in dealing with senior treasury and agriculture officials, nor in doing "shadow" price analysis as part of an effort to choose the optimally efficient commodities for donor/recipient net benefit.

Minimizing free food. Welfare may be temporarily a disfashionable term, but the fact is that the welfare of Africans is low, and the US has an obligation as a rich member of an interdependent world to provide welfare to Africa. Furthermore, it is in the long term interests of the US to do this. Welfare, however, does not and should not mean free food distribution. Free food can disrupt voluntary rural work efforts, create dependencies among nomadic populations as in Mauritania and northern Kenya, and become a device for manipulating populations by the agency charged with the free distribution. Famines are the only real situation where free distribution is justified. Famine prevention, of course, is a goal of the whole initiative. Thus, a major effort should be made to create rural work projects in areas of greatest nutritional vulnerability, not necessarily using food, but having the possibility of adding food as an input. These projects could then be expanded at times of regional or national crop shortfalls and food from other parts of the country, or from neighboring states, or from overseas, if appropriate economically, could be used. Food could be part of the work project's compensation program, either as a partial wage payment or through closed-loop sales to "beneficiaries" in the project. This would expand total food supply to an area suffering an economic downturn and/or food shortfall that threatens the populace's basic food security.

Such projects at the local level are parallel to the "reform" recommendations at the national level. The aim is to create incentives for productive work, letting price signals move people to more efficient uses of their time and letting income be distributed in rough proportion to

contributions (value added) to the national economy. Food aid can help do this by assuring that in Type III and IV projects some quid pro quo is involved that makes sense economically, i.e. some sensible public or private rate of return can be anticipated.

The use of food aid then, in every application, should be appraised by the host country working group and by AID's Coordinating Committee on SubSaharan Africa to insure that incentives for productive work are built into the proposed use of all food aid. The greatest contribution to the long-term goal of ending hunger will be a welfare system in Africa that creates incentives and keeps the burden of the humanitarian welfare within bounds that African states can eventually manage on their own.