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FOOD FOR DEVELOPMENT

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FOOD FOR DEVELOPMENT

Introduction and Summary

The purpose of this policy paper is to provide guidance to USAID missions for using PL 480 Titles I and III to help developing countries formulate and implement equitable growth strategies.

Policies governing the use of domestic and imported food in developing countries can be an important way to stimulate participatory, largely agriculturally-based, growth processes. Two broad types of poverty problems need to be solved, and food aid can help address both: (1) the overall gap or deficit between domestic food production and demand must be narrowed, and in many countries closed, by giving much greater attention to agriculture; and (2) individual nutritional intake must be vastly improved in many poor countries. Over the longer term the developmental use of food can contribute to the achievement of national food self-reliance, indicated either in terms of domestic grain production or the ability to import food on commercial terms. These growth objectives can benefit the poor only if nutritional standards are also achieved.

The U.S. Government is increasing the developmental impact of its concessional food program; food (together with dollar) assistance can help recipient countries increase and sustain their commitment to equitable growth. Accordingly, this two-part policy statement suggests concepts (Part I) and procedures

(Part II) for implementing a bilateral food for development relationship between the United States and developing countries.

The term "food for development" refers to governmental policies guiding the uses of basic foods and other agricultural commodities to employ and feed people. The primary objective is improved individual well-being. Food for development includes the whole package of food and agricultural policies and programs, and food itself, necessary to effect the expansion of production and consumption of staples. In this paper, priority is given to improving the terms of trade for agriculture, to stabilizing the incomes of food producers and consumers, and to direct nutrition programs.

This policy paper reflects Title III (Food For Development) of PL 480. Implementation of this legislative provision must now be emphasized. The food aid concepts discussed here can also be drawn upon to strengthen the design and implementation of Title I and Title II programs. PL 480 programs have several features which can be utilized to encourage the successful negotiation of more developmentally-oriented agreements. Each Title III program inherently contains three mutually reinforcing methods for implementing an agreed upon development effort. These are, in brief, (a) the potential policy dialogue associated with a significant level of food aid with a multi-year pledge, and with concessional financing, (b) the constructive impact of the imported food commodities themselves, and (c) the use of local currencies generated by the sale of these commodities for development.

We envision that Title III can become an important U.S. concessional food program for poor countries and that Title I programs can be strengthened. Developmentally-oriented food import programs, in conjunction with dollar and technical assistance, and the assistance of other donors where appropriate, can help governments affect significant expansions in domestic food production and consumption. Broadly, this will require strengthened resource, analytical, and administrative commitments to equity-oriented development and the reorientation of those policies and programs that may impede progress in this direction.

At the very minimum, the negative effects food aid has had in some circumstances, such as acting to depress harvest prices, should be avoided. The paper describes the conditions under which these effects can arise and indicates the direction that analyses of food policy and food aid should take in order to ensure that adverse consequences of food aid are identified in advance and deliberately addressed during the process of designing and negotiating innovative programs.

Part I. Conceptual Framework - Food For Development

A. Magnitude of Malnutrition

The majority of the world's poor people subsist in agricultural occupations and will remain in rural areas for decades to come. But they need not remain poor. Despite a good deal of technical know-how and development effort, food deficits in many countries are large and are projected to grow larger in the future.^{1/} Even in the face of good harvests in the latter half of the 1970s, the long-term annual per capita growth rates in food production in twenty-two poor countries between 1961 and 1978 have remained negative; in twenty-seven other countries, the annual rates have been less than one percent.^{2/} 1.3 billion people live in these countries. Many of them suffer from some degree of malnutrition. These estimates in turn reflect poverty; tens if not hundreds of millions of people do not have fulltime employment nor do they have access to public services.

Maldistribution is a major cause of this poverty. Lack of access to existing resources and to available food explain

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1. The International Food Policy Research Institute, USDA, and the FAO, among others, have projected growing food deficits in poor countries. For estimates of these deficits, see IFPRI's, "Food Needs of Developing Countries: Projections and Consumption to 1990," December, 1977; USDA's Report cited below; and the FAO's "The Fourth World Food Survey," 1977.
 2. These estimates are drawn from the Report Assessing Global Food Production and Needs, USDA, Economics, Statistics and Cooperatives Service, April 15, 1979.

much of the world's hunger. The world's harvests have been good in recent years; there is more than enough food to bring all people up to a minimum caloric standard, provided excess supplies could be provided directly to the poorest people.

A total transfer of 25 million tons would bring the very poorest people up to 85 percent of the minimum caloric standard set by the FAO. But in the absence of direct distribution programs or the will and resources to create them, far higher levels of food tonnage are required to reach the poorest groups in developing countries; upwards of 224 million tons per year.^{3/} This figure is very large because little food leaks down through normal market channels, and through many public food systems, to the poorest people in society. The importance of distribution and purchasing power to the alleviation of hunger, discussed in greater detail in later sections, has been given visibility by the above described USDA estimates, which quantify the alternative amounts of food needed to close any one of several food "gaps," depending upon the definition used. These estimates in turn are based upon FAO's country caloric standards. For many countries, closing a nutritional gap by relying on market-oriented distribution systems requires ten times as much food as that amount needed if the poor could be reached directly. The inescapable conclusion is that the normal market solution to food production and distribution for many poor countries is no solution at all.

3. See USDA, Report Assessing Global Food Production and Needs.

These USDA estimates dramatize the scale and character of the world hunger problem. It is not likely that food donors will allocate 25 million tons to the world's poorest people, and even less likely that poor governments would accept food aid for this purpose to the exclusion of its use in urban centers. With respect to agricultural production, poor countries have not been able to sharply increase their growth rates although they face the immediate responsibility for addressing their own food problem. If the record is any guide, food donors will not be producing, shipping or financing anywhere near the amount of food needed to close present and projected food gaps - - gaps made intolerably expensive to close by the manner in which food is currently distributed.

Governments of food-deficit countries will have to focus on increasing domestic agricultural growth rates and will have to do so in ways which enhance the well-being of their poor people. Whether a country's staple food is rice, wheat, potatoes, or livestock and milk, adequacy of food supply will become an increasing, if not overriding, concern of government.

Although reliance on imported food is the easy solution, and may be a realistic one for a few countries in light of their comparative economic advantage in exportable products, it can only be a partial solution. Most poor countries must increase their production of basic staples if there is to be any hope for improved well-being. The inescapable conclusion is that the food problem has to be solved by the initiative of poor countries themselves. As is shown in this paper, food aid can play an important supportive role.

B. Agriculture's Central Role

Inattention to agriculture in poor countries explains much of the poverty problem; agriculture's treatment in the future, much of the solution.^{4/} For reasons explained in this section, the policy paper focuses its analysis on the policy and program orientation of food and agriculture in poor countries.

Contrary to earlier development strategies, we know that urban and industrial growth cannot be financed by the easy transfer of "surplus" laborers, savings and foodgrain from agriculture to the cities. In practice agricultural transfers have been forced by taxes, foreign exchange policy, and adverse market prices, and the result has been slow or declining rates of per capita grain output in many countries, an increase in income inequality, environmental degradation, and the growth of urban slums. Equity-oriented development strategies have become popular, primarily because they are seen as a way to realize social objectives promised by earlier heavy industry or trade-based growth models.

Population growth is another critical problem; contrary to the expectations of national plans, food production trails

4. The World Bank has a series of studies under way to examine agriculture's problems and potentials. See "Agricultural Prices, Subsidies and Taxes: A Summary of Issues," May 11, 1979, prepared by the Agriculture and Rural Development Department and the Policy Planning and Program Review Department. See also Gilbert T. Brown of the World Bank in his article, "Agricultural Pricing Policies and Economic Development," Finance and Development, December, 1977; and A.A. Saleh, and O.H. Goolsby, "Institutional Disincentives to Agricultural Production in Developing Countries," FAS, USDA, August, 1977.

population increase in numerous countries. Many countries are clearly unable to supply their new members with the same opportunities and services as their existing populations are struggling to share. Because sharp increases in economic growth are not likely, high birth rates will have to be brought down in several countries before significant per capita improvements in nutritional well-being can occur.

It is not our purpose here to point to all the factors which have forced changes in growth theory that have taken place in the 1970s except to emphasize the role of domestic food and agricultural policy and food aid. Our central development model is equitable growth. Its main tenets have been amply described by others and by A.I.D. itself.^{5/} Food, however, the principal wage good, remains important in all growth models as the primary source of non-inflationary finance available for development. But now much greater attention must be given, on both developmental and humanitarian grounds, to the policies which influence the production and consumption of this basic wage good. In the past, the conditions giving rise to widely-shared agricultural growth were assumed to be fulfilled when in fact neglect and even exploitation were more typically the case for basic grains and for poor people. It is these conditions which now demand attention.

5. The broad outlines of A.I.D.'s development policy are described in the Strategy for A More Effective Bilateral Development Assistance Program: An A.I.D. Policy Paper (March 1978), and the Agricultural Development Policy Paper (June 1978).

The simultaneous growth of agricultural production and purchasing power, promised by a broadly participatory agricultural strategy, are now seen as necessary components of both rural and urban development. Agriculture must receive higher priority than it now has in many developing countries to provide low-cost employment, to supply the wage good, food and other agricultural products, and to create new incomes. Growth in consumer demand is important in its own right to improve family well-being but is also needed to stimulate growth in other sectors and in trade, and to otherwise integrate an economy. Furthermore, some country experiences suggest that it is a combination of broadly participatory growth and effective provision of family planning services that results in the acceptance of the small family norm and in significant declines in population growth rates.

Many factors bear upon the agricultural growth rate, and the extent to which rural people both contribute to and benefit from increasing food production. Land tenure traditions and laws, formal and informal credit practices, and the adequacy of agricultural input supplies can speed or retard the rate of growth and the degree of participation. Other rural services, the adequacy of market infrastructure, and pricing policies and other factors affecting choice of seed and mechanical technology are important. The availability or absence of proven technologies can explain large differences in productivity. The levels of agricultural prices and aggregate demand for food play critical roles.

The importance of each of these factors will vary depending upon conditions in each developing country. A deficiency in any of them could pose a serious constraint to broadly participatory agricultural development, to improvements in nutritional well-being, and to growth in production.^{6/} Unlike most facets of the agricultural development process, food prices affect everyone in the economy directly. For many, if not most people in low-income countries, the price of food is an indirect but vital long-term determinant of the adequacy of their food intake because, through the harvest price, the price of food affects productivity, employment opportunities, and real income. The issue of price carries with it far broader implications than those attributable to other agricultural factors of production.

After years of slow growth in agriculture, agricultural product prices are now seen as the nexus between incentives for increased production on the one hand and the creation of

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6. It is precisely this concern that focuses our attention on the sequencing priorities of A.I.D.'s Agricultural Development Policy Paper (June 1978). This paper suggests a series of constraints to the simultaneous achievement of production and equity objectives in many developing countries. This sequence, which at a minimum directs a questioning process, begins with asset distribution, land tenure relationships, and related local organizations which can help assure equitable access to scarce resources. Other functional priorities are planning and policy analysis, new technologies and their diffusion, rural infrastructure, and (as a group) marketing, storage, inputs and rural industry. The A.I.D. Policy Determination on Agricultural Asset Distribution: Land Reform (PD #72, January 16, 1979) also directs attention and support to the issues of access to agricultural assets and resources.

rural purchasing power on the other. Realistic agricultural prices are a major link between an aggressive agricultural strategy and the well-being of the rural population. This link and others, the subjects of A.I.D.'s Agricultural Policy Paper, are indispensable to the solution of poverty by productive means.

But price is by no means a "cure-all" as is emphasized in several sections of this paper. In low-income countries costly food adversely affects the well-being of many people because so many poor people are net food purchasers. Conversely, inexpensive food would appear to benefit everyone (except producers of basic foods). But over the longer term, individual well-being in agrarian, market-oriented societies also depends upon productivity and the expansion of employment opportunities. It is this dilemma, between inexpensive food for consumers and incentives for producers, between the shorter and longer term, which rules out simple analyses of present price policies and easy prescriptions. (For a theoretical discussion of this point see John Mellor's "Food Price Policy and Income Distribution in Low-Income Countries," IFPRI reprint, 1978.)

Another broad factor which directs greater attention to agriculture is a random one affecting food production and supply. Because of climatic factors, levels of domestic agricultural production and internal and international food supplies and prices can vary dramatically and unpredictably. Food price variations have a significant influence on agricultural investments, levels of production, and privately-held stocks at

the farm level, and on government planning and budgets at the national level. Whether viewed in terms of family or national well-being, a high price is paid for the uncertainty surrounding food supplies. Because of low agricultural growth rates and growing populations, governments can expect to pay increasing attention to the maintenance of food reserves, the strengthening of distribution systems, and other risk-reducing mechanisms.

Although agricultural modernization is designed in part to reduce risk, there is little evidence that advances in irrigation and fertilizer coverage have reduced the variability around national crop production trends in poor countries (USDA, Report, Page 1-5). As high quality often irrigated lands are farmed more intensively, the expansion of agricultural programs to semi-arid lands may also increase an economy's vulnerability to weather. Furthermore, the expansion of cash crops often pushes food crops to poorer, more vulnerable lands. Some new seed varieties of foodgrain have been shown to be riskier for poor cultivators to plant (Mellor, op. cit., page 20).

Development programs may also be penalized during food crises as governments shift scarce administrative capabilities to alleviate food shortages among their populations.

Weather-related risks also apply to North America, a region of the world on which food importing countries are growing more, rather than less, dependent for grain. During another period of international short supply and high prices, food-deficit countries which learned the lessons of 1973 and 1974 will enjoy the benefits of foresight.

There is a related reason poor countries must increase their agricultural growth rates. The ability of other countries (including middle-income and OPEC countries) to purchase food in poor crop years will cause the scarcity value of both food and food reserves to increase sharply. For the poorest countries food imports may simply dry up. 7/

Poor countries not only compete for food imports and food aid but for other forms of foreign assistance as well. The size of projected food deficits in poor countries is large, and is of the same order of magnitude in dollar terms as the annual additional external cost of providing basic needs-related programs and services to the poor in developing countries.8/ Because both food and other development assistance "needs" are substantial, concessional assistance to meet both needs is not likely to be available, particularly in food-short years.

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7. The food deficits of poor countries will not be met by the scale and direction of food trade (concessional or commercial). The importance of newly-developed countries for U.S. agricultural sales is clear from grain trade data. These countries, once poor, can and do purchase large quantities of U.S. agricultural commodities, as well as non-agricultural U.S. products.
 8. While such comparisons are necessarily approximate, their general similarity of magnitude is noteworthy. As estimated by Joseph Stern in an ILO study, the supply of basic services to the poor would cost approximately an additional \$15 billion per year. (This estimate is said to be low and poses several methodological issues.) A food aid transfer of 40 million tons in a bad crop year (at \$300/m.t.) would cost \$12 billion per year. See also IFPRI, December, 1977, page 21 for a similar estimate of food costs.

For these several reasons, but primarily because so many people are malnourished, greater attention must be paid to equity-oriented food and agricultural policies and programs. Food cannot be treated as a passive, residual factor in the development process, nor can its importance as a consumer good be allowed to cloud the efficient and equitable conditions (and potentials) of its expanding supply. For most developing countries, food must become an active if not leading ingredient in the formulation and implementation of equitable growth strategies. The degree to which governments will support these changes on behalf of poor populations depends upon their perceptions of necessities and risks and, to a lesser extent, the role the foreign assistance community plays in shaping these perceptions with development research and financing. Food imports in the past have all too often allowed urban centers a degree of independence from their own domestic food systems. Domestic food policy and food aid should increasingly be used to integrate urban needs with broader developmental priorities. The political risks of integrating and strengthening a national food system are real; it is our hope that these risks will be perceived to be less than those that will arise from the wrong actions or none at all.

C. Alternative Roles for Food Aid

The degree of world-wide malnutrition demands better use of food aid, but emphasis upon food and agricultural policy as described in this paper is not necessarily the only way to

address hunger. Although several alternatives are possible, they are described here only briefly to alert the reader to this policy paper's primary thesis and assumptions.

For the past thirty years, food aid has been commonly used to provide balance of payments support and additional domestic resources to finance what have been largely capital-intensive growth strategies. In the 1970s, equity-oriented, more labor-intensive strategies have been formulated to address poverty problems in the poor developing countries. Food aid is now seen as an important form of assistance to expand employment and to feed poor people. In addition, development theorists have proposed that improvements in the quality of human capital can be a source of qualitative changes in skill levels and in health, which are necessary conditions of equitable growth. The following brief review of these development strategies highlights their several objectives and the different uses of food aid needed to support them.

Growth models popular in the 1950s and 1960s treated concessional food transfers primarily as another form of resource transfer. Food aid provided foreign exchange savings and the means for raising domestic resources during the early stages of industrial development until domestic savings could expand to sustain domestic investments. This twin resource gap approach to development was not as helpful as it could have been for the world's poorest countries, because it assumed that development was largely a matter of releasing resource constraints. Recipients

of PL 480 in the early days of the program made effective use of U.S. commodities to support policies to feed people and to put them to work. But the newly independent countries of Asia and Africa, which have been major recipients of food aid in the 1970s, do not appear to have as strong a capacity, in either their governmental or private sectors, to use food aid resources effectively for developmental goals.

In the late 1970s, the hunger problem is seen by a growing group of experts from a human capital point of view. This view posits that the quality of a population's skills and its physical well-being are as important to development as are physical investments. This conceptualization, rooted in the empirical studies of developed and developing economies, and in the new household economics, manifests itself in nutrition programs, maternal and child health care, education and training, and other formal and nonformal services.^{9/}

Deficiencies in the lives of poor people -- whether educational, health, or nutritional (and often all three) -- explain poorly developed abilities and motivations. Even if children go to school, malnutrition may prevent them from gaining from the experience. Cooking and food-sharing

9. See "Nutrition, Basic Needs, and Growth," World Bank, 1979 (forthcoming), and "Nutrition and Food Needs in Developing Countries," World Bank Staff Working Paper No. 328, May 1979. AID's Office of Nutrition also has two research projects under way: the "Consumption Effects of Agricultural Policies," and "Subsidized Consumption."

practices and food taboos within the community and the family can also compound deficiencies. A malnourished population mortgages its intellectual and physical potential.^{10/}

Accordingly, the welfare or relief mentality that continues to surround human capital programs is no longer appropriate. Instead, a holistic equity-oriented production and services strategy, with the individual and her family at the center, has emerged as a critical aspect of modern development.

Even though the old and new uses of food aid described above are important, the primary emphasis of this policy paper is on the programming of food aid in ways that support equitable growth. The broad objective is to expand opportunities for employment; the primary implementation strategy is largely one of creating a dynamic agricultural sector. Government is seen as playing the central role in setting policies, providing production inputs and services, and supplying food to the poorest in society. This formulation is different from the capital-intensive approach of earlier models and is viewed here as a means of achieving human capital, nutritional, and agricultural growth objectives.

10. The seriousness of malnutrition is demonstrated by comparing the actual average caloric food supplies for individual countries against an accepted rule that without more than 1800-2100 calories per day, an adult cannot work more than 3-4 hours.

There are other practical reasons for giving primary emphasis to food and agricultural policy and to design of food aid programs - to briefly restate some of the points raised in the previous section. Present food and agricultural policies in poor countries are often inimical to the interests of poorer groups in society. "Urban biased" food policy is a common feature in countries as otherwise dissimilar as Jamaica, Haiti, Senegal, Sudan, Pakistan and Indonesia. Also, because food imports are already a significant factor in many food deficit countries, this transfer through biased food systems is having effects which can exacerbate rather than help solve the hunger problem. Another reason for being more explicit about the developmental uses of food, as we have said before, is that the major food aid recipients in the 1970s and 1980s, unlike those of the 1950s and 1960s, are increasingly the world's poorest countries. Their ability to program food aid for development cannot be taken for granted.

In short, the primary emphasis of this paper is directed by what we perceive as a widespread bias in food and agricultural policy and therefore, in the use of food aid. It is this historic treatment of rural areas, in the face of its potential contribution to equitable growth that directs attention to "food for development."

The remainder of this paper discusses the ways in which agriculture can be favorably supported by such resources as food aid. The food for development guidance proposed in the next section is designed to be applicable in whole or in part to all

developing countries; it should be viewed flexibly to meet widely varying circumstances.

D. Food For Development

The term "food for development" used in this paper refers to a governmental approach to the uses of basic foods and other agricultural commodities to employ and feed people. Food for development includes the whole package of food and agricultural policies and programs, domestically produced food, and food imports, necessary to effect the expansion of production and consumption of food. Therefore, "food for development" is not one policy, program, or agreement, nor is it direct feeding or food for work programs, though these uses of food have a role in this broader development-nutritional framework. Nor does the phrase necessarily refer to food aid alone, because the concept includes each country's total food and agricultural system. Furthermore, unless a developing country is simultaneously pursuing an equitable growth strategy, developmentally-oriented food policies by themselves may not stimulate growth in basic staples, increase rural income, or reduce malnutrition.

The developmental uses of food imports described below are by no means original with this paper. Early statements of these food policy and food aid objectives are to be found in the 1954 FAO principles for commodity disposal and in the 1965 FAO publication The Demand for Food, and Conditions Governing Food Aid During Development, by V.M. Dandekar. In the later

paper, food aid is treated primarily in its positive light, as a resource for the promotion of labor-intensive employment, but the potential disincentive effects are also noted.

To translate the food for development concept into PL 480 agreements, the following policy framework is developed to guide the formulation and implementation of agriculturally-based equitable growth strategies. In Part II, we explain how PL 480 Title I and Title III agreements can be negotiated to support these strategies.

1. Incentives for Agricultural Growth

The alleviation of hunger requires that much greater attention be devoted to agriculture through the private market and through public investments in rural development. As a matter of policy, and as elaborated upon in A.I.D. policy papers, equitable growth requires a favorable policy environment and increased resource flows for people in agricultural enterprises. The reasons for this are many.

First, as described earlier, existing national development policies tend to divert attention and resources from meeting the requirements of agricultural growth. Many poor countries would have been capable of supporting more people at adequate income and nutritional levels had their policies favored agriculture historically. Realistic prices have been the case in several East Asian countries, but not in others. For the lack of rapid growth in food production to sustain their industrial priorities, Russia, China, and India have had to

allocate more resources to agriculture .

Second, in the face of what appears to be a technical bias on the part of agricultural experts and ministries of agriculture favoring expanding production by the delivery of modern agricultural inputs, the demand or nutritional side of the agricultural modernization process has not received equivalent attention. In much of the Subcontinent, supplies of new seed and agricultural inputs have been greatly expanded through elaborate distribution systems, and output has grown over the last two decades, but underemployment and malnutrition remain serious.

Third, the role of the private sector in the expansion of agricultural demand has often been overlooked or even stifled. Although public development expenditures for agricultural research and extension, rural development, irrigation, and a wide range of input subsidies, play an important role in encouraging agricultural growth, the cultivator's primary incentive to make agricultural investments comes largely from the private market, from urban and foreign purchases of food and other agricultural commodities.

All of these factors are interrelated and bear closer scrutiny. To illustrate why higher incentives must be given to agriculture if food is to play its development role effectively, we briefly review the experiences of Asia, Africa and Latin America in agricultural development. In each case, we draw implications for the role of food aid in providing

additional incentives to agricultural growth.

The new varieties of rice and wheat explain most of the agricultural growth in Asia.^{11/} These new seed varieties improve agricultural efficiency by making it possible to expand production and, despite greatly increased use of purchased inputs, reduce unit costs of food. Increased supplies of food grain enabled the expansion of employment without causing food prices to be bid up. Policies to expand employment, in the absence of this new source of food, could have caused food prices to rise to the detriment of poor wage earners and small agricultural producers. The challenge to government plans (and the hope for the poor) is to ensure that incentive conditions prevail for agriculture so that the growth in food grains will moderate food prices in the face of policies to expand employment throughout the economy. Short-term higher food prices to stimulate agricultural growth will encourage the adoption of new seed, cost-reducing increases in agricultural production over the longer term, and growth in other sectors.

Governments should ensure a continuing stream of technologically efficient seed and related inputs to cause an upward shift in the supply of agricultural commodities (which

11. The importance of agriculture generally, and the new seed specifically, has been given great emphasis by B.F. Johnson (for Japan) and by John Mellor (for India). See Mellor's The New Economics of Growth, 1976. See also Mellor and Lele, "Growth Linkages of the New Food Grain Technologies," May, 1972.

would be cost-reducing). But, in the absence of a modern input package, low food prices will provide only short-term gains for poor consumers because of stagnant or low rates of growth in agriculture, and possibly little or no growth in off-farm rural enterprises. Landless laborers and small farmers, often forced to work off-farm, are hit the hardest if there are few secondary growth effects. Making the new seed and associated growth linkages available to the poor remains a challenge of fundamental importance 12/

The implications of this agreement for all food aid receiving countries are clear. Agricultural growth that enhances the well-being of the poor calls for a wide range of policies and programs. In a favorable policy environment food aid can release the wage good constraint so that, as the new seed systems are developed, employment can expand faster than it would otherwise. Also, food aid can be used directly to supply nutrition programs for the poorest people who suffer the greatest hardship during the early period of agricultural development. Japan, Taiwan, and South Korea have exploited the full growth potential of modern agriculture; the lessons are clear for later developing countries in Asia.

At the risk of oversimplification, it is useful to contrast the Asian characterization with agricultural

12. In a recent article by Mellor (op. cit., 1978), he elaborates the agricultural production and food consumption conditions upon which equitable growth depend.

conditions and possibilities in the arid regions of Africa.^{13/} Though not nearly as densely populated, and without vast numbers of landless laborers, arid Africa cannot adequately support its people and their livestock. Agricultural output in per capita terms is stagnant or declining and malnutrition is prevalent, possibly more severe than in Asia. The agricultural resource based and rural institutions show the greatest differences, however. There is little proven technology for arid and semi-arid lands, nor is much known about improved livestock under these conditions. What marketing systems exist are designed largely for crop procurement and export. Agricultural development is not the relatively simple matter of providing more favorable prices for an otherwise comparatively developed system, but must involve the creation of technology and supporting institutions, markets, and infrastructure appropriate to African ecological and socio-economic conditions.

Although the new seed-based growth linkages of agriculture are seen as critical to expanded incomes and nutritional well-being, it is clear that this new technology, wide-spread in Asia, is not generally appropriate for much of Africa. Furthermore, the Sahelian region has relatively high wages, which casts doubt upon the region's comparative advantage in the

13. This discussion is drawn from the Agricultural Development Council's report "Implementation of U.S. Food Aid - Title III," August, 1979.

the production of basic grains alone. Growth linkages will have to emanate from improved yields of cash and food crops, and from the development of new food and livestock systems designed for arid lands. Much greater attention needs to be placed on agricultural research, on maintaining food reserves at the regional and national level, and on regional markets and rural infrastructure. Sahelian food systems appear to have one thing in common with many food systems in Asia; a price and distribution bias in favor of urban people.

The Latin American and Carribean countries show the greatest diversity of the three continents described here, and also the greatest promise of solving their own food problems, at least in aggregate terms. Accordingly, generalizations are less easily made about these countries than for those of Asia. The continent as a whole is food deficit even though several countries have high 4 percent agricultural growth rates, and most of the continent enjoys a middle-income status. The countries in greatest difficulty are Honduras, Haiti, and Bolivia, whose people suffer the continent's lowest nutritional standards. By 1990 Bolivia and Haiti are likely to experience food deficits larger than one third of their projected food consumption needs. Subnational food deficits, within Brazil's northeast for example, will probably be as great.

It is notable that on a proportionate basis, Latin America is the world's largest producer of corn and beans, crops which

can have self-targeting characteristics for poor people, because they are less expensive than other grains. Yet the urban food preferences, trade patterns, and agricultural research priorities, like those in other parts of the world, are only now being analyzed for their effect on rural populations and nutritional well-being. A few ministers of agriculture are beginning to question the single minded attention to coffee and sugar.

One of the remarkable prospects for Latin America's future is Argentina's food exports -- projected to grow larger than the continent's total food deficit by 1990. The challenge to food planners may become one of encouraging regional food transfers and the acceptance of domestic policies to encourage agricultural diversification, specialization, and elimination of malnutrition. (The preceding is drawn largely from IFPRI, op. cit., 1977.)

On all three continents, food and agricultural policy encompasses commercial and export crops, livestock, and a variety of staple grains and root crops. In the past, governments and academicians have given most of their attention to commercial and export crops, with the consequence that the equity impact of government food policy has been largely ignored. Price ceilings and floors, and public investment priorities, can give incentives to food crop producers and, through price and distribution criteria, to poor consumer groups. While these techniques have long been used to promote commercial and trade interests, it is now understood that the same tools can be used

to favor poorer cultivators, including herders and producers of specialized export crops (such as the female cultivators of pyrethrum in Kenya), as well as poorer consumer groups. For too long, cash crops for industrial processing and export have received priority (over basic grains and minor but often more nutritious food crops), without adequate attention being paid to the income, nutritional, or regional impact of such preferences. It is this aspect of food policy which will probably receive a great deal of attention in the 1980s. Self-targeting foods, the importance of using price to promote productive efficiency and equity, and nutrition are related topics addressed elsewhere in this paper.

We should hold no illusion about the supply elasticity of higher harvest prices in Asia and Latin America and particularly in Africa, whatever the food crop priority may be. For a number of reasons, relatively higher agricultural prices above are not likely to stimulate large near-term increases in agricultural staples. Higher prices will not immediately do away with fragmented agriculture of markets and weak infrastructure. With the progressive modernization of agriculture the price elasticity (or responsiveness) of agricultural supply will increase. But unless traditional conditions and processes give way to modern ones, "incentive" harvest prices alone may only provide windfall profits to traders and a few farmers without eliciting greater production. To emphasize again, high food prices are a condition for growth but also a constraint to food consumers--a dilemma we have attempted to resolve in this paper

by highlighting the interrelationship of expanding food supplies and declining prices over time, and the important role of nutrition programs.

Certainly the constraints to agricultural growth are complex; the policy trade-off difficult to resolve. Relevant factors cannot be identified or analyzed without specific country assessments.

2. Stabilizing the Incomes of Agricultural Producers

In addition to improving the terms of trade for agriculture, it is also desirable as a matter of development policy to reduce the unexpected variation of agricultural prices that often occurs over the course of the crop season and during unusually good and bad harvest years. It is desirable to reduce the costs - to cultivators, to consumers in general, and to national plans and budgets - of uncertainty that can arise from unseasonal and therefore unpredictable changes in food supplies and prices. Reducing costs caused by uncertainty is desirable on development grounds to sustain adequate incentives for cultivators on the one hand and to prevent inflationary rises in food prices from acting as a brake on employment expansion on the other. Poor people are hit hardest by high food prices. There are also political benefits to assuring food supplies and moderated prices.

A policy to prevent or reduce wide swings in food grain prices over the crop season has other, less often considered, benefits for poor people. Relatively higher harvest prices and

lower lean season food prices will enable tenants and poor farm owners to repay rental and debt obligations at harvest by selling smaller amounts of grain (for those debts enumerated in monetary terms) because the bottom has not fallen out of the market at harvest. Also, later each season when laborers and poor cultivators seek off-farm work and have to buy additional grain in any event, the lean season grain price will not be as high as it would be in the absence of a grain price ceiling policy. In the absence of such a policy the seasonal variation in agricultural prices can work twice to curtail the real income of the poor.^{14/}

Our emphasis on seasonal price stabilization--to reduce the variability of producer income--must be seen as being largely compensatory. Yield variation due to adverse weather and to insect and pest losses is greater than variation in production due to public price interventions. This fact in turn underscores the importance of improving agricultural practices, technologies, and other inputs to provide greater stability of supplies for home consumption and for market. In other words, where yields are low, risks are high, and home consumption

14. As Mellor points out (op. cit., 1978, page 16) a price stabilization program can destabilize the real income of owners of middle-sized farms, while it stabilizes consumers' incomes and those of the largest and smallest producers. Reduced output price instability through the annual crop cycle stabilizes incomes for consumers, and the lowest income farmers because they are net consumers, and for the highest income producers because they market a high proportion of their production. For the middle income producer, the effect of a production decline outweighs the effect of a price increase (moderated by stabilization policy) causing total income to fall.

of production is important, a price stabilization policy can have only a limited (albeit positive) impact on poor cultivators.

Public mechanisms to implement price ceilings and floors may include (a) open market sales of publicly held grain stocks and (b) public procurement at harvest, when necessary, based upon announced ceiling and floor prices. By use of these same tools, the government can shift agricultural prices in favor of producers in successive years and thereby achieve and sustain some pre-determined level of incentive returns for agriculture.

Although many governments have price stabilization programs in some form, the conceptual advantages of price stability are not easily translated into stable producer incomes or into stable consumer expenditures for food. In fact, the technical and managerial demands of public food management suggest that caution and even skepticism should govern steps to alter or expand existing public systems. Furthermore, the managers of public food systems are seldom able to operate public systems free from political pressures.

Experience has taught food policy makers that the public sector rarely manages food well. Because of the risks of spoilage, because of low margins for profit and error, and because public servants do not usually have the authority or resources to handle grain expeditiously, the public sector

seldom manages grain as efficiently as does the private sector. In the interests of efficiency, governments often choose to guide or control, rather than supplant, the private grain trade. Policies and regulations governing private traders to realize public price objectives can include credit and foreign exchange regulations, improved rural infrastructure, and the removal of commercial grain storage and shipment restrictions. In a mixed grain economy, timely announcement of public food price and reserve intentions will help prevent private grain speculation. Nonetheless, most governments are reluctant to relinquish what control they may exert over food markets. As often as not, private grain traders do exploit periods of scarcity to the detriment of the public welfare.^{15/}

- In whatever way a price policy is implemented, the private sector should be assured of adequate incentives to engage in grain trade and to undertake the primary burden of this arbitrage function; the grain price "spread" between publicly determined highs and lows must not be too narrow. The intra-year

15. D. Gale Johnson has pointed out that in a completely laissez faire system the private sector will fulfill many of the above prescribed policies in order to stabilize food supplies and prices. Furthermore, he states that "the world has a need for grain reserves primarily because of governmental farm policies, including trade interferences, and not because there is a large annual variability in world food production." See his "Implications of the World Food Conference," December 20, 1974, page 8. Without arguing the possible merits of this "Chicago" conclusion or its underlying assumptions for poor countries, it does counsel against establishing additional regulatory policies and programs simply to correct the effects of existing ones.

price range around a trend is normally twenty to thirty percent for basic grains in developing countries and is a function of expectations, interest rates, and other costs. It is the unexpected variation, often as high as fifty or one hundred percent, which is clearly punitive, that we are concerned with controlling in this food for development context.

Risk and risk reduction also have important implications for improvements in individual well-being. The bulk of available evidence indicates that parents prefer small families when women's opportunities expand, when their social and economic dependence on children eases, and when parents feel that well-cared-for and basically educated children will have a realistic opportunity to survive and to improve their lives. Services reduce risks. Policies to stabilize food grain prices, expand agricultural incomes, and provide for food in periods of crises are also essential to improving women's productivity and children's prospects for survival. These factors together can have an important impact on the acceptance of the small family norm.

3. Humanitarian Uses of Food

We draw a distinction in this paper between the food policy objectives described in 1 and 2 above, and humanitarian uses of food. In this food policy framework we treat direct feeding and relief work programs as providing a humanitarian floor to development programs that ultimately are to encompass all poor people. A humanitarian floor - a direct income transfer - is necessarily part of a food for development concept because of

wide-spread malnutrition, because the poor are penalized most by poor harvests, and because agricultural growth cannot be equated with increased food consumption and improved nutrition. Price-based food management systems -- which depend upon purchasing power -- do little directly (or immediately) to ensure food for underemployed and malnourished people. Therefore, poor people should obtain food from public programs, and public works programs should be started and expanded, when severe malnutrition and underemployment exist as measured by some accepted government indicator.^{16/} (More is said on the identification of food needs in Part II).

Progress has been made in breaking out of what has become in many cases a self-perpetuating welfare approach to direct food programs. Greater attention is being paid to cost-effective food delivery; to indigenous foods, and to reaching people in greatest need. Furthermore, food relief programs are

16. Relief work programs are becoming more important in several developing countries. We will not review this complex subject except to point out a few issues relevant to the perspective on food and food aid presented here.

First, during years of normal harvests and normal grain prices, rural works wage payments should be in the form of cash, because cash payments create purchasing power and increase the demand for grain at harvest, and because cash is administratively easier to handle. Rural works laborers should be paid in food grain when grain is not locally available at normal prices in the market. Admittedly, a policy to implement both a cash-and food-based wage for works, depending on conditions, further compounds severe administrative burdens on governments. This burden may only be justifiable should works programs become large enough to adversely influence domestic grain prices. (cont.)

being innovative in developmental directions -- by strengthening food reserves, by taking account of the price impact relief programs can have on domestic foods, and by building service and productive infrastructure. Still, a nutritional or human capital perspective has made only minor inroads on the relief mentality of food donors and recipient governments alike.

Because of the scale and tenacity of malnutrition, imaginative, cost-effective nutrition programs cannot wait for better times.

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16. Second, we have labeled works programs as being humanitarian rather than developmental in this paper. Although works programs benefit the underemployed through additional wage payments (whether cash or kind), many of the production - related benefits of work programs, which flow from canals, irrigation systems, and even roads, fall primarily to farm owners and commercial people and not to the landless or tenants. The likelihood that these benefits favor land owners strengthens the need to examine land distribution and the degree to which other policies and programs are ensuring equitable agricultural growth. This view is consistent with the sequence of constraints to agricultural production which the A.I.D. Agricultural Policy Paper identifies as being important to equitable agricultural development in many countries. A recent thirty-country World Bank study has reached similar conclusions (see World Bank, "Issues in Bank Financing of Rural Public Works," (draft) 1977). Laborers may benefit directly from the project they help build, such as schools and clinics, provided they or their children use these facilities. Still, only a small portion of works resources are being allocated for these kinds of community projects.

E. Food Reserves in Developing Countries

Foodgrain reserve systems are needed to serve the developmental and humanitarian objectives described above, to enable governments to improve the terms of trade for agriculture, to stabilize excessive grain price variations, and to feed people directly according to established criteria. However, food aid and other forms of assistance to strengthen reserve facilities and to stock them cannot be justified without regard for the development strategy they are designed to serve. The stocking of food warehouses, for example, does not in itself promote equitable growth. Where such a strategy is being implemented, food aid can be used in conjunction with other assistance as necessary, to strengthen reserve systems and to build stock levels.

Grain reserve levels, over and above minimum operating stocks, can be estimated to meet unexpected seasonal price changes in the market, the needs of humanitarian programs, and the normal needs of ration systems. Each use, and appropriate stock level, has its associated cost; costs that can outweigh expected benefits or the cost of an alternative way of meeting a food objective. Building grain reserves to protect against the one-in-twenty year "worst case" crop failure, for example, would be very costly. Most storage systems are not large enough, even at full capacity, to hold enough grain to dampen extreme food price rises caused by very poor crops. As an alternative to holding large stocks in anticipation of extreme food scarcity situations, food price increases and food

imports can be allowed to play some equilibrating role. That is, some upward price movement will curtail consumption and elicit increases in availabilities. But such price increases will cause malnutrition to grow more severe. All the more reason that food policy must encompass direct food programs as well as market-oriented policies. In the future, the worst-year crop burden on poor countries can be moderated if domestic reserves can be linked to the physical (and financial) reserves of international grain reserve arrangements. In any event, the use of public grain stocks to moderate unseasonal price variations has to be undertaken with great care, as noted earlier. Food stock levels and anticipated food imports should be adequate to enable sales sufficient to moderate an anticipated price rise of a certain level, duration, and size of market, with a predetermined degree of confidence.

With respect to stocking domestic grain silos, governments may occasionally have the choice of procuring domestically or importing grain on concessional terms. Although it is important that governments procure domestically in order to maintain harvest floor prices for reasons described earlier, use of a procurement program may be costly if it only serves the purpose of building stocks. In the absence of a need to maintain harvest prices (during poor harvests, for example,) governments may find it more economical to build reserves with concessionally-financed food imports. However financed, there are clear limits to reserve stock levels, imposed both by the capital and maintenance costs of storage space and by the opportunity cost

of other development efforts foregone.

Given the efficiency with which the private sector usually stores and ships grain, a government may determine that it should minimize its own role in the control of prices. A government may focus instead on humanitarian programs, on improving infrastructure such as transportation and communication, and on policies and regulations to facilitate private investments in storage and stocks.

While we believe the above general points should be considered in providing assistance to reserve systems, we do not intend to prejudge the necessity and design of specific public food system investments; these must be left to in-country assessments of conditions, objectives, and alternatives.^{17/}

Although our emphasis here is on national reserve systems, household and village reserves are important in their own right. Also, in time, annual income- and nutrition-oriented public food policies can have a substantially positive effect on risks born by rural producers and consumers. In Africa much more than in Asia, storage of grain for food, seed, and feed is a significant survival mechanism born of necessity in

17. A.I.D. is giving greater attention to food grain management and reserves in food-deficit countries. Accordingly, food aid can be used in association with technical and capital assistance to strengthen reserve systems. Following on a recent study by the Kansas State University, DS/Agriculture is prepared to support mission requests for technical assistance. See: Richard Phillips and L. Orlo Sorenson, Food Grain Reserves in Developing Countries, Food and Food Grain Institute, KSU, March 1978, and AIDTO 403, September 30, 1978, entitled, "Strengthening Food Grain Reserve Systems in Developing Countries for Equitable Growth."

the face of a harsh climate. Rural families in some Sahelian countries often store as much as a year's food supply at a high opportunity cost, trading low caloric intake for survival. To the extent that production and income can be increased and their variability reduced, and to the extent that other national food policies and programs reach the village household level, rural people can reduce their own storage costs. This is an ideal, whose achievement is uncertain in the eyes of the understandably skeptical villager.

F. Other Developmental Uses of Food Aid

A food for development policy as described above can be viewed broadly; food aid can support nonagricultural sectors, and equitable growth strategies can be based primarily on manufacturing and raw materials export. If countries are already pursuing equity-oriented development strategies in which food and agricultural systems are well integrated with development priorities, then concessional food imports can be used to support any one of a number of other sector activities such as rural industry, education, health, and family planning. Food aid can also be used to support monetary, fiscal, and trade reforms (commonly associated with IMF agreements); and, as emphasized earlier, land and tenure reforms. In other words, food aid in support of services, sectors, or basic structural reforms can also be seen as appropriate in such cases. (The fact that the concessional resource transfer happens to be in the form

of food carries no necessary restrictions on its use - except the very important one that the potential disincentive effects on food production (see page 43) must be carefully avoided.)

Governments may welcome food aid to help bridge chronic food and local resource shortfalls that may grow temporarily large because of the costs involved in decisions to expand agricultural services and to undertake reforms. Agrarian reforms, which often entail disruptions in crop production levels and market supplies, and which may require high levels of food reserves and other resources, can be implemented more smoothly with the support of food aid. (See A.I.D.'s Policy Determination on Agricultural Asset Distribution: Land Reform, PD #72, January 16, 1979.)

Although food aid can be used to promote employment and growth in nonagricultural sectors of the economy, the basic relationship between employment and income expansion and the supply of basic wage goods must be recognized. Employment expansion in industry will increase the purchasing power of laborers who in turn will demand a range of basic consumer goods, particularly food. Unless the food supply is also increased by domestic production (or imports) food prices will rise, causing an erosion in real income gains for urban and rural laborers. If the basic wage good, food, remains costly because of slow agricultural growth, real improvements in well-being may be slowed.

The same argument holds for industry. The supply of non-food wage goods must also grow to meet demand and will do so

to the extent manufacturing (and imports) focus on basic consumer goods. If, on the other hand, trade restrictions and political interests protect capital-intensive, often luxury-oriented, consumer goods production, growth in employment and purchasing power will be slow and the price of non-food wage goods is likely to remain high. The basic point remains: government will have to sustain the supply of cost-reducing agricultural and industrial technologies in order to ensure stable wage good prices. Food aid can be used directly to relax the constraint on the supply of food and indirectly to relax the constraint on the supply of non-food wage growth in the face of a policy to expand employment (Mellor, op. cit., 1978, page 24).

Having described these uses of food aid, we treat this section as a parenthetical comment, not because these uses of food aid are not important in their own right and cannot promote equitable growth, but because the severity of malnutrition and degree of underemployment in many poor countries strongly suggests that U.S. food aid be used to find low-cost solutions to food production and job creation. Agriculture must be given prominence. The exception to this statement is the use of food aid to support land and tenure reforms.

G. Food System Dynamics

When all the aspects of this food for development perspective are seen as a whole, food aid can help to support public policies which increase food production and enhance food consumption.

Each country's food system would provide: (a) more favorable prices (and greater public investments) for agriculture; (b) a food price ceiling for food purchase; (c) food for humanitarian needs; and (d) grain reserves to support all three. The justification for this approach to food is to stimulate income growth through agricultural development and employment expansion, and to provide a humanitarian floor for the poorest groups in society.

In the short term, sales from public grain stocks would be used to moderate unseasonal price rises, and public releases used to feed malnourished people. From year to year, food reserve sales as needed would be used to stabilize domestic prices in the face of expansionary employment policies. The long range purpose of such a food management system is to (a) contribute to the achievement of food self-reliance either in terms of domestic grain production or food importation on commercial terms, and (b) strengthen a country's human potential.

Elements of food systems discussed here - such as incentive prices or direct feeding programs - have been accepted in one form or another in most countries. However, the implementation of these developmental food policies has often been neglected, or deemphasized in order to meet alternative agriculture production and consumer price priorities. Procurement of cash crops for export, and urban food systems which serve the middle class are cases in point. Food crises also cause governments to defer developmental policies in favor of meeting humanitarian

and political necessities. So while the food departments and physical infrastructure for food movement and storage may be in place in many developing countries and some prices may be "right," the developmentally-oriented food policies designed to serve equitable growth are not well formulated. Nor do food departments have the kinds of staff which can pose more efficient or equity-oriented food policy options.

We are not suggesting that governments do not face hard, politically sensitive, choices in the setting of prices and in the uses of food. Budget resources used for domestic food procurement cannot also be allocated for cash crops or food subsidies; food held in reserve is not available either for the middle class or for the poor, nor can sales under a price stabilization program be triggered by every political crisis that may arise. But we do believe that improvements in the efficiency and equity of food systems can be implemented at the same time as these systems continue to meet near-term political objectives. These objectives are not necessarily incompatible with developmental ones, but their simultaneous achievement cannot be taken for granted. One of the purposes of this policy paper is to suggest approaches to food aid whereby conflicting objectives, or ones that are at least perceived to be in conflict, can be resolved. The classic example of this - food aid acting as a disincentive - is discussed in detail in the next section.

H. Disincentive Effects of Food Aid

We have assumed to this point in the paper that food aid is or will be used as another resource to finance development; that its potential disincentive effects will not be allowed to manifest themselves by virtue of government policy. In order to highlight those policies which are necessary to ensure that food aid does have "incentive" effects, it is useful to describe conditions under which food aid can have adverse influences. It is also useful to do this because many public food systems in poor countries, which often depend on food aid support, do have adverse effects on growth and humanitarian objectives.

In broadest terms, whether domestic food supplies and food aid are used for development depends upon the orientation and effectiveness of a government's development strategy. Is food aid used to support a policy of employment expansion? Does food aid displace domestic agricultural efforts? Does a government strive to expand consumer demand and needs-oriented programs to absorb food aid, or are harvest prices allowed to fall to the detriment of domestic farmers? These are complex questions.

Food aid can have multiple effects in an economy, some positive, some negative. The combined or net effect of several factors may be negative but this can only be determined by assessing the public food system in relationship to marketed food supplies from domestic sources together with several aspects of public food policy: the use of the local currency generated by food aid's sale; food aid relative price in the market; and the manner in which public food is distributed.

As each of these factors interacts with the others, the total effect cannot be determined by looking only at one or two of them.

With respect to the size of the public food system, the share of the domestic market dominated by food imports is the share not available to, or capable of being supplied by, domestic producers and traders in the short term. In a few economies, this share can range as high as 50-60 percent. In itself, this relative scale, like any other single factor, is not "good" or "bad" in terms of effect on growth and well-being. First, it needs to be determined whether the public revenues generated by food sales are spent to expand production and employment and to what degree so that an increased demand for food is created. The employment impact of such public food imports and sales is greatly diminished if the revenues are spent for capital-intensive activities. (The impact may also be detrimental to development if these revenues allow a reduced emphasis on domestic resource mobilization.) To put it another way, there may be a disincentive effect if reduced market activity caused by a reduced level of domestic grain sales is not "compensated" for by additional labor-intensive public investments.

Second, to the extent that these grains are sold below the market price, the government generates less revenue than it could (for development) and undercuts private grain sales. The use of a subsidized price is the one aspect of food aid's

disincentive effect on which most attention has focused but in itself is not necessarily a "villain." (The Bellmon amendment stipulates that PL 480 commodities are not to result in a "substantial disincentive" to domestic production.) Having said this, food aid may be subsidized to benefit genuinely poor people or to discourage the production of some crops (and not others). Both of these objectives can be consistent with an equitable growth strategy. In practice, however, most food subsidies are designed to provide income transfers to various urban groups. As a consequence of subsidies, many food systems do not generate as much local currency as the food aid commodities are worth on the international market. Nor could poor governments sustain the cost of their subsidy programs without food aid. The subsidy therefore acts to cut, by half in a few cases, the local currency that could otherwise be "generated" for development programs. (Unless required to do so under Title III agreement, governments generally do not make up the difference between the PL 480 commodity cost and the subsidized sale price in the domestic economy with extra budgetary allocations.)

In any event, the disincentive effect caused by a relatively low subsidized price may not be serious if the public food program is small. Alternatively, food imports that supply half of an urban market, even without a subsidy, may have a greater negative impact on the market opportunities of the agricultural sector than a small public program that offers, say, a fifty percent subsidy. For this reason, food aid can act to discourage the production of basic grains even if its sale price is

administered at what may be an incentive harvest price.

Third, the effect of subsidized food on domestic production is also influenced by who purchases the food. If the grain is sold without benefit of a needs test, i.e. without eliminating those with adequate income, then a subsidy diverts consumer expenditures from the private sector to the public budget. The food purchases of urban consumers should be helping to sustain domestic agricultural prices. If, on the other hand, food is sold to poorer groups in society, the potential disincentive effect is minimized because the poor will continue to buy about the same low quantity of food from the private sector. That is, relative to society as a whole, or to the urban middle class, a food subsidy will act to encourage a relatively greater increase in food consumption. The disincentive effect of direct feeding or targeted programs can also be reduced by use of commodities which are self-targeting; that is, by use of commodities such as wheat or sorghum that are less expensive than, say, rice.

We have assumed in this discussion that a country produces and imports one kind of staple grain. The disincentive issue is made complex when this simplifying assumption is relaxed by recognizing that most economies have several staples. Trade, production, and consumption policies toward each of several staples have important implications for equitable growth and nutritional well-being. For illustrations of this point, see the recent paper on a multi-staple food economy by Peter Timer, "Food Policy Analysis in a Multi-Staple Food Economy,"

prepared for the Carnegie Endowment Conference on Indonesia, November 1978.

None of these factors can be assessed apart from their country-specific environment. Our purpose here is not to identify the incentive or disincentive elements of each public food system but to alert the reader to the policies that give rise to positive and negative economic effects of food policies and food imports, and to those changes in policies and programs that should be implemented to ensure positive developmental results from food aid.^{18/}

I. Other Considerations of Food Policy

Two considerations of food policy are elaborated below to emphasize the range of possible country situations encompassed by this policy paper and the diversity of conditions with which A.I.D. missions must deal.

1. Equitable Growth and the Role of Food Aid - A Second Look

The food policies outlined in this paper are not necessarily synonymous with an equitable growth strategy. These developmentally-oriented policies, if not implemented in conjunction with an equitable

18. The total effect of food imports, however financed, can be quantified. See D. Blandford and J.A. von Plocki "Evaluating the Disincentive Effect of PL 480 Food Aid: The Indian Case Reconsidered," Cornell, July 1977. Short of undertaking an econometric analysis as is done in this case for India, missions should make assessments based on the kinds of factors indicated in Section H.

growth strategy, will contribute primarily to the welfare of the urban and rural middle class through food price stability and relatively higher harvest prices, respectively. In the absence of an equity-oriented growth strategy, poor people may be left out of modernizing processes. This is not simply a food aid problem; it is an important development challenge of the 1980s. Can food aid play a role?

To answer the question in brief, we posit three admittedly very simplified types of development in the world's poorest countries - one based largely on agricultural growth; one based on growth in other sectors; and lastly, one where little growth in any sector is occurring.

First, the agriculturally-based equitable growth model posits access to resources and land so that growth and equity are pursued simultaneously. Incentive agricultural prices can hurt food consumers, but growth of agriculture and secondary growth linkages promise expanded food supplies, employment, and moderate prices for wage goods over the longer term. In this dynamic setting, humanitarian feeding programs are viewed as being short-term or interim.

Second, an equitable growth model can be based on growth in cash crops, raw materials, manufacturing, and trade. Labor-intensive techniques keep the capital-output ratio low and employment expands at rates sufficient to cause real wages to increase. The economy is pursuing a strategy which depends upon food imports purchased in progressively larger

proportions with foreign exchange earning.^{19/}

In both of these simplified models food aid can play an important role in diminishing foreign exchange and local currency constraints. This in turn allows government to pursue employment expansion at a higher rate than would otherwise be possible. These idealized successes need to be contrasted with the hypothetical "no progress" third model.

In the absence of the ability to form a political consensus to foster equitable growth and associated policy reforms, there may be little growth in per capita income. In the absence of access to resources and land, the burden of incentive agricultural prices would fall heavily on the poor without commensurate expansion of rural employment and incomes. In the absence of expanding purchasing power, poor people would not be able to buy the food that was produced or imported. In this case food aid may act to sustain inequities rather than to help finance their alteration. The need for food aid for budget support and for humanitarian purposes may show little

19. We do not intend to suggest that whether a country should be self-sufficient or self-reliant in food can be settled easily or in the near term. For basic food crops, countries do switch over the years from being exporters to importers and back again. Be that as it may, food exporting countries such as Argentina and Thailand can still have serious problems of regional malnutrition and underemployment as can food-deficit but cash crop exporting countries such as Brazil, Kenya and Turkey. (Examples from IFPRI *op. cit.*, December, 1977). Aside from a country's net food trade position, which is generally dictated by economic factors, a few countries strive to be food independent for political reasons. Such a policy can be very costly if a country's comparative advantage lies in another direction.

promise of declining.

In short, food for development programs can be conceptualized, but the usefulness of food aid as a development resource in a country with other than equity-oriented development priorities can be severely circumscribed. In such cases, and this is our point, how much weight should food donors give to humanitarian programs and to budget support? Domestic and imported food and the administrative capability to manage market-oriented food policies compete with those resources and capabilities needed for humanitarian programs. The need for both types of programs may grow larger in poor countries, yet both may be ineffective in the absence of commitment. Having asked these questions, missions may wish to set their sights on the medium term and venture recommendations on the direction food aid programs should take.

2. The Role of the Market System - Production Incentives and Income Distribution

Policy makers in all countries often face the dilemma of wanting one policy instrument to serve several, frequently conflicting, objectives. A common example of this is food price, which must be kept high enough to stimulate production and market supplies, and low enough so that poor food consumers are protected. Because one price seldom serves both purposes, many governments purchase grain at one price and resell it at another, often lower price. Where the government actually does the buying and selling, net budget outlays can be large.

Even if the public sector controls prices of the private trade and otherwise does not intervene, it is often forced to go somewhat farther because of the lack of the "correct" private sector response. In addition, governments often set up direct feeding programs to serve an income transfer function outside the market.

As is typically the case in poor countries, the controlled purchase price for basic foods is not high enough to stimulate a high agricultural growth rate nor is the income objective well served because actual beneficiaries tend to be the middle class. The distortions and costs which arise from this confusion of objectives often results in the recommendation that the efficiency and equity objectives be separated. The private market price should be allowed to function to stimulate greater production. The political objective (an income transfer objective) can be ensured by salary increases and by using open market sales of public food stocks to protect the urban economy from unseasonal price variations. The humanitarian objective (the income transfer objective as conventionally understood) can be served by needs-oriented food delivery systems. All three objectives would continue to be met but the policy instruments would be separate.

Alternatively, one should recognize that the relative prices of basic foods are the primary instrument for income distribution, as the "mode of production inheritantly contains its own pattern of distribution," so that by the selection of price levels, crop types, and regions, the public sector can influence the distribution of income as well as the composition and level of production. More specifically, the public sector may as

a matter of distribution policy, decontrol the price of rice as an example (with its subsequent price increase), and procure other food crops which have a large income elasticity among poor people (and a low or even negative income elasticity among other groups). In this second use of food policy the efficiency and equity instruments would be combined, but the distributive implications of basic production choices would be altered to favor poorer, or broader groups of agricultural producers. The political and humanitarian functions of public food policy could continue to be served as described in the first case.

The importance of this point is that food aid is often used to sustain conflicting or at least ineffective policy instruments which, in the absence of food aid, could not be as easily sustained. Reliance on domestic and imported rice (and even wheat in one or two countries) can be increasingly seen as a costly way to meet nutritional and distributive objectives. Nevertheless, food aid can be used to support the commodity and local currency costs of programs to alter producer and consumer food priorities in favor of broader groups of people in poor societies. 20/

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20. Practical examples are worth noting. Wheat production and imports are expanding in Bangladesh because wheat is more nutritious and less expensive than rice. Sorghum is also being tested in the Bangladesh ration system as a self targeting food. A sorghum-wheat flour blend is being tried in the Sudan as well. The Sri Lankan government is undertaking a most innovative program of food and agricultural policy "rationalization" while at the same time improving the effectiveness of its direct food targeted programs.

Part II. Implementation of Food Aid Policy

A. The Relationship of PL 480 to these Food Policy Concepts

The conceptual discussion of food aid in Part I was drafted without direct consideration of PL 480. This has been done in order that the logic of the development analysis, rooted in the challenge of reducing poverty and hunger, would determine the paper's range of prescriptions and the requirements of their implementation. Food aid, to meet an immediate food need and to speed food self-reliance if not self-sufficiency, is the basis of this conceptual analysis. We believe that poverty and hunger can be alleviated by appropriate developing country efforts and appropriate foreign assistance programs. However, we do not believe that the manner in which food aid is presently programmed is contributing as fully as it might to these twin development goals. The analysis in the first part of this paper provides a basis for evaluating PL 480 on developmental and humanitarian grounds, and for improving PL 480's effectiveness in light of equitable growth objectives.

In Part II, unlike Part I, PL 480 is treated explicitly. Because the developmental uses of food described earlier and the new Title III Food For Development provision are similar, the paper as a whole provides a broad framework for the implementation of Title III. In keeping with recent Executive Branch directives, this paper also provides guidance for improving the developmental impact of Title I. (As explained before, it is not our purpose

to suggest ways for improving the present Title II program although some of the discussion here may be pertinent to such efforts. For Title II guidance see Handbook 9 and the Annual Budget Submission guidance.)

B. Basic Elements of a Bilateral Food Aid Program

The Country Development Strategy Statement (CDSS) is the place to begin. The CDSS guidance calls for an evaluation of country food and agriculture policies and programs and of the impact that these have on a country's food production and consumption levels, and on its overall development strategy. Furthermore, in those countries with large and growing food deficits, the CDSS should make some judgment about the country's ability to become self-reliant in food in a given time period. These analyses may suggest the need for a PL 480 program or the redirection of an existing one. The CDSS food analysis should provide the underlying justification for specific measures which may be considered for negotiation with a government. The CDSS should include an assessment of when concessional food assistance may start to decline as an indication to the government that we expect that agricultural plans will be effective.^{21/}

21. The ways in which dollar and food assistance are to be integrated are spelled out in the CDSS guidance. Both programs are to be rooted in the same country poverty analysis but each form of assistance has characteristics which make them useful for supporting certain types of governmental efforts and not others. Because the solutions to poverty and malnutrition are found in policy changes as well as increased resource commitments, PL 480 Title III is not to be used simply to offset foreign exchange commitments and to finance the local currency costs of dollar projects. For further guidance on these points see Title III and CDSS guidance airgrams.

A separate mission paper may be required for Title III (and one may be required for strengthened self-help provisions under Title I) because of length limitations composed on the CDSS. It is on the basis of such papers that the formal Title I and Title III agreements can be drafted. Although these papers should stand on their own, they should be rooted in the equitable growth analyses of the CDSS, and may be appended to them. Like the CDSS, food assistance papers should be updated as required. The annual budget requirement of each PL 480 proposal and agreement is to be addressed in the Mission's.^{22/}

As mentioned in Part I, a PL 480 program may address developmental issues and program opportunities other than those having to do with domestic food production. While the policies and programs needed to affect the developmental uses of food (and therefore food aid) should receive first priority in poor food deficit countries, a country's food and agricultural systems may be already supporting an equity-oriented strategy. So although food aid should still serve to meet a food deficit, each agreement can provide multi-year support for a wide range of developmental activities.

22. Each year's CDSS and ABS guidance will govern the precise form in which PL 480 requests are to be submitted. The airgram "PL 480 Title III - Food For Development" (AIDTO - 481, dated November 30, 1978) and its successors, provide the specific policy guidance for Title III proposals. This policy paper does not offer guidance for determining which of the three PL 480 titles is best suited for particular conditions. For preliminary discussion of this point for the Sahel see "Food For Development in Sub-Sahara Africa," AFR/DR/ARD, May 15, 1979.

Each PL 480 Title I and Title III agreement inherently contains three mutually reinforcing methods for implementing an agreed upon program. These are, in brief, (a) the potential policy dialogue associated with a significant level of food, with a multi-year pledge (under Title III), and with concessional financing; (b) the constructive impact of food commodities themselves; and (c) the use of local currencies generated by the sale of these commodities for development.

First, the food commodities provided under an annual or multi-year agreement are highly valued by recipient governments because they often offset a portion of the foreign exchange a government might otherwise feel compelled to spend.^{23/} Title I often represents a significant share of all food imports and these grains are typically used to feed an often politically volatile urban middle class. For these reasons, U.S. missions may engage recipient governments in discussions of basic policy that may be necessary to improve the development impact of food aid. Other conditions which may be required for fruitful discussions are described in the following sections.

Second, the commodity flow itself can be used to strengthen or establish a food for development objective: such as a price stabilization system, a needs-oriented food system, higher levels of food reserves, and food for work and direct food programs.

23. See Philip C. Abbott, "Modeling International Grain Trade With Government Controlled Markets," Northeastern University, (draft) September, 1977, for evidence that PL 480 Title I displaces commercial purchases..

The actual commodities, in addition to requisite policies and currency expenditures, are required to effect these uses of food. Proper commodities scheduling, in terms of timing, quantity, and type, is also needed to sustain food program objectives. The timing of food shipments for instance can act to support developmental food objectives that may be difficult to implement in the absence of sound food management. For example, food should not be imported when a government determines that stocks are ample, when grain is not needed to effect a price ceiling, or when releases are adequate for humanitarian programs. Food import levels which do not take account of good harvests could hamper a domestic grain procurement program and cause stocks to deteriorate and market grain prices to fall lower than they might otherwise. (These are the kinds of considerations which prompted the Bellmon admendment on adequate storage.)

Third, the local currencies generated by the sale of imported commodities can be used, like the commodities themselves, to implement the policy and program objectives of a food for development agreement. Examples include supporting the costs of operating a domestic procurement program, the costs of establishing a needs test for food or an open market system, the costs of food grain storage, improved transportation, and the administrative and technical staff to implement these objectives. But unlike food commodities, local currencies can also be spent to support non-agriculturally related development programs. In all cases, care must be taken that the availability

of the commodity-generated currencies does not displace the government's efforts to mobilize domestic resources generally, or to curtail the allocations they might otherwise make to specific activities agreed upon under a Title III agreement.

Because all agreements are reached only after the dialogues, commodity arrangements, and currency use planning have all been completed, each agreement should utilize the positive contributions that each of these three methods can make to the achievement of agreement objectives. We do not foresee circumstances, for instance, in which an agreement focuses solely on local currency financing, while the management of food imports or price policy is ignored. In fact, such a narrow use of Title III is contrary to A.I.D. policy. (Title I may be a more appropriate local currency source in such cases.) In those countries where Title III is thought to be appropriate but little is known of the food and agricultural policy situation, missions may consider only a two- to three-year project-oriented agreement but one which also emphasizes and finances research and analyses in order to prepare for a more comprehensive follow-on agreement.

In summary then, each agreement, depending upon country needs and circumstances, may place emphasis on policies and other systematic changes, on the uses of local currencies to finance food for development objectives, or on the uses of the commodities themselves, or some combination. In all agreements, however, it should be shown that the three methods described above are mutually reinforcing.

These three facets of policy dialogue, commodity support and local currency resource are seldom coordinated in the mutually reinforcing way idealized here. First of all, only a few U.S. missions have the kind of continuing dialogue with their host governments that can lead to comprehensive agreements. The staff requirements of this approach to food aid programming are discussed in Section D.

Second, we seldom can plan the precise tonnage, shipping schedule, or type of food assistance to maximize the PL 480 contribution from the point of view of the recipient government. The U.S. capability to negotiate convincing conditions depends upon our capacity to deliver food in a timely manner. If a PL 480 shipment arrives so late that cash purchases for imports can not be forestalled, the concessional value of the program diminishes sharply.

Thirdly, the local currency generated under Title I is very seldom equivalent to the international value of the commodities because their sale is usually subsidized. For this reason, Title I self-help provisions are seldom "fully funded." To avoid the underfunding of program agreements with Title III, recipient governments are required to make up the difference so that the development program is equivalent in value to the U.S. food grant contribution. Furthermore, annual government benchmarks should be required for each project in order that missions can assess governmental contributions to each Title III-financed project.

In short, exploiting the full value of PL 480 requires the best efforts of both parties; efforts that on the U.S. side require staff and the capacity to ship as required, and on the host government side, efforts to ensure that grant resources are developmentally utilized. Successful coordination of these three methods will enable negotiation and agreement on "large" developmental questions.

There are additional features of food agreements that require discussion here. First, on what basis is a food aid need judged? Second, in the face of varying, often unpredictable, changes in food import needs, how can a PL 480 agreement be designed to sustain a government's resource commitment to an agreed upon development program?

C. Indicators of Food Aid Requirements

The degree of malnutrition in many countries argues for the negotiation of PL 480 programs in food deficit countries before U.S. food resources are utilized to support other types of development objectives. As desirable as this priority is, the measurements of food deficits, in aggregate and for individuals, is an imprecise science. In this section, we discuss a wide spectrum of techniques for estimating aggregate food needs and food aid quantities. Qualitative measurement of individual food needs is a difficult empirical task, and aside from a few comments, is outside the scope of this paper. (For summary discussions of numerous nutrition studies,

see the World Bank reports cited in footnote 9/.) Here the discussion ranges from various "gap" approaches to the identification of need in terms of income growth and nutritional improvement.

1. Aggregate Food Gap Measures

"Balance of payments" support has been the primary economic justification for Title I over the years. By itself (and this phrase often stands in lieu of an analysis) this statement implies that both food and concessionality are required. Typically, little or nothing is said of the uses of food or the developmental orientation of the receiving country. The foreign exchange saved, the local currency generated, and the food aid itself should be evaluated for their contributions to a country's development efforts in all future Title I proposals.

In recent years, Title I food imports have been justified on the basis of a supply-demand table assembled by missions. This is an imperfect exercise, but it is a place to start an analysis of need. The aggregate annual country food demand is usually calculated on the basis of the total population, per capita grain consumption, and some desired change in carry-over stocks at the end of each crop year. The supply side is based on estimates of annual harvests of accepted staple grains minus allowances for seed and waste (often 10 percent). These figures are often assembled for each type of food: rice, wheat, corn, edible oil, etc.; and by sector, public and private. In order to ensure that the deficit - the difference between

aggregate demand and supply in the market - is not closed by price rises, increasing malnutrition, and the reduction of stocks below some safe level, governments generally procure domestically and contract for commercial and concessional food imports. Often as not the terms "deficit" and "reduction of stocks" refer to the public food system - an indirect reflection of conditions in the market and among poor people.

U.S. missions should be familiar with crop conditions, harvest estimates, food prices, and public system stock and flow estimates including import data, to document their Title I and III requests and to satisfy the Bellmon determination (Section 401 (b) of PL 480) that "adequate storage facilities are available. . .to prevent spoilage or waste. . . and that the distribution of the commodity will not result in a substantial disincentive to domestic production." To satisfy the Bellmon determination with respect to storage, missions with large PL 480 programs may wish to maintain food tables (covering opening stock, food arrival, procurement, offtake, and closing stock data) by year or quarter as appropriate for each basic grain handled by the public sector in order to judge actual and projected stocks and flows against port and storage capacities.

Even within this mechanistic method for estimating the annual gap, several improvements can be made. Following on the approach described in Part I, a public food reserve serves a multi-purpose food system. By helping a country to maintain its public food stocks with imported (and domestically procured) grain, the food system as a whole can be strengthened.

Projections of future food needs should be based on estimated crop production growth rates, expected market prices, and most importantly, the government's plans for growth in employment. Within this context, estimates should also be made of the country's longer-term food import levels.^{24/}

With respect to the CDSS, PL 480 requests are not to be included in the dollar Indicative Planning Levels. Still, missions are required to project PL 480 levels forward for five years in their CDSSs and ABSs. Aggregate food analyses should separately identify quantities that governments and donors allocate for humanitarian programs.

The changes suggested above remain narrow in their perspective however, and a broader view is useful. Even though a food system described in Part I would serve food needs expressed directly in terms of market demand and would supply food programs for people, such a food system may not meet the total food requirement of a malnourished population.

2. Income and Nutritional Measures

As we have emphasized in Part I, nutrition-based estimates

24. D. Gale Johnson of the University of Chicago has proposed that food aid be scheduled according to general trends. If, for example, food grain production drops from a long term trend growth rate of 4 percent, down to 2 percent, food aid donors could supply some proportion of the deficit (say 70 percent) and could share in this contribution in some agreed upon ratio. This approach has the advantage of obviating the need of frequent assessments, but by itself does not give due importance to the developmental uses of food imports or to food deficits and surpluses which can occur on short notice.

of the food gap indicate far larger deficits than ones based on market indicators alone. And as the USDA Report indicates, striving to meet a market gap is no solution to malnutrition. According to a World Bank study more than 90 percent of the variance of calorie intake is explained by income levels and food prices; poor people simply do not have access to the market. (World Bank, May 1979, op. cit., page 20).

Present market-oriented food gap techniques and direct feeding programs veil a considerable amount of malnutrition. India is a case in point: the public food storage system is comprehensive, a national needs-oriented fair price shop system is in place, many nutrition studies have been conducted, and there are dozens of direct feeding and rural works programs. But it cannot be said that a significant proportion of India's poor will achieve an acceptable food consumption standard in the foreseeable future.

Two alternative approaches are needed to reduce hunger. The first one suggested here, following on the primary focus of Part I, argues for a more energetic effort to expand employment, and the second one, to be seen as complementing the first, calls for more effective delivery of larger amounts of food to malnourished people.

First, an alternative way to address the basic food requirement issue is to ask what amount of food would be consumed if all laborers were fully employed at or above a "poverty line" wage, and therefore all families were adequately fed. This approach has been suggested for India: what levels of

public expenditure and personal income are necessary to raise consumption of basic food commodities to an acceptable norm? 25/ Greatly expanded rural works programs, such as the Maharashtra Employment Guarantee Scheme, is one possible approach to income expansion on a significant scale.^{26/} This approach suggests a development expenditure gap instead of simply a food gap.

Second, agricultural development is a long-term solution, one that is off to a painfully slow start in many poor countries. Direct food programs should be strengthened and expanded to reach severely malnourished people; food allocations for these programs should be increased as effective identification and delivery mechanisms are developed. Although a national program to close a nutrition gap will not be as costly as one which emphasizes closing an expenditure gap, the administrative burden will be greater for foods delivered directly and in ways which enhance individual productivity and health.

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25. In 1923, the ILO recommended that each person should enjoy an income adequate to "purchase basic human needs." This is the essence of an employment-income approach to development. An Indian study by V.M. Dandekar and N. Rath, Poverty in India (Bombay: Gokhale Institute of Political Economy, 1971), drawing on this approach, has estimated that level of added income needed to enable poor people to live at and above an adequate standard.
26. I.J. Singh, "Small Farmers and the Landless in South Asia," World Bank Staff Working Paper No. 320, February 1979, see pages 171-182 for Maharashtra's Employment Guarantee Scheme.

D. PL 480 Programming Flexibility in the Face of Varying Resource Needs

We have emphasized in this paper that PL 480 agreements should allow flexibility in food shipment levels. This is desirable because domestic agricultural production cannot be accurately forecast over the life of a multi-year Title III, or even at times during an annual Title I agreement. It is obviously desirable to avoid supplying food when it is not required, and to supply food when it is required. Although food import levels should be governed by local supply, price, and public stock conditions, such flexibility may create problems for governments. Flexibility in the food import schedule can dictate an undesirable degree of flexibility in local revenues generated by the sale of PL 480 commodities.

The budgetary support that results from concessional food aid can be large in proportion to total revenues and can also vary greatly with changes in the sale of public food stocks. For example, open market derived revenues will be large during periods of poor harvests and high prices, and will fall during periods of good harvests when public food sales are not needed to moderate prices. This variation in sales and revenues is explained by the price inelastic character of basic foods; the quantities of food purchased do not vary greatly with wide price fluctuations. Still, governments may need assured levels of local resources, particular to finance policies and programs agreed upon under PL 480 agreements.

The basic problem we describe is generic to food programs; total U.S. supplies are governed primarily by U.S. conditions and not by those in recipient countries as a whole. Also, budget levels determine the dollar size of PL 480 each year. Furthermore, country agreements are in terms of dollars not tonnage. As a consequence of these factors, and because the world's harvests in rich and poor countries alike appear to rise and fall together, PL 480 tends to act as a pro-cyclical rather than a counter-cyclical contribution. When harvests are poor in food-deficit countries, needs are greatest, yet U.S. crops are likely to be down as well, and in the face of a budget ceiling and generally higher food prices, the quantity of food shipped declines. (This general statement does not hold when cases are examined country by country, at least not in the first part of each budget year.)

Under PL 480 agreements, commodity levels can be adjusted upwards to meet unforeseen food needs arising from poor crops. Alternatively, when food shipments are not needed, non-food grain agricultural commodities can occasionally be substituted under Titles I and III. This substitution, of edible oil for wheat for example, acts to level out the variation in revenue generations that might otherwise occur. However, this present degree of program flexibility may not be adequate. In countries with which the U.S. has a multi-year agreement, conditions may arise that require further commodity or dollar flexibility. An assured resource level may be necessary in certain countries where the perceived and real costs to the recipient government of

difficult policies and programs require secure levels of assistance; secure levels, that is, during both good and bad crop years.

Alternatively, it can be argued that a multi-year commitment of food, as needed, is adequate in itself to secure an agreement. If the recipient government experiences good crops as a result of good weather and progressive agricultural policies and programs, the U.S. should not be obligated to compliment the government for its own agricultural success. Revenue shortfalls from declining food imports in such cases should be compensated for by other revenues, such as from taxes on increased agricultural productivity. During bad crop years, domestic and international food reserve mechanisms can play a compensatory role, as may the IFIs. (It is noteworthy, however, that no "food facility" has been set up comparable to the IMF's Oil Facility.)

If it is determined that some greater degree of resource assurance is desirable under a bilateral agreement to secure a food for development program, the U.S. Government could seek greater resource flexibility. Dollar assistance could be authorized to compensate for reduced food aid import levels that may be dictated by favorable crop conditions. A wider range of commodities may also be desirable under PL 480. Alternatively, in the situation of poor crop conditions in food-deficit countries, a situation of greater concern, the U.S. has been pressing with some success for bilateral and multilateral mechanisms to protect these countries.

As we gain more experience with the developmental uses of food, and strive to provide counter-cyclical assistance, we may wish to seek more enduring ways of helping governments sustain their commitments to development.

E. Staff and Coordination Requirements of Food Aid Policy

It is difficult for a policy paper designed for many countries to be of great help in the formulation of mission programs which must of necessity be unique to each country's institutions and needs. Like the CDSS guidance, the purpose here is to state a few concepts in order to ensure that A.I.D. supports equity-oriented development programs. This guidance cannot reflect or substitute for the missions' analyses of food and agricultural issues in their host countries. What policy papers can do is point a direction and establish general guidelines and standards by which requests for assistance will be reviewed. Should missions find that a particular development opportunity can be financed by PL 480, they should communicate draft proposals to their bureaus.

In an increasing number of countries, the task of analyzing food and agricultural policies is being shared with the government, the World Bank and the International Monetary Fund. In several countries, the Bank and the Fund already have an analytical lead. The World Bank is increasingly supportive of the kinds of macro-economic and agricultural policies described in this paper, and the IMF, which has previously stayed clear of such issues, is also beginning to analyze foreign exchange and budgetary positions in

light of food and agricultural policies. There is greater awareness that financial performance depends upon agricultural performance, on the scale and efficiency of food subsidies, and on other institutional characteristics of the domestic economy. Academic and policy-oriented research institutions are also devoting attention to these issues. U.S. institutions include the Stanford Food Research Institute, the International Food Policy Research Institute, the Harvard Institute for International Development, USDA, and A.I.D.

Because there is broad attention to food issues in many countries, A.I.D. missions do not necessarily have the responsibility for carrying the entire analytical load. Nonetheless, we do recommend that in those countries where the U.S. food assistance levels are high in proportion to total food imports, A.I.D. should lead in seeing to it that the food and agricultural analyses and options are kept before the government and the donor community. Where little or no work is being done, and food deficiencies are severe, A.I.D. missions may wish to undertake the basic analyses. And even where other institutions have the lead, missions should still have the staff to make judgments about the macro analyses and developmental prescriptions of others. (This capacity is related to the broader economic skills needed to prepare larger and more significant A.I.D. development assistance programs as well.) To these tasks can be added a wide range of requirements including participation in multi-donor food discussions covering food needs, shipping coordination, and preparation for consortia meetings. In those countries where

U.S. assistance is a significant factor, U.S. missions often find themselves in a position to lead discussions on food contributions and coordination if not also on policy and program priorities. In addition to providing ideas for bilateral discussions, this policy paper is also designed to stimulate discussions with multilateral food institutions such as the FAO, WFP, and the EEC.

The staff burden of more developmentally-oriented PL 480 agreements also depends upon how malnutrition is defined and solutions prescribed. Most analyses of malnutrition are likely to call for an accelerated, more broadly participatory development effort, and increased allocations for direct feeding programs. Should a food analysis indicate that malnutrition has been seriously underestimated in a particular country, the potential scope for a food for development program could grow. A food analysis could suggest more aggressive agricultural production and general purchasing power creating programs, larger direct feeding programs and, in association with such efforts, higher food import levels.

The investment of mission staff time in food analyses will depend on the mission's perceptions of the hunger problem, how solutions are defined, the actual and potential share of U.S. food assistance, and the degree to which there is host government interest in the kinds of approaches to food described here. We expect missions to design food programs which will help reduce poverty and malnutrition, and to undertake the kinds of research and assign staff needed to do the job.

F. Conclusion

Programming food for development is a difficult task, and requires a long view of the development process. U.S. contributions to the alleviation of hunger in poor countries must be based upon understandings of their economic and political institutions, and on understandings of the implications of existing and proposed food policies and programs. The will and capacity to sustain dialogues with recipient governments is the primary food for development challenge.