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Famine Mitigation Strategy Paper

FOOD/CASH FOR WORK INTERVENTIONS IN FAMINE MITIGATION

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Executive Summary

The conventional perception of famine, that it is a "wide-spread scarcity of food," with "starvation," implies that famine is primarily a food supply problem. Images on TV screens of starving people place pressures on governments, international agencies and private organizations to supply food to afflicted areas. However, recent research has demonstrated the dangers of viewing food supply as the sole cause of famine.

A major advance in analysis of famines occurred with the 1981 publication of Amartya Sen's **Poverty and Famines**. Sen observed that in certain major famines where hundreds of thousands have died (e.g. Bengal in 1943, Ethiopia in 1972), the total food supply in the country was sufficient to meet the needs of the entire population, including those in the affected areas. Rather than attributing the problem exclusively to reduced food supply, Sen proposed a more balanced and flexible theory of famine, which explained how large populations, or groups within a society, become vulnerable to starvation due to lack of access to food. Lack of access may result from a deficient supply but it can also result, for example, from a lack of effective demand.

Sen describes how each occupational group either has a direct entitlement to food (they produce it), or a "trade entitlement," whereby whatever they produce is traded for a dependable amount of food. Famines occur when there are downward "shifts" in this amount. Landless laborers may earn less for their labor when there is poor rainfall, or flooding, which wipes out a portion of the crops. When prices drop for an important commodity, such as livestock or fuelwood, the labor groups which supply it experience a drop in income. When these are groups with few other forms of entitlement, or claims on the government, they may suffer starvation, even if society around them has sufficient food.

Similarly, when farmers experience a production failure (e.g. through drought), they lose their direct entitlement to food, and, if they have no income from labor or sales of other items, they lose their exchange entitlement also. There will be limited effective demand in the area to pull in additional supplies. Famine will occur in the affected region, even when there is sufficient production in the remainder of the country. A local shortfall in food production in a country affects the entire economy; the seriousness in terms of food supply, depends on the source of income and foreign exchange for the country.

Numerous reviewers have analyzed and expanded on Sen's thesis, especially in relation to the experience with famines in the 1980s. Highlights of the debate are summarized in Annex A. Sen's emphasis on entitlement has permitted a more articulate response in recent famine relief that has probably saved many lives. This advance in understanding has profound implications for famine mitigation, as it indicates that decreased food consumption can often be addressed by maintaining incomes and assets for food purchases. Food aid and/or commercial imports may be required to permit a more rapid recovery from pre-famine or famine conditions, or to avoid starvation deaths, when production losses are general in the country. However, the mode of distributing the food can be through markets, except in special circumstances, where employment for food wages or direct distribution of food to particularly disadvantaged groups may be required.

There are a range of possible interventions to help maintain entitlement, including three types involving cash, food or a combination of the two:

a. **Cash/Food for Work (C/FFW)** where cash or food wages are provided in return for labor, generally on public works;

b. **Cash/Food Incentives (C/FI)** where cash or food is used as an incentive e.g. to undertake training or productive activities, either in an individual households' own interest or in community projects; and

c. **Cash/Food Transfers (C/FT)** where cash or food is distributed to particularly vulnerable or needy households, not capable of participating in employment or incentive schemes. C/FT may also be used to respond quickly to emergency needs, while other interventions are being organized, or to assist isolated households, such as nomadic herders.

This paper proposes strategies for using various combinations of these interventions for famine mitigation.

Factors such as income level, own-food production (i.e. household gardens), proximity to markets, government rationing and informal discrimination can mitigate or increase the impact of food shortages. Those people involved in productive activities that suddenly carry less relative value and those with special vulnerabilities are most at risk.

As previous research has shown, the cash/food range of interventions provide an effective means of reaching people with subsistence resources. In addition, the interventions can be used to create physical and human assets or to foster investments in productive activities and enterprises. Both of these properties are valuable for famine mitigation and have effects which increase food entitlement in the longer term.

Care is needed throughout the mitigation activity to ensure that those most in need are being reached. This goal is best achieved by designing interventions where the beneficiaries are self-selected, based on need. Village councils should be involved from the start in assessing the needs of different households and to advise on wage and subsidy levels. Communities should be selected for interventions based on the level of their harvests, local market prices, and nutritional standards.

Determining when wages, incentives and transfers should be used is linked to their respective abilities to identify and reach the various target groups and contribute to the goals of famine mitigation. C/FFW, C/FI and C/FT have different effects and can be used separately or in combination.

Both food and cash have obvious value to target groups in all famine-prone areas, but, their relative values differ. The tradeoffs must be calculated, not on a country level, but at the actual intervention site. Tradeoffs must take into account the village economy and household characteristics of those most vulnerable to dislocation during a drought.

Shubert (1987) provided one of the best rationales for providing cash in a food emergency:

> *"It seems that wherever there is a demand coupled with buying power, in most cases a corresponding supply will develop in due course."*

To foster increases in local food production and strengthen markets, famine mitigation should give priority to cash interventions with target groups, combined with measures to increase food supply. However, not all groups are reached equally by cash or food and the relative value of food or cash to the target groups will vary within and between famine areas.

A review of famine response research suggests that donors and intervention managers should be prepared to provide a combination of cash aid, monetized food, and food interventions, in parallel with efforts to improve market functioning.

Untied cash and food transfers will remain a large share of international donor response to the needs of famine-prone populations. It is clear that much of these transfers could accomplish additional objectives if it dispersed geographically, planned earlier, and disbursed through public works projects. This has been effective in Cape Verde, Ethiopia, Botswana, Lesotho, Kenya, India, and Bangladesh. Similarly, the same resources can prevent famines, and thereby be yet more effective, by achieving sustainable mitigation effects at the village level, well in advance of distress behavior. In these instances, cash and food should be used as incentives for more loosely-enforced, community-based activities.

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1. INTRODUCTION

This paper draws on the literature and accumulated experience of governments, Private Voluntary Organizations (PVOs), and other donor agencies in using food/cash employment or incentive schemes for famine mitigation. The funding for any particular mitigation activity (whether the construction of a sanitation system or a relocation program) generally will use either food or cash as a wage, incentive or transfer. This summary document considers how new food and cash interventions can be tailored to address the variety of famine circumstances in different countries.

Food and cash for work projects have been extremely successful in preventing famine deaths in some countries. One of the conclusions of the review of the 1984/85 African famines prepared for the United States Agency for International Development (A.I.D.) was that standby food for work projects should already be in place so that they can be expanded quickly to respond to the earliest stages of social disruption (Baron, *et al.* 1986). This paper will examine the appropriate uses of food and cash as parts of comprehensive packages to mitigate famines that may occur, primarily in Africa.

2. GENERAL PRINCIPLES

2.1 Background

The conventional perception of famine, that it is a "wide-spread scarcity of food," with "starvation," implies that famine is primarily a food supply problem. Images on TV screens of starving people place pressures on governments, international agencies and private organizations to supply food to afflicted areas. However, recent research has demonstrated the dangers of viewing food supply as the sole cause of famine.

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2.2 Problem Statement

The term "famine" is often vaguely applied to periods of varied lengths (from one season to several years), when populations (from villages to nations) are threatened with starvation. This paper will address those situations where large populations (500,000 or more persons) experience a rapid and

extreme drop from normal food consumption levels, which last for at least a year, and have the potential of resulting in excess mortality of at least one to two percent of the total population.

Under these conditions, food resources in the immediate and nearby areas are not sufficient to redress the situation. The population of the affected area uses a variety of coping measures which are progressively more disruptive of normal life. People begin eating foods not usually consumed. Many of these are wild foods which are only collected and eaten during periods when the normal supply fails. Household members (usually young males) are sent to work in other areas to remit income for food purchases. High costs are incurred in reaching the work location, maintaining a separate residence, finding employment and remitting the cash. Such migration usually results in limited additional income for households left behind and can leave them labor-short for continuing normal production activities.

As the famine worsens, households must resort to coping measures which have ever more severe effects on production capabilities. Valuables are sold, debts are called in, any form of credit available is used and, finally, productive resources are sacrificed: oxen, other animals, tools, seeds, household goods, and land. When all else fails, farming families abandon their homes and migrate. Nomadic households leave their normal migration routes and travel to towns in search of food and water. Each of these actions makes it progressively more difficult for the victims to return to their normal livelihoods.

Death rates increase as the famine progresses and excess mortality is registered. It is estimated that three million Africans died directly from famine in the 1980s. The survivors are weakened and much less able to participate in the economy than they were going into the famine.

Governmental and donor responses to famines often occur too late in the cycle to avoid long term negative effects and are very costly. The response of foreign donors to the 1983/85 famine in Africa cost over $2 billion in relief funds and had limited long term effects. Measures are needed which begin early enough to reduce the death and suffering, and enhance the affected society's capacity to cope with current and future disruptions in food entitlement. A number of countries, including India, Bangladesh and Botswana are developing such capacity.

The range of food/cash interventions offer opportunities to meet both immediate needs and create longer term capacity. Food entitlements can be maintained by providing food directly as part of wages, incentives or transfers or by providing cash to purchase food where supplies are available. They can also be made available during times of severe inflation. The works or incentive activities can also create resources needed to address the causes of the disruption in food production, e.g. by building roads and dams or using new production methods.

The objective tree shown in Figure 1. diagrams how the inputs and interventions are related to the strategic objectives, objectives and goals of famine mitigation. The balance of the paper considers how cash and food interventions can be chosen and tailored to specific needs. Section 3.0 reviews the responses to famines, while Section 4.0 describes the characteristics of the target groups for famine mitigation and describes the types of food/cash interventions most adapted to their needs. Section 5.0 discusses the differing uses of wages, incentives and transfers. Section 6.0 examines key economic, technical and political considerations in relation to the use of the interventions under

different conditions. The final section, 7.0, sets out strategic recommendations and considerations for employing these interventions.

Figure 1. Objective Tree

Goal: ***Reduce deaths and economic disruption.***

Objectives:
Ensure food entitlements for vulnerable groups.
Prevent population dislocations.
Enhance long-term productive capacity

Strategic Objectives:
Target food supply and demand expansions.
Support social safety nets.
Create public and technical works.

Activities:
Food and Cash for Work
Food and Cash Incentives
Food and Cash Transfers
Subsidized Sales
Internal Purchases

Inputs: *Food aid, grants, technical and administrative support*

3. RESPONSES TO FAMINE

3.1 Historical Perspectives

Famines have been a part of the written histories of all cultures. Speculation has credited food shortage with the decline and fall of the Mesopotamian, Roman, Mayan and many other civilizations. Every few years during the Middle Ages, a region of Europe suffered a famine from a crop supply shortfall after a colder-than-normal winter. During those centuries, some area of China reported a famine every year, either due to cold, floods, or insufficient rainfall. The 18th century economist, Malthus, even argued that famine was an inevitable force of nature, a check on human population growth. His scenario would shortly play out, in 1848-1851, in Ireland, when one million people starved following a period of high population growth and farming of marginal lands. The Irish Potato Famine also provides the clearest case of over-dependence on a single food crop.

Until recently, famine was synonymous with a food production shortfall. Since the dominant activity of many populations was related directly or indirectly to food crop production, a significant shortfall swiftly translated into an economy-wide depression. Farmers had limited food for their own households and less to exchange for the products of the much smaller numbers of artisans and traders, whose livelihoods and access to food were also affected.

Famine has now receded as a problem for many countries, including the developed countries of Asia (such as India) and Latin America (such as Brazil). The improved situations in these countries are not due solely to greater consistency in production, since yields and total output in individual areas still vary considerably with rainfall and climate patterns. Three other factors have contributed to enhanced food security in these countries:

a. **Physical integration, through improved transport infrastructure, of all markets, both nationally and internationally.** When local food stores are insufficient to buffer sudden variations in supply, shortfalls can be more readily compensated for through imports from other parts of the country or through international trade.

b. **Diversification into a greater variety of crops and intensification of production.** Diets are now much fuller and more varied than in the past. Substitution between foods is so readily available, that supply decreases or price increases of one food, simply means more consumption of other foods. For example, when the rice crop is poor, prices rise out of the reach of some households and consumers substitute cassava or other less preferred foods which are cheaper.

c. **Higher incomes resulting from a complex economic system requiring many tiers of specialized skills.** The average income of an American today could purchase a year's supply of the basic food basket in Sierra Leone five hundred times over (World Bank, 1990). This income can pay, among other things, for the transport costs of importing food from other hemispheres. In some countries a portion of this income is also used for public and private programs whose purpose is to assure that the poorest have access to sufficient food "safety nets."

These factors are already operating to reduce the threat of famine in many developing nations. Even though millions may be chronically hungry, for example, in the northeast of Brazil or the *pueblos jovenes* of Peru, while inflation soars and the economy stagnates, these countries are, nevertheless, buffered by international food markets. The availability of other supply sources places a limit on how high internal food prices can soar, relative to other tradable goods.

Today, famine threatens only the very poorest countries, with large land areas or geographic barriers, dispersed populations, poor infrastructure, minimal irrigation, and low levels of inter-regional trade. These conditions are found in much of the Sahel, the Horn of Africa, and Southern Africa. In the drought-prone countries of Africa, famine becomes a possibility following successive years of inadequate rainfall. Many authors, citing output per capita figures, point out that African agricultural production has stagnated over the past three decades. At the same time, these nations increased their reliance on cash crops, such as coffee, cocoa, or cotton, for export earnings. The irrigated agricultural production that does exist tends to be focused on cash crops for export and for urban markets.

In the 1980s and 1990s famine in Africa has been associated with these features:

a. Drought for two or more years;
b. Widespread and long-term civil conflict, with decreasing economic activity;
c. Authoritarian, non-representational governments with an ideological agenda;
d. Hundreds of thousands of citizens uprooted by violence;
e. Environmental conditions marginal for livelihood needs; and
f. Meager transport or road systems available to rural populations.

Short-term solutions are to help these populations store food from year to year or to migrate to less affected areas and are the same solutions that were employed during the Biblical era. In modern times, the provision of large scale food aid is sometimes used to sustain the famine victims. A more permanent solution is to identify and augment those skills and comparative advantages that will permit sustained income growth, diversification of production, and integration with world markets. Both short-term and longer-term solutions can be promoted through public works and training programs supported by food and cash payments and incentives.

The most critical need in famine-prone areas is to improve the functioning of markets during pre-famine or actual famine situations. It is emphasized that the term "markets" is used here to refer broadly to exchanges on both the supply and distribution sides of the economy and includes labor markets as well as commodity markets. Markets mediate events. The reasons extant markets don't always remedy crises or prevent famines include: (a) local failure or shortfall of cash (or effective demand); (b) the time required to move goods, often increased by distances and poor infrastructure; and (c) the high transport costs of foods from other regions.

The balance of this section discusses traditional coping responses to famines and the efforts made by governments, donors and non-governmental organizations (NGO) to lessen the effects of famines on victims and economic development. The remainder of the paper considers how food and cash interventions can be used to increase the effectiveness of these efforts.

3.2 The Evolution of Famine Coping Responses

Each culture has its own legends describing how the ancestors reacted to famine conditions. Resorting to searching for new food sources, for distant jobs, and for new skills are all common themes. Going out into the wilderness to obtain "famine foods" is a particularly prevalent response. Famine foods are often root crops and wild fruits that are perennially available, but which are generally ignored until famine strikes.

The sequence of social behaviors in response to worsening famines has been recorded by many anthropologists. The order and priority of these behaviors may vary, but it is important to appreciate that they are sequential and may often involve permanent choices by desperate households. The sequence of behaviors progresses from easily reversible strategies to more and more irreversible strategies as the resources available to the affected population are consumed (Watts, 1988). Reversible strategies include the gathering of wild famine foods, calling in loans made or seeking credit for food purchases. Another reversible strategy is the temporary migration

of adult family members to seek employment in return for food, or cash to purchase food, which they remit to their households.

The essence of irreversibility is that it is inordinately inefficient, difficult or impossible to return to the previous state (analogous to having fallen from a cliff). For instance, when precious grain stores or seeds are consumed, they cannot be recovered. Irreversible events include loss of property (loss of usufruct right, sales), loss of way of life (environmental destruction, resettlement), long-term dependence on external aid (refugee camps in Somalia, Malawi), loss of livestock (death, sales, banditry), and death (starvation, epidemic). Famine can even lead to a loss of cultural memory, the destruction of heritage, and respect across the generations, as found among the Ik of Kenya (Turnbull, 1974). The previously pastoral Ik were settled in famine camps, with external aid, and rapidly lost social cohesion and support networks.

As will be discussed, the timing of interventions should be planned precisely to prevent the occurrence of irreversible events. Despite improvements, famine interventions are too often reactive, implemented only after sales of household assets and migration, and even after many deaths have transpired. Mitigation interventions should be distinguished by the opposite traits: proactive and early implementation. Understanding the timing and sequence of famine events, which were briefly outlined in Section 2.2, is crucial to understanding when specific interventions should be scheduled and implemented. Such an understanding allows for better situational monitoring, linkage with ongoing vulnerability reduction programs, and the capability to progressively gear up or wind down the response as the situation warrrants.

3.3 Government and Donor Responses to Famine

During the 1980s, Sen's views concerning the importance of maintaining entitlements to food have been reflected increasingly in the thinking of governments and agencies working to mitigate famines. For example, much of the recent literature discussing and expanding on his theories has been advanced by the staff of non-governmental organizations (NGOs) which were addressing famines. There is growing recognition that when a government or relief agency moves into a famine area and establishes a feeding program, that act creates a new entitlement. Persons receive entitlement to the new food either by passing means tests or qualifying by their interest. However, establishment of such a program does not remove certain transaction costs for the participants. To obtain their relief goods, recipients spend large amounts of time, energy and often travel expenses, waiting in lines and sometimes moving to and living in relief camps (or villages).

Relief is most effective when it arrives early enough to minimize social and economic disruption and makes the difference in saving lives. It is even more effective where it also allows recipients to learn how to sustain themselves, perhaps using their current skills, but shifting to new regions or new products.

3.3.1 Prevention

Proper prevention involves intervening before any famine is imminent. Certain governments and NGOs consciously encourage risk minimization at the household level, for instance, by promoting the planting of different crops in drought prone areas, and diversification of production and employment opportunities within and across regions. The best intervention activities for preventing

famines include, for example, increasing incomes through infrastructure construction or enhancement, new seeds and cropping techniques, skills training, literacy, and through increasing connections to outside markets.

In many African environments, there are specific constraints to continued agricultural productivity. Most of northern and highland Ethiopia, for instance, (Gondar, Wello, Showa, Arsi) has suffered years of extreme soil erosion. Today, many environmental planners believe that the best means to avoid future famines among the populations is to depopulate these areas and concentrate on reforestation activities. Reforestation could be funded efficiently as a FFW or CFW project, and resettlement facilitated through food or cash incentives.

During the 1970s and 1980s, India significantly reduced its vulnerability to famine by concentrating on crop yields. The successful Green Revolution combined improved seed varieties, improved agricultural extension services, increased inputs of fertilizer, irrigation and pesticides to significantly increase agricultural output. The Indian Government also continued to support large-scale public works programs which had their roots in "Test Relief" programs begun in the 19th century. People in need of food during times of famine passed a "self-acting test by providing labor in exchange for food" (Dreze, 1990). The National Rural Employment Program (NREP) and the Rural Landless Employment Guarantee Program (RLEGP) together provided 40 percent of the incremental employment in rural India during the 1980s and were able to expand in times of food scarcity, as during the drought of 1987-88 (Slade, 1989; Kakwani and Subbarao, 1990).

Another strategy used by governments and NGOs is to improve cereals storage. For example, in Burkina Faso many NGOs have supported and financed the establishment of village cereal banks. Although a number of the cereal banks have not operated very efficiently, they did provide a useful channel for dispensing emergency assistance during the last Sahelian drought.

3.3.2 Prediction

Donor agencies have increased their emphasis on the development of early warning systems. Recent famine early warning methodologies stress timely predictions, but they also emphasize careful economic and sociologic examination of what is happening on the ground. FAO's Global Information and Early Warning System (GIEWS) provides such assessments on an alert basis. The USAID Famine Early Warning System (FEWS) now allows food planners to anticipate new emergency food needs from Burkina Faso to the Sudan. The best of these programs attempt to incorporate the latest thinking in famine theory not only through the identification and analysis of relevant indicators, but also in the identification of the most appropriate and timely responses (Hutchinson, 1992).

Nevertheless, there are many factors that may precipitate famines: abrupt population movements, intensified civil strife, natural disasters, etc. There are numerous cases also, in the last decade alone, where FAO, governments, early warning systems and field observers have predicted famines that have not occurred. As one analyst observed:

> *"on the one hand, even though famine is dramatically clear when in full force, it is shrouded in ambiguity before it reaches that advanced stage. Until famine happens,*

one cannot be sure that it will happen. The boundary, if there is one, between famine and non-famine is extremely difficult to locate." (Field, 1989)

3.3.3 Early Stage Mitigation

The most flexible early intervention have been initiated by governments (e.g. Botswana, Maharashtra state government in India) which scale up FFW and CFW programs to redress household demand problems of the unemployed or underemployed. These programs are doubly effective when they also recognize and use the existing marketing structures (the Botswana government organizes CFW programs to increase incomes combined with commercial imports of food sold through normal retailers and fair price shops). The ability of traders to deliver food to deficit areas has been greatly enhanced by public works road construction. FFW road construction in the past decade has dramatically reduced food vulnerability in Lesotho (Bryson, *et al.*, 1991).

Of course, a government's capacity to organize a large scale emergency response or to support flexible safety nets depends on its own financial solvency. At present, few African governments have positive account balances. They need the assistance of foreign donors to fund development activities and for famine mitigation.

3.3.4 Famine Response: Maintaining Food Supplies

Once famine has set in, the most usual donor response has been to organize the transfer of food from foreign stocks directly to households in the affected area. Intermediate-scale responses are perceived as slow and insufficient. The ensuing emphasis on a total food delivery system means that food reaches those in need at great expense.

Jansson (1987) observed that the biggest import during the Ethiopian famine of 1985 was trucks. He describes the difficulty of coordinating these imports, their operation and maintenance. In addition, United States, Luftwaffe, Royal Air Force planes and Polish helicopters airlifted food. At times, the foods or medicines were of types that were culturally or logistically inappropriate. The high expenses of relief delivery have been noted in other famines, such as Chad (Wood, 1986), where the internal transport and associated costs alone were $400 per metric ton. This cost represents several times what the food itself is worth, either on the world market or to the recipients.

There are dangers in a large-scale food supply response. Food aid can have a disincentive effect on local producers of comparable products. Price stabilization at low levels can discourage producers. Countries, like Bangladesh, find that they cannot return to levels of less annual food aid. Following years of social disruption, entire countries can become dependent on outside relief aid. Somalia started receiving massive amounts of food donations in the early 1980s, following an influx of one million Ethiopian refugees. Somalia absolutely required maintenance of donated imports to feed its population, which it received until the coup in 1991. Similarly, Mozambique has been torn by civil war for so many years that donated food has become a necessity. This type of relief dependence is extremely difficult to end and is why mitigation activities are much more effective when focused on earlier stages in the famine cycle.

3.3.5 Famine Response: Maintaining Effective Demand

The model for successful famine response remains the Indian Famine Codes, which were developed during British rule, based on years of drought vulnerability in the sub-continent (see Dreze, 1991). The actual Indian model has evolved over the decades, but its essentials are:

a. Permanent institutions in each region, with the responsibility and capacity for employment of large numbers of victims.

b. Pre-planned and continuous public-works projects (including irrigation and road-building) that can be quickly scaled up to include new workers.

c. Supplementary distribution of foods to groups who can not work (handicapped, elderly, under-fives).

The effect of the famine codes was that every drought victim could count on a source of income, even in the worst of times, within just a few kilometers of home. This risk insurance affected the entire lifestyle and economy of millions, and has prevented massive dislocations. The success of this model in India also depends on the ability of the government and markets to move food between different states to reduce food price hikes during shortfalls. The availability of rail transport following the construction of the railroads in the latter part of the 19th century made a significant contribution in this regard.

In the last 10-15 years, governments and donor agencies have started to incorporate an understanding of how to blend interventions with the victims' own coping behaviors into their relief programs. To avoid the need for migration to find work, food-supported public works are used in conjunction with emergency response. Food supported public works have been used on a large scale during food shortages in Kenya, Ethiopia, the Sudan, and Bangladesh. Much less experience has been documented with cash for work or incentives programs. Von Braun (1991) summarizes the three current trends, or shifts, in works projects in Africa:

> *"First there is a concentration of activities sectorally and geographically. Second, there is a shift in public works programs' inputs away from only food to also include nonfood inputs and cash. Third, there is an increasing emphasis on private participation in public works programs."*

NGOs, as well as governments, now have much cumulative field experience in moving food and setting up appropriate projects during famines. In some situations, NGOs build their own transport fleets to respond to famines. Just as often, NGOs work intimately with local truckers. As such, NGOs have great potential for combining their administrative expertise with local merchants and transporters to directly remedy the supply and demand shortfalls through existing market structures.

Increasingly, food and cash-for-work is being used in both prevention and relief situations. Cash for work has been extremely effective in reducing deaths and disruption in Botswana during their last famine situation. Public works projects have provided an infrastructure in Lesotho and Kenya that has directly allowed the market system to buffer food price fluctuations, reducing vulnerability to famine.

Public works projects in Ethiopia operate broadly to bolster food access among millions. The FFW soil conservation project supported by WFP (the largest project of the organization) has operated for more than a decade, helping to provide a safety net in the watersheds where it operates. NGO FFW projects established in Ethiopia between 1984 and 1986 served as an effective base for mobilization and expansion to respond to early warnings of 5 million at risk when another drought struck in 1987 (Bryson *et al.*, 1991). In Niger, during the 1983/84 famine, the government distributed bilateral food aid in targeted areas to encourage dry season productive activities. The transfer of food directly reduced famine deaths and the incentives associated with its distribution directly encouraged economic recovery.

Von Braun (1991) argues for even more emphasis on public works projects in food insecure countries in Africa:

> *"The macroeconomic environment for public works programs is fluid... The changing capital/labor price ratio, which has been increasing rapidly in the context of structural adjustment policies lends new and unprecedented support to the argument for more labor-intensive investment in both the public and private sectors."*

3.3.6 Recovery and Prevention

A key objective of recovery is to help markets return to normalcy. Another, equally important goal is to avoid overwhelming markets with free food and concomitant logistical demands. Helping populations which have been forced to migrate to find new homes in new environments may also be an essential component of the recovery effort.

Resettlement may require employment and food supply incentives to insure that households can comfortably commit themselves to a new situation. Migration in search of wage labor may be more of a problem among the newly resettled than among the permanently settled. Creating jobs at a resettlement site through C/FFW may be necessary to provide a minimum level of employment until the establishment of normal economic activities can provide work for the labor force.

In addition to the need to provide employment, resettlement areas impose an abrupt demand burden on the local economy. An outside source of food frequently needs to be identified for at least one crop cycle. FFW, FI and direct food transfers could be effective, in parallel, to bring different foods via different channels to different consumption groups, helping to expedite the establishment of a layered market system. To date there are few examples of such carefully targeted measures and many resettlement efforts have been largely unsuccessful.

There are many other models of famine recovery, some of which incorporate measures to prevent future occurrences. Famine response efforts in the Turkana district of Kenya have evolved into a combined famine prevention, management and recovery system supported by government, the World Food Program (WFP), national and international donors and NGOs (Bryson, *et al.*, 1991). Many other efforts were less well focused or have ended too soon, leaving affected populations to struggle for many years to regain their standard of living, often vulnerable to the recurrence of famine.

If the goals of recovery and prevention are to be achieved, vulnerable groups must be identified, their geographic locations mapped, and interventions designed which are tailored to their needs. Country analyses that describe the level of food stress by region and population group include the regular reports by the Famine Early Warning System program.

4. IDENTIFYING VULNERABLE GROUPS

In all societies there are homeless or marginal people, whose skills or ability to earn enough to provide for their food and health needs are limited, or incompatible with economic changes occurring around them. Famines are periods when many thousands of people suddenly fall into these categories and suffer a drastic shift in their ability to secure sufficient food to maintain life. Although the rise of food prices and social repercussions affect everyone in the society, these changed conditions affect different groups in very different ways.

Factors such as income level and source, own-food production (i.e. household gardens), proximity to markets, government rationing and informal discrimination can mitigate or increase the impact of food shortages. Those people involved in productive activities that suddenly carry less relative value and those with special vulnerabilities are most at risk. In this section the different vulnerable groups and their famine mitigation needs are discussed.

4.1 Internally Displaced and Refugee Populations

The number of internally displaced people and refugees worldwide has grown rapidly over the past decade, especially in African countries. In 1981 there were 6.3 million displaced persons in Africa, 43% internally displaced and 57% refugees, which represented essentially half of all displaced persons worldwide (Adepoju, 1984). In 1992, it is estimated that there are 17 million refugees worldwide, and anywhere from 15 to 40 million internally displaced.

Refugees are often particularly disadvantaged economically. Not only have they left their land, lost their home and other property, but they are often stripped of their remaining belongings by thieves, or unable to transport valuable commodities over long journeys. They are also often in extreme need of medical attention. Public works projects may be inappropriate for them until food and health care has restored their physical condition.

A high proportion of internally displaced and refugee households living in camps managed by governments, international agencies and donors (including PVOs) are female-headed. During drought conditions, able-bodied males generally migrate early to seek work; women and children only migrate when all local resources and remittances are insufficient to maintain life. It is thus the women and children who end up in camps. Similarly, in the case of populations uprooted by civil disturbances, while the males may be with their households initially, they tend to leave their wives and children in the camps where they will be cared for, to seek employment or to pursue their normal livelihoods (e.g. if herders, to care for their animals).

These populations need to maintain their will to survive independently, and also to acquire the resources to re-establish their household production. These households would be most helped by

locating camps in areas where large scale work activities are possible, e.g. significant roadworks, reforestation or water conservation structures. When the households arrive, some may be in such poor condition that it will be necessary to care for them and provide all necessities until they improve. Those with able-bodied members should be employed to establish the camp and sanitation facilities (preferably on CFW terms if food sales can be arranged, otherwise combined food/cash). Thereafter they could be involved in the work activity.

Because refugee camps have generally concentrated populations in infertile, non-urban areas, males must migrate up to several days journey to supplement household income with wage sources. C/FFW activities around refugee camps can address the negative aspects of these camps: deforestation and poor infrastructure. This approach would help the men remain with their households, or attract back men who had migrated previously. In addition, the development of infrastructure that will also benefit the resident community can serve to reduce tensions that often arise between refugees and local inhabitants. Providing cash as well as food will permit refugee and displaced households to save for the purchase of productive assets.

4.2 Ethnic Minorities

Small populations of ethnic minorities generally have little political voice at the national level and are often disregarded during crises. The Dinka and Nuer of the Sudan, for instance, have suffered both direct government military action in the cross fire of the civil war and passive neglect in terms of famine relief. Displaced Dinka suffered spectacularly high mortality rates in the late 1980s as they migrated on foot and by train to the north for relief. Periurban displaced person camps of Dinka surrounding Khartoum today are among the most vulnerable populations in all of Africa. The Sudanese government recently forcibly resettled these famine victims into desolate desert areas with no basic infrastructure.

Sudden shifts in entitlement have occurred for tribal groups in many nations when legal access to land suddenly changed, (e.g. Ecuador, Brazil, India, Uganda and Niger). The ethnic minorities were forced to become part of the rural landless. When these shifts do not coincide with larger food supply shortfalls, the plight of these groups may be overlooked in famine research (see Bodley, 1982). The needs of ethnic minorities are the same as the other groups discussed here, with which they overlap. However, as information about these groups is often restricted, special care is needed to assure that they receive the assistance they require.

4.3 The Rural Landless

Landless households in rural areas derive their incomes from agricultural labor on farmers' fields, by producing goods and services needed by the local economy or through trading. Various household members may participate in any and all of these activities at some time of the year. These households are often among the first to be at risk during drought conditions as farm households restrict their use of outside labor when production falls. Economic activity also contracts, reducing earnings from non-farm sources.

African land tenure systems, and the ratio of population to arable land, has limited the number of landless households up to the present. However, continued population growth, environmental

degradation and farming of more marginal lands is resulting in an increasing proportion of households with land assets barely adequate to meet household production needs when conditions are favorable. For these households, off-farm work, including agricultural labor for other households is becoming an essential part of their total household income. The number of these households is likely to grow in coming years, particularly given the size of displaced and refugee populations which have resulted from famine and civil disturbances.

The immediate need of the rural landless or near landless in pre-famine or famine conditions is for employment to maintain incomes both in their households and in the wider economy. Employment which provides skills training or assets to increase their longer-term income earning potential (e.g. masonry, production of bricks, roofing tiles and culverts) or creates enterprises which will provide local jobs (commercial nurseries) are particularly helpful to the landless. Incentive programs may focus on encouraging the near landless to reorient their production away from extensive cereals production to intensive production of higher value foods, e.g. vegetables, animal husbandry, fodder production, or tree crops. Products which can be further processed by the household for added value are particularly beneficial.

4.4 Female-headed Households

Female headed households are of two types, *de facto* (where the husband is absent for long periods of time) and *de jure* (where the woman is either widowed, divorced or single). The income, assets and other capabilities of these households range from high to low. Some female-headed households have substantial productive assets. They may also have adult male relatives resident in the household or in the community who provide labor for productive activities or cash income (including remittances from absent husbands) which they can use for hiring services such as land preparation. However, a much greater number of female-headed households are in the lower income groups and have limited labor and productive assets. These households also include a high proportion of persons such as young children, pregnant and lactating women and the elderly who are at high risk during famine conditions.

Female-headed households are found among all the other types of households discussed in this section. They can be assisted by the same activities as the other households, but require adaptations which facilitate their participation. For example, C/FFW activities close to their homes with provision made for child care within the community accommodates the needs of both the women and their children. The women use up substantial energy reserves when they must walk long distances to work sites carrying young children. Once there, their ability to work is compromised by concern for the children who are at some risk from construction activities. Day care arrangements which include meals also transfer food directly to young children.

Another approach is to hire women on piece work terms to provide a specific amount of materials used in the work activity, e.g. water, sand, or firewood, within a time period which provides some flexibility in performing the work. The households may also be able to participate in various incentive schemes. Those with young, malnourished children and the elderly are candidates for food/cash transfers. However, even the elderly can be involved in FFW, as was found in Lesotho, where FFW programs primarily employ women over the age of 46 (Bowles, 1988).

4.5 Herders

Herder groups are primarily composed of households with several able-bodied adult members. Milk and blood are major components of herder diets, and they also sell or exchange meat and milk to purchase cereals and other needs. Those in semi-settled households produce at least a portion of the cereals they need during the growing season. Herder households have adapted to low rainfall conditions and may be remote from government outreach efforts.

When drought conditions are extreme, however, herders cannot maintain themselves and their animals. With decreases in fodder and water availability, animal production of milk and meat falters, their condition declines, herds become concentrated around available water and forage sources and are more exposed to diseases, and ultimately some of the animals die. Relatively early in a drought, prices of animals begin to fall, while prices of cereals rise. In the ensuing price spiral herders can rapidly lose all their animals in an often vain attempt to secure sufficient food. Their situation is worse than farmer households, as the herders' productive capacity is destroyed by drought or may take several years to recover, rather than being unusable until the rains return.

Herders need food for themselves, feed and water for their animals, and reliable fair markets for animal sales. Health programs for both people (outpatient clinics, supplementary feeding) and animals (such as immunizations) are also helpful. Market interventions to purchase animals, at fair prices, in either cash or cereals, is an effective means of assisting herders. Works activities, such as water points (which must be carefully located to avoid territorial and environmental problems) and water harvesting structures for crops production can be helpful and can provide a source of income for herders. Works or incentive programs for animal health, range improvement, production and distribution of feed cakes and salt licks, and training in adapted, improved animal management techniques can further mitigate the effects of famine on these households.

WFP experience among herders in the Turkana region of Kenya has found that women, children and the elderly are shed from nomadic migrations during food stresses and are among the first to migrate to population centers in search of food (Bush, 1992). This tends to be the inverse of those who migrates from agrarian households during distress. In this instance, FFW participation became a long-term draw. Ninety-seven percent of recently surveyed participants had been on FFW since they were initially registered an average of eight years earlier.

4.6 Settled Agricultural Households

Agriculture in Africa generally requires adequate rainfall for production and minimally stable political conditions. During drought or civil strife, farm households' capacity to produce food are constrained, with the result that their incomes drop precipitously and food shortages develop throughout the society. Farm households generally have several able-bodied adult members and recourse to a variety of famine coping techniques, culminating in the sale of productive assets. If these measures fail, and the household is forced to migrate, the expense of reestablishing the family as a productive unit are high. Their return to providing food for the economy is also delayed.

To remain intact as a productive unit, households need income and access to food. They also need water for domestic needs and feed and water for their animals. Immunizations against disease and improved sanitation can reduce the nutritional drains of disease. For the longer term, households need more adequate drought proofing for agriculture, including soil and water conservation structures, soil fertility enhancing measures, drought resistant crops, and increased access to irrigation.

These households can readily participate in activities to construct infrastructure or introduce other mitigation or preparedness measures. If they can be maintained on their farms, and, especially, if enhanced production possibilities are created, farm households can provide a vital means of restoring food supplies when rainfall conditions improve.

4.7 Commercial, Service and Professional Groups

There are few households in rural areas which depend totally on trade or salaries for their livelihood. Those fortunate enough to own their own business (such as cafes, selling imported manufactured goods and staples as well as cooked foods), merchants involved in trading products at the regional level and salaried individuals such as nurses, doctors or teachers, may be somewhat insulated from the early effects of famine. They have the financial capacity and contacts to arrange for food supplies from distant markets. In the latter stages, prices may surpass even their resources, particularly if food becomes very scarce, or if there are controls on inter-regional trade. These individuals provide valuable services and do not necessarily need alternate employment. They can be best served by interventions which maintain local food supplies, purchasing power, and functioning markets (such as auctioning food to local merchants and using the money for CFW in the community).

The significantly larger numbers of small traders and individuals providing personal services (hairdressers, tailors, letter writers) face greater difficulties. Many of these individuals are women, who are either wives helping to supplement family income or deserted, widowed or divorced women, whose earnings provide most of the household income. The women's market incomes often derive from selling grain, fruits, vegetables or processed food. The products they sell may be produced by the household, but it is common for raw materials to be purchased from wholesalers. Others sell gathered items such as firewood, wild foods, and botanical medicaments.

The income earned by these women has a direct impact on household diets, as much of it is spent, immediately, on foods to make up shortfalls in household production, or to buy items such as salt which they do not produce. As prices increase and supplies become scarce, these sellers are forced out of the market. They are placed in a double bind, as income is reduced when prices are increasing. They can be helped by interventions which increase household income, as well as by interventions which increase supplies in markets and maintain market activity. Women, in particular, can be helped by interventions which improve the efficiency of their food preparation activities, to reduce the processing time and improve the quality of the products.

5. USING WAGES, INCENTIVES AND TRANSFERS IN FAMINE MITIGATION

As previous research has shown, a broad range of cash and food interventions can provide an effective means of reaching people with subsistence resources. In addition, these interventions can be used to create physical and human assets or to foster investments in productive activities and enterprises. Both of these properties are valuable for famine mitigation and have effects which increase food entitlement in the longer term.

Care is needed throughout the mitigation activity to ensure that those most in need are being reached. This goal is best achieved by designing interventions where the beneficiaries are self-selected based on need. Village councils should be involved from the start in assessing the needs of different households and in advising on appropriate wage and subsidy levels. Communities should be selected for interventions based on the level of their harvests, local market prices, and nutritional standards.

Determining when wages, incentives and transfers should be used is linked to their respective abilities to identify and reach the various target groups and contribute to the goals of famine mitigation. C/FFW, C/FI and C/FT have different effects and can be used separately or in combination. The following sections discuss the circumstances in which each of the types of interventions can be used.

5.1 Cash/Food For Work

C/FFW is a multipurpose intervention which can be used at all stages of famine mitigation. It provides a means of identifying most of the at-risk population and of protecting or supplementing their incomes in a non-welfare context. Further, provided appropriate technical and material resources are available, the work performed can make a contribution to other aspects of famine mitigation and long-term development. A discussion of how C/FFW can be used to identify the target population is followed by two important issues of C/FFW in famine mitigation: setting the wage rate, and activity choice.

5.1.1 Identifying the At-Risk Population

Several observers have noted that famines are not the great levelers they are assumed to be (Webb, *et al.*, 1992). Households with more resources are better able to maintain production even under adverse circumstances and have larger stocks of food, cash and physical assets to meet their needs. As relief supplies will always be limited, identifying the poorer households and targeting resources to them is a priority.

Identifying the most vulnerable, e.g. on the basis of household surveys, is difficult and time consuming for response organizations. It is even harder to assure that the poor are the primary recipients of resources. There is considerable evidence from African experience that when there is a general distribution of food (e.g. as in Niger in 1986) or in cash (UNICEF cash for food in Ethiopia) all households tend to share in the resources, no matter what their situation. However, when CFW or FFW wages are set at just below the minimum wage, they will tend to attract only those most in need. Better-off households have higher "opportunity costs" in accepting CFW or FFW employment.

This feature was recognized by the British colonial government in India, which tried several methods of identifying those in need of assistance during food shortage situations. The "work test" was found to be the most effective. C/FFW was institutionalized in the Indian Famine Codes and is still used on a large scale in modern India. The C/FFW activity has to be prepared to accept all who present themselves for work, to be effective in identifying those in need, and serving as a channel to provide them with resources. These works should be designated "Special Works" or "Famine Mitigation Works," to avoid confusion with normal public works activities, which have different employment and payment standards.

5.1.2 Setting the Wage Rate

There is considerable evidence that wage rates need to be kept low if the objective of self-targeting employment to those most in need is to be realized. As food prices often increase rapidly during periods of shortages, this presents a particular problem for C/FFW activities in famine mitigation. If a low minimum wage is paid in cash, workers may not be able to purchase sufficient food; alternatively, if sufficient food is provided to meet household needs, it may result in payment of a very high wage.

Accordingly, it is critical to set the wage carefully, and to follow local norms on wage rates and on the amount of work expected in return. A possible means of addressing this issue is to set payments based on task completion. Workers can be advised they will be paid provided a given task is completed adequately by a certain time (or date if payment is made per work period). If the work is completed early they would be permitted to take on additional tasks to earn more. This approach will maintain the "opportunity costs" of the work while permitting workers needing extra food (or money to buy food) a means of acquiring it.

This approach also addresses the problem of low labor productivity, which is often an issue in public works projects. Experience with works projects suggests that achieving good labor productivity, good quality of completed work and ease of supervision requires making payments for task completion based on norms of reasonable accomplishments per work day. Some may not consider labor productivity and quality of work completed a priority in a famine situation, however, famine victims and drought prone areas are not well served by "make work" activities. Improvements in the current situation and longer term famine mitigation both require that time, energy and resources are not wasted.

Closed circuit monetizations are another category of employment schemes, pioneered by the World Food Programme, which provide a means of targeting poor workers. Under closed circuit monetizations, workers are paid in cash at low wage rates, but with their cash wages they are entitled to purchase food commodities at discount rates. Therefore, they receive cash, food and the ability to efficiently choose the mix appropriate for their household. To date, closed monetizations have depended on the participation of both the external donor (WFP) and the host country national government.

5.1.3 Activity Choice

There is considerable experience with using C/FFW for famine mitigation (Dreze and Sen, 1990; Bryson, 1991; among others). Cash or food wage employment is a formal arrangement, where remuneration is supplied in return for work. The employee is required to perform a specific

amount of work, in a particular time period (in contrast to the looser situation allowed when incentives are used).

This form of compensation is suitable for developing infrastructure which have generalized benefits, such as schools, dams, wells and roads. As wages have to be kept low on famine mitigation works, it is also appropriate to use wage employment for infrastructure which will directly benefit the workers. An example is an activity where farmers build irrigation canals to their fields.

A primary objective of C/FFW is to increase immediate income. Longer term famine mitigation, however, depends on permanently increasing incomes. Accordingly, efforts should be made to organize works that build skills and/or assets for future employment. For example, workers may be taught to make culverting by building forms and casting cement culverts, rather than purchasing the culverts in urban areas and transporting them to the work site. These skills can be used later to supply materials on contract for local, regional or national public works. Activity choice is important in realizing the full famine mitigation benefits from C/FFW.

C/FFW can be started up quickly with service (for example vehicle loaders, guards, sanitation workers, census takers) or professional employees (teachers, nurses, work supervisors). Small scale works, such as the construction of village cereal banks, also have a relatively short lead time when the materials needed can be procured in-country. A master mason to direct the work can generally be found locally and the skills required are either known to the workers or easily acquired. Workers hire to work on medium or large scale infrastructure works can be involved in skills training classes and initial site preparation even before all equipment and materials are available.

However, there is a considerable lead time involved in employing and managing substantial numbers of workers effectively. If famine early warning systems indicate large numbers of people will be affected by food access problems, decisions should be made early to arrange for materials, supervisors and cash or food to meet payrolls. If it is found later that not all of the resources are required to respond to the emergency, they can be diverted for use in regular development programs. Having them available early on during an emergency will avoid the need for expensive crisis management.

Expanding famine mitigation activities can borrow food stocks from nearby development projects. WFP in the Sahel now favors a policy of calling forward an extra six months of food stocks for its development projects if advance indicators suggest drought. The storage facilities of development projects can therefore subsidize the pre-positioning of foods that may or may not be needed for famine response. The efficiency of this approach lies in the fact that the development project would consume these resources in time if they are not borrowed for famine activities.

5.2 Cash/Food Incentives

Incentives are the most versatile of the cash/food interventions. They are more flexible than wage interventions, they can be used in more types of activities, and their start-up time can be quicker. C/FI can be given to individuals, households or communities. Although C/FI have less capacity to

target the poorer households, this drawback can be partially overcome through careful intervention design. A discussion of targeting C/FI is followed by a review of the circumstances where incentives can be used.

5.2.1 Targeting Incentives

C/FI can be designed to reach the target groups in two ways:

a) Directly, by providing incentives for activities in which the target groups have the capability of participating; and

b) Indirectly, by providing incentives for outcomes which will benefit the target group.

As these methods suggest, activity choice is the key factor in targeting incentives.

In the first instance, attention should be paid to the activities and capacities of the intended target group. For example, a program may be established for households to receive incentives to turn in seed to a community seed bank. The objective of such an activity is to protect the seed from consumption during critical periods, with the seed to be returned to participants at or just before the planting season. Poor households who are facing the prospect of consuming their seed are more likely to be prepared to participate even if they are doubtful the seed will be returned. Similarly, the poor can respond to incentives to collect tree seeds for a nursery or gravel for a construction activity when the only resources needed are their time and labor.

Examples of indirect approaches include incentives for participation in training for village health workers or to plant a new variety of seeds. The individuals and households who have the resources to participate in these activities may not be those most affected by food shortages, however, their involvement can further mitigation efforts by increasing health services and food supplies, which directly benefit the target groups. In this case, it would be important to supplement the initiatives with activities which increase the incomes of the poor, thereby combining and balancing the objectives of famine mitigation.

Incentive programs, like public works, can be self-targeting. If the food is loaned, or if the food or cash needs to be repaid through other related or linked activities, it is more likely to be used by those truly in need and will thus be self-regulating.

5.2.2 Uses of Cash/Food Incentives

C/FI can be provided to individuals, households or communities. They can be used at all stages of famine, and provide a means of starting activities quickly, without the necessity of general distributions of food or cash. The recipients of incentives retain more dignity and are required to make inputs into the famine mitigation efforts. The incentives can also make the critical difference in reducing productive asset sales, migration and famine-related deaths by providing a means of tiding areas over until conditions improve. This progress may well be achieved at substantially lower cost than an emergency response, especially if interventions are initiated early in the famine cycle.

Incentives, however, cannot insure that technical standards will be achieved on major construction activities. Problems were experienced with ambitious irrigation works on the UNICEF cash for food activity in Ethiopia (UNICEF, 1988). Quite impressive achievements are possible provided sufficient technical and supervisory personnel are available, but incentives are best suited to activities with moderate technical, material and organization requirements.

It is also possible to employ incentive programs with herder populations, e.g. to recruit their herds for vaccination. In this case, as in others, such as incentives to bring children to clinics, the participants may be rewarded for receiving services which they would ordinarily be expected to buy. However, the incentives are needed to give them sufficient impetus to participate, or to overcome risks, which they would not normally take under the circumstances. Making it clear that the incentives are 'famine incentives,' just as the C/FFW are 'special works,' may help in overcoming dependency problems when the situation returns to normal.

5.3 Cash/Food Transfers

The word, "transfers," is used here to refer to direct provision of cash or food based on need, without any requirement for work or other response on the part of the beneficiary. There is considerable danger that dependency may result from transfers. Such long-term dependencies have occurred in many large refugee populations. Much of US and WFP food aid is annually committed to paying for such "protracted" refugee and displaced population programs. Although the need of the poorest is undeniable, it is unlikely that government resources will be available to continue payments after external assistance is withdrawn. In addition, indiscriminate food or cash transfers can actually motivate populations to leave their homes and productive cycles. This was, in fact, the intention of the cross border feeding of Tigrayans in the Sudan, 1984/85.

Such an approach provides incentives to migrate to large feeding centers and not only disrupts the productive potential of the next cropping season, but also creates conditions amenable for the spread of infectious disease (large feeding camps are notorious breeding grounds for cholera, measles, whooping cough, diarrhea, upper respiratory disease, tuberculosis, etc.). Rural populations in particular are very vulnerable to severe infections during exposure in high-population-density situations where transmission rates surpass thresholds for sustained infectivity. Massive and unnecessary mortality has been documented in many of these feeding camps where the benefits of food access were outweighed by epidemics. Transfers should be used sparingly and as a last resort to prevent starvation mortality.

5.3.1 Criteria for Selecting Recipients

Whenever anything is given away free, it is human nature to wish to share in the benefits. Unfortunately, the more powerful members of a society are often able to monopolize such windfalls. It is important that these transfers reach those for whom they are intended, people who are often too weak or ill to exert their claims. Very specific criteria for determining recipients need to be established for transfers if the needy are to be reached effectively.

The criteria for receiving transfers should be based on particular objective conditions. One set of criteria applies to groups in society which require special care. Households with no other able-bodied members, comprised of the elderly, the handicapped, or women-headed where there

are young children or the women are pregnant or lactating, are in this category. Despite their disadvantages, these households are able to provide most needs for themselves during normal times. Some of them may receive help from their communities when resources are not so severely strained. Other particularly disadvantaged groups are those in famine areas which are scattered in small remote villages or herder camps. These are hard to reach with other interventions and are a relatively small and specific group.

A further criteria is the need to respond quickly to an emergency, such as the arrival of a large number of displaced persons in a conflict situation. Applying these three criteria: specific disadvantages, small, remote populations, or need for rapid response (especially to unpredictable events) are suggested as a way to limit abuse of this resource.

For implementation guidelines for eligibility and organization of mass feeding programs see Mitchell (1990).

5.3.2 Using Transfers

Combining transfers with works activities is particularly effective in meeting the needs of the poorer groups in society. The work activities provide resources to most poor households, while transfers are made to only those households with special disadvantages and no able-bodied members. These restrictions eliminate the need to provide food to better-off households which may include elderly or infirm members. Although there is likely to be some diversion of the transfers, these restrictions should help to keep them to a minimum.

Populations in locations covered by administration and outreach from interventions are best served by combining transfers with C/FFW. Mitigation is also needed for remote populations, such as nomadic or transhumant groups, which are hard to reach. Transfers can help them avoid distress sales of animals and maintain the productive capacity of their households. Similarly, remote populations incur the greatest expense in securing food, and have the longest way to travel, if they are forced to migrate. Organizing C/FFW or C/FI are preferable responses, but are not possible for all areas. In the absence of these other interventions, transfers will minimize suffering and dislocation.

Individuals and households forced to migrate, either after exhausting their coping strategies or due to military action, need initial support when they arrive at a temporary refuge. Transfers will likely be required for immediate needs, however, many of these refugees are able bodied and can support themselves if provided reasonable opportunities. Conversion from transfers to C/FFW or C/FI should be made as soon as such opportunities can be organized and made available.

The greatest danger in large relief transfers is the implicit incentive for at-risk populations to migrate to distribution centers. This negative incentive not only places populations in areas where they are unable to use their skills to work their land or otherwise take advantage of their environment productively, but it also encourages public health disasters. Feeding programs should be decentralized, dispersed, aperiodic, perhaps mobile and always be accompanied with investments in immunization (primarily measles), morbidity monitoring (primarily cholera, whooping cough, typhus, meningitis, and malaria) and sanitation (primarily water quality, water quantity, and latrines).

5.4 Community-Administered Activities

C/FFW and C/F Incentives overlap in situations where traditional community practices include labor teams where participation is customary, where initiation decisions originate from the traditional leaders, and where remuneration is not seen as a wage *per se*. It is common in many societies for community members to contribute certain weeks of the year to local works projects during which time they will be fed, but not earn a cash wage of any sort.

Working through community structures remedies a common problem of mitigation activities: lack of local participation in design. Gaude (1987) summarizes this problem in his review of FFW in five countries:

> *"Popular participation... was confined to the voicing of opinions by designated spokesmen-representatives of political parties... whatever the nature of the contacts or the perspicacity and experience of the spokesman, the beneficiaries, and in particular the target groups, very seldom had any say in the matter... haste in preparing the program accounted mainly for the lack of prior consultation with the local populations, particularly concerning land issues and the assessment of real needs."*

The issue of haste in design is compounded under emerging famine conditions. Communication with village structures for design issues (activity choices) should be as front-loaded as possible, and explicitly deal, at that time, with the possibility of scaling up activities in case of drought, dislocation or unemployment.

External resources may be applied to locally identified and managed projects deemed desirable by donors, even though that project may have been pursued without external resources. In such a situation, the external resources applied to the project allows the community to invest those spared resources in other locally identified activities which may be quite different from those desired by donors (McCalla, 1985).

Because resources are fungible, arrangements should be made as public as necessary to ensure that locally managed mitigation resources are utilized to benefit those for whom they are intended.

6. TECHNICAL, ECONOMIC, AND SOCIAL CONSIDERATIONS

6.1 The Criteria for Providing Food or Cash

Both food and cash have obvious value to target groups in all famine-prone areas, but, their relative values differ. The tradeoffs must be calculated, not on a country level, but at the actual intervention site. Tradeoffs must take into account the village economy and household characteristics of those most vulnerable to dislocation during a drought.

Shubert (1987) provided one of the best rationales for providing cash during a food emergency:

> *"It seems that wherever there is a demand coupled with buying power, in most cases a corresponding supply will develop in due course."*

To foster increases in local food production and strengthen markets, famine mitigation should give priority to cash interventions with target groups, combined with measures to increase food supply. However, not all groups are reached equally by cash or food and the relative value of food or cash to the target groups will vary within and between famine areas.

A review of famine response research suggests that donors and intervention managers should be prepared to provide a coordinated combination of cash aid, monetized food, and food interventions, in parallel with efforts to improve market functioning. The following sections review the principal advantages and disadvantages of using food and cash, followed by a discussion of various factors involved in the decision-making process. The following table provides a comparison of the main features of the two types of resources.

Food Resources	Cash Resources
Considerations	
Less easily exchanged.	Easily converted (fungible).
Convenient where part of larger food program.	Easy to rotate project sites.
May ameliorate pastoralists terms of trade.	May help pastoralists relocate.
Appropriate incentive for school and MCH attendance, marketing incentives, grain and seed banks.	Appropriate for credit funds, land-owners, projects with material needs.
Often necessary to maintain homogeneous wage/ration rate.	Allows for more differentiation in levels of transfers.
Brings community together.	Less symbolic, harder to tie to volunteerism.
Can more directly address nutritional deficiencies.	Broad scope.
Recipient Costs	
Longer time in queues.	Shorter time in queues.
Search and travel costs for market sales may be large.	Transaction costs minimal.
Physically moving foods may be costly.	Purchasing foods out of town more costly.
Liable to military extraction, theft, robbery.	Liable to taxation.
Recipient Use	
Direct nutritional and health benefits.	Efficient income transfer.
Can be self-targeting.	Inherently of value to everyone.
Usage favors consumption by women, children, elderly.	Usage favors men, non-food consumption.
Favors savings and household goods retention.	Favors capital investment.
Local Impact	
May compete with merchant activity/imports from other regions.	Encourages inter-regional trade.
Can thwart price-fixing efforts of unscrupulous grain traders.	May increase profit margins of colluding merchants/hoarders.
Price affect reduces resale value of each food transfer.	May reduce local value of money.
May complement local market mix of food commodities.	May be less versatile in affecting local food supplies.
May pioneer movement of foods to remote locations.	May encourage private sector trading to remote locations.

6.2 Using Food

Food use has the advantage of directly attracting those families most in need of food. It also targets those within the family who have limited ability to travel to markets (the elderly, the infirm, or lactating women). Food use favors those who control food, or those, such as children, who have a special need for food.

In areas where food imports are unavailable and local prices high and rising, food distribution can have a higher value than cash for food-storage-poor target groups, such as herders. In addition, during a famine situation, food distribution can be beneficial to households which do not receive it directly. For example, the arrival of food aid can result in reductions in local market prices and may also reduce prices in markets in neighboring regions. This will have the effect of an income increase for all consumers as they will be able to buy more with the same amount of money.

Fitzpatrick (1990) examined food assistance in various countries. Among other findings was that the income value to recipients adjusted for the project costs were highest in remote and famine-prone areas. Countries suffering from famines often have food prices that are higher than international prices, so that selling or giving the food in those regions is actually more valuable than a donated equivalent amount of cash, as valued back in the donor country.

Food distribution has other traits that recommend it. It has symbolic value relating to its traditional importance in community activities (feasts, gifts, exchanges). Because of this, it has a greater capacity to promote volunteerism and cooperative efforts among different members of a community and not merely the underemployed. For similar reasons, food makes an appealing incentive for attendance in health prevention activities, in training projects, in community meetings and for girls to maintain their enrollment in primary schools.

A primary difficulty with food is that it is bulky and there are substantial administrative and transport costs involved in its use. In addition, unless food is available for purchase in regions or countries near the famine area, and the donor is able to purchase those foods, there is a long lead time required for importing food, often 6 to 9 months. The food may not arrive until after the crisis has passed, which may create further negative consequences. There are numerous occasions where large quantities of food aid arrived simultaneously with large harvests. The resulting price drops further damaged the farm sector.

Because many vulnerable groups are in remote, border, desert, mountainous, or inland locations, transport costs of bulk foods are often the largest single budget item of mitigation and relief activities. Donors should recognize that a major tradeoff is occurring when the cost of inland transport is worth more than the commodity itself.

Airlifting food requires transport costs greater than the value of foods. Airlifts are indicated where excess mortality is imminent or surface transport simply does not exist. Airlifts may also be necessary in order to get resources across regions of violence (as in Somalia, 1991/1992) to reach inland rural target groups.

General food transfers tend to be untargeted, while using food to pay workers means that relatively small individual amounts have to be disbursed at regular intervals. This is costly in administration, although creative solutions are possible, e.g., paying workgangs who divide the food among themselves. A further consideration is that households need cash as well as food. Households have needs to pay for other expenses such as school fees, to purchase fuel for cooking, rents or to pay off debts. Unless the works program pays a combined cash/food wage, workers generally must sell a portion of the food they receive. Although this helps to distribute the food more widely, the recipients incur transaction costs in the sale. Despite this practical recourse to the market, food is not nearly as valuable as cash in strengthening and integrating markets.

6.3 Using Cash

Cash interventions directly boost purchasing power which, through market signals and after a lag time, boost local supplies through imports and/or production. This is preferable to augmenting supply through non-traditional, donated food imports because it should be more sustainable. If purchasing power can be maintained, the supply channels may be regularized, trade routes solidified, and retail margins reduced.

A further advantage to using cash is that the money supply affect is more pronounced when it is used for purchases. The size and nature of benefits from the multiplier or linkage effects of economic activities are the subject of considerable debate. Cash appears to have an added benefit to an economy because it circulates more readily, more quickly, and for a longer time than commodity transfers such as food. In other words, when someone receives cash, they pay for food to eat, but then, that cash becomes an income boost to a food seller who uses the cash to buy something else, and so on. The households which receive food consume most of it, and the benefit ends there.

Cash has two other major advantages over food: it can be disbursed much more quickly and can be used to reach remote populations at much smaller logistical expense. Cash transfers are a useful option to use on short notice with a very large target population. During the Afghan crisis, from 1979-1982, where five million displaced people fled Afghanistan, the Government of Pakistan provided free, untied cash transfers to the refugee populations. Simultaneously, the World Food Program began distributing food rations among the same populations. The dual approach helped the refugees meet their survival needs.

Cash also has disadvantages. Donated cash aid tends to be captured by higher-income and middle class project participants, universities, urban projects, technical support, and the like. In contrast, groups that come to food-supported activities are relatively poorer than other groups. Food tends to be more self-targeting on the poor. As will be seen in a later section cash is less available at the donor end, because donors are more prepared to respond to famines with food. The increasing use of food aid sales or "monetization" to generate local cash allows implementing agencies manageability around this constraint.

6.3.1 Ethiopia Cash Distribution by UNICEF

UNICEF administered cash-distribution programs for work activities in nine sites in Ethiopia (Shoa, Arsi, Gamo and Gofa). The rationale was that these were famine "pockets" near food

surplus areas. The program was termed "cash for food" since the cash was to be used for the purchase of food from the nearby surplus areas. Ninety-five thousand participants and their families benefitted from these cash transfers. It is estimated that, on average, they saved roughly one third of this income (UNICEF *et al.*, 1988). Post evaluations found that much of the cash transfers also went to paying off land taxes, peasant association dues and debts. Nevertheless, it was estimated that the cash transfers achieved rehabilitation effects at roughly half the cost of food grain assistance.

Activities included terracing, feeder road construction, blanket weaving, hand-dug wells and heifer reproductivity. Activities were oriented toward women. In the follow-up phase, rather than using cash grants, credit windows were opened instead, allowing women to pursue self-determined income-generating activities.

By mid 1988 all the projects were terminated, except for three sites in Arsi where the drought was so severe that the participants said they preferred water to cash.

Webb found that in isolated villages in Ethiopia, the price of local foods increased immediately after the cash distribution by up to 100 percent. It is unlikely this would have occurred had markets not been so fragmented and food transport so risky under federal prohibitions. This same observation was made in Kordofan, Sudan (Madani, 1991) following an SCF distribution of cash in a credit fund (but at the outset of a famine), and in Darfur, Sudan by SCF/UK during an emergency distribution of cash. While some price inflation is helpful in encouraging increased production and distribution, arranging for some food supplies to meet the needs of the most vulnerable and to moderate prices is often desirable.

The multiplier effect of cash is related to a final problem. As money is used over and over, there is a short-term impact on the local money supply whenever money is brought into a region. In a famine region, the short-term effect may be magnified. This can sharply increase food price inflation, which is undesirable, as higher prices reduce the consumption of the entire population. But it also directly undercuts the benefits of the transfer program. In other words, inflation offsets the income transferred, so the total intervention effect may be considerably less than the hard currency value of the cash.

In choosing between food and cash inputs, whether for project support, or for direct distribution, one needs to consider the efficiency of the income transfer and feedback effects on prices. If the recipient undergoes greater transaction costs (time, effort, haulage expenses, search costs) for cashing out a commodity, then more cash should be provided (see discussion of subsidized food stamp schemes, Stiglitz, 1988). If the recipient spends more time and expense seeking retail food purchases, then more consideration should be given to supplying the preferred commodities directly.

6.4 Further Considerations

Both food and cash have obvious value to target groups in famine-prone areas, but their relative values differ. The tradeoffs must be calculated, accounting for the micro-economy of the village and for those households most vulnerable to hunger during a drought or other dislocation. The

major part of such a calculation will usually be estimating shipping, inland, internal, and distribution site transport costs. For an overview of options in transporting goods to famine sites see UNHCR's Supplies and Food Aid Field Handbook (1989).

6.4.1 Characterizing the Target Group

The decision of whether to distribute cash or food, or a combination of the two in a community, depends in large part on knowing the background of the specific target groups, what they already have and what they need. Some of the issues are illustrated in the following two examples.

In one scenario, a large, national famine surrounds a rural village of 10,000 people. Food prices are high because the harvest in the region was sharply lower than normal, but the actual supplies of food in the village are adequate for most of the population. The village harvest was sufficient for the annual needs of even the small farmers, but there is no surplus to market. All those dependent on cash wages, however, in service, transport, teaching, crafts and industry, face 300 percent increases in the price of their basic food basket, which they cannot afford. Imports of food from other regions are not possible as they have even larger food deficits.

In this case, the target groups are the unemployed and the non-agricultural households. The specific needs of these target groups are for greater food availability. This can be achieved either through FFW or by local market interventions (such as auctioning food to the merchants and traders) combined with CFW. Providing cash alone might merely increase the competition between households for a limited supply of food, driving the price up further and creating greater inequality of access, leading to more starvation among the poor.

A different situation is found in a village where a few estates grow cash crops for export. Most of the households have small plots or are landless, contract agriculturalists. The local harvest was bad, but the surrounding regions had a decent harvest. Local and regional price increases for food are moderate. However, the income and purchasing power of the majority of farmer households has dropped to near nothing. They cannot begin to pay for food supplies to be brought in from surrounding regions.

In the latter scenario, increased purchasing power for small farmers and contract agriculturalists is needed. The most efficient response is likely to involve using the cash range of interventions, emphasizing incentives or wages. Activity choice would focus on investments which will improve participant incomes in the long-term. Establishing a local cereal bank, with an initial stock of cereal to operate on a cash basis, could provide participants with further control over their food supply.

6.4.2 Assessing Local Food Supply

As illustrated in the preceding examples, assessment of local food supply involves considering two intertwined issues. The first issue is the current food supply in the region, which should include recent cereal production and food in storage (merchant and household) from previous production and/or imports. The national food supply situation is important, as it will determine whether additional food is likely to be available at affordable prices. This will be affected by supply but also by the difficulties and expenses of moving food in and constraints on trade.

The other issue to evaluate is the likely production response of local farmers to changes in food prices. Farmer response to price increases is based on both the incentive effect of higher prices and the farmers' capacity to respond. There is considerable difference of opinion surrounding this question. Some argue that small-scale farmers (and especially those in Sub-Saharan Africa) produce as much food as they can, regardless of this year's or last year's price. Others contend that, depending on their ability to substitute other crops (including cash crops), or to diversify into other economic activities, farmers will produce less if food is imported.

Food assistance and cash assistance will have price effects in the target region. If the vulnerable group includes farmers, the price effect of assistance will translate into an income effect on these producers. For instance, food assistance may be used to affect cereal price stabilization, lowering food prices during a period of scarcity. Ellis (1988) warns:

> *"Where crop yields remain highly variable, price stabilization may serve to exacerbate rather than reduce income variance. This is because, under the market, prices rise in low yield years and fall in high yield years (oversupply), resulting in some smoothing out of annual incomes. With stable prices this does not occur and income variation follows yield variation."*

Decision-makers need to assess the likely short-term response based on past experience. If food imports are necessary, longer term effects on local production can be minimized in several ways. Prices will remain good if demand is sustained, through the use of wage interventions, whether in cash or food. Activity choice to improve agricultural technology, resources and farmers' incomes will provide additional capacity and incentives for increased food production.

6.4.3 Trade Constraints and Market Controls

Restraints on trade in African countries include government regulations, market structure, and physical conditions, but each can usually be translated into a transfer cost. Often food is not traded from areas of surplus to areas of deficit because of the inability of populations to pay the costs. When these areas are across borders, currency differences and shortages of hard currencies further reduce the volume of food trade.

Determining whether local food supply is sufficient should also include assessment of interregional trade. The supply response of one region to a deficit in another can be estimated from the intersection of each region's net aggregate external offer curves (see Bressler, 1970). Most often, food does not flow to regions of need because the road, rail and waterway transport network is poor. The infrastructure of most African nations was built to accommodate the outflow of cash crops to port and food surpluses to urban areas. Feeder roads to small-holder populations must be assessed at the outset of any mitigation program.

Access to many famine areas is ultimately limited because of insurmountable physical constraints. The shifting sands of northern Kordofan and Darfur in Sudan, completely bury roads during the windy season. Large distances and swamps make overland transport from northern to southern Sudan impossible. Recently resettled populations may also have deficient transport networks, such as following a famine recovery, or the return of hundreds of thousands of people, following civil war in Angola or northern Somalia.

Sometimes a government prohibits the movement of food. It might do this by confiscating transported food (seen in Tanzania and Ethiopia), requisitioning evident surplus food (Ghana and Sudan) or by fiat. Even when governments do attempt to reduce trade in foods, informal trade occurs anyway, but the costs of going underground are high and reduce the volume available where foods are demanded.

Prices will vary with geography. It is not unusual that the same commodity will cost 20 percent more or less from village to village. In some countries these different prices may result from government trade restrictions. More commonly, variation results from real market-structure differences in transport costs, local supplies, local storage, and economies of scale. Variation also results from imperfect information, incomplete planning, local-level speculation, sudden shifts in demand (perhaps a feast, a wedding, a shortfall of a substitutable commodity), and unplanned losses.

Price anomalies may, also, be traceable to their being fixed or determined by traders. The market system normally pits traders competing against one another, establishing a lowest suppliable price. But when a rural market is served by only a few traders, they have the capacity to set a coordinated price. The best measure of collusion is whether food prices in some villages are dramatically higher than in nearby, but equally remote villages.

Cash relief is less appropriate in instances where traders in food employ monopolistic practices, increases in the local money supply and the expendable income of the poor merely allows the traders to increase the price of the food they import or release from stores to sell. Generally, cash is less appropriate if there is only one or a few traders serving a population. This is unlikely to be the case where there is free entry and minimal start-up costs. In other words, it is difficult for traders to fix prices when consumers can turn to other alternatives, such as simply traveling to other markets.

6.4.4 Commodity Selection

Selection of commodities must be considered in planning whether any food at all is appropriate for the intervention, and in identifying sources and arranging for procurement. The food or foods to use depends simultaneously on the economic, nutritional and cultural values of each food. There can be considerable variation between these three values.

A food that is very valuable nutritionally may be useless in an intervention if it is not eaten locally, and if it has a low value in the markets. Further, many foods distributed in famine and to dislocated populations are sold by recipients, sometimes in high proportions. The greater their local market value, the more foods tend to be sold (vegetable oil, for instance). Foods also tend to be sold if they are culturally unpalatable, unfamiliar locally, or require extensive preparation or cooking time. For example, the target group may sell their shares of donated meats, canned goods and dried milk to upper or middle class populations. This is not necessarily bad, if the income earned allows the target groups to purchase even greater amounts of food which they desire. This was the case in Ethiopia, where households selling oil were able to purchase sufficient grain to increase the overall calories received from the transaction.

The most useful method of selecting foods is to assess, through interviews, focus groups, or market survey data, the demand structure of the specific target population. If the target population mainly purchases millet and tomatoes, for example, then distribution of millet and tomatoes will:

a) Selectively attract their participation in the project;

b) Reduce their transfer costs by minimizing their need to barter for other foods;

c) Selectively stabilize or reduce the local prices of those goods, further benefiting that income level or sub-population;

d) Spare them the greatest amount of their normal food expenditures; and

e) Possibly increase their income from food sales if millet and tomatoes are the scarcest and highest priced famine foods.

Point a) refers to the self-targeting character of each food type. The goal is to identify which available commodity is the least attractive to the middle and upper income groups. This may be a commodity with a low overall elasticity of demand (millet, barley, sorghum, various beans). Reliance on a staple that the poor consume a great deal of does not ensure self-targeting. No "inferior" staple can be isolated in Mali, for instance. In Morocco and Tunisia both the poor and the wealthy consume mostly bread and flour-based food products.

The differential transport costs of commodities must also be considered when choosing among incentives, work projects and free transfers. Vegetable oil, for instance, has less volume, bulk, and perishability per kilocalorie delivered than other commodities. Corn Soy Mix, on the other hand, has more of a balanced nutritional profile per dollar of delivery than bulk grains. However where the budget constraint is tight and procurement costs are paramount, then less expensively-procured foods such as maize, rice and sorghum may be indicated.

The following table summarizes these contrasting attributes of food versus cash relevant to their programming for distribution.

Food Distribution	Cash Distribution
Availability	
Greater donor surplus.	Limited donor budget.
Donations increase during famines.	More forthcoming during prevention.
Donor generosity greater during international glut.	Donor generosity reduced during recession.
Somewhat tied to maritime and NGO budgets.	More flexible.
Monitoring	
Losses from spoilage, handling.	Losses from inflation during lag times.
Misallocations usually more evident.	Misallocations more easily hidden.
Losses from theft routine, but low.	Losses from theft variable.
Time consuming weighing.	Easy to review books.

Management Costs	
High transport and handling costs.	Minimal transport costs.
Transport sometimes impossible.	Local banks sometimes non-existent.
Significant storage requirements and costs.	Minimal storage costs.
Administrative costs typically higher.	Administration geared more to project activities.
National and Regional Impact	
May stop food inflation spiral.	No price dampening effect.
May discourage domestic production.	May encourage local production.
May increase taste-driven demand for non-locally produced foods.	Likely to lead to efficient demand expansion.
Most appropriate timing prior to harvest period.	Best season unclear.
Many multiplier effects in donor country.	Currency circulation effects in recipient economy.

7. STRATEGIC RECOMMENDATIONS

7.1 Cash/Food Intervention Principles

The following general principles are proposed for Food/Cash interventions:

- The primary objective of the interventions is to assure that vulnerable households have adequate access to food, either in kind or in cash, sufficient to avert starvation and maintain productive activity patterns.

- The choice between payment in food, combined food/cash, or cash should be based on an analysis of several considerations:

  - An assessment of the ability to target the needy with the selected form of remuneration.

  - The supply of food available in the markets in the area, food prices and a calculation of the impact that an infusion of food and/or cash would have on food availability/prices in the markets.

  - Government regulations or other barriers (e.g. civil strife) to the movement of food into and out of the area.

  - Knowing which donated resources have been made available. Where other resources are needed, an assessment should be made of the relative possibility, costs and time involved for the donor, as compared with the household's ability to adapt the resources to the needs in the area. For example, if the donor has cash, and food is preferable, how much time, legal hurdles and expense will be incurred by the donor, as compared to the household's involvement in purchasing food supplies and bringing them into the area.

  - The administrative capacity of the implementing agency to handle food or cash.

- Arrangements should be made, wherever possible, to provide food supplies through markets and through increased purchasing power, rather than through direct distributions. Increasing market strength and integration are important factors in reducing dislocations from food production shortfalls.

- The choice of activities supported by cash/food interventions should give preference to supporting other interventions which maintain assets or develop productive capacities. Where these activities are insufficient to absorb all the individuals who need work, other projects which enhance productive capacity, preferably activities requiring minimum supervision, should be organized.

- Technical strategies should also include specific training of supervisory staff early in a famine, so that the staff capacity is there for the later stages when employment programs may need to increase rapidly in scope and scale.

- Donors are encouraged to establish mechanisms for the conversion of their resources into the type required by the situation (e.g. imported food into local food or currency), to provide the flexibility in food/cash use required to respond to an evolving famine emergency.

The proposed general principles for Cash/Food For Work are:

- Employment generation should be targeted to poorer households by setting wages at or just below the standard minimum wage rate.

- Employment should be guaranteed to all who apply. Subscription rates will provide a measure of the amount of distress. The numbers of individuals prepared to work for low wages will quickly and accurately measure small and large fluctuations in unemployment and distress migration. It will also allow both local institutions and international donors to track the growth in famine dislocations and accordingly plan the scale of other responses.

- Payment for task work by persons or work gangs should be based on norms of work to be accomplished per day. The level of work required for payment should be established based on local circumstances, especially the physical condition of the individuals employed and the local terrain. Task working by gangs should be used, wherever possible, to improve productivity and ease the burdens of supervision.

- Resources should be used to secure technical, supervisory and material resources required and to assure the quality of the works undertaken. The workers are coping with the challenges of famine and their labor should be used to improve conditions, not merely to make work.

- Every effort should be made to absorb migrants on employment projects, rather than to establish feeding camps. In view of the lead time involved in preparing to manage the employment of large numbers of people, planning and arrangements should be made early in an evolving famine situation.

The proposed general principles for Cash/Food Incentives are:

- Activity choice should be used to direct incentives to the desired beneficiaries. Activities and resources of the target groups should be identified and used to plan activities in which they are capable of participating.

- Certain incentives may also be directed at better off groups, especially those whose responses will improve conditions for the poor: e.g. participation in health training in preparation for providing village health services.

- Incentives are most useful in helping households and villages maintain their normal activities. They can be used throughout the famine cycle, as a quick response, which allows the beneficiaries to remain participants in improving conditions, rather than recipients of distributions.

- Incentives are best used on moderate sized activities which households or villages are capable of organizing themselves, with occasional, rather than continuous, outside supervision.

The proposed general principles for Cash/Food Transfers are:

- Direct, untied transfers should be used sparingly on the basis of objective criteria, to meet special needs of special groups, rather than as the primary response, as has so often been the case in past emergencies.

- C/FFW, which can identify most of the population in need, should be combined with transfers for households with special problems. Surveys will establish those households in need which are unable to participate in work projects. Suggested criteria might include households with no other able-bodied members, comprised of the elderly, the handicapped, or women-headed, where there are young children or where the women are pregnant and lactating.

- Another criteria for using transfers would be the remoteness of populations who may be beyond the reach of other types of interventions.

- Transfers may also be the only practical response should there be a sudden need to support large numbers of displaced persons or refugees. Every effort should be made to limit this type of situation, particularly in famines caused by drought, which develops over time. Large feeding centers often facilitate the transmission of infectious diseases, which cause many of the deaths associated with famines. Transfers may be the only palliative, however, in conflict situations.

7.2 Conclusions

The following table summarizes many of the indications for using a particular type of project in different circumstances. The traits listed in each column either describe the type of project or indicate where and when it is appropriate to be used.

FACTOR	CASH/FOOD FOR WORK	CASH/FOOD INCENTIVES	CASH DISTRIBUTION	FOOD DISTRIBUTION
Timing Issues				
Start-up Time	long	short	very quick	long
Famine Stage	all	mid, recovery	late	very late
Asset Creation	rapid	medium	slow	slow
Scale-up Potential	good	problematic	rapid	constrained
Population Issues				
Scale	large	large	diffuse	medium
Aggregation	urban, rural	most versatile	rural and remote	health centers, camps
Community Participation	can foster	should foster	least effect	ambiguous, negative effect
Self-Targeting	unemployed, mobile	rural, collectives	rural and most remote	children, women, ill, displaced
Transfer Amount	based on local wage levels	flexible	related to food price levels	based on estimated caloric requirements/day
Implementation Issues				
Administrative Costs	high	modest	low	high
Complementary Costs	high	varies from low to high	low	medium
NGO Experience	high	low	low	high
Local Govt. Buy-in	high	low	medium	medium
Appropriate Intervention Types	silo construction, food processing, roads, construction, reforestation, irrigation works, teaching	storage silos, retail trade subsidies, seeds, tools, preventative medicine, surveillance	local organization, buy downs, credit funds, herd destocking, elderly, pregnant and lactating women	MCH, monitoring, establish new foods, rapid price impact
Concerns				
Induces Displacement	modest	low	lowest	highest
Coping Stimulus Effects	medium	high	medium	low
Effect on Food Prices	neutral	stabilizes	raises	lowers
Leakage/Losses	low	unclear	medium	medium
Dependency Potential	low	low	medium	high
Major Constraint	requires skilled supervision	requires creative project planning	exchange rate differentials	overland transport and storage expenses
Major Advantage	self-targeting income guarantee with clear project effects	versatile for numerous village level project types	covers remote and infirm populations	buffered against exchange rate and bureaucratic tangles

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ANNEX

THEORIES OF FAMINE

Based on the historic notion that famines are merely supply shortfalls, much famine prediction has used food balance sheets to examine overall food supply. This approach is incomplete. It inadequately measures how some goods can be substituted for other goods and how capable a population is of taking advantage of the international food market. All nations operate within the milieu of the international market. But, not all households or population groups have equal access. Access depends on a complicated series of mediating factors, including market structure, merchant collaboration, infrastructure, transport costs, hard currency supply and exchange rates.

The theory of why some populations are more susceptible to famine than others took a dramatic turn in 1980, with the publication of Amartya Sen's *Poverty and Famines*, which elaborated the theory of food entitlement. Sen's subsequent publications have described how entitlement "mappings" work. Mappings refer to the pathways a household can use to exchange assets or claims for other goods. A casual laborer can exchange one day's field work, for instance, for a meal and petty cash, which then can be exchanged for a store-bought food. Sen's work with Jean Dreze (*Hunger and Public Action*, 1990), which analyzes the Ethiopian famines, demonstrates how famine has been successfully prevented in India and emphasizes the importance of monitoring the prices of each of many commodities traded in an economy.

Sen's greatest contribution has been to stimulate the creation of an entire new field of literature on famine analysis during the 1980s. Most of the commentary on Sen is in the form of pointing out how the entitlement theory should be extended to be more comprehensive. Bowbrick (1987) argues that Sen underestimates the importance of food supply during the Indian and Bengal famines, attempting to attribute too much to demand shifts. Baulch (1987) describes how it is insufficient to focus on simple entitlement mappings based on a few goods. For example, during the Wollo famine farmers, in their desperation, interacted with markets in many new ways, including seeking calories sources from non-staple foods.

Some analysts argue that entitlement theory must be used in conjunction with analysis of ecological crisis, government mismanagement, war, and demography. De Waal (1989) maintains that Sen's largest gap is in failing to explain the primacy of widespread violence in causing famines. Civil conflict has led to negative economic growth among most of the countries recently visited by famines.

Intentional starvation has, of course, been a tool of war (practiced by Hannibal when he burned the wheat fields of Italy) possibly as long as humankind has practiced agriculture. Stalin changed the terms of scale by starving 20 million kulaks which were his own citizens. Similarly, since breakaway Biafra was intentionally starved by the parent state of Nigeria in 1967, famines are increasingly correlated with armed conflicts and with policy decisions by governments to permit, or not permit, famines in contentious zones.

Osmani (1991) responded to de Waal and suggested that Sen does not attempt to describe the course of famines, nor how society reacts to or evolves during famines. Rather, he suggests, Sen has set out the proximate conditions that predetermine famine.

DaCorta, Deveroux and others have attempted to combine Sen's theory with those of his detractors: establishing food availability decline, income, and entitlement as the three ruling factors. Each of these factors must then be examined further to account for market depth (level of competition, resilience), how many transactions occur between farmgate and consumer, occupational level, class, and the moral economy of the society. Mellor and Gavian (1987) point out that famines affect income distribution negatively, as higher food expenses hurt the poor disproportionately.

Sen's work has spurred economists, such as Martin Ravallion (1986, 1990, 1991), to probe how direct manipulation of markets can affect famines. These studies indicate that famines can be modified very effectively through wage employment, public works, pricing policies, etc. In actually applying entitlement theory, much more research is needed in mapping risks before droughts and in examining famine impacts on different socio-economic groups. House (1987), for instance, has demonstrated income and purchasing power differences between ethnic and demographic segments of an urban, Sudanese population, and related these to their access to food through effective demand, accounting for the price of local food baskets. Bender and Hunt (1991) have done the same for Luanda. Follow-up studies following the food shortages of recent years would close the circle.

Jeremy Swift has applied and extended entitlement theory, based on his experience with nomadic peoples in Kenya, Mali and the Sudan. Projects such as the Integrated Livestock Development Program in the Turkana District in Northern Kenya, which are applying Swift's proposals, seek to diversify the production options of nomadic pastoralists, such as the Tuareg and Turkana.

The unique insights of entitlement theory result from the focus on how to get people back on their feet after a drought or famine concludes. These insights suggest that response should focus on the **income** needs of the poorest. Relief agencies have appreciated that need and are increasingly working on parallel income-generating approaches that fit the needs of different unemployed and underemployed groups. Therefore, there has been significant recent experience with using demand-creation techniques to ameliorate and prevent famines. An example is the large scale cash-for-work program, combined with market interventions, which was employed by the Government of Botswana to manage a prolonged period of drought during the 1980s (Dreze, 1990). However, these new approaches have not yet displaced the conventional emphasis on increasing food supply as a response to famine.