

Working Paper 113

**FOOD AID AND FOOD SECURITY IN THE 1990s:
PERFORMANCE AND EFFECTIVENESS**

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Summary

Food aid's effectiveness in promoting food security from international to household level is reviewed as part of a wider study of food aid policy. Evidence for the 1990s is provided by several major evaluations, complemented by a wider literature review and statistical analysis. The international Food Aid Convention has not assured stable and predictable minimum levels of food aid. In a national crisis, the value of import support provided by food aid is frequently reduced by operational weakness, especially delayed responses. Programme aid for sale shows modest positive development impacts through balance of payments and budgetary support and frequent, but typically marginal disruptive and depressive effects on local markets. Project aid supporting direct food distribution is often effective as a safety net for livelihoods in short-term food shortages and, sometimes, as an income transfer, especially where circumstances favour easy targeting. The alleged special advantage of food aid in targeting the poorest, especially women, is not demonstrated. Nutritional effects are hard to establish. Significant impacts on sustainable development objectives are unproven, often due to lack of integration of food aided activities with other development action. Relief food contributes to saving lives, but frequently reported under-nutrition, micro-nutrient deficiencies and related health problems amongst assisted populations indicate weaknesses planning and operational performance and lack of complementary actions.

Monitoring of food aided activities, especially relief operations, continues to be seriously inadequate and constrains assessment and measures to improve performance. But the inconclusive or ambiguous record is a recurrent finding that probably reflects underlying realities. This is partly because of the marginal role of most food assistance interventions and multicausality of food sector performance, livelihood and nutritional status.

The absence of any demonstrable inherent advantages of food aid combined with higher transaction costs imply that financial aid is normally superior to food as commodity aid in providing balance of payments or budgetary support, even when tied to specific project use. Direct food assistance is likely to be effective only as part of a wider set of complementary actions to provide food security and nutritional improvement for poor and vulnerable groups.

Acronyms

CIDA	Canadian International Development Agency
<i>cif</i>	Carriage, Insurance and Freight
CILSS	Comité Inter-États de Lutte contre la Sécheresse au Sahel
CPF	Counterpart Fund
DAC	(OECD) Development Assistance Committee
DFID	Department for International Development
EC	European Commission
ECHO	European Community Humanitarian Office
EGS	Employment Generation Schemes
EU	European Union
FAC	Food Aid Convention
FAO	Food and Agriculture Organisation
FFW	Food For Work
<i>FOB</i>	Free on board
FY	Financial Year
GATT	General Agreement on Tariffs and Trade
GIEWS	Global Information and Early Warning System
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IDA	International Development Association (World Bank)
IDS	Institute of Development Studies
IEFR	International Emergency Food Reserve
IGC	International Grains Council
IMF	International Monetary Fund
INTERFAIS	(WFP) International Food Aid Information System
ITSH	Internal Transport, Storage and Handling
IWC	International Wheat Council, now IGC
LDC	Least Developed Country
LIFDC	Low-Income Food-Deficit Country
LIPW	Labour-Intensive Public Works
MCH	Mother and Child Health
NFIDC	Net Food-Importing Developing Country
NGO	Non-Governmental Organisation
NUPI	Norwegian Institute of International Affairs
OCHA	Office of the Coordinator for Humanitarian Affairs
ODA	Official Development Assistance
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PFA	Programme Food Aid
PRO	Protracted Relief Operation
PVO	Private Voluntary Organisation
RMP	Rural Maintenance Programme
SADC	Southern African Development Community
SCF	Save the Children Fund
SFP	School Feeding Programme
TFP	Therapeutic Feeding Programme
UNHCR	United Nations High Commission for Refugees
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VGF	Vulnerable Group Feeding
WFP	World Food Programme
WTO	World Trade Organisation

1. Issues for Analysis

The future of food aid, for long a major element of development co-operation and humanitarian assistance, is in question. The sharp decline in physical levels of food aid and donor expenditure in the mid 1990s highlights this issue. The fall in food aid has been considerably greater than the wider decline in funding of development co-operation. A number of developments in the policy environment also underlines the changing role and uncertainties concerning the future of food aid. There has been a large shift of resources from development to humanitarian assistance, particularly in situations of conflict. The GATT Uruguay Round involving liberalisation of international agricultural markets raises questions on the supply side, because food aid has historically been closely tied to the agricultural exports of the major donor. There have been cuts in donor commitments to the Food Aid Convention (FAC) since 1995, and the re-negotiation of the follow-on Convention, begun in early 1997, was still unresolved in September 1998. The halving in donor commitments to the regular budget (developmental activities) of the UN World Food Programme (WFP) during the 1990s, in particular, indicates doubts about the developmental role of food aid.

As a contribution to a constructive international debate on these issues, ODI undertook a policy review of the future role of food aid, with the support of the UK's Department for International Development (DFID). In reporting on this policy review, two companion documents are being published. The policy setting, main conclusions and recommendations of the study are published in an ODI report 'The Future of Food Aid: A Policy Review' (Clay, Pillai and Benson, 1998). This Working Paper complements that report by presenting a fuller version of the review undertaken as part of the study of the evidence on the effectiveness of food aid as a humanitarian and development policy instrument. This paper focuses particularly on the role of food aid in promoting food security and especially on recent evidence for the 1990s.

1.1 Food security issues

There is now near consensus that food aid should be considered primarily in terms of promoting food security. Food aid is contributing less than four per cent of aid (Official Development Assistance from OECD countries) and is therefore unable to make a major separate contribution to the general development of assisted countries. Instead, all major donors during the 1990s have come to stress food aid's special role in supporting food security (AIDAB, 1997; CIDA, 1998; EC, 1996; USAID, 1995).

This apparent narrowing of focus is not without problems. Food security is a multi-layered construct, subject to many definitions (Maxwell, 1996). There are, however, a number of common elements in international policy statements to which systematic assessment of performance can be related. First, there is broad recognition of the difference between situations of crisis and acute food insecurity and those of continuing chronic poverty and linked problems of under-nutrition and malnutrition (World Bank, 1986). Focussing on public policy interventions, questions of food insecurity arise at a hierarchy of levels. First, problems of food insecurity are those of individuals and households unable to obtain assured access to adequate food consumption levels, or in Sen's alternative formulation, to assure their entitlements (Dreze and Sen, 1989). There are overlapping but distinct issues of assured access to food linked to incomes, livelihoods and entitlements. Furthermore, food consumption is only one necessary factor contributing to nutritional status or

assuring nutritional security and, following the practice of many analysts, it is useful to consider nutritional issues separately. Thirdly, food security has sectoral and national dimensions: assurance of food supply, involving production, storage, marketing and trade. Fourthly, there is the international dimension of food security where public action has been concerned with assured resources for food aided interventions and mitigating the possible effects of market variability. These four dimensions of food insecurity: international, national, household food and nutrition security are considered separately in this review.

1.2 Sources of evidence

First, the review draws upon two substantial recent studies undertaken at ODI. The Joint Evaluation of EU Programme Food Aid over three and half years involved bringing together evidence not just on programme food aid, but also on the policies and programmes including evaluation literature for the Commission, and the bilateral or national actions of the individual member states (Clay, Dhiri and Benson, 1996). It also included case studies involving literature reviews and country visits during 1995 for twelve of the twenty largest recipients of food aid, that accounted for more than 60% of both EU and global commodity volume in the early 1990s. The second was a review of the literature on household food security, which included published documentation since the mid-1980s and was based on searches at two major bibliographical resources, the British Library of Development Studies at IDS Sussex and the Joint Bank-Fund Library in Washington (Clay, 1997). In addition, there have been other recent major evaluations of food aid involving systematic re-examination of documentation by four major donors, Canada (CIDA, 1998), European Commission (ADE, 1994), Australia (AIDAB, 1997) and US Agency for International Development (McClelland, 1997), as well as the tripartite evaluation of WFP by Canada, the Netherlands and Norway (Chr. Michelsen Institute, 1993a). This review synthesizes the evidence from these various studies.

The major international agreement for promoting food security is the Food Aid Convention. It involves a commitment on the part of agricultural exporting and other aid donors to ensure minimum annual levels of cereal food aid. The Agricultural Committee of the World Trade Organisation (WTO), in seeking to implement the so-called Marrakesh Accord, which recognises a potential role for food aid supporting developing countries affected by implementation of the Uruguay Round. It has also specifically drawn attention to the potential future role of the Food Aid Convention (Konandreas, 1998). However, the Convention does not require systematic evaluation of individual donor or overall performance in relation to commitments, and so assessing its past performance or future potential is made difficult by lack of evidence. In the absence of analyses of the functioning of the Food Aid Convention, a literature survey was complemented in this case by a fresh statistical analysis of the performance of the Food Aid Convention in contributing to the 1974 World Food Conference targets and ensuring stability of food aid supplies in the face of international cereal market variability. This analysis, which is reported below, has involved drawing upon and updating a statistical model used to explore the determinants of global and major donor food aid supplies (Benson and Clay, 1998).

1.3 Definitions of food aid

In background documentation for the 1996 World Food Summit Conference, FAO proposed a distinction between *food assistance* and *international food aid*. Food assistance involves public

interventions by governments or NGOs directly providing food or subsidising acquisition of food within a regional or national economy. International food aid involves the supply of food as commodities or funds specifically tied to the purchase of food for direct distribution by a donor international agency or non-governmental organisation (FAO 1996). This review, concerned with the effectiveness of food aid as an aid instrument, focuses on the latter. Nevertheless, since the greater part of food aid is used to support food assistance interventions of one form or another, the analysis of household food security necessarily also concerns food assistance. Similarly, at a national level, the use of food aid to support food assistance or provide budgetary or balance-of-payments support as programme aid needs to be clearly distinguished. Intervention to promote food security involves a permutation of possibilities. This is set out clearly by Dreze and Sen (1989) in their analysis of social responses to famine: they distinguish *food* and *cash* as the *medium* for intervention and food injections or financial transfers as a way of resourcing intervention. At the different levels, micro-intervention in a local economy or sectorally or nationally, these alternative ways of organising public action have profoundly different potential human and economic implications.

Programme food aid, which involves commodities provided directly to the recipient government or its agent for sales on local markets, does not provide food assistance, except insofar as there may be links to subsidised sales. The extent of the injection of additional food into the economy does not depend on whether the food aid is tied to imports from donor market or acquired on the international market or as a triangular transaction in a developing country. This choice of source may affect the composition of imports and, or, costs or have domestic market implications. There are the substitution and fungibility issues of whether public or private sector imports were lower than these would have been without food aided imports, and whether there is any alteration in the level or composition of expenditure.

Relief food aid is usually freely distributed and has potentially different market implications according to whether imported or locally purchased. *Project food aid* may involve food provided as wages in food-for-work or supplementary rations in, for example, a mother and child health programme. But it may also involve a cash medium where, for example, a commodity has been monetized in a comparable way to programme food aid and the proceeds used to finance rural works. Distinctions between programme, project and relief food aid are institutional or political and not purely analytic.

There are broadly two generic types of question raised by food aid, as institutionally defined. First, are actions involving food in a humanitarian relief or developmental context (which is commonly one of poverty alleviation or human development), an *effective* form of intervention? Second, is commodity assistance tied by source or to acquiring food for direct use an *efficient* aid transfer mechanism? The evidence considered in this paper is largely concerned with the first question of effectiveness. Although some aspects of the second efficiency question are considered below, the question of cost-effectiveness is examined in the Policy Review (Clay, Pillai and Benson, 1998: 31–36)

1. 4 From international to household food security

Some researchers have suggested that, because the problem of food insecurity is fundamentally one of people at an individual and household level, the analysis should begin with and focus on people (e. g. Maxwell, 1996). However, in undertaking a review ranging from household to international

level issues, there are analytic and not merely conventional difficulties in the way of organising an examination of evidence from a bottom-up perspective. Specific interventions and their impact at household level involve assumptions about the organisation of intervention and provision of resources at a national and international level. For reasons of presentation and avoidance of repetition the conventional approach of moving from international to national and then to household and nutritional issues has been adopted.

The review of food aid and international food security in Chapter 2 focuses on the Food Aid Convention. The overall picture of global food aid, as described more fully in the companion report (Clay, Pillai and Benson, 1998: 1–8), is of a relatively complex set of actions resulting from the decisions of major donors, in particular the US, Canada and the European Union (EU). For the EU, the provision of food aid in parallel through both *community action*, organised by the European Commission, and the *national actions* of each of the member states involves a further layer of complexity. The international consequences of that complexity with regard to effectiveness are considered in terms of the performance under the FAC, which represents the major institutional arrangement through which donors jointly seek to meet commitments to provide minimum levels of food aid. The key issue is that of assuring resources for different food aid uses in the face of variability in the global food economy. That variability impacts on the supply of food aid through international market prices and stock levels, especially in major food exporting donor countries.

Assessment of food aid effectiveness at a national level is the subject of Chapter 3. This review takes into account the role of food aid commodity systems, both directly as balance-of-payments support and indirectly through the provision of local currency support to the budget, if the commodities are sold. Even in the case of directly distributed aid, there may be balance-of-payment and budgetary impacts because of fungibility. The effectiveness of food aid at this level is also influenced by the complexity of donor institutional arrangements that pose considerable problems of co-ordination (Clay, Pillai and Benson, 1998:39–43).

The implications of policy on food insecurity at a household level involve both the effects of food assistance interventions directly supported by food aid and also, indirectly, effects through markets. These are considered in Chapter 4. The role of food aid in improving nutrition and health status in aided countries and targeted food insecure groups is considered in Chapter 5. Finally, the implications of the review of evidence on effectiveness in terms of the choice of performance indicators are considered in Chapter 6. The wider policy implications of the whole study are considered in the companion policy review.

2. International Food Security: the Food Aid Convention

The effectiveness of the FAC in providing a floor or safety net for food aid is reviewed in this chapter. The Convention does not require monitoring or assessment of donor performance beyond the annual reporting of actual shipments in relation to the commitments of signatories. Perhaps surprisingly, there have been no recent independent attempts to examine systematically the impact of the Convention on donor behaviour and its consequences for food aid effectiveness.

2.1 The origins and history of the FAC

The first FAC in 1967 originated as a form of international burden-sharing for supporting food aid as part of the Kennedy Round of GATT negotiations (Wallerstein, 1980). There were 18 signatories to the initial Convention, including all of the then major wheat exporting countries and some of the most important grain importers (IWC, 1991). The signatories also included one grain-exporting developing country member, Argentina. The European Community's obligation was undertaken as a joint and collective commitment which was then apportioned by the European Council between the Commission and member states. Minimum commitments were based on complex calculations involving donor countries' grain production and consumption and per capita GDP. Food aid commitments could be met in the form of wheat, coarse grains or grain products fit for human consumption and acceptable to recipients. Alternatively, cereal importing countries were allowed to provide cash for the purchase of grains. The International Grains Council (IGC), formerly known as the International Wheat Council (IWC), is responsible for the Convention.

Further FACs were signed in 1971, 1980, 1986 and 1995 (Table 2. 1), although with certain changes to membership, commodity coverage, eligible recipient countries and principles. Food aid commitments of 4. 3 million tonnes were made under the First Convention, with a marginal decline to 4. 2 million tonnes under the Second. Commitments were increased significantly under the Third Convention of 1980, rising to 7. 6 million tonnes. This increase reflected earlier international commitments to provide 10 million tonnes of food aid made at the World Food Conference in 1974, itself held in the food aid crisis of 1972–74.¹ A significant part of the increase was accounted for by a 2. 6 million tonne increase in US minimum commitments. Both global and national commitments remained broadly unchanged under the subsequent Fourth Convention of 1986, standing at 7. 5 million tonnes, as only Australia reduced its commitment by 100,000 tonnes.

Commitments dropped sharply, to 5. 4 million tonnes, under the most recent Fifth Convention of 1995. This decline again largely reflected changes in US minimum commitments, which fell by 44% or 2. 0 million tonnes. Canada also reduced its minimum commitment by 33% or 200,000 tonnes. Despite this decline, the list of recipient countries to which shipments could be counted against FAC minimum commitments was also extended under the Fifth Convention to include those former COMECON countries which had been given developing country status by the DAC.

¹ A Resolution of the Conference had recommended that '... all donor countries... make all efforts to provide commodities and/or financial assistance that will ensure in physical terms at least 10 million tons of grains as food aid a year' (quote cited in IWC, 1991).

Table 2. 1. Minimum contributions of food aid under successive Food Aid Conventions, 1968–71 to 1995/6– 97/8 ('000 tonnes)

	1968-71	1971-2	1972/3	1973/4 -1979/80	1980/1 -1985/6	1986/7 -1994/5	1995/6 -1997/8
EU: ^(a)	1287	1035	1161	1287	1670	1670	1750 ^(b)
Community Action	207	331	418	580	920	920	920
National Actions	1080	704	743	707	750	750	835 ^(b)
Canada	495	495	495	495	600	600	400
USA	1890	1890	1890	1890	4470	4470	2500
Global	4259	3974	4200	4326	7612	7517	5350

Notes: (a) Including contributions of member states which joined EU after 1967, except Austria, Finland and Sweden (which joined in Jan 1996).

(b) Including Austria, Finland and Sweden.

Source: IGC and European Commission

With regard to commodities covered, the Convention has become increasingly flexible in terms of the way in which commodities are acquired and the recipient country actions which can be counted against obligations of signatories. Commodity coverage was formally expanded to include rice as well as wheat products and coarse grains under the 1980 Convention. Another notable change concerned a switch in the system of evaluating cash equivalent contributions from a fixed rate to 'prevailing market prices' in order to reflect the price variability experienced in grain markets. Further changes occurred under the 1986 Convention, which allowed cereals food aid purchased in developing countries for emergency operations and food security reasons to be counted against obligations. The coverage of commodities was also extended in 1995 to include up to 10% of contributions in pulses provided for emergency operations.

As of 1995, there were 25 signatories to the FAC, including the European Union represented by the Commission and its now 15 member states. Negotiations amongst the signatories began in 1997 for the next convention, and as these were prolonged, the 1995 convention was extended to mid-1999. During these negotiations, Australia unilaterally reduced its contribution for 1998/99 by 50,000 tonnes to 250,000 tonnes due to other aid commitments, thereby underlining downward pressures on commitments.

Effectiveness of the FAC

In the context of the FAC renegotiation in 1997/98, the World Trade Organisation (WTO) Agriculture Committee has asked the IGC to consider the role of food aid in meeting commitments under the Marrakesh Decision and for these to be used to assist low-income and food-deficit countries during agricultural trade liberalisation (Konandreas, 1998). This proposal has given further prominence to questions about the future role of the FAC in contributing to international food

security. These considerations provide the justification for a careful re-examination of the actual performance of the FAC in providing a food-aid safety net.

Relatively early on in its existence, during the world food crisis of 1972–4, the FAC played an important role in maintaining food aid flows. As the IWC (1991:6) notes, following a very poor Soviet crop and the consequent depletion of world grain stocks, 'non-FAC food aid and concessional sales almost disappeared, falling to only 2 million tonnes in 1973/4 . . . (but) . . . aid under the FAC remained steady at around 4 million tonnes as donors continued to honour their minimum tonnage obligations'. However, the extent to which the FAC has subsequently continued to provide an effective safety-net during tighter world cereal market conditions is less clear-cut.

An initial comparison of FAC minimum commitments and flows of food aid indicates that, despite the Convention, annual global flows have varied by up to 20–25% between years. The FAC has apparently had little impact in eliminating such wide fluctuations, in part because actual flows have often considerably exceeded minimum commitments. (Figure 2. 1). Only recently, in 1996/7, were FAC commitments not met, despite substantial reductions and the inclusion of pulses (see below). Unsurprisingly, this pattern also appears to have been replicated at the level of individual donors (as illustrated in Figures 2. 2, 2. 3 and 2. 4). This is confirmed by reviewing three-yearly average cereals food aid shipments as a percentage of FAC minimum contributions (Table 2. 2).

FAC minimum commitments may have been set too low to provide an effective floor, preventing downward fluctuations in food aid shipments following poorer harvests in donor countries. But the way market conditions impact on food aid shipments also depends on the specifics of each donor's budgetary process (Benson and Clay, 1998). This is reflected in different 'best fit' lagged relationships between international cereal prices and shipments (Figures 2. 2, 2. 3, 2. 4, and discussed in Section 2. 2)

However, wide inter-annual fluctuations *per se* may not mean that the Convention has been entirely unsuccessful in helping to promote national food security. Such a conclusion rests partly on the nature of the factors underlying that variability. Have the fluctuations reflected changing needs, such as determined by the scale of conflict, or the intermittent occurrence of severe drought? Or have they reflected changing world cereal market conditions and donor budgetary factors? The answer clearly has important implications. If fluctuations have been driven by changes in demand or need then they may have reflected an efficient and effective use of aid resources. However, if they have reflected supply factors then the FAC may, indeed, have failed to protect low income food deficit countries from the vagaries of international cereal markets.

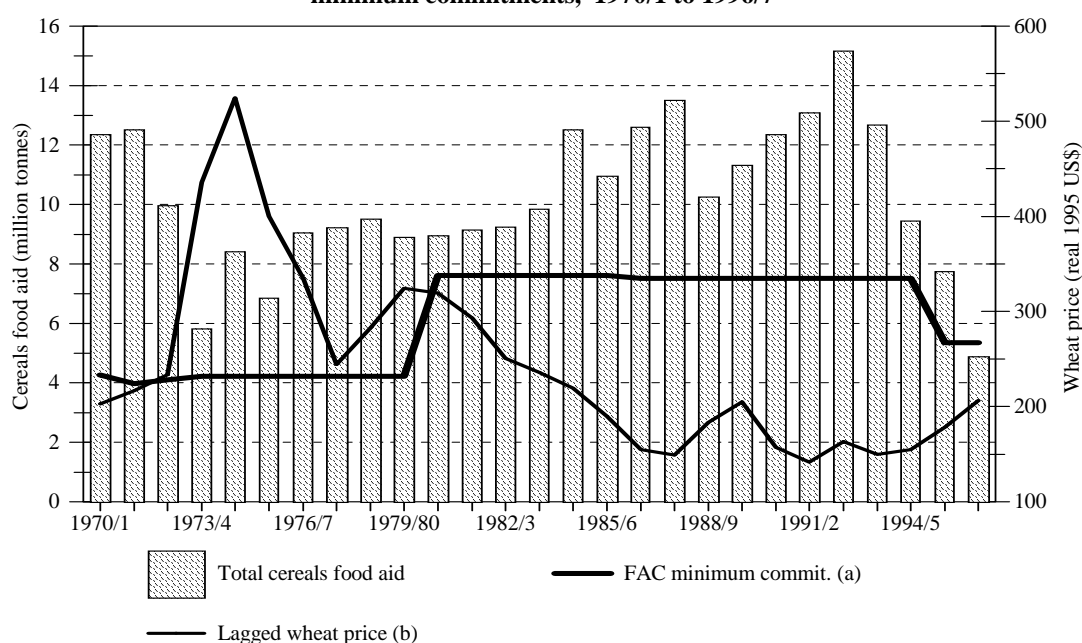
Table 2.2. Three-yearly average cereals food aid shipments as a percentage of FAC minimum commitments (%)

	1971/2–73/4	1976/7–8	1981/2–83/4	1986/7–88/9	1995/6–96/7 ^(b)
EU: ^(a)	79.8	94.9	102.1	132.7	123.2
Community Action	76.8	107.8	98.3	123.2	145.1
National Actions	85.5	84.3	106.8	144.4	99.2
Canada	172.7	188.2	125.5	192.9	101.5
USA	341.3	322.6	188.7	157.3	102.3
Global	223.2	218.9	123.6	161.2	117.9

Notes: (a) Excluding Austria, Finland and Sweden but including Spain (which joined in Jan 1986).

(b) A two yearly average is given for 1995/6 – 96/7

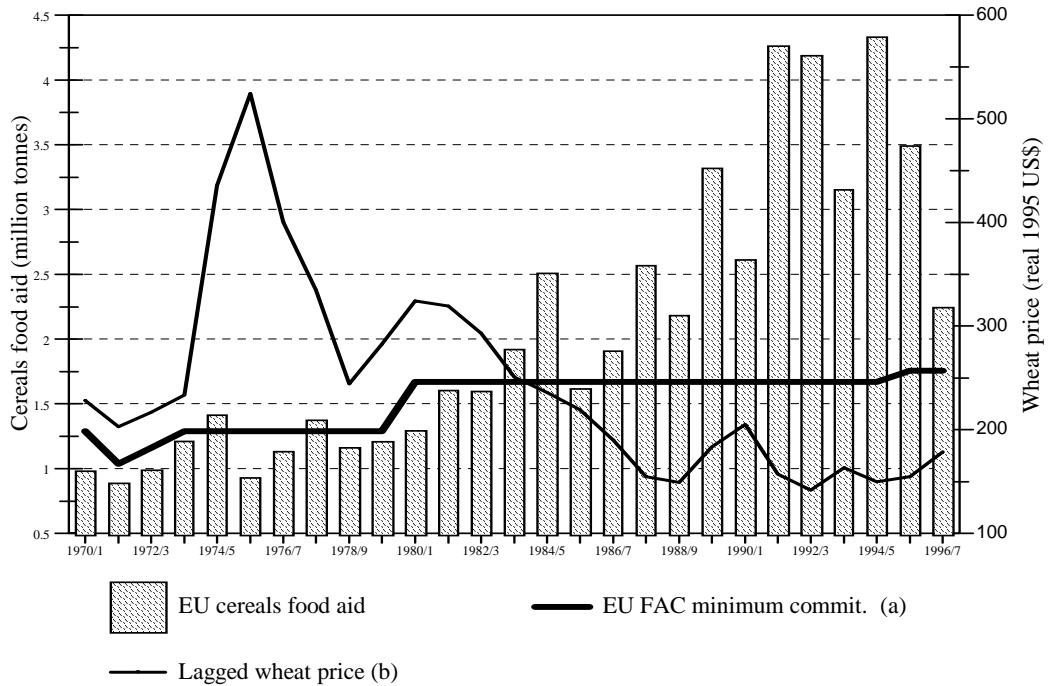
Source: IGC and FAO

Figure 2.1. Trends in global cereals food aid, wheat prices and FAC minimum commitments, 1970/1 to 1996/7

(a) Global minimum obligations rose from 3,974 to 4,100 thousand tonnes at the beginning of 1973.

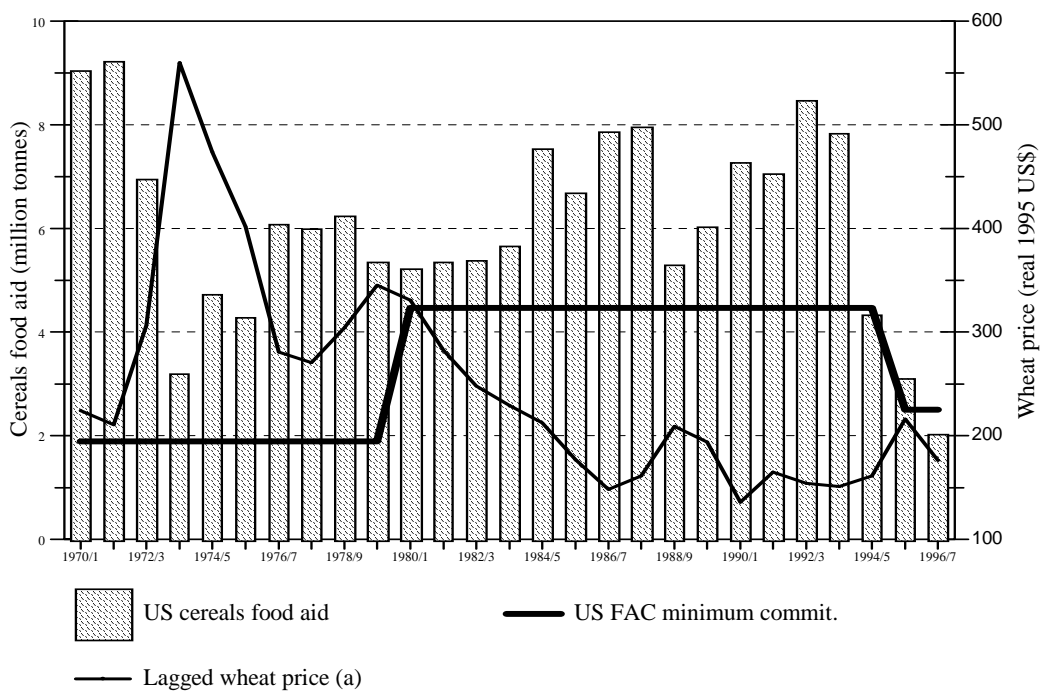
(b) US No. 2 hard winter ordinary wheat in real 1995 prices, lagged 6 months

Figure 2.2. Trends in EU cereals food aid and FAC minimum commitments, 1970/1 to 1996/7



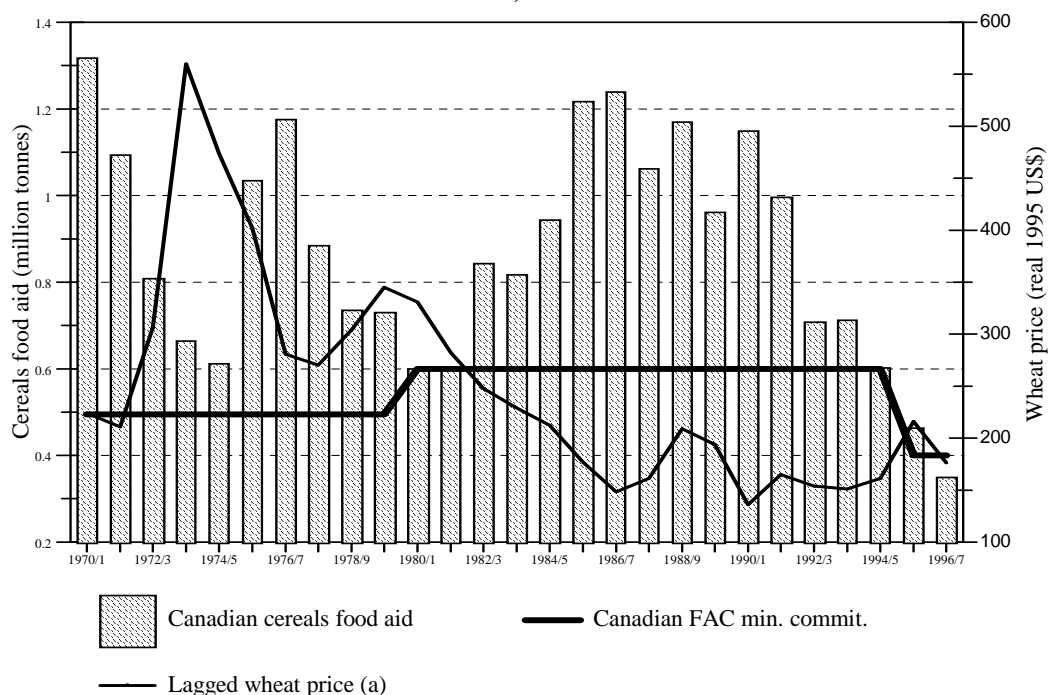
(a) EU minimum obligations rose from 1,035 to 1,161 thousand tonnes at the beginning of 1973.
 (b) US No. 2 hard winter ordinary wheat in real 1995 prices, lagged 18 months

Figure 2.3. Trends in USA cereals food aid and FAC minimum commitments, 1970/1 to 1996/7



(a) US No. 2 hard winter ordinary wheat in real 1995 prices, lagged 0 months

Figure 2.4. Trends in Canadian cereals food aid and FAC minimum commitments, 1970/1 to 1996/7



(a) US No. 2 hard winter ordinary wheat in real 1995 prices, lagged 0 months

Sources for figures 2. 1, 2. 2, 2. 3 and 2. 4: IGC, FAO and OECD

2. 2 A quantitative analysis of FAC performance

The remainder of this chapter considers the role of supply factors in more detail, exploring the extent to which the FAC has protected food importing developing countries against fluctuations in world cereals market conditions, as well as its role in determining the scale of annual flows of food aid. Multiple regression techniques (in logarithmic form) were used to explore the impact of the FAC on both international food security and annual flows of food aid more formally, focussing on the period 1970/1–96/7. Separate regressions were undertaken for the EU, EU Community Actions, EU Member State national actions, Canada, the USA and global food aid. These donors together provided 88% of global food aid between 1970/1 and 1996/7.

A widely accepted test of the effect of food aid on global food security is whether the volume of commodities provided is positively or negatively correlated with movements in world market prices (for example, see Taylor and Byerlee, 1991). Three explanatory variables were therefore tested: a wheat price series² and dummy variables to take account of changing levels of FAC commitments and two extraordinary relief programmes in 1984/5 and 1992/3, both in response to droughts in sub-Saharan Africa. Two FAC dummies were included: first, to capture the substantial upward revision in minimum commitments under the FAC in 1980/1 and, second, the major downward revision as

² The price series was based on that for US No. 2 Hard Winter (ordinary) wheat in US dollar terms, deflated using the US GDP deflator. This price series was selected following earlier discussions with the International Grains Council. No account was taken of movements in other currencies against the US dollar, although this could have had implications for levels of food aid flows from non-US donors. Since wheat constitutes the single most important commodity within total cereals food aid and, with the notable exception of rice, movements in the price of cereals are generally highly correlated, this price series was considered a reasonable proxy for a more general cereals price series.

occurred in 1995/6.³ If the FAC had played a significant role in stabilising annual flows of food aid by providing an effective floor, then food aid flows were expected to be positively correlated with the first FAC dummy variable and negatively correlated with the second. *Ex ante*, it was also hypothesised that annual levels of food aid shipments would be negatively correlated with the wheat price series – that is, the higher the wheat price then the lower the flow of food aid. In other words, it was held that fluctuations in shipments of food aid accentuated the impact of price variability, with food aid flows declining and therefore necessitating increased commercial imports during periods of higher prices. Finally, food aid flows were expected to be positively correlated with the emergency dummy.

A number of regressions were also run to test a range of price lags in recognition of the varying intervals between the programming and shipment of aid provided by different donors. In the US case, for example, food aid is largely budgeted in value rather than volume terms; as a result, inter-yearly fluctuations in volume were expected to be highly correlated with real price movements in the same year. By contrast, over the period of analysis the European Commission's food aid programme has been subject to considerable delays between programming and shipping of food aid actions, as reflected in best-fit estimations for the wheat price series lagged 24 months.

The results, including the best-fit lag for each donor, are indicated in Appendix A. Regressions were firstly undertaken on the wheat price alone; then on the wheat price and emergency dummy variable; and finally on the wheat price, the emergency dummy and FAC dummy variables.

The findings indicate a strongly significant positive correlation between food aid shipments and the FAC dummy both for the EU overall and also for Community and member state actions⁴. This suggests that the upward revisions in minimum commitments under the FAC in 1980/81 resulted in higher flows of food aid during the 1980s and early 1990s. However, except in the case of Community Action, a strong negative correlation was also found with the wheat price series, indicating that wheat prices have also played an important role in determining annual flows of food aid. In other words, the FAC did not prevent large inter-yearly fluctuations in EU national food aid actions in response to changing world market conditions, essentially because minimum commitments were set too low to provide an effective floor. The fact that annual levels of Community Action were not correlated with the wheat price series reflects the fact that the budget for this food aid is fixed in volume, rather than value terms, with additional budgetary allocations in response to major emergencies.

Results of the regression analysis for Canadian and US food aid were more surprising. They suggested that although the wheat price series was typically strongly negatively correlated with the volume of food aid flows, FAC minimum commitments had little influence on levels of shipments.

³ The first FAC dummy variable assumed values of 0 in 1970/1–1979/80 and again in 1995/6–96/7 and of 1 in 1980/1–1994/5. The second assumed values of 0 in 1970/1–94/95 and of 1 in 1995/6–96/7. For purposes of the analysis of EU food aid (including separate analysis of Community Actions and member state national programmes) the first FAC dummy variable was amended to assume values of 1 for the full period 1980/1–96/7, as EU minimum commitments were not revised under the 1995 FAC.

⁴ Additional regressions were also run taking actual food aid shipments expressed as a percentage of minimum food aid commitments as the dependent variable and again using the same wheat price series and emergency and FAC dummy variables, as before, as the independent variables. The FAC dummies were included to capture major shifts in the base against which food aid shipments were being measured. The results obtained were very similar to those reported above, including a typically strong negative correlation between the dependent variable and both the wheat price series and also, in the case of the USA, Canada and globally, the first FAC dummy.

Indeed, although coefficients for the first food aid dummy, which was intended to capture the upward revision in the two donors' minimum commitments under the 1980/1 FAC, were statistically significant, they indicated a negative rather than positive correlation with food aid flows. In other words, for any given wheat price, food aid flows were lower over the period 1980/1–94/5 than over the earlier period 1970/1–79/80, despite the two donors' increase in minimum commitments.

This finding appears partly to reflect the scale of Canadian and US food aid flows during the 1970s relative to subsequent FAC minimum commitments under the Third and Fourth FACs of 1980/1 to 1994/5. In the case of the USA, in eight out of the ten years between 1970/1 and 1979/80 annual food aid shipments were higher than subsequent minimum commitments under the Third and Fourth Conventions of 1980/1–1994/5. Similarly, annual Canadian food aid shipments during the 1970s exceeded subsequent minimum commitments under the Third and Fourth Conventions in every single year between 1970/1 and 1979/80. Thus, the upward revision in minimum US and Canadian FAC commitments from 1980 perhaps reflected less an undertaking to increase levels of food aid than an increase in commitments to levels commensurate with actual food aid shipments over the previous decade.

A second factor perhaps contributing to the negative correlation between flows of US and Canadian food aid shipments and the first FAC dummy has been a statistically significant change in the relationship between food aid shipments and wheat prices between the 1970s and 1980/1–96/7. Regressions for the respective donors over the two periods separately indicate statistically significant lower coefficients of determination on wheat prices in the latter period⁵. In other words, for a given price of wheat, the resulting volume of food aid shipped by the USA and Canada was higher in the 1970s than in the latter period (Appendix A). The apparently negative correlation between food aid flows and the FAC dummy for 1980/1–94/5 could therefore partly reflect the fact that the FAC dummy has acted as a proxy for factors contributing to this change in relationship.

Finally, in terms of global food aid, the regression results indicated that the substantial increase in FAC commitments in 1980 had no significant impact on the volume of global food aid shipments. Basically, the positive relationship between EU food aid shipments and FAC minimum commitments was negated by the negative correlation between the two respective variables for the USA and Canada. Meanwhile, a strong, negative correlation continued to prevail between food aid shipments and world cereals prices.

Implications for the future of the FAC

The results of the quantitative analysis indicate that the food aid commitments provided by donors under the FAC have failed to prevent a strong, statistically significant, negative correlation between fluctuations in food aid flows and trends in international wheat prices. Had FAC minimum commitments reached the target level of 10 million tonnes recommended by the 1974 World Food Conference then the Convention might have been more effective in stabilising food aid levels. Instead, it has partially failed to meet its underlying objective, thus leaving cereal-importing developing countries potentially vulnerable to simultaneous increases in the cost of commercial

⁵Chow F tests were run to test the stability of the estimated relationships, comparing the results for 1970/1–79/80 and for 1980/1–96/7 with those for the full period 1970/1–96/7. These revealed statistically significant changes between the two periods which the first FAC dummy variable failed to explain sufficiently.

cereal imports (assuming no downward adjustment in the volume of imports) and declines in food aid receipts.⁶

This pattern has been effectively institutionalised under the most recent FAC of 1995 as minimum commitments under the Convention have been reduced from 7.6 to 5.3 million tonnes. This allowed substantial reductions in shipments in the immediate wake of an increase in international cereals prices to levels not seen since the early 1980s. Moreover, even then, although donor obligations were met in 1995/6, provisional data for 1996/7 indicated a shortfall of almost 0.3 m tonnes (in wheat equivalent). If donors were not allowed to include food aid in the form of pulses as part of their minimum obligation then the shortfall would have been even greater, standing at almost 0.5 million tonnes (in wheat equivalence) or 9% of minimum commitments. The FAC may have prevented an even greater decline in food aid in 1996/7. However, the fact that commitments had already been cut, in part as a short-term response to tighter market conditions as well as budgetary difficulties of certain major donors, effectively reduced the potential role that the FAC might have played. This turn of events may be repeated in 1997/8 as uncertainties about the availability of food aid continue.

The apparent failure of the FAC to meet its objective raises questions about whether there is a continuing role for minimum levels of food aid under a renegotiated FAC. Although the current level provides some floor, much of it is effectively accounted for by programmed commitments of relief and project aid and multi-year commitments to some recipients. This leaves little flexibility to respond to any substantial new emergencies. Thus, might it be more appropriate to rethink obligations in terms of the two generally agreed areas of need for continuing food aid: the food aid requirements of those affected by emergencies, refugees and displaced persons and the food assistance required to prevent situations of highly food-insecure groups degenerating into crisis? This would require a definition of needs in terms of groups rather than balance sheets, perhaps linked to commitments to make the necessary funding available rather than to provide legally binding quantitative minimum obligations.

WFP has proposed a reformulation of the FAC towards a more people-centred approach, concentrating a greater proportion of food aid towards the most vulnerable people in the poorest regions of developing countries (WFP, 1997a). It further suggests that a combination of incentives and discounts might be incorporated within the FAC to encourage the best use of food aid. WFP would also like donor contributions to be accounted for in their totality, including the cash expenditures that directly support food aid operations, in part because a more people-centred approach to food aid inevitably involves a higher cost for food aid operations. At the moment,

⁶ Two other analyses support the findings of a strong statistically significant correlation between food aid flows and world cereals prices. First, Shapouri and Missiaen (1990) conducted a similar analysis of domestic factors determining total volumes of food aid provided by each of the US, the European Community and Canada. In the case of the US, they differentiated between food provided under PL480 Title II, other PL480 programme food aid and total food aid. Multiple regressions using an ordinary least squares estimation in linear form were run, with grain stocks, grain price, government budget agricultural outlays and a dummy variable to take account of extraordinary relief operations in recipient countries as explanatory variables. In the case of the US, a dummy variable was also used to represent the political party of the incumbent President. Regressions were run for 1961–86 for the US and 1970–86 for the EC and Canada. Overall, strong relationships were found.

Second, Eggleston (1987) also undertook a statistical analysis of the factors determining levels of US food aid over the period 1955–79. He found a positive correlation between the level of or changes in US agricultural surpluses and levels of PL 480 aid, with an R^2 of 0.67. The other two explanatory variables: per capita food agricultural production in recipient countries and a dummy variable indicating the party of government in the US, were not found to be significant.

Related analysis was also undertaken by Benson and Clay (1998) to explore the extent to which food aid flows to Eastern Europe and the former Soviet republics were additional to flows to traditional food aid recipients. The analysis presented in this paper, which also models the determinants of fluctuations in food aid flows, effectively draws on this earlier analysis.

obligations are met in volume terms, leaving considerable scope for meeting obligations at very different costs ranging from free-on-board supply to transport up to the point of distribution. As such, costs may range from perhaps \$150 to \$800 per tonne (Clay et al, 1998).

Therefore, is a shift in emphasis of the FAC away from a minimum quantitative commitment towards one related to need perhaps more appropriate in view of the decline in the use of food aid as a means of agricultural surplus disposal? Food aid increasingly competes directly with other forms of assistance for donor funding and, as such, needs to be justified as an effective use of resources. This objective might not be met by securing higher minimum quantitative food aid commitments, as would be required to ensure that the FAC plays a greater role in stabilising food prices, but could be, through some form, of obligation linked to need.

3. National Food Security and Economic Development

The effectiveness of food aid in contributing to national food security is considered from a number of perspectives in this chapter. First, there is an examination of the consistency between donor objectives and national food security as an overall goal. The provision of crisis support in the context of transitory food insecurity raises quite different issues from those of supporting development. There are also a number of long standing issues concerning the national economic and sectoral implications of food aid, including the actual additionality of food aided imports and direct impacts on local agricultural markets and production. Programme food aid is also used to provide budgetary support and monetization of project assistance is undertaken in support of food security. All these issues are considered separately.

3.1 Donor objectives and allocations

Major national food security concerns are widely understood to be those of assuring the availability of food in the short term, by combatting problems of production variability and financing constraints on supply. In the longer term, some combination of increasing production and financial ability to import determines a country's capacity to assure food availability. In practice, assessment of food aid's performance in contributing to national food security needs to take into account the fact that historically food security has not been the sole objective in providing food aid; in particular, bilateral assistance has been influenced by foreign policy and agricultural trade goals. There is a further need to differentiate as far as possible the effectiveness of programme, project and relief food aid in contributing to national food security. However, where sectoral impacts are concerned, it is difficult to isolate the impact of a particular component of food aid or the role of an individual donor.

The Joint Evaluation of EU Programme Food Aid (Clay et al., 1996) and a number of other recent studies (for example, Herrman et al., 1990; Shapouri and Missiaen, 1990) show that the relationship between the formal criteria and indicators which donors have cited as influences, such as per capita GDP, balance-of-payments problems and food availability in recipient countries, only partially explain food aid allocations.⁷

There is an observable but relatively weak targeting of food aid on LIFDCs. For example, the FAO in 1995 identified 31 excessively food-import-dependent 'poor' countries, and these accounted for 39% of global and 43% of EU food aid. Countries affected by humanitarian crises involving substantial neighbouring refugee populations feature increasingly in allocations (FAO, 1995). This explains the substantial share of food aid in the early 1990s to Ethiopia and Mozambique, as well as to Kenya for Somalian refugees, to Malawi for Mozambican refugees and to Pakistan for Afghan refugees.

⁷ In the early 1990s EU food aid was concentrated on a few recipients, whilst relatively small amounts went to over 100 countries. The top five recipients (Ethiopia, Bangladesh, Mozambique, Egypt and Sudan) accounted for 45% of total EU food aid to developing countries and 32% of that to all recipients including the economies in transition. The top 20 countries accounted for some 70% of the total to all developing countries and over half the total to all recipients. This pattern suggests the diverse factors influencing allocation decisions that result in a large number of countries receiving food aid directly as bilateral aid or indirectly through NGOs and international agencies.

A number of more particular regional and country-specific factors also influence allocations. Conspicuous examples are the political and commercial considerations that made Egypt the largest single recipient of food aid from the late 1970s to the early 1990s and also made Tunisia an important recipient (Table 3. 1). Similarly, Nicaragua was a major recipient of EU support, and the US provided substantial food aid to other conflict-affected Central American states until the decline in violence in the early 1990s. The large number of small, often single-year allocations noted by the EU Joint Evaluation can presumably also be explained by the specifics of individual donor-recipient relations.

Table 3. 1. Top ten recipients of global cereal food aid

1985/86		1990/91		1996(a)	
Country	000t	Country	000t	Country	000t
Egypt	1799	Egypt	1864	Bangladesh	678
Bangladesh	1287	Bangladesh	1356	Ethiopia	477
Sudan	904	Ethiopia	894	Korea, DPR	476
Ethiopia	793	Poland	742	Rwanda	339
Pakistan	384	Jordan	481	India	296
Sri Lanka	366	Romania	480	Georgia	283
China	290	Mozambique	454	Fmr Yugo	227
El Salvador	278	Sudan	453	Armenia	215
India	257	Peru	371	Angola	207
Mozambique	252	Tunisia	348	China	170
Top 10 as a % of global volume:	61		60		51
Total number of recipients:	96		97		111

Notes: (a) Calendar year deliveries
(b) Former Yugoslavia

Source: FAO; WFP Interfais

The recognition of the need to give food security higher priority appears to be reflected in the recent re-allocation of much diminished levels of food aid since the mid 1990s, as reflected in the top 10 recipients for 1996 (Table 3. 1). Similarly the European Commission, in implementing the new food security-based policy, has explicitly attempted to reduce the number of recipients (EC, 1996). In terms of programme food aid the WFP has also embarked on a rationalization of its programme, phasing out activities in the middle-income and newly industrializing countries of Latin America and South-East Asia.

Transitory food insecurity

In a crisis situation donors have typically utilized different food aid instruments as necessary both to assure availability of food, and directly and indirectly to address the needs of affected populations.

Consequently, humanitarian crises often involve *programme food aid*, the primary objective being to finance additional food imports in acute, ie. crisis-deficit, situations where, in the absence of food aid, there are judged to be risks of intensified problems of undernutrition among vulnerable groups and associated problems of social deterioration and even famine. Recent evaluations find that such aid has frequently made a positive contribution to combatting short-term food insecurity. However, this positive impact is often vitiated by inefficiencies in programming and implementation.

Where there are already established *food assistance projects*, such as food-for-work and supplementary feeding programmes for pre-school and school-aged children, these can provide additional flexibility in coping with transitory food insecurity, and they have been expanded in crisis situations, for instance in Bangladesh and Ethiopia. However, only when such operations involve a significant part of the food supply and marketed surpluses can these be used as a vehicle for affecting national food security. There are also potential conflicts of objectives between short-term food security considerations and the viability of projects in contributing to longer-term human development and the creation of assets. Finally, in countries where food assistance already involves a substantial proportion of the population, for example in conflict-affected Mozambique, then *relief aid* is an effective way of addressing intensified food insecurity (GTZ, 1993; Legal et al., 1995; Tschirley et al., 1996).

Since the mid 1980s, the UK has accorded priority to *relief assistance* and countries affected by current emergencies. Thus in 1992/93, in determining responses to the southern African drought, food aid was targeted on Malawi because of institutional weaknesses, and in Mozambique, where markets were barely functioning, direct import support for food assistance programmes was considered appropriate. In contrast, financial support was given to Zambia and Zimbabwe as a contribution to covering the widening balance-of-payments gap resulting from the drought, including additional food imports.

The challenge for donors working with governments of affected countries, as well as NGOs, is to ensure that food aid instruments are used in combination with other possible forms of support to provide the most effective response to transitory food insecurity. The strong preference which countries in southern Africa are currently indicating for cash or finance-based responses to a possible major drought in 1997/98 indicates a recognition of the inflexibilities and inefficiencies associated in practice with food aid. These problems are illustrated in Box 1 and Figure 3. 2 for Zimbabwe and were also documented for Zambia and Kenya in the Joint Evaluation of EU programme food aid (Legal and Chisholm, 1996; Hannover et al., 1996). Where public institutional capacity and the effective integration of the marketing system permit, financial assistance for additional food imports is likely to be more appropriate than food aid. Where food assistance programmes are appropriate, these should be resourced from local markets if supplies are available so that excessive price spikes can be avoided (Buckland et al., 1998).

Box 1: Coping with Drought in Zimbabwe: Comparative Advantages of Financial and Food Aid

When Zimbabwe was affected by ‘the drought of the century’ in 1991/92, the government embarked, albeit after a delay, on a response strategy that included seeking both financial assistance and food aid. The threat to overall food availability and stability posed by a massive reduction in cereals production and low stock levels led the government to organize commercial imports. Some donors, including the UK, Germany and the World Bank, contributed to financing these imports with additional support and reallocation of already committed funding. The government used commercial credits and also drew on an already negotiated IMF arrangement to cover the foreign-exchange gap. The major food aid donors responded with both programme and emergency relief commitments, the latter to be channelled through WFP and international NGOs into rapidly expanded supplementary feeding programmes. These imports were all part of a major logistical exercise covering the southern African region, organized by WFP with donor support and the unprecedented involvement of South African and parastatal rail and port authorities as well as SADC member countries.

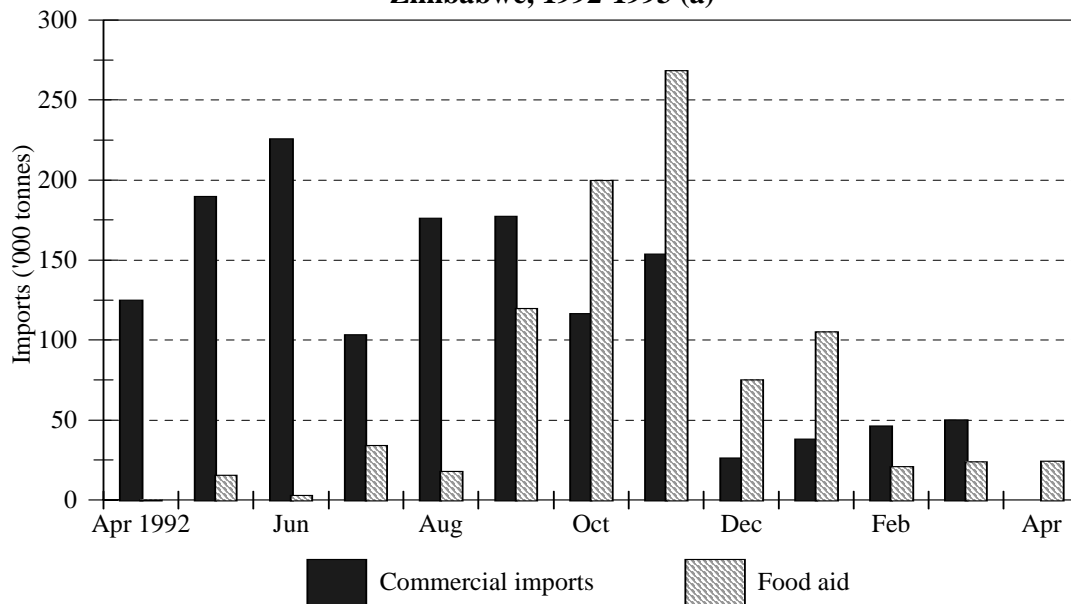
The arrival of large-scale commercial imports averted a crisis of cereals availability, but only just. These were followed by shipments of programme aid. Emergency relief organized through NGOs only began arriving ten months after the declaration of an emergency and when the drought had broken. Food assistance programmes were resourced initially by borrowings and NGO local purchases from the maize marketing board and the market. An additional programme of supplementary school feeding was established to utilize the relief food aid that could not be reallocated for any other purpose. Subsequent assessments indicated the value of supplementary feeding in terms of sustaining the nutritional status of potentially vulnerable groups and attendance and performance in schools. The UK gave food aid as partial support to continue school feeding. This involved Christian Aid partners purchasing food locally after the end of the drought. However, problems of sustaining such interventions locally have not been resolved and this temporary assistance was terminated.

Food-for-work was another response which provided employment and livelihood support to households in drought-affected areas. There were, however, considerable problems of organization and these programmes had a ‘make-work’ character (Webb and Moyo, 1992). Many interested recipients received less than the official rations due to delays and poor targeting and depended on local market purchases (Eldridge, 1997).

Subsequent drought-preparedness measures indicate the lessons drawn in Zimbabwe from the 1992/93 experience. Confronted with a potentially severe drought crisis in 1997/98, the government and the NGO community have indicated a strong preference for cash-based rural works programmes. Following the 1992/93 crisis a food security reserve has been reintroduced to minimize the need for highly expensive crisis-related food imports. As an alternative mechanism for financing a drought crisis programme, a drought levy on the agricultural sector has been proposed.

Source: WFP

Figure 3.1. Monthly arrivals of cereals food aid and commercial imports to Zimbabwe, 1992-1993 (a)



(a) Shipments based on date of arrival at southern African ports, not on date of arrival in Zimbabwe. After allowing for the problems of overland transport, the food was probably available for distribution in Zimbabwe some 4-6 weeks after its arrival in port.

3.2 Economic development and sectoral impacts

If a crisis has often been the initial rationale for food aid, the continued provision of commodity aid has typically been based on a combination of more specific objectives, including promoting food security and providing balance-of-payments support for wider economic development. In addition, the provision of budgetary support from counterpart funds has been linked to both general economic and sectoral goals. Historically, programme aid has in most cases been provided as a form of import support to the balance of payments and general budgetary support, depending on the envisaged extent of the additionality of food supplies (Bruton and Hill, 1991). Whatever the formal position under the Rules of Surplus Disposal, which requires that food aid is additional to normal imports (FAO, 1980), programme aid has partly substituted for commercial imports and partly involved additional imports.

Supporting food security has in practice encompassed a wide range of more specific objectives, including general agricultural development or, more narrowly, extra food production, and poverty reduction objectives. The support in turn has two aspects. First, food aid is committed within the framework of wider macroeconomic and sectoral policies and is expected to contribute to objectives which are often presented as 'policy reforms', to liberalize the economy. This has most obviously been the case for the US, the major provider of food aid, from the Marshall Plan up to and including its programme for major recipients such as Bangladesh, Egypt and Peru during the past decade (Clay, 1995). In contrast, the EU and the Member States have rarely been involved in linking food aid to explicit macroeconomic or sectoral policy conditionalities. This is despite statements in favour of using food aid to assist signatories to the Lomé Convention in counteracting the social consequences

of structural adjustment.⁸ Again, the recently adopted EU food security policy implies that commodity aid and finance from the food aid budget lines will be used to support national food strategies (European Council, 1996). That statement is part of a continuing change in the balance of policy objectives.

First, there is a decline in the use of programme food aid for balance-of-payments support purposes as reflected in reduced levels of aid to Bangladesh, Egypt, Nicaragua, Kenya and Mauritania, as noted in the Joint Evaluation (Clay et al., 1996). Increased liberalization of foreign-exchange regimes and improved foreign-exchange positions in a number of low-income developing countries are making balance-of-payments support a less appropriate way of supporting food security goals. Secondly, some donors are substituting assistance to *finance local food purchases* in economies with highly variable domestic food supply levels (eg. Ethiopia, Mali, Mozambique) and in other cases to fund non-food or complementary food security investments. Finally, liberalization of food marketing in a number of economies is changing the institutional framework within which food provided for sale can be introduced into the domestic markets.

A marginal resource?

An assessment of the direct impacts of food aid needs to recognize the scale of the resource transfer involved. Food aid is now concentrated on a relatively limited number of recipient countries (see Table 3. 1) and is a major resource transfer in only a few of them.⁹ In addition to the few major recipients, many developing countries have been receiving small and variable levels of food aid, often including NGO and WFP projects which are marginal in relation to the national economy and food sector. As discussed below, such aid can be considered only in terms of micro-impacts of projects and relief operations on specific groups. The marginal role of programme food aid in relation to public expenditure also explains why donors have come to focus on 'priority' sectors where counterpart funds may be more significant. The implication is that direct impacts will be marginal, whether positive or negative.

Additionality to local production and commercial imports

There is a broad consensus among analysts that approximately 60% of total food aid, other than relief, substitutes for commercial imports (von Braun and Huddleston, 1988; Saran and Konandreas, 1991; ABC/IDS, 1982; USAID, 1989). The balance of evidence is that most programme food aid typically provides balance-of-payments support substituting for other imports. Even in the case of much emergency assistance, the intention is to avoid additional crisis-related imports that would otherwise be a severe funding problem for the affected country.

⁸ Important exceptions include the multi-donor agreement with Mali and support for poverty alleviation programmes in Cape Verde.

⁹ During the early 1990s in only six of the case-study countries covered by the Joint Evaluation, which included 11 of the 12 largest recipients of EU and other programme food aid, did total food aid represent a sufficiently large transfer to have possible substantial implications for national food security. These included situations of conflict and immediate post-conflict reconstruction (Ethiopia, Mozambique), economies highly dependent on food imports (Cape Verde and Mauritania), Bangladesh where there are large social safety nets resourced by food aid, and temporarily affected countries during a drought-related crisis, such as Zambia in 1992/93.

However, a second counterbalancing factor highlighted by the Joint Evaluation of EU programme food aid is the effects of delays, uncertainty about aid negotiations, timing of deliveries, poor selection of commodities and general rigidities. Most donors have difficulty in postponing or cancelling a shipment or substituting financial assistance for already committed food aid. Frequently this results in higher levels of imports than the recipient government intended or the private sector organized. Such a significant discrepancy between intended and actual outcomes has implications both for local production and, because of problems in disposing of commodities, for the generation of local currencies earmarked for development purposes.

Agriculture and food sector impacts

There is long-standing concern about the potential direct impacts of food aid on agricultural prices and, through interaction with domestic policy, on both the short- and long-term agricultural development of a recipient economy. The debate on the agricultural disincentive issue has continued since the beginning of large-scale food aid in the 1950s, and the consensus amongst analysts is that it remains unresolved. That conclusion has important implications. First, there is a broad area of agreement that direct impacts on agriculture, particularly of cereals as programme aid, are severely curtailed because providing foreign-exchange savings effectively precludes direct price effects on domestic markets. Except in a situation of severe short-term food insecurity, additionality is more an inadvertent consequence of operational mismanagement by donor or importer. Secondly, the scale of the resource transfer is, except for a few cases, relatively small, accounting for only a minor proportion of total imports. Thirdly and Consequently, the focus of the debate has shifted away from generalized disincentive effects *per se* to the relationship between domestic and international import and export parity prices for individual commodities. For example, the limited, largely urban market for wheat and wheat products is most sensitive to the effects of food-aided imports in a number of recipient economies, including much of sub-Saharan Africa.

The selection of commodity type can have considerable implications for the short-term interaction of food aid with other imports in relatively thin, highly segmented markets. The Joint Evaluation (Clay et al., 1996) and the European Commission's evaluation of food security (ADE, 1994) point to the structural features of recipient country situations as determining to a considerable degree the impacts of food aid on agriculture. Small island and micro economies often have high import dependence. Nevertheless, there is a need for sensitivity to the micro commodity-specific elements of food balances. Cereal imports may affect local production of roots, tubers and other vegetables and the overlap through cross price effects in the markets for basic foodstuffs and animal feeds. In the case of war- and disaster-affected economies, the short-term interaction of food aid in relatively thin, poorly integrated markets may be large and potentially highly negative. However, effects are likely to be more localized than in larger, more integrated food systems. Significantly, many of the reported cases of disincentives over the last decade concern such war-affected economies, including Ethiopia, Mozambique and Nicaragua (GTZ, 1993; Tschirley et al., 1996; Weersma-Haworth and Hopkins, 1996). In countries vulnerable to drought shocks, particularly in sub-Saharan Africa, the provision of food aid involves the risk of negative impacts on local markets. Such concerns have been a force behind the promotion of codes of conduct for food aid for the Sahel and the Horn of Africa.

The processes of urbanization and economic development also affect the technology of food consumption. These changes have resulted in the growth in demand for processed foods and those involving relatively simple preparation – wheat/bread, rice, pasta. The growth in demand for animal protein also changes the structure of demand for cereals. These changes, which have often been attributed to food aid, are occurring more generally across the developing world.

Finally, in those lower-and middle-income economies with continuing large-scale structural import deficits, a combination of factors, including political instability and the way liberalization of input and output markets is managed, also affects outcomes. Experiences in, for example, countries as different as Bangladesh, Egypt and Peru, all relatively major food aid recipients over the last decade, point to the importance of agricultural and wider economic policy, particularly on market liberalization and investment incentives for agriculture and structural adjustment in the recipient economy, as the major factor determining impacts.

The interaction of an economy's structural characteristics and the short-term political economic situation determine the agricultural impacts of food aid. An overall assessment needs to take account therefore of the change in geographical and immediate context of large-scale food aid operations which could have significant market impacts. Maxwell and Singer (1979) found, in reviewing 20 case studies from the 1960s and 1970s, that disincentive effects were uncommon. However, most of these recipients were receiving food aid on a regular basis as balance-of-payments and budgetary support to longer-term development. In contrast, the Joint Evaluation (Clay and others, 1996) reports marginal negative impacts in 8 out of 12 case study countries, the large majority of which were affected by an emergency or severe short-term economic crisis. A common aspect of the Southern African drought response in 1992/93 was the late arrival of food aid, resulting in market management difficulties. If large-scale food aid (relative to the recipient economy), is being increasingly used as a crisis response to countries with thin or disrupted food markets, then the risks of agricultural market disruption and disincentive problems may have increased.

Non-cereals food aid

Historically, the availability of commodities has been sensitive to internal donor market management and the search for opportunities for surplus disposal. The now well documented experiences of EU dairy food aid in countries as varied as China, India and a number of African economies, highlights the risks of disincentives at a sub-sectoral level (Ahmed and Huang, 1996; EU Court of Auditors, 1987; Dangroup, 1992). Such aid was invariably intended to provide imports to the local dairy processing industry, which were to be sold to finance the development of dairy farming, especially by small-scale producers. Operation Flood in India apart, dairy aid has hardly been associated with any substantial development of local dairy farming, especially small-scale production. The tensions are severe between sustaining urban demand, including middle- and high- income consumers and the service sector (hotels, public institutions, etc), supporting marketing and processing and also promoting production. The record of poor performance and a changing policy environment, in which public sector involvement in dairy pricing is considered less appropriate, therefore justifies the progressive cutback in dairy aid over the past decade. However, the growth in EU vegetable oil aid potentially raises the same issues for a local economy in terms of tensions between consumer and processing/producer interests.

3.3 Budgetary support and agricultural development

A characteristic of food aid policy debates is the contrast between possibilities for constructive use and the less impressive empirical evidence. A number of analysts have stressed the potential of linking food aid to supporting policy reform affecting agriculture and the food sector, more generally and this has been echoed in policy documents. A few rare cases such as Mali apart, the balance of the empirical evidence is to the contrary (Coelo, 1994). There is little evidence that donors, individually or in co-ordination, have been successful in organizing food aid in support of agricultural development policy. Rather, the widespread process of economic liberalization and sectoral agricultural reform has been occurring within a wider context of international support, and the commitment of many governments to structural adjustment forces. Donors, governments and parastatal agencies have been adapting in the way food aid is channelled leading to a changing, more liberal, environment (Clay et al., 1996: 48–9).

There are two distinct but not unrelated debates concerning the provision of commodity aid for budgetary support. First, import support is provided on a programme basis. Donors commonly see this aid as also providing budgetary support from the local currency counterpart funds (CPFs) generated by the sale of the commodities (Bruton and Hill, 1991). There is, however, an important dissenting view, which has been the position of some donors, including the UK and the Netherlands. In the case of aid provided as balance-of-payments support, the budgetary effects concern the whole of public expenditure and it is therefore not appropriate to engage in attempts to hypothecate specific sources of revenue to specific donor-approved development activities. In practice, such tying is also unlikely to be successful because of fungibility issues. Nevertheless, use of commodity aid for budgetary support has been a continuing aspect of EU Community Action aid. It is part of the financial accountability monitored by the European Court of Auditors. The European Commission and some Member States have also focused on CPF management and use as a way of promoting food security through the provision of food aid.

Regarding the use of CPFs for budgetary support, the most recent review, the Joint Evaluation of EU programme food aid, has reconfirmed methodological problems inherent in determining actual CPF uses, given the problems of fungibility, and establishing their developmental effectiveness. Performance in relation to donor objectives in 12 countries, accounting for over two-thirds of EU programme food aid, was patchy. In most cases information available on the use of CPFs, whether on- or off-budget, failed to establish the genuine limit of additionality in terms of sectoral activities that would not have been undertaken without the use of these funds, whether or not there were bilateral agreements between government and donor specifically hypothecating CPFs for use in a particular sector. It is therefore analytically more correct to describe CPFs as associated with a sector or more specific set of activities. Evidence on the quality of activities associated with CPF use also suggested that performance is often less than satisfactory. There is a general lack of evidence on the functional uses, e. g. construction, salary costs and imports, as distinct from the sectoral allocations, that would contribute to a better understanding of real impacts on, for example, poverty. Initiatives to improve the effectiveness and efficiency of the management of food aid for budgetary support have been attempted, but so far with limited evidence of success. A final, and perhaps most critical, issue concerns the cost-effectiveness of using food aid as an instrument for providing budgetary support (see below, section 3.5).

3.4 Monetization: project and emergency aid

The use of food aid in development projects typically involves the direct distribution of food to targeted beneficiaries, usually as some form of wage-in-kind, ration or food supplement. The impact of such targeted interventions in terms of poverty eradication and combatting food insecurity and malnutrition is considered in the following chapter. However, a widespread feature of project support is also monetization, or the sale of commodities, usually on the open market, to meet local project costs. This most commonly involves *partial* monetization to meet the specified costs of logistics, organization and complementary inputs such as tools or construction materials associated with a direct distribution project. Secondly, there is *full* or 100% *monetization* where food is provided to generate budgetary support tied to a specific project, as in the case of dairy development, food security reserves or price stabilization schemes. Some WFP projects involve the sale of subsidized rations to *closed groups* of beneficiaries outside of normal markets, and use of the sales proceeds for project costs. The WFP estimates that 13% of the commodities it provided for development projects have been monetized in recent years. Of this approximately 5% was for partial, 3% for closed loop and 5% for full monetization (WFP, 1997b). In contrast, the proportion of US Title II development project food aid rose from 7% in FY 1989 to 21% in FY 1995 and almost 40% in FY 1997 (USAID, 1998). With the EU Regulation of June 1996 governing food aid policy and management European NGOs have the alternative of cash in place of food, making monetization unnecessary, unless there are specific local reasons.

Partial monetization is a pragmatic response to a practical reality. Financing local costs is a common problem of much project aid, and in providing only food aid WFP has had to find complementary financial support through co-financing. Similarly, in receiving only food aid from some donors NGOs face the same difficulty. Monetization is therefore sometimes seen as the easiest and quickest way of ensuring availability of cash for particular projects. Nevertheless, the fundamental efficiency problems of using commodity aid as a mechanism for providing local currency support, considered below, suggest that better project planning to include both cash and food resources can make monetization under normal circumstances unnecessary. The marginal scale of most food-aided projects also precludes significant effects of such monetization on agricultural markets and production in recipient countries. Closed-loop arrangements may be appropriate where markets are incomplete, as a context-specific arrangement, but careful assessments of potential leakages are required.

Full monetization, or projects with a high degree of monetization would appear to present problems. The implication is that food assistance is not considered an appropriate form of intervention. The food is being used as a mechanism for generating local currency support. The issues raised are similar to programme aid. Direct impacts from the sale of food, typically on urban markets, are unlikely to have significant positive direct impacts on food security. In-country co-ordination with other food aid imports can be problematic where there is also substantial programme aid. The additional managerial tasks that monetization imposes on the implementing agency and the likelihood of very high transaction costs make this an unattractive way of providing aid in the case of a donor that has alternative financial instruments at its disposal.

Are there circumstances in which full monetization is pragmatically justifiable as a second-best option? From the viewpoint of an operational NGO, monetizing food aid may offer an additional resource, but from a wider perspective this may be a misuse of aid resources. The large NGO social and nutritional programme in Peru targeted at vulnerable groups in poorer areas has been sustained

by local currency support from several food aid donors (Hopkins and Grenier, 1995). Its continuation appears to be sensitive to that support continuing, as a reduction in Canadian aid has shown. In a similar way, several US-based NGOs report how they have successfully used local currency support from monetized food aid to support innovative initiatives in a number of least developed countries. This can now even involve ‘third-country monetization’ whereby food aid is sold in one country and the proceeds used in another country to support a food security initiative (Cekan et al., 1996). But is food in fact an appropriate way to provide local currency when there are other instruments that can be used to support anti-poverty programmes? Are difficult sustainability issues being evaded? The use of food aid to provide local currency support in this way should be demonstrated as an efficient use of aid and not justified as an opportunistic use of additional resources (Maxwell and Templer, 1994).

Monetizing emergency aid

As most donor regulations preclude the sale of emergency aid, this is an apparently little exploited possibility (Peppiat and Mitchell, 1997). However, Dreze and Sen (1989), drawing upon experience in India with the Maharashtra Employment Guarantee Scheme, consider the possibility of combining market intervention that involves sales of food (an injection of food into the local economy) with use of the proceeds to fund a cash-based programme of entitlement support. In practice, something similar was attempted in Southern Africa in 1992/93 and again in 1994, when donors agreed that the proceeds of the sale of programme food aid as emergency support would be used to finance drought relief programmes, for example in Zambia (Legal and Chisholm, 1996).

3.5 Superiority of financial aid

Finally, there is the critical issue of cost-effectiveness which is outside the scope of this paper. The transaction costs associated with commodity aid plus the costs of time by commodity source and method of acquisition suggests that *ceteris paribus* financial assistance for balance-of-payments or budgetary support will be superior to food aid (Abbot and McCarthy, 1982). That theoretical presumption is borne out wherever cost-effectiveness is analysed empirically in a systematic way, as is discussed in the accompanying report (Clay, Pillai and Benson, 1998, chapter 6). The rationale for food aid therefore needs to be made on a case-by-case basis in terms of the specifics of market conditions and institutional capacity, or pragmatically because of genuine aid additionality.

4. Alleviating Poverty and Securing Livelihoods

In the light of the increasing importance of poverty reduction and elimination at the heart of international development efforts, epitomized by the UK Government's new approach to sustainable growth in favour of the poor, a review of food aid's contribution to this objective is timely. This chapter will examine the impact of food aid, in its three forms, as a resource for poverty alleviation and livelihood security.

Programme food aid, as general support to economic development and growth is, obviously, able to have an impact on poverty. But, in theory, it also has the potential to make a developmental impact, either through the direct provision of food assistance or via the generation of counterpart funds (CPFs), channelled to developmental purposes, on- or off- budget.

The justification for project food aid as an appropriate development tool rests on the assumption that it can be used discriminately and so be effectively targeted at the neediest with sustainable results. The arguable improvements that project food aid can deliver include infrastructure development and employment generation through food-for-work (FFW) programmes, improved nutritional and health awareness mediated by mother and child health initiatives, and increased attendance and improved educational performance through school feeding programmes. These sectoral uses of food aid will be considered more fully in the following chapters.

Emergency food aid has a positive short-term impact upon recipients. But its longer-term effects are less clear, particularly its effectiveness at linking in with development and rehabilitation efforts to eradicate poverty and secure livelihoods.

4.1 Programme Food Aid (PFA)

Case-study evidence accumulated during the Joint Evaluation of EU PFA (Clay et al., 1996) indicated that this form of intervention is ineffective in enhancing the household food security of the poorest through the support of direct food distribution programmes. Indeed, the evaluation found that many public ration and subsidy systems discriminate against the poor, with the majority of benefits accessible mainly to urban, public and formal sector employees, the military, the civil service and similar groups. USAID PFA distributions were concluded to have reached only those consumers with purchasing power, thus by their very nature not the poorest (McClelland, 1997).

On occasion, the use of so-called self-targeting commodities – those disproportionately consumed by the poor, eg, soft wheat in Bangladesh and wholemeal bread in Egypt – has had progressive effects as an income transfer to poorer consumers. But the subsidized distribution of such commodities is limited by evidence that they are sometimes purchased for use as animal feed. Self-targeting commodities represent a blunt and inefficient way of achieving an income transfer to food-insecure households.

The directed use of CPFs has also been viewed as a way of targeting PFA to projects aimed specifically at increasing the food security of vulnerable households. Over the years donors have sought to become increasingly specific about the targeting of CPFs, regardless of how they are budgeted. It is difficult, however, to ascertain the developmental impact of on-budget CPFs because

of food aid's fungibility. In cases where resources are provided off-budget, it is also not always possible to conclude that there has been additionality, as they may have triggered a re-allocation of budgetary resources away from the sector to which the CPFs were allocated. Also, in many instances, agreements guiding the disbursement of CPFs have been too nebulous to ensure that donor conditionalities are met. It was difficult, for example, to determine whether any CPF-associated agricultural development projects funded by EU Community Action and the Member States had actually succeeded in prioritizing food-insecure regions or groups. Problems in management and accounting of CPFs also mean that improvements in food security for the poorest are very difficult to achieve.

Policy reform initiatives leveraged by PFA can theoretically benefit the poor if they effect change on issues critical to food security and poverty. But only the US has seen itself as having sufficient weight, in terms of food aid shipments, to engage in bilateral policy dialogue to influence recipient countries' sectoral and macroeconomic policy (USAID, 1989). Donors working in tandem have had only limited success in dialogue with recipient governments on policy issues. Historically PFA has proved to be a blunt instrument for leveraging policy change and indeed can sometimes act as a disincentive to sustainable development, by allowing governments to postpone implementation of suitable policies.

There is no evidence to suggest that PFA is more pro-poor in its impacts than other forms of programme aid. Such conclusions concerning PFA's effectiveness as an instrument for poverty alleviation have led most donors to shift their food aid allocations increasingly to alternative methods of distribution which can, in theory, focus upon particular beneficiary groups.

4.2 Project aid: labour-intensive works

The single greatest resource that most poor people have is their own labour and it has long been argued that this resource can be utilized effectively to address the problems of poverty and hunger, mediated by labour-intensive works (Burki et al., 1976). The nature of these labour-intensive works can vary greatly, ranging from relief works offering temporary wage employment in crisis situations to long-term employment programmes designed to provide secure livelihoods for the most vulnerable (Clay, 1986). Payment has generally been made in the form of either cash or food.

Three questions must be asked with regard to the appropriateness of these labour-intensive works in the context of this Working Paper. First, what impact have these activities had upon poverty and food insecurity objectives? Second, how effective is food as a wage for this type of activity? And third, if food-for-work is an appropriate and effective developmental intervention, what role does food aid have in supporting it?

Livelihood security

The impacts of these rural works programmes with respect to food and livelihood security are highly dependent upon the circumstances in which they are implemented. The State-run Employment Generation Schemes (EGS) in India in which unskilled labourers are guaranteed employment on rural infrastructure works (eg road and soil conservation, afforestation and irrigation), for a cash wage have also played an important role in combatting seasonal malnutrition and insecurity by

providing year-round employment (Dreze and Sen, 1989). Furthermore, the EGS has been found to improve livelihood security by reducing the income variability of labourers by 50% in comparison with those employed in non-EGS villages (Dev, 1995). The Bangladesh FFW programme has been similarly successful in providing slack season employment for landless and marginal farmers when demand for agricultural labour is low (Ahmed et al., 1995). It has been argued that the success of labour-intensive public works in South Asia has limited relevance to the less densely populated regions of Africa (Clay, 1986).

Others dispute this and contend that local population densities can reach very high levels, making these works a viable strategy for poverty alleviation in this continent also (von Braun et al., 1991). There are notable examples where FFW projects have been expanded during short-term food shortages, allowing the distress migration, which would have otherwise occurred, to be avoided (CIDA, 1998). A household food economy analysis of the Tezeke Lowlands in north-east Ethiopia (SCF, 1997a) indicated that relief works during poor crop years have allowed the poorest households in this region to meet their food needs without resorting to migration to Gonder and incurring the detrimental effects on community and family life, as well as future livelihoods, that this move would inevitably have. Indeed, the relief distribution in this instance has enabled some of the poorest households to increase their asset base by freeing them from the usual overriding preoccupation of meeting their daily food needs. Others cite the experience of successful schemes in Niger and Zimbabwe (Webb, 1995; Webb and Moyo, 1992). However, the apparent success of such schemes is also disputed, especially in a crisis context (Devereux et al., 1995; Eldridge, 1997).

Problems regarding the effectiveness of these projects have largely been encountered where rural works, with the short-term goal of providing food to the hungry, have also been intended to have long-term sustainable impact (CIDA, 1998). Public works projects cannot effectively achieve both goals simultaneously and should generally have one or other as their primary objective.

Asset creation and sustainability

A recurrent theme in the literature is the appropriateness or quality of investment undertaken through labour-intensive rural work where income generation through employment creation is the primary objective. There is considerable controversy regarding the sustainability of assets created through these works and thus the ability to have an impact on longer-term food security and poverty reduction goals. A review of CIDA's multi-year programme in Ethiopia (Rempel, 1997) found it impossible to determine whether its goal of increasing long-term, sustainable household food security had been achieved. Little attempt has been made by NGOs to measure the contribution of the assets created to increased sustainable food production, nor indeed what contribution might be made when the assets have matured.

Sometimes the assets are of questionable quality and have frequently been left to deteriorate. WFP-funded agro-forestry projects in Ethiopia, for example, which created physical conservation structures and tree plantations, have been lost because of lack of maintenance. Similar widespread problems raise the question of the degree to which the assets created reflect the needs and interests of participants and the wider community, or the technical and administrative capacity of the implementing agency. The involvement of communities and beneficiaries in project planning stages is all too rare, and risks a feeling of lack of ownership on the part of the community towards the assets created being translated into lapses in maintenance and upkeep.

The long-term success of all works projects ultimately depends on the rights of beneficiaries to the use of the assets they have created and are expected to maintain. Clear tenure and usufructuary rights are rarely established beforehand and, as the WFP evaluation elucidated (Chr. Michelsen Institute, 1993a), the long-term benefits of the infrastructure created have often been appropriated by the better-off residents. Even the redistributive taxation measures implemented in the EGS in India have failed to redress this imbalance (Hirway and Terhal, 1994).

Too often operational and technical problems have also hampered the developmental effectiveness of FFW projects. For example, the small-scale CIDA-funded projects implemented in Malawi, including construction of communal tree plantations, primary schools and seed gardens, were frustrated by a lack of critical non-food inputs and irregular food delivery (Vandenberg, 1997). The tripartite evaluation of WFP development activities also noted that the mobilization of non-food items was not always successful or timely, and was a key aspect of project failure.

Targeting the poorest

The performance of public works in successfully targeting the poorest is mixed for both cash and food-based employment schemes. The EGS in Maharashtra State, India, has over 90% participation by the poor, an increasing proportion of them women. The Rural Maintenance Programme (RMP) in Bangladesh employs destitute women for a cash wage in farm-to-market rural road maintenance and also has a 95% success rate according to the strict targeting criteria used (Guest, 1997). Furthermore, the wider Bangladesh FFW programme which pays wages in wheat also reported effective targeting of the project to the poor with a large female participation rate (Ahmed et al., 1995).

Recent assessments of targeting practices in Ethiopian FFW interventions (Sharp, 1997) found that for a number of projects, less vulnerable members of the community were benefiting disproportionately. This is, in part, because these households are more likely to have surplus labour and so be able to access FFW opportunities without sacrificing other sources of income. Often non-competitive payment rates also preclude participation by the neediest as they provide inadequate income to support the poorest households. Once again, the unintentional effect of targeting practices may actually be to discriminate against the very people the project is designed to reach. Evaluation of WFP-supported projects also found that the benefits, in terms of food as a wage, very often accrued to the less vulnerable. Government employees in Ghana were part-paid with food aid for work on agro-forestry projects (Chr. Michelsen Institute, 1993b), and landowners were comparatively greater beneficiaries of rural development projects in Pakistan (Chr. Michelsen Institute, 1993c).

As female-headed households are typically more labour-constrained and thus less able to participate in such projects without harming on-farm production and future livelihoods, these works may in practice also discriminate against them. Rural development works in North West Frontier Province in Pakistan earmarked a proportion of workdays for women, none of which were utilized in the first three years of the project. Training programmes in support of rural women in the same region reached only 20% of the target, and it was felt that food aid was an insufficient incentive. Similarly, agricultural projects in Malawi specifically aimed at increasing the household food security of female-headed households were, in practice, supporting a number of male-headed households.

Moreover, the leadership of village-level farmers' groups assembled by the project was predominantly male (Chr. Michelsen Institute, 1993c).

Cash or food wages?

Mode of payment should be governed largely by local conditions including the market situation and the specifics of likely household food consumption behaviour and indirect effects on non-participating vulnerable groups. In circumstances of food scarcity, payment in kind has the obvious advantage of providing food to the hungry whilst simultaneously augmenting local supplies. If food supply is highly inelastic in the short term, then cash payments without a complementary injection of food would raise prices for excluded groups (Basu, 1996). In circumstances of high inflation, payment in food is also probably the more appropriate means as it maintains the real value of wages to the beneficiary. There is also some evidence that the use of food as a wage can lead to increased calorie consumption at the household level, although in itself this does not constitute a sufficient reason for payment in kind (the nutritional implications of this are discussed in Chapter 5).

A proclaimed strength of food, compared with cash-wage employment, is that this resource provides an effective means of reaching specific beneficiary groups. This assertion is based on assumptions about the self-targeting nature of food wages, which contend that only the poorest will work for self-targeting commodities, at wages set below the market rate, or will engage in the strenuous labour typically required in FFW activities. However, some highly vulnerable groups, such as the elderly and the disabled, as well as those living in areas too distant to allow regular travel to worksites, may be excluded. Some of the more successful continuing rural works programmes, from the vast scale of provincial programmes in China (Zhu and Jiang, 1995) and State Employment Guarantee in India (Hirway and Terhal, 1994) to small island programmes in Cape Verde (Ferreira Duarte and Metz, 1996), combine cash wages with complementary marketing interventions to ensure food availability and stable, often subsidised, prices for consumers.

Delays in the provision and distribution of food commodities have disrupted works programmes, and it was reported that in some Ethiopian FFW programmes, targeted beneficiaries chose not to participate because of their inability to defer payment until commodities became available (Sharp, 1997). In circumstances where the timely provision of food commodities cannot be guaranteed, payment in cash is likely to be preferable. Concern has also been expressed about the possible disincentive effects upon beneficiary agricultural production of food wages. But it appears that there is little empirical evidence of reduced involvement in farming by participants of major FFW programmes in Ethiopia (Maxwell, 1991) or Bangladesh (Ahmed et al., 1996).

Cost-efficiency is obviously a crucial issue. A cash wage appears to be more efficient than food payments where handling and transportation costs are high. In Bangladesh it is estimated that cash rather than food wages could reduce public works programme costs by 25% by avoiding commodity-related transaction costs (Ahmed et al., 1995). Cash payment also obviates the need for beneficiaries to sell a portion of their food wage, when it constitutes a large proportion of household income, in order to meet other needs. This involves further transaction costs which are often ignored in cost-effectiveness calculations.

To sum up, the choice of mode of payment should be largely determined by market functioning, especially when a crisis event has occurred, and targeting considerations. When markets are functioning relatively efficiently, cash payment may be a better option since it can be more easily

monitored; it creates demand for local food production and is easier to handle. Where markets are poorly integrated and there are serious imperfections or there is high inflation, payment in kind may be the best option in the short term. A 'mixed' food and cash wage may sometimes be the preferable option as it provides greater flexibility for both implementing agencies and beneficiaries. A further consideration is the indirect impact of intervention on those excluded from the programme. The appropriate choice for payment in a rural works programme should also take account of other complementary interventions. The accumulated evidence about mode of payment underlines the need for decisions to be made on the basis of a careful consideration of local conditions.

The role of food aid

Food aid can support labour-intensive public works in three ways: through the provision of commodities for payment in kind or for public distribution systems which can then be drawn upon for wage payments, or through the generation of local currency to finance these works. The first option has predominated, to the extent that food aid and FFW have become almost synonymous in much of the literature.

The issue of cost-efficiency, already mentioned, is fundamental to the question of whether food aid is the most suitable way of supporting FFW projects. Transaction costs including international and local transportation and storage and handling costs can be prohibitively high, raising questions about the efficiency of the direct use of food aid commodities. Another factor is the choice of commodity with which to make payment. If the commodity selected is determined by the existence of exportable surpluses and poses problems of acceptability to the consumer, there is little basis for building public works programmes around food aid. These two problems are being addressed to a certain extent by the trend in increased purchases of commodities in developing countries. However, cost-efficiency remains an important consideration.

The sustainability of programmes supported by food aid is also a crucial issue. In the short-term, fluctuations in local food supply can make it sometimes inappropriate to import food. But switching between food and cash and between imports and local acquisition to take into account these fluctuations is technically difficult. In the longer term there may be funding problems, especially for relatively large rural works programmes, such as the Bangladesh and Ethiopian FFW programmes. They rely on the willingness of donors to sustain them, as it is unlikely that government will be in a position to substitute the locally produced commodities owing to budgetary constraints. With market liberalization, cash-wage-based rural works may also be more suitable, than FFW. Monetization and the use of sales proceeds to fund cash for work could then have a transitional role in assistance.

In summary, the empirical evidence on the role of labour-intensive public works in achieving poverty reduction and long-term livelihood security is mixed. The record of sustainable asset creation is poor, but there have been many positive impacts on short-term food insecurity in situations of acute food shortage and also in providing a safety net for the chronically poor. This mixed record is partly the result of over-ambitious project designs which combine incompatible short- and long-term goals, and partly because it reflects the implementation of works in regions or countries to which they are not well-suited.

The role of food aid as a support for effective and efficient FFW programmes appears to be limited to situations of market dysfunction and food scarcity, conditions which are more likely to be found in crisis and post-crisis rehabilitation situations. Under these circumstances, food aid distributed as payment in kind can be crucial in maintaining household consumption at adequate levels, providing that appropriate and effective targeting is undertaken to reach the poorest. There is also a challenge in ensuring a timely transition to cash-based schemes or other activities where there is continuing need for poverty-alleviating, safety-net programmes.

4.3 Project aid: School Feeding Programmes (SFPs)

This type of intervention typically involves the distribution of a food supplement to primary school children, although programmes have been undertaken in secondary schools, universities and colleges. Project objectives, besides improving nutritional status, are concerned with human resource development, and include improving enrolment and attendance, often of girl-children specifically, reducing drop-out rates and enhancing cognitive development and academic performance.

During the 1980s, a series of negative evaluations led to a decrease in the importance accorded to SFPs among donor priorities. It appears, however, that some agencies and governments have recently been returning to SFPs as a means of promoting sustainable development, largely for two reasons. The immediate impact of structural adjustment programmes on the poor has been so regressive in many instances that the role of SFPs in mitigating these negative impacts is being recognized. Also, the greater emphasis on human development as characterized by the UNDP Human Development Index has re-focused attention on the role that food aid has to play in reaching the poorest and most vulnerable, particularly children. It is for these reasons worthwhile to re-assess the role of food aid-supported SFPs.

Developmental impact

Recent evaluations of WFP-supported projects have noted how difficult it is to establish with any degree of certainty how far school feeding goes in improving cognitive function and academic performance (Chr. Michelsen Institute, 1993a). The only area where some positive effect could be ascribed was in the concentration shown by those children who travelled long distances to school. The review of similar USAID-supported interventions was more positive in its conclusions. Programmes in Honduras, Burkina Faso and Bangladesh were all credited with improving enrolment and attendance rates and some anecdotal evidence was provided of better attention spans, learning abilities and academic performance as a consequence of supplementation (McClelland, 1997). The Honduran SFP, Bonos Mujer Jefe de Familia (BMFS), essentially acts as an income-transfer programme rather than a traditional feeding intervention by providing coupons to children in primary schools in areas of severe malnutrition and poverty which can then be used to buy food and other goods or converted to cash. NGOs have also reported positive effects of more conventional supplementary school feeding in post-drought Zimbabwe. They observed reduced levels of school drop-out and also fainting during the SFP and reported an average weight gain of 20% for the children participating (Christian Aid, 1997).

Targeting the poorest

Targeting of these programmes to the poorest and most insecure families has proved problematic. Past research has indicated that those attending primary school are more likely to come from less vulnerable backgrounds, suggesting that SFPs may even discriminate against the neediest. Levels of enrolment and attendance and whether SFPs can influence these appears crucial. The successful 'Nutribun' feeding programme implemented in Jamaica in 1986 which distributes daily milk and fortified buns, effectively reached its targeted beneficiaries as a consequence of the almost universal enrolment rates of primary school children in that country (World Bank, 1989).

The general assumption that SFPs increase the number of girls attending school also appears to be more a matter of belief than consistently established fact, although a successful pilot programme in Bangladesh indicates that this can be achieved. This project targets vulnerable households which have difficulty in sending children to school because of the high value placed on their work, by compensating them with wheat for the loss of child earnings (McClelland, 1997). It has been particularly effective in reaching girl children, because of the requirement that *all* the children must attend school in order for the household to be eligible for participation. These experiences illustrate the importance of considering the local socio-economic conditions when determining the most appropriate form of intervention.

The use of food aid as an effective and cost-efficient way of supporting SFPs appears to be debatable. Evidence of positive developmental impacts is limited, often to pilot schemes where the constraints can be more easily addressed. SFPs appear to have had more success when they have been implemented as income-transfer programmes to the poorest families rather than direct feeding interventions for poor children. The logistical and financial problems in providing and maintaining food supplies and the complementary non-food inputs are clear and undermine the cost-effectiveness of this form of intervention. Moreover, even if project objectives are successfully achieved their long-term sustainability would still be in doubt because of the high proportion of recurrent costs. The tripartite evaluation of WFP suggested that it was unlikely for most programmes that host governments would continue funding to the same level, if at all, were aid to be withdrawn (Chr. Michelson Institute, 1993a).

In choosing how to allocate local funds, alternatives involving lower transaction costs such as reducing or waiving school fees may be more effective in increasing enrolment of poor children (Jackson, 1982). Only if there is convincing evidence that SFPs also improve nutritional status and performance might they be preferable as an incentive to attendance. Nevertheless, in areas with existing high enrolment levels of poor children, or where these can reasonably be achieved, food aid distributions might indeed be a suitable means of making an income-transfer to the neediest families. Where these conditions cannot be guaranteed, benefits are likely to accrue disproportionately to the better-off.

4. 4 Project aid: supplementary feeding programmes

This term is a wide-ranging one and can be used to describe interventions including Mother and Child Health programmes (MCH), Vulnerable Group Feeding (VGF) and Therapeutic Feeding Programmes (TFPs). Besides improving the nutritional status of poor mothers and babies, MCH programme objectives include improved health and nutritional knowledge and practices, and

supplemental income generation through small enterprises and gardening. VGF programmes encompass MCH-style interventions as well as the provision of food to hospitals, orphanages and other institutions. They attempt to go beyond simply dealing with malnutrition to include health education, functional literacy and other forms of training. TFPs target individuals, severely malnourished as a result of some emergency event, be it drought, war or flood, and aim to rehabilitate them and promote weight gain through the use of food rations in conjunction with medical care and supervision.

Like SFPs, MCH and VGF-type interventions received less attention in the 1980s because of inconclusive evidence as to their direct health and nutritional effects and sustainable developmental impact. They are now being re-examined in the light of the increased prioritization of human development and security, in particular of women and children. The poverty, nutritional and health aspects of these interventions are complex and difficult to separate, both conceptually and practically, and are discussed further in Chapter 5.

Effectiveness

Experiences of these projects as long-term developmental interventions have been mixed. Problems have been encountered in linking the direct intervention - the provision of a food supplement - with the overall objectives of the projects. A VGF project undertaken in the Yemen Arab Republic, for example, failed to relate the feeding component to any complementary programme for nutritional or health education.

In contrast, the large VGF programme in Bangladesh initiated in the wake of the famine in 1975, which targets poor, distressed women, was concluded to have positively affected their status within the community and increased their and their children's food consumption and caloric intake, as well as having a positive impact on their economic position (Guest, 1997). The crucial difference between this and less successful projects is the provision of an effective development support package including literacy, numeracy, health and nutrition education and income-earning skills. In general, as the WFP evaluation concludes, VGF programmes do not address the root causes of malnutrition and food insecurity and as such are ill-equipped to act as more than simply food distribution interventions that provide an income transfer, rather than a means of sustainable development (Chr. Michelsen Institute, 1993a). The question remains as to whether a food intervention, supported by food aid, is the most cost-efficient and practical way of achieving objectives even for those projects that did prove successful.

The educational components of some MCH projects funded by USAID were judged to have had some beneficial outcomes, with some evidence of improved breast-feeding, weaning and other health practices but it is likely that comparable impacts could have been achieved without costly food interventions. The positive non-nutritional impacts of these programmes may also only be attained hand-in-hand with non-nutritional costs, for example the creation of dependence on short-term unsustainable handouts at the expense of self-reliance and sustainable development.

Many projects, however, have their origins in, or are considerably expanded as, crisis response measures, assisting displaced and refugee populations or resident populations affected by conflict and acute food insecurity. MCH and VGF interventions, under these circumstances, provide a way of simultaneously addressing a potentially acute nutritional situation and making a targeted income

transfer to affected or vulnerable households. There is considerable evidence that such actions are often the only project option available and are 'supplementary to nothing' (Shoham, 1994). Consequently there *is* an argument for sustaining them as part of a crisis management system, especially where food markets are thin and likely to break down in crisis and where alternative institutional arrangements for intervention are not possible.

To sum up, under the crisis circumstances in which these programmes are sometimes implemented, the combination of severely malnourished individuals and acute food shortages means that food aid, mediated by MCH and VGF-style interventions, is a crucial input for saving lives and responding to immediate nutritional needs. The role of such interventions in a more stable situation of endemic poverty and chronic hunger is more contentious and raises the question of alternative ways of providing safety nets, supporting health education and promoting development in a sustainable way.

4.5 Humanitarian relief

The range of responses to humanitarian emergencies involves all categories of food aid instrument, as appropriate. Programme food aid is used to finance additional food imports as previously discussed. Food assistance projects such as FFW, VGF and MCH may be expanded to provide the necessary flexibility in dealing with acute, transitory, food insecurity and Botswana, Bangladesh and Ethiopia provide much studied examples of so-called 'concertina projects' (Buchanan-Smith and Tlogelang, 1994; Ahmed et al., 1996; IDS/IDR, 1996). Thirdly there is relief food aid provided for direct, free, distribution to affected populations in times of crisis. This chapter does not deal with the uses of project and programme instruments, except to note that the 'relief aid' of some donors may be directed at the expansion of existing projects.

The exact structure of free food distribution programmes is highly situation-specific and varies according to the nature of the emergency involved (Jaspars and Young, 1995). In acute rapid-onset emergencies, emergency food aid is typically provided principally as a means of preventing malnutrition and morbidity. But in other situations, especially more protracted crises, where mortality rates may be close to normal levels, it can act principally as an income-transfer and support to livelihoods for affected populations. The lack of understanding of the dual role that emergency distributions commonly play can seriously weaken the link between relief and development activities.

This link between relief and development is increasingly recognised as crucial in supporting livelihoods and preserving assets as far as possible (Buchanan-Smith and Maxwell, 1994). From the development perspective, this means elucidating strategies for reducing the frequency, intensity and impact of shocks through disaster prevention, preparedness and mitigation programmes such that the need for humanitarian relief is reduced.

From the perspective of emergency interventions, it is crucial that relief programmes do not undermine developmental efforts, that they operate on the same basic principles as development programmes and that they contribute to development goals as far as possible. It has been recognised that the ease with which these linkages can be achieved varies considerably according to the nature of the emergency (Borton and Macrae, 1997). In politically stable and secure countries, withstanding a natural disaster, the continuum is likely to be more straightforward than in insecure and unstable countries suffering a complex emergency.

Many evaluations confirm that relief food aid in humanitarian crises has played a critical role in saving lives and limiting long-term damage to human development. Recent examples include the Rwandan emergency (Eriksson, 1996). Beyond that basic conclusion, there is a mixed record on effectiveness.

One reason for this mixed record is 'too little-too late' syndrome in which the response sequence from the identification of a crisis to the commitment and supply of commodities often means relief aid is provided too late (Buchanan-Smith and Davies, 1996). Under these circumstances the limited amounts of food aid available in the early stages only mitigates rather than prevents the negative effects of the humanitarian crisis – excess morbidity and mortality and difficult to reverse losses of livelihoods. When the aid finally does arrive there is often too much present as the crisis is abating. This is a particular risk when the relief operation is characterised by a lack of coordination amongst donors, or the aid is sent in response to natural disasters from which there is often a rapid recovery. This has led to the development of early warning systems focusing on regions and countries vulnerable to famine. But their record in overcoming this problem is so far mixed (Buchanan-Smith and Davies, 1996).

Evaluations of emergency aid programmes undertaken in response to the southern African drought of 1991/92 noted that relief food distributions prevented mass migrations and the formation of displaced person's camps. This in turn facilitated a rapid recovery once the drought had ceased (MSI, 1994; Callihan et al., 1994). Relief food aid was targeted on countries Mozambique and Malawi, where conflict and problems of governance resulted in market collapse and institutional weakness. Elsewhere efforts were made to ensure that targeted relief complemented measures to assure food supplies and avoid excessive price instability through market interventions as in Namibia, Zambia and Zimbabwe. In some cases including Malawi and Zambia, excessive commitments of relief aid, which could not be easily substituted for other assistance, or halted, exacerbated post-crisis market management problems (Legal and Chisholm, 1996; World Bank, 1995). Indeed, school feeding programmes in Zimbabwe were devised in large part as a way of absorbing excessive food aid. It was concluded that the prevention of severe food shortages maintained regional political stability. Furthermore that the infrastructure developed through the importation and transportation of additional cereal imports including relief commodities brought 'very significant' long-term benefits to regional trade and co-operation. There is evidence that relief responses to drought and other slow-onset crises, is becoming more refined. The role for relief food aid is also diminishing, as compared with support for preparedness including food security stocks and BoP support.

Under circumstances where the formation of refugee or displaced person camps is inevitable, the food distributed is to assure nutritionally adequate and balanced food consumption. The provision of relief and of budget lines tied to donor's FAC commitments, which are typically in cereals, can be an obstacle to achieving this, as in Mozambique in 1992/93 (Clay et al., 1995).

Where a relief operation is protracted, it may also be appropriate to choose commodities according to their economic as well as nutritional value. This is particularly important as camp residents may be totally dependent upon relief rations as their only economic resource and as such they may trade their rations for additional foods not provided in the food basket or for other goods such as fuel, cooking implements and clothing. By considering such factors, the relief distribution supports beneficiary self-reliance and empowerment and links the current crisis to future livelihoods. It has been suggested that complementary cash and food distributions may be the most appropriate step in enabling households to take control of their own lives and livelihoods (Peppiat and Mitchell, 1997).

There is concern that in the longer-term, free-food distributions can impact negatively on beneficiaries; by shifting tastes from locally available foods if inappropriate commodities are distributed; by creating dependency if the transition to more empowering forms of intervention is not undertaken; by creating disincentives to local production, particularly when food deliveries arrive late; and by sometimes perpetuating conflict when the food aid is intercepted by combatants (Macrae and Zwi, 1994).

Rehabilitation efforts often overlap considerably with development activities, as the needs of people whose lives have been affected by conflict or natural disaster are often indistinguishable from those living in absolute and chronic poverty (Duffield, 1994). Some believe that rehabilitation activities should be linked with existing and related programmes and projects and incorporate development principles (Masefield et al., 1997), while others caution against the uncritical application of the continuum concept to complex political emergencies (Macrae et al., 1997). In such situations, eg Sudan, it is argued that the pursuit of developmental strategies may impact negatively upon conflict-affected populations.

The phasing out of relief activities is a complicated process. Although it is generally advisable that an exit strategy is incorporated into any emergency operation, it needs to be flexible and termination of relief food distributions must be sensitive to the rate of recovery in domestic food production. This means it is crucial that an investment is made in gathering information as the crisis is progressing, as well as at the onset, so that operations can be modified in a more timely manner and phasing out activities can be undertaken at the appropriate moment.

Over time, the balance of relief operations has shifted from responses to natural disasters to conflict-related or complex humanitarian crises. This is partly because relief food aid has been recognised as a less appropriate response to rapid-onset natural disasters. The emergency food operations are usually temporary and are normally to do with ensuring that temporarily disrupted markets begin to function again quickly and that affected groups have access. In slow-onset disasters, especially droughts, as the southern African experience demonstrated, relief food aid has a limited role and that may be much diminished except where markets are incomplete. Humanitarian crises and the protracted relief problems that these leave behind constitute the main area where relief food aid distribution has a major role.

4.6 A developmental role in doubt

The now considerable number of evaluations and analyses has narrowed, if not settled entirely, the controversy surrounding the usefulness of food aid as an input for sustainable development. As the 1993 evaluation of WFP pointed out, food for development is a frequently cumbersome resource, demanding specialist expertise and organization (Chr. Michelsen Institute, 1993a). There are also inherent institutional and community-level problems. It is frequently argued that developmental food aid projects merely act as a palliative, without addressing the root causes of poverty and food insecurity. But supporters contend that food aid provides a unique means of targeting the poorest and most vulnerable whilst assisting long-term development.

PFA distributions have rarely focused on the poor and seldom had an impact on poverty alleviation efforts. A sequence of evaluations has found that programme food aid is an ineffective method by which to increase the income and consumption of the poorest and may even have negative short-term

effects on this group through its consequences for local production. As a result, donors have reached a near consensus that this form of food aid has a role to play only in response to acute emergencies, when there is a temporary food or foreign-exchange gap.

Project food aid takes many forms and there is a wide body of literature to draw on when judging its effectiveness. From this, the rationale for food aid-supported projects appears to be clear and strong in only a limited set of circumstances, namely, situations of food scarcity and/or market breakdown. Project food aid has proved effective when acting as a safety net for livelihoods and food security in circumstances of short-term food shortage or high inflation; as an income transfer to needier families through SFPs where enrolment levels of poorer children are high; as an input in MCH programmes in crisis and rehabilitation situations. It has not been demonstrated to have significant impacts on sustainable developmental objectives either through the creation of assets or in linking with educational and health interventions.

The argument of its advocates, that its great advantage over other forms of aid lies in its ability to target the poorest, especially women, is not *consistently* borne out by the evidence, although many projects did indeed reach their intended beneficiaries. WFP-supported projects, for example, have provided minimal information as to the way in which an impact is made on women through their access to the food distributed, income generated, or assets created. This lack of empirical evidence after 30 years' experience seriously weakens claims that food is a more effective resource than cash for supporting poorer women at the household level. It is crucial that *effective* targeting criteria and practices are defined and implemented in developmental programmes. To paraphrase WFP themselves, the use of food aid as a developmental input is difficult to justify in the absence of effective targeting (Chr. Michelsen Institute, 1993a).

Relief food distributions play a clear and crucial role in saving lives, but their developmental relevance is limited by a lack of clarity and understanding of the ways in which relief and development activities can be better integrated to maximise impact. Greater flexibility and timeliness is required for better results in regions and countries where emergency food aid is likely to remain important. Minimising the potential negative effects of free food distributions requires more innovative programmes of support, particularly for refugees and displaced persons.

5. Improving Nutritional and Health Status

There is a widespread belief that nutritional status is determined solely by the amount and nutritional value of food consumed (Shoham, 1994). Thus the nutritional impact of food aid intervention, on the rare occasions it is even considered, is assumed to be a positive one. In fact, an individual's health status, itself affected by a host of environmental variables, is as important a determinant of their nutritional status as access to food. This is even more apparent in developing countries where the health environment is often poor and adequate health facilities and services are lacking. For children, adequate maternal and child health care are also recognised as complementary factors (Haddad et al., 1996). Indeed, a study in Ethiopia found that differences in food availability and access had a limited effect upon the differences observed in child nutritional status (Pelletier et al., 1995).

Even mild and moderately malnourished individuals are at increased risk of disease because of the debilitating effects on the immune system. Disease in turn can be a significant cause of malnutrition because of the reduction in intake and retention and/or absorption of nutrients. It was found that increases in calories do not automatically translate into improved child health and nutrition unless the high rates of diarrhoeal disease are simultaneously addressed (Alderman and Garcia, 1993). The cyclical nature of the relationship between health and nutrition is such that it is increasingly recognized that adequate health and environmental inputs must be provided alongside food interventions for the latter to have any effect on nutritional status. The disease burden of the environment must be minimized through immunization, water, sanitation and health education programmes, and the scale and quality of health services accessible to the vulnerable must be improved, for any effects of the feeding intervention upon nutritional status to be observed. Indeed, systematic reviews of food-based interventions alone indicate little measurable impact on nutritional status, morbidity or mortality levels except in crisis situations (Clay, 1997).

Increasing emphasis is also placed on the role of micronutrients as well as overall calorie consumption as a determinant of nutritional status. The interaction between micronutrient deficiencies and morbidity and mortality, particularly in young children, is increasingly recognized. Vitamin A supplementation, for example, results in an average reduction of 23% in mortality rates of children under five years of age. The role of food aid commodities in supporting programmes with more refined micronutrient objectives is unclear, although it has been suggested that the proceeds of food aid monetization could support such initiatives.

Evidence to evaluate the nutritional impact of food aid interventions is limited, in part because of the cost and complexity of obtaining accurate and reliable anthropometric data and also because of the difficulties in disentangling the effect of food from the host of other variables impacting upon nutritional status. This chapter will review the available evidence of each form of food aid intervention.

5.1 Programme Food Aid (PFA)

Recent evaluations by both the US (McClelland, 1997) and Canadian (CIDA, 1995) governments of their food aid programmes noted that PFA has seldom made a significant contribution to the

alleviation of hunger and food insecurity. PFA has often replaced commercial imports that would otherwise have been brought in and so has generally not added to the food supply available. And even if it had resulted in increased aggregate food availability, this is still only a necessary but not sufficient factor in improving access for the most vulnerable.

These findings largely concur with those of the Joint Evaluation of EU Programme Food Aid (Clay et al., 1996), which was basically positive in its conclusions on the relationship between food imports, food aid and nutritional status, the only exception being circumstances of acute food shortage, where large-scale food aid imports are additional and supplement local supplies, and thus are crucial in preventing widespread starvation. This report also highlighted the inadequacy of using the bulk supply of food for sale as a means of supporting interventions concerned with the micronutrient composition of beneficiaries' diets.

5. 2 Project food aid

The historical evidence on food-based nutritional interventions indicates little measurable impact on nutritional status, morbidity or mortality levels evident among targeted groups. Beaton and Ghassemi (1982) in their comprehensive and widely cited survey of supplementary feeding programmes found that anthropometric improvements were surprisingly small and that programmes were expensive for measured benefits. The evidence of project food aid's impact on nutritional status from the recent round of evaluations has been similarly equivocal.

Although the USAID review of food aid states (McClelland, 1997: 38), 'American food aid has its greatest social and nutritional impacts through. . . . direct food distribution programmes', the evidence presented is inconclusive and this tends to be true of the results of other evaluations reviewed. Project food aid, where it has been successful, has typically acted as a safety net, increasing consumption in the short term rather than effecting longer-term nutritional improvements.

Supplementary feeding programmes (MCH and VGF)

The improved nutritional status of poor mothers and babies is generally only one objective of these programmes. As mentioned in Chapter 4, nutrition and health education and small-scale income-generation activities are also aspects of this form of intervention. The US has evaluated its support to MCH interventions in five countries, finding mixed results. In all the programmes, food supplementation alone showed little, if any, direct or sustainable impact upon the nutrition of under-fives suffering from moderate or mild malnutrition. One possible reason for this was widespread evidence that the ration was shared amongst all family members. This gives rise to the question of whether nutritional improvement is a truly appropriate objective for MCH programmes, or whether it best serves as an income transfer to poorer households (Mora et al., 1990). The USAID-supported Honduran programme was judged to have had some success in raising nutritional status (Philips et al., 1995). But simultaneous improvements in overall health conditions meant that it was difficult to disentangle the effects of the food intervention from the other activities taking place, eg. vaccinations and improvement in water/sanitation. Given the evidence of other programmes, it seems safe to assume that the nutritional impact of the MCH programme alone was minimal.

The tripartite evaluation of WFP concluded that VGF programmes had negligible nutritional impact (Chr. Michelsen Institute, 1993a). These interventions were judged not to address the root causes of malnutrition and food insecurity and so be ill-equipped to act as more than simply feeding interventions. Too often, they acted in isolation from the other causal determinants of improved nutritional status: nutrition education; income generation; supply of potable water, to name but a few. Feeding projects must be integrated within a more holistic response to malnutrition and related diseases in order to maximize their nutritional impact. The inability of these supplementary feeding programmes to link maternal nutrition and health education, immunization and oral rehydration to the food supplement, as well as the absence of complementary environmental interventions, restricted the nutritional impact.

Labour-intensive works

The controversial use of food-for-work as a developmental tool has already been described in Chapter 4. Assessment of its role as a tool for raising the nutritional status of poor and vulnerable individuals has proved equally inconclusive. It has been strongly argued that providing food rather than cash as a wage results in increased household consumption, particularly if the wage is controlled by women. But, as already mentioned, increased consumption does not automatically translate into improved nutritional status.

A recent review of Employment Generation Scheme targeting practices in Ethiopia (Sharp, 1997) highlighted the phenomenon, by no means restricted to Ethiopia, of ‘thin-blanket syndrome’, in which rations are distributed so widely that the neediest receive too little for there to be any significant effect on their situation, nutritional or otherwise. Reasons for this over-distribution are, in part, attributable to a cultural aversion to the concept of selecting beneficiaries. Work entitlements are often too thinly shared either by the rotation of beneficiaries or the severe limitation of the number of work days allowed per household. Frequently beneficiaries are selected and food distributed to them in accordance with project guidelines, only for the rations to be redistributed later, sometimes involuntarily, amongst the whole community. As the author states, this problem is a difficult one to combat and limits the worth of labour-intensive works as a nutritional guarantee. It has also been suggested that the heavy workload in some works projects may offset, in energy terms, the effect of the food wage and so minimizes the impact on nutritional status. At this stage there is little empirical evidence to support this hypothesis (Webb, 1995).

A recent assessment of FFW in Bangladesh shows some positive impacts on calorie consumption of participating households, but anthropometric impacts are not established (Ahmed et al., 1996). This is a problem common to many studies which focus on ‘food expenditure’ or *apparent* calorie intake data from food expenditure and consumption surveys, but which do not provide sufficient evidence to infer nutritional improvement.

Female-controlled income, as mentioned above, is usually associated with higher household food expenditure and nutrient intake than income controlled by men. So, the argument goes, by targeting FFW programmes at women, a valuable and empowering resource is placed in the hands of the family member most responsible for household food security. In his study of intra household resource allocation in Brazil, Thomas (1997) found that the share of the household budget devoted to human capital, eg household services and health, increased when income was controlled by women. Specifically he found that nutrient intakes rose more quickly as women’s income increased

and that maternal income had a significantly greater effect than paternal income on child anthropometric indicators (weight-for-height and height-for-age). Evidence from a number of studies in different geographical locations supports this assertion (Hoddinot and Haddad, 1991; Engle, 1993). But the erratic success of FFW programmes in reaching women, as detailed in Chapter 4, precludes there being a consistently positive impact on the nutritional status of the household.

Another important consideration is the impact of maternal work outside the home upon child care and thus child nutrition. The available evidence is mixed (Engle et al., 1997). Some studies have demonstrated significant negative effects between maternal work and the nutritional status of children. For example, an evaluation of 2000 rural mothers in India found that the children of mothers engaged in agricultural labour were likely to be significantly malnourished (Abbi et al., 1991). In contrast other studies have found no negative effect (Wandel and Holmboe-Ottesen, 1992) or indeed some positive effects (De Groote et al., 1994; Brown et al., 1994). Further research is obviously required to clarify the effects of mother's time availability and workload upon child health and nutritional status.

School Feeding Programmes (SFPs)

The available evidence does not provide compelling support for the use of SFPs as a means of improving child nutritional status. There is no proof that this form of intervention consistently reaches the neediest children. Furthermore, operational difficulties, including irregular food delivery and distribution and the lack of complementary financial and technical support, have continually undermined project effectiveness, and thus nutritional impact.

WFP's distribution of food supplements to primary school children has seldom demonstrated measurable improvements in nutritional status (Chr. Michelsen Institute, 1993a). Evaluation of USAID-supported interventions produced mixed findings. An evaluation of the USAID programme in Burkina Faso concluded that this 35-year school lunch project was responsible for reduced rates of malnutrition amongst the beneficiaries (ISTI, 1981). But reviews of the Honduran and Ghanaian school feeding programmes reported that the average daily amount of calories provided was probably not sufficient to effect a measurable improvement in child growth or nutritional status (Rogers et al., 1995; McClelland, 1997).

5.3 Humanitarian relief

There is almost unanimity on the appropriateness of providing food aid in situations of acute food insecurity. However, there is abundant evidence of the need for continuous effort to improve operational performance. A recent review by Shoham and others (1998) clearly elucidates the constraints on emergency food aid which affect its nutritional impact.

In many emergencies, the ration provision has fallen short of the recommended 1900 kcal/capita (now revised to 2100 kcal/capita; WFP/UNHCR, 1997). In some instances this shortfall may be in recognition of the fact that beneficiaries have access to other food sources. For example, access to local farm employment enabled Rwandan refugees in Goma to withstand ration levels of 800kcal for several months in early 1995 (Borton et al., 1996). However, in closed or isolated camp situations where beneficiaries may be entirely dependent upon rations, this shortfall combined with the

hazardous health environment which often predominates in emergencies could be detrimental to nutritional status.

Effective targeting can make a crucial difference. An evaluation of the humanitarian intervention during the Great Lakes crisis (Borton et al., 1996) reported continued evidence of malnutrition in refugee camps, generally well supplied with satisfactory levels of commodities, principally as a result of inequitable distribution rather than inadequate provision.

Provision of foods with the appropriate micronutrient composition has also proved problematic. Standard emergency rations based on cereals, legumes and oil do not provide sufficient micronutrients and there are difficulties in supplying micronutrient-rich fruit and vegetables. An analysis of the household food economy in the Kakuma refugee camp in Kenya (SCF, 1997b) highlighted the significant incidence of severe anaemia at least partly attributable to the poor micronutrient content of the diet, in particular the lack of absorbable iron and vitamin C. There have also been outbreaks of beri-beri, scurvy and pellagra amongst refugee populations provided with deficient rations (Jaspars and Young, 1995). Cases such as these have led to an increased reliance upon blended foods (WFP/UNHCR, 1997). Indeed WFP and UNHCR stipulate in their MOU the provision of blended foods for beneficiaries dependent upon emergency rations. But these foods are not without their own problems. They are a very expensive means of providing micronutrients (at least US\$500/tonne) and their continued provision cannot always be guaranteed. This means that the few grammes generally included in emergency rations are often insufficient to bring the micronutrient density of the entire food basket to adequate levels. It has also been argued that blended foods may be unacceptable and so not consumed by beneficiary populations although this contention has been disputed (Oxfam, 1998). The situations in which micronutrient deficiency diseases have not occurred reflect the ability of beneficiaries to diversify their diets through access to other food or income sources.

Deficiency in type 2 nutrients such as magnesium, zinc and sodium, is thought to result in poor growth, stunting and wasting (Golden, 1995). But their provision in emergency rations is often overlooked. This could result in a situation where there is an adequate general ration in terms of type 1 nutrients (protein, energy) but a continued incidence of severe malnutrition and stunting due to a deficiency in type 2 nutrients requiring the continuation of selective feeding.

A further obstacle to improvement in nutritional status in the recent past has been the provision of commodities which are culturally unacceptable, unpalatable, difficult to prepare or spoiled. For example, during the Great Lakes emergency, Rwandan refugees were provided with spoilt locally purchased blended foods which then had to be discarded. The provision of a maize based ration during the same emergency was also considered inappropriate for young children accustomed to sorghum-based porridges.

Initiatives to increase the use of locally produced blended foods such as unimix and superunimix have highlighted problems of quality control and the need to strengthen monitoring of local production facilities. Concern has been expressed that poor quality blended foods are inefficient in promoting weight gain because of high phytate and fibre content and the presence of anti-nutrients. Problems of rodent and insect contamination have also been reported as well as inconsistencies between the composition of the food provided and that on the labels of bags.

5. 4 Not by food alone

The evidence available indicates that food aid interventions have rarely had a demonstrable positive impact on the nutritional status of beneficiaries, except in circumstances of acute food shortage. Under these conditions, food aid has been critical in ensuring adequate food availability to the neediest. The health environment in which many emergency distributions are undertaken is extremely hazardous, however, and this negatively affects the 'size' of the nutritional improvement that can be achieved through the supplementation. Indeed, the prevalence of diseases such as diarrhoea, TB and measles in these situations can accelerate so rapidly that nutritional crises occur despite the adequate provision of food.

Chronic malnutrition has clear socio-economic dimensions in terms of poverty and social exclusion. Unless these aspects, which include access to health services, water and sanitation improvement, and economic development, are simultaneously addressed, improved nutritional status is unlikely to be realized through food supplementation alone.

6. Monitoring and Performance Indicators

The lack of conclusive evidence on performance noted in this paper points to the need for accurate indicators by which to judge the effectiveness of programmes and projects and also international institutional arrangements. In considering the future role of food aid the authors indicate two contrasting strategies: of adaptation and radical reconstruction of food aid institution arrangements (Clay, Pillai and Benson, 1998). Even an adaptive strategy should include improved monitoring and evaluation, but a comprehensive system for monitoring and evaluating food aid's performance will inevitably be a complex one, given the diversity of food aid programmes. It is therefore crucial to be discriminating with regard to priorities in improved performance monitoring. The lack of performance monitoring assessment at international level would appear to indicate one priority. At the programme and project level, debates on the role of food aid increasingly focus on two areas of concern: firstly, the appropriateness and efficiency of food aid as an instrument and secondly, targeting and impacts. An area of unresolved dispute concerns the appropriateness and efficiency of food aid in supporting national food security. A second area of unsatisfactory monitoring concerns the efficacy of food aid in targeting and impacting on the condition of poor, food insecure, nutritionally vulnerable groups. Again it is crucial to be discriminating with regards to indicator selection, in order to keep human resource and financial cost burdens at sustainable levels. Different types of indicators would need to be selected according to the nature of the intervention, emergency, project or programme food aid and the recipient country.

6.1 Monitoring FAC performance

An obvious deficiency in the FAC is a lack of performance monitoring, or assessment, of the consequences of the regime the Convention has established and sustained for food aid. When questioned, many current and former food aid administrators made light of the FAC. That may partly be because in the past there was considerable over-fulfilment of commitments by many donors. However, in the mid-1990s shipments and FAC contributions have come closer together. At least three major donors, Australia, Canada and the US, have reduced commitments to be more consistent with the levels they intend to budget.

Many donors link their FAC commitments and their budget pledges to the WFP for both its normal development programme and relief operations. This might have implications for both the levels and commodity composition of development project and relief food aid. That, in turn, has potential implications for the effectiveness of food aid, for example: the constraints within which emergency operations are organised, the rations that are provided and the nutritional status of supported populations. As Shoham and others (1998) suggest in a path-breaking exploration, institutional arrangements that determine the way emergency food aid is provided may have important nutritional security implications. Meanwhile under all Conventions so far, contributions by donors, whether provided on an FOB basis or including delivery costs up to point of distribution, have been treated equally in terms of fulfilment of FAC obligations. But that is despite cost differences which could range from under US\$150 a tonne for an FOB shipment of wheat as programme aid to Egypt to US\$800 a tonne for airlifted food relief to neighbouring Sudan. The 1985 Convention allowed local purchases for emergency aid to be counted towards contributions.

Since 1995 donors have been able to include pulses for relief distribution as up to 10% of fulfilment of their overall obligation. The 1995 Convention also extended eligibility to many former COMECON members including several former Soviet Republics. There has apparently been no attempt to assess whether such specific provisions influence donor behaviour, including possible diversion of aid (Benson and Clay, 1998), or food aid operations.

Donors have agreed on a timetable for ratifying a new Convention to begin in mid-1999. That new Convention offers an opportunity for closer monitoring of this key international arrangement for food aid.

6.2 Programme and Project Monitoring

The first priority area for strengthening programme and project performance relates to monitoring the *appropriateness* and *efficiency* of food aid as an instrument:

- Appropriateness of commodities delivered (in relation to local diet and micronutrient content);
- Timeliness of delivery (assessed against a series of benchmarks from the times of agreement, procurement, shipping and distribution);
- Local market effects;
- Availability and timeliness of delivery of non-food inputs;
- Transaction costs for donors and recipients;
- PFA and monetization involving local currency generation, management and use.

Those are areas of performance for which management specialists and food economists can provide both a qualitative assessment and suggest context specific indicators at a country level to government and donors if food aid is to be incorporated into a food security strategy.

These issues of appropriateness and efficiency ought to be considered as part of the *ex ante* assessment made before a food aid action is approved by individual donors. There are aspects of performance that need to be considered also. For example, there are choices in terms of providing finance or food, the source of food and the method of procurement. These choices which affect efficiency should be made explicit in terms of their cost-effectiveness implications. US legislation for programme aid requires a 'Bellmon determination' to establish that there are no anticipated negative effects on local agriculture. It might be useful to establish in advance if there are criteria for deciding when to stop food imports, to switch to local sources of food and when to end food distribution.

Food aid involves potential local market impacts that are difficult to monitor and assess in any wholly conclusive way at local or sectoral level. However, some analysts have suggested indicators. For example, Maxwell (1991) concludes that assessment is possible even with relatively poor data, provided that there is market data for local and imported commodities. Again, this implies always ensuring that price data are being collected or made a required component of programme or project monitoring. The other constraint is human resource availability – economic skills. Monitors are sometimes provided for humanitarian relief, and perhaps these should be required to have basic economic-statistical skills or receive training. If local market impacts are potentially severe where there are incomplete markets, especially in a disaster or humanitarian crisis, then any of the

institutions involved need to ensure monitoring of local markets and a capacity to analyse the data quickly. The data may provide important evidence on targeting, modifying and phasing out of interventions.

Local budgetary support and monetization assessment is nearly always hampered by lack of data. A few critical pieces of information make possible an assessment of efficiency: import parity prices; prices at which commodities are sold; deductions for within-country ITSH and management; the time delays before deposit of funds; whether deposits are in interest bearing or non-interest bearing accounts and timing and rates of rates of disbursement. The composition and geographical distribution of expenditure, not just sectoral uses, may also provide qualitative clues to the extent which budgetary support is being targeted at poorer groups.

Targeting and impacts on household food security and nutritional status

The second set of concerns about programme and project performance relate to targeting and impacts on poor, food insecure, vulnerable groups. Food aid interventions cover the whole gamut of social development interventions and crisis-related humanitarian measures. For that reason, indicators of performance will not be unique to food aid but concern these specific types of intervention. Assessment of impacts should typically concern:

- Penetration of food assistance to the most vulnerable (in terms of effective targeting of beneficiaries);
- Impact on livelihoods and well-being of targeted groups such as poor, female-headed households;
- Nutritional and health status of target groups (commonly a more specific concern of MCH, but arises in relation to almost all food assistance interventions: few interventions are solely concerned with income-transfer effects);
- Measures of school performance and participation of targeted groups in terms of enrolment: attendance rates are a more obvious aspect of SFPs.

Assessments of impacts in terms of livelihoods require social surveys that provide before and after, with-without contrasts for more convincing evidence of impacts. But as the evaluation literature reiterates, the design of food-aided interventions too often has not included any kind of formal survey. That is a problem not unique to food aid but seems to be particularly extreme because of the lack of complementary resources. The remedy lies in donors requiring that a monitoring module is included in any substantial humanitarian operation or development project, and providing the financial and human resources where these are needed.

Most of the evaluation literature is inconclusive on the effects of food-aided interventions on nutritional status except in situations of severest food insecurity. Practically, only formal monitoring that includes anthropometric indices such as weight-for-height and recording of morbidity and mortality, will provide robust evidence. Such monitoring is costly and difficult to sustain. This may only be possible on a 'sentinel research project' basis or as part of an on-going therapeutic programme. But in the absence of such data, nutritional effects will be uncertain.

It is also crucial to monitor the social impacts of interventions. Social indicators should include intended beneficiaries' own perceptions and assessments. There is considerable scope for

strengthening the WFP and NGOs project assessment in this respect. The objectives of emergency aid are to save lives and livelihoods. When provided regionally or nationally on a significant scale, the macroeconomic and sectoral implications of emergency aid should also be considered, as well as the effects upon beneficiaries.

6.3 Food aid as a special case

There are no simple, very low-cost strategies for improving performance monitoring. What is surprising is that, with notable exceptions, for so long so many food aid interventions have not been effectively monitored. For that reason monitoring is potentially an important subject for the development and adoption of guidelines for improving practice. An implication for guidelines on programme and project development of the evidence summarised in this paper is that food aid should be regarded as one potential form of aid to be used in support of food security programmes and projects. The decision on whether food aid should be a resource transfer instrument should consider appropriateness in relation to supporting interventions that have explicit targets and outcomes that would be monitored.

The evidence and areas of uncertainty in the evaluation and research record suggest that food aid has a more widespread role in emergency situations, but even in crisis management, financial support is often more appropriate. Decisions on where and when food aid has a role in supporting programmes and projects for poverty alleviation, nutritional improvement and human development more generally should be based on a careful consideration of local conditions. A careful sifting of the available evidence is inconclusive on effectiveness and impacts, commonly suggesting marginally positive, but sometimes negative results of food aided interventions. Taken together with the theoretical and strong body of evidence that financial aid is more efficient, the provision of food as commodity aid should be regarded as a special case to be justified by specific circumstances.

There is an alternative, more optimistic narrative, as set out by Mellor (1988) and Singer and others (1987). There have been some successes, and negative effects appear to be typically marginal. Poor and incoherent policies and weaknesses in performance could be overcome, allowing food aid to play a wider, more prominent, role in combatting food insecurity and poverty and promoting human development. The problem with this perspective is the continuing, wide gap between possibility and actual performance. The iterative nature of the problems has been repeatedly documented in evaluations and research studies. Weaknesses in performance, resulting from lack of integration of food aid with other development action, high transaction costs and a variety of operational difficulties, noted in this review were also described by, for example, Schultz (1961), Maxwell and Singer (1979) Wallerstein (1980) and Jackson and Eade (1982). There is a wide spectrum of better and worse practice reported in the literature, but many of the problems appear to be inherent in tying international assistance to commodity aid and, especially, in the 'double' tying to donor exportable food surpluses (Ruttan, 1993). In practice these constraints have necessitated a 'second best' policy agenda - how to make the best use of aid budget lines that are tied to food as commodity aid.

There are also other important gaps in the assessment record, which are the consequence of a rapidly changing policy environment and which require special attention. The growing use of food for relief in conflict related situations is only beginning to be evaluated (Eriksson, 1996; Shoham and others, 1998). The liberalisation of international and domestic markets is making it increasingly difficult to provide food as commodity aid in conventional ways, for import or budgetary support. The

examination of direct distribution of food to provide safety net income transfers, or for nutritional improvement also needs to take account of market integration and, in the late 1990s, an apparently increasingly uncertain economic environment. These developments and their possible policy implications receive some attention in the companion policy review (Clay, Pillai and Benson, 1998), but are beyond the scope of this paper, which documents the recent historical record as it has been evaluated.

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