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Ethiopian Famines 1973–1985: A Case-Study

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#### ABSTRACT

The paper studies the experience of Ethiopia with regard to the two major famines the country has witnessed in the last fifteen years. It is argued that the entitlements approach developed by Amartya Sen provides a useful analytical framework within which to place the experience of Ethiopia during the famines of 1972-75 and 1982-85 even though these crises were largely caused by declines in food availability rather than by distributional shifts. The destitution of different occupational groups in the course of the famines can be understood in terms of the collapse of specific kinds of entitlements to food. The paper also provides a discussion of the social and demographic impact of the famines and of the short and longer term imperatives of a relief strategy to deal with their effects. The relevance of the Ethiopian experience in the context of more general discussions of hunger and starvation is emphasized in the concluding section.

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#### ETHIOPIAN FAMINES 1973-1985: A CASE-STUDY

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### 1. Introduction

With the notable exception of sub-Saharan Africa, global food production has in recent years been keeping abreast of population increase; malnutrition is yet endemic amongst the poor in the developing world today. Starvation deaths, resulting from protracted malnutrition, and accentuated by infection are also not unusual in many poor contexts. But famines - defined as virulent manifestations of intense starvation causing substantial loss of life - are on the

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A recent estimate by the World Bank (1986) puts the figure of malnourished worldwide at a staggering 730 million. A more conservative estimate, with a review of the methodology used in measurement, is provided in Lipton (1983).

<sup>2.</sup> Cf. Scrimshaw, Gordon and Taylor (1968).

Cf. Jean Meyer's definition: "... a severe shortage of food, accompanied by a significant increase in the local or regional death rate." (1975 p.572).

other hand, comparatively rare, even though this century has witnessed some terrible examples. <sup>4</sup> In discussing these issues, it is important to note that while endemic malnutrition and the associated starvation are in general characterized by the <u>lowness</u> of the <u>typical level</u> of food consumption and accentuated by a <u>declining trend</u> of food consumption, it is a <u>sudden collapse</u> of the level of food consumption that typically characterizes a famine. The contrast is a crucial one to appreciate, inasmuch as a dramatic fall in the ability of a group to command food can occur at a time when the overall trend in food consumption is on the increase.

An intuitive first approach to the analysis of famines is to focus on the total availability of food, and to analyze the connections, if any, between a decline in this statistic and the onset of a famine.

This can in fact be quite a revealing exercise. The Irish famine of 1845-47 was the result of a disastrous fall in total food availability brought about by a recurring failure of the pest-ridden potato crop; food availability did decline considerably during the Sahel famine of the 1970s; and, as we shall see, the recent Ethiopian famine was preceded by a dramatic collapse of food availability.

But it should be clear from what has been said above that the connection between the total availability of food, and the amount of it going to a particular group or groups is a contingent - and not an inevitable - one. It should therefore come as no suprise that some major famines occurred with no overall decline in food availability;

<sup>4.</sup> The recent Ethiopian famine, to be discussed presently, of course comes to mind; but the most devastating such catastrophe this century was without doubt the Chinese famines of 1758-61 following the failure of the Great Leap Forward, during which close to thirty million people may have perished. On this, see Ashton, Hill, Piazza and Zeitz (1984).

<sup>5.</sup> See Woodham-Smith (1962) and Mokyr (1983).

<sup>6.</sup> Sen (1981) pp.113-129.

instead people starved to death either became a sudden increase in food prices cut their ability to buy enough food (as in the Great Bengal Famine of 1943)<sup>7</sup> or because their employment - and hence ability to buy food in a market economy - collapsed as a result of massive flooding (as in the case of the Bangladesh famine of 1974).<sup>8</sup> To understand the causes of starvation and famines, then, one has to go much beyond analyzing total food availability, important though the latter may be.

A more general approach to famines, put forward by Amartya Sen, <sup>9</sup> views famines as economic disasters rather than as just food crises.

A focus simply on downward trends in the amount of food availability per head - or FAD ('food availability decline') for short - is misleading, according to Sen, because it gives us little clue to the causal mechanism at work, concentrating on aggregates rather than on the relationship between people and the food they need. Indeed:

A food-centred view tells us rather little about starvation. It does not tell us how starvation can develop even without a decline in food availability. Nor does it tell us - even when starvation is accompanied by a fall in food supply - why some groups had to starve while others could feed themselves. (1981 p.154)

Instead, Sen focuses on what he calls 'entitlements' as an explanatory variable. Entitlements are defined as "the set of alternative commodity bundles that a person can command in society using the totality of rights and opportunities that he or she faces."

<sup>7.</sup> Ibid., pp.52-85.

<sup>8.</sup> Ibid., pp.131-153.

<sup>9.</sup> See in particular ibid., pp.1-8, 47-50 and 162-166. Also Sen (1977, 1986a) See Tilly (1985) for an application of this approach to the analysis of European famines occurring between the seventeenth and nineteenth century.

(1983, p.497) Entitlement relations can be diverse and depend on different facets of the production and distribution system of societies - they can be trade-based, production-based, own labour-based - and so on. Much depends on the type of economy and social structure one is dealing with. In the context of starvation and food supply, each of these entitlement relations represents a different way of ensuring that individuals can command enough food for subsistence, through securing, in one way or another, an entitlement to it. The entitlement may remain safe even though the average availability of food per head has declined. Equally, any entitlement to food can collapse as a result of economic and social changes in the region or country at large even in the absence of any decline in the overall availability of food.

The approach thus presents a framework for analyzing famines — and indeed their antecedents — poverty and destitution. It is worth emphasizing, in view of the subsequent discussion, that this framework is a general one and can be usefully applied even to famines where it is evident that the main causal element <u>has</u> been a decline in food availability. The wider scope of the entitlement approach can still be used to shed light on the various processes at work which precipitated the famine, and assist us in identifying the broad groups whom it affected. <sup>10</sup>

The purpose of this paper is to apply this framework to the experience of Ethiopia, a country which in the last decade and a half

<sup>10.</sup> This point deserves to be underlined if only because it has been so often misunderstood - witness the persistence of a Bowbrick (1986, 1987). The entitlement approach carries no implication that food availability per head is an unimportant variable; it only emphasizes that, even where a food availability decline is a crucial part of the story, an economic - and perhaps social, legal and political - analysis of the reasons why the availability decline caused a widespread failure of entitlements on the part of a large section of the population needs to be carried out.

has been notable for witnessing periodic outbreaks of mass starvation. It has, of course, to be borne in mind that a full account of the reasons for these frequent devastations would require detailed analysis of a host of social and political factors, some with deep historical roots. Such an enterprise is clearly beyond the scope of this paper, though its importance is obvious. While reference is made below to the political background against which the famines developed, and to the way in which political and military factors operated to intensify the starvation by posing a serious threat to relief operations, the focus throughout is on the development of the famines themselves, the proximate factors which caused them, their social and demographic impact, and the relief policies followed to contain their effects. There is therefore little attempt at social or historical analysis, or consideration of the kinds of political structures the famines were associated with, paradoxical similarities between which have oftenbeen noted despite their radically different character. These are no doubt important to the understanding of the political economy of hunger and starvation in Ethiopia, but they are best tackled in a separate paper.

We start, then, with a discussion of the country's agricultural economy, and its continuing vulnerability to the ravages of drought and famine (Section 2). The experiences of 1972-75 and 1982-85 are then analyzed (Sections 3-4), followed by a discussion of the relief policies in operation at the time, and any implications that these might carry for general policy issues. (Section 5) There is, finally, by way of concluding, an attempt to draw out the main lessons of the Ethiopian experience (Section 6).



Reproduced from Hancock (1985)

TABLE 1: 'Normal' Year Expected Production

(1)		(3)	household quintals/month (4)	'normal' Year (gm) (5)
	(2)	(5)		
Wollo	3 609 918	0.79	8.3	555
Tigrai	2 409 700	0.52	4.5	287
Eritrea	2 614 700	0.52	4.2	247
Harerghe	4 151 706	0.45	6.9	438
Gamo Gofa	1 248 034	0.54	5.8	356
Sidamo	3 790 579	0.21	2.8	174
Illubabor	963 327	0.59	8.9	595
Keffa	2 450 369	0.45	6.4	428
Shewa	8 090 565	0.84	10.7	666
Bale	1 006 491	0.95	10.1	575
Gondar	2 905 362	1.05	8.9	602
Wellega	2 369 677	1.05	12.3	718
Gojjam	3 244 882	1.16	11.8	740
Arssi	1 662 233	1.33	16.7	933

p.260.

<sup>(</sup>b) Col.(2) RRC: The Challenges of Drought (Addis Ababa, 1985)

#### 2. Famine vulnerability in Ethiopia

Whereas the long recorded history of Ethiopia provides fascinating insights into the evolution of a distinctive ethos and culture, 11 it is the tragic images of death and destitution caused by famines, recurring time and again, that stay in the mind. The first recorded famine goes back to the ninth century and no century since then has been free from a major devastation: the thirteenth century witnessed four major famines, and no less than twenty-three are recorded from 1540 to 1800. The worst famine of all, however, occurred towards the end of the nineteenth century: the so-called 'Great Famine' ravaged the country in the years 1888-1892, leaving only two-thirds of the population alive. These devastations occurred for a variety of reasons and one cannot really generalize about the historical causes of famime in the country. There is, on the other hand, little doubt that the famine-prone character of the society does not seem to have diminished much in more recent times. A recent study of the vulnerability of the country to the onset of famine makes the astonishing estimate that, 'between two and five million' people died between 1958 and 1977 as a cumulative result of the destitution induced by drought, bad harvests and famine. $^{12}$ 

One of the main reasons for this continuing vulnerability lies in the particular characteristics of the largest and most critical sector of the economy: agricultural performance is vital not only for food

<sup>11.</sup> For historical accounts, see Ullendorf (1963) and Pankhurst (1961).

<sup>12.</sup> Wolde Mariam (1984) p.58.

production, but also for the livelihood of 80% of the working population. 13 Most agriculturists are subsistence farmers who maintain themselves by growing crops or rearing livestock. For most of the year, the vast majority are market-dependent, even for the fulfilment of basic consumption needs. Before the dramatic change of regime of 1974, the agrarian economy was largely feudal in character; a surplus was extracted from a low productivity agriculture by a small group of overlords and cultivating practices were primitive. The new regime introduced radical changes in the social organisation of agriculture, such as the nationalisation of land, the massive redistribution of usufructary rights and the banning of hired labour. These changes, which on the whole proved beneficial to the peasantry, have nonetheless left unresolved the problem of generating surpluses in the agrarian sector without depressing already low consumption standards. The structural weaknesses of the agrarian economy remain thus another contributory factor to continuing famine vulnerability.14

The consequence is that for a large proportion of agriculturists, the famines have only succeeded in making an unfortunate day-to-day situation a tragic one. Evidence in this regard for the seventies emerges in nutritional surveys carried out in several regions before the 1972-74 famine (Miller and Holt, 1975) which revealed very low

<sup>13.</sup> According to a recent study released by the Ethiopian Relief and Rehabilitation Commission (RRC) eighty-six per cent of the total population of 42 million live in rural areas. Of the total, 49.4% (17.1 million) are in the 15-59 year working age group and 75.4% (12.9 million) of them are defined as economically active. As regards land use, 65% of the total land area is considered to be suitable for cultivation though at present less than 20% (16.7 million hectares) of the total arable land is cultivated. For more details, see Relief and Rehabilitation Commission (1985).

<sup>14.</sup> For a discussion of the problems of agrarian transformation in Ethiopia, see Abate and Kiros (1983), Ghose (1985) and Griffin and Hay (1985).

levels of calorie intake, exacerbated by vitamin deficiencies and by the presence of goitre: the body fat reserves of the population, as indicated by skinfold thicknesses, were also found to be very low. (op. cit. p.198) Estimates for more recent years of per person production of food in normal (i.e. non-famine) times (Table I) show six regions, viz. Tigrai, Eritrea, Harerghe, Gamo Gofa, Sidamo and Keffa, falling below the RRC's relief ration of 500 gm per person per day (and of these Tigrai, Eritrea, Gamo Gofa and Sidamo fall below the critical minimum figure of 400 gm). In some regions, particularly in the southern and south-western parts of the country, the meagre diets of which these statistics are evidence may be supplemented by wild foods or root crops such as 'enset' (false banana). There is little doubt, however, as to the generally poor nutritional situation in the country and the ravages caused by sudden collapses in food entitlement, when the base from which this happens is already so low, can now be seen in some perspective.

Agricultural life in Ethiopia revolves around the country's two principal rainy seasons: belg (Februrary to May) and meher (June to September). The belg season traditionally sees lowlanders planting long maturing crops such as maize and sorghum. Highlanders, on the other hand, take advantage of the different climate of the mountains to plant short maturing crops such as barley and wheat during the belg rains, which they harvest in June and July. The main meher (or kremt) rains see the planting of long maturing grains in the highland areas and the main crop is normally harvested in November/December. Although the belg season represents only 5-10% of total crop output, it is important to note that it is the more productive season – and occasionally the sole

season - in lowland areas like Bale, Sidamo, Gamo Gofa and particularly Wollo (where 50% of crop production takes place during the belg season). A failure of the belg rains by itself can thus have a significant impact on the vulnerable crop-dependent population, as will be evident from the discussion that follows.

#### 3. The famine of 1972-75

#### 3.1 Background

The critical events in Ethiopia in the early seventies can be periodized as follows: in the first phase viz. 1972-73, the north and especially the province of Wollo suffered recurrent crop failure and fell in the grip of famine; the second phase ran from 1973-75 in the course of which the famine moved south and mainly affected the province of Harerghe. Much of the destitution and mortality took place in the first phase and the subsequent discussion will therefore centre on this period, although the fate of the southern pastoralists - hit by drought and animals deaths - will be considered in some detail when we turn to analyzing the impact of the famine on different occupational groups.

The erratic behaviour of the weather in 1971-72 did not augur well for future harvests. Although the indications were that weather conditions would deteriorate further, little concern was expressed by the government, and still less any contingency planning carried out. Nature then fulfilled its share of the bargain. The country witnessed a failure of the meher rains for 1972, followed by the disastrous loss

of the 1973 belg harvest. (The former was to have its impact mainly on the lowlands and the latter mainly on the highlands). By this time, the famine was in full swing in Wollo, and the situation was much as had been described in a Report put out by the Ministry of Agriculture: 15

The most serious problem is centred in the lowland areas east of the escarpment road in Tigrai and Wello and the lowlands of northern Shewa, with a less serious problem 6 appearing in Eritrea, Harerghe and Begemdir and Simien.

By early 1973, there were signs of the distress in Wollo spilling over to the other regions in the form of migration and roadside destitution: sick and hungry people lined parts of the north-south highway through Wollo, stopping vehicles to beg for food; a march by one and a half thousand peasants to Addis Ababa to plead for food was turned back by the police <sup>17</sup> and attempts by intellectuals at Addis Ababa University to rouse the authorities into acting against the spreading famine were brusquely brushed aside by the Imperial Government, which denounced the reports of distress as 'fabrication'. Later in the year, the Emperor voiced his views about the famine in an interview:

Rich and poor have always existed and always will. Why? Because there are those that work  $\dots$  and those that prefer to do nothing  $\dots$  Each individual is responsible for his misfortunes, his fate.

<sup>15.</sup> This Report, which related to the 1972 season, was known to the authorities but was deliberately not publicized, for obvious political reasons. It was finally released only in mid-1973.

<sup>16.</sup> Quoted in Hussein (1976) p.23.

<sup>17.</sup> Wiseberg (1976) p.108.

<sup>18.</sup> Wolde Mariam (1984) p.40.

<sup>19.</sup> Quoted in Wiseberg, op.cit., p.108.

The attempts to systematically minimize the seriousness of the situation in the early - and critical - period of the famine, together with the apathy and callousness shown towards the suffering, contributed in no small way to delaying relief efforts. They also ultimately helped to bring about the fall of the imperial regime.

The relief camps that were set up initially were woefully inadequate to deal with the thousands of destitutes who flooded in. Indeed, as Rivers et al (1976) note, "the crisis of starvation and death occurred from June to August 1973 when the relief camps, exceedingly ill-equipped with food, sanitation or medical services were overwhelmed by some three times the numbers they could shelter, and by August at least 284,000 people had asked for help at administrative centres." (p.351)

By late 1973 foreign aid had started arriving in considerable strength. Attempts to mobilise it had been greatly helped by the excellent work of the TV journalist Jonathan Dimbleby, who, in his film 'The Unknown Famine' had exposed both the true seriousness of the situation and the shabby attempts at covering it up, and thereby alerted the attention of potential aid givers. By this time, however, the peak of the starvation was already over and the camp population in Wollo had shrunk to 15,000. Indeed by the time the international relief operation went into top gear in early 1974, the famine had moved from Wollo and Tigrai to the south, where fresh destitutes were being created every day. Despite this, owing to a mismatch of aid with real distress, the bulk of the food aid went to the north, with Harerghe, now reeling under the impact of famine, receiving only 8 per cent of relief aid. (Rivers et al 1976)

TABLE 2

1972-73 AGGREGATE CROP PRODUCTION IN ETHIOPIA

Region	No. of Districts reporting	Normal	Above Normal	Below Normal	Below 1	stantially Below Normal
	(1)	(2)	(3)	(4)	(5)=(4)-(3)	(6) included in (4)
Wollo	21	10	0	90	90	52
Arussi	20	70	5	25	20	10
Harerghe	22	39	23	39	16	9
Eritrea	23	78	4	18	14	8
Shewa	72	54	17	25	12	8
Tigrai	42	84	6	10	4	0
Wellega	35	86	0	14	14	0
Gamo Gofa	17	82	6	12	6	0
Illubabor	14	64	22	14	-8	О
Gojjam	22	82	14	4	-10	0
Kefa	9	45	33	22	-11	0
Begemder and Sim <i>i</i> en	29	72	21	7	-14	0
Sidamo	23	78	22	0	-22	0
Bale	11	9	82	9	-73	0
Total	360	65	14	21	7	7

Source: Columns (1) - (4) Ethiopian Ministry of Agriculture (1973) and Hussein (1976) Table 10

Columns (5) and (6) Sen (1981) Table 7.1

#### 3.2 Food availability decline?

Since the famine was clearly initiated by a drought, it might be plausible to think that the main causative element in the destitution was a drastic decline in food availability brought about by crop failure. There are, however, problems with this explanation.

Consider to begin with the Report referred to a moment ago which the Ethiopian Ministry of Agriculture released after the failure of the main rains in 1972 (Table 2). Rather than provide quantitative estimates of output, the Report classified districts according to whether production was 'above normal', 'normal', 'below normal' or 'substantially below normal'. This was done for each of the main crops, and for 'aggregate production' for 1972-73. It appears that while 65 per cent of the districts had normal output, 21 per cent had below normal production, and 14 per cent above normal. The below normal category is further split up into those districts that produced 'substantially below normal' and those below normal but not substantially so.

As Sen (1981) argues, attaching the same importance to all the districts, the 14 per cent above normal districts can be 'cancelled out' against the 14 per cent non substantially below districts.

This leaves 65 per cent normal output districts and 7 per cent substantially below normal output. Assuming that nothing was produced in the substantially below normal output districts - a clear understatement - this gives us a figure of displacement from normal output of 7 per cent. As Sen puts it, "A 7 per cent decline in the output of food crops is hardly a food availability decline (especially in an

economy with primarily rain dependent agriculture)" (p.90). There is thus little indication of a decline in food production coinciding with the famine. The evidence there rather points to a fall in food production in 1974  $\underline{\text{after}}$  the main impact of the famine had been felt. 20

#### 3.3 Logistics, food supply and starvation in Wollo

The fact that the evidence points to no dramatic decline in food availability, countrywide, in the famine year 1973 might tempt one to dismiss an explanation premissed on food availability straightaway as unsustainable. This, however, would be rather peremptory. Since the famine was not a generalized phenomenon but had its main impact in the north, and particularly in the province of Wollo, a more disaggregated analysis is necessary before the issue of causation can be settled.

A look at Table 2 shows clear evidence of food availability decline in Wollo. Starvation could still in principle have been avoided if food had been moved quickly into the affected areas from other provinces where output had not declined. This tells us that the appropriate unit of analysis in looking at the Wollo famine has to be Ethiopia rather than Wollo itself. And in deciding between competing explanations of the famine, much then depends on whether there were serious logistical problems in bringing food into the province. A view

<sup>20.</sup> Direct evidence for this is lacking since the FAO discontinued its food consumption series between 1972 and 1975. However, the data on calorie availability per head in the FAO Production Yearbook (1976) (see also Sen 1981, p.93) points to a decline for 1974 compared to any previous year.

centred on food availability would attribute the failure to avert starvation to the inability to move food sufficiently quickly into the affected areas, and ascribe the responsibility for this failure to the inadequate roads and bad transport with which the country had to live. An alternative view would deny that logistical problems were of paramount importance, since these could in principle have been overcome if the required demand existed, and ascribe the starvation instead to a failure of purchasing power.

Sen's analysis of the Wollo Famine is notable for its unequivocal rejection of the former hypothesis. Sen argues that:

".... the fall in food output in Wollo resulted in a direct entitlement failure on the part of the Wollo farmers and a trade entitlement failure for other classes in Wollo e.g. labourers and providers of services. There was not merely a decline in the food output to which the Wollo population was directly entitled out of its own production but also a collapse of income and purchasing power and of the ability of the Wollo population to attract food from elsewhere in Ethiopia."

(op.cit., pp.93-94)

This view is favoured over the transport limitation explanation for three reasons: (i) Roads may be few and bad in Wollo but two highways run through it, including the main north-south road linking Addis Ababa and Asmara. (ii) There were some reports of food moving out of Wollo through the famine period. (iii) Food prices did not go up very much and for long in Wollo, despite the disastrous failure of food output; in fact wholesale price data from Dessie - the main grain market in Wollo - showed very little movement.

In sum, since roads existed and were in fact used to carry food out of the province, transport could not have been a binding constraint

on food moving into Wollo: the failure of prices to rise is further indicative of this, since a transport limitation view would have suggested a jump in prices owing to the excess demand arising from supply constraints. A collapse of direct food entitlement, on the other hand, can operate without a rise in market prices. <sup>21</sup> There are, however, reasons to think that this explanation may not be entirely convincing.

First, it is likely that Sen underestimates the extent to which the unsatisfactory road network and the difficult topography of the country could militate against an effective transfer of grain and supplies. In the issue in question, it is not clear that his point that some food moved out of Wollo shows anything about food availability and transport not being important limitations, since any attempt to avert starvation in Wollo by moving in supplies would have required an ability to move substantial amounts of food in a sustained manner over a period of time. Further, the inaccessibility of the interior regions of the province - referred to in Sen's analysis (p.74) - may be more of a problem than he is prepared to acknowledge. It is true, as he says, that some relief camps were set up near the highway where they were accessible to convoys coming in from the capital and also that some destitution was near the main road, posing little logistical problems in terms of administering relief. The overall difficulties created by topography and limited transport have, however, been emphasized by many commentators 22 and clearly did operate as a

<sup>21.</sup> Contrast the case of the Great Benegal Famine of 1943 (San 1977) which was a classic inflationary 'boom' famine.

<sup>22.</sup> Cf.Gebre-Medhin and Vahlquist's (1977) comment that, "... the general inaccessbility of the interior areas, especially of regions like Wollo, due to the mountainous terrain and lack of roads made difficult or impossible the distribution of foods, seeds and animals at the village level." (p.197)

constraint on the ability to help the starving at a crucial point in the development of the famine: they cannot summarily be ruled out of court.

Second, Sen's use of the apparent stability of prices in Dessie in Wollo to cast doubt on the transport limitation view is questionable. Seaman and Holt (1980), using data from Korem and Alamata in Wollo, have argued that prices did increase as the famine set in. Further, Cutler (1984) has shown that because of distress migration, prices tend not only to rise with a lag, but to rise further and further from the epicentre of the famine zone as the impact of the migration begins to be felt. For these reasons, the data that Sen used, collected as it was from one provincial central market, may not be of the right type to enable a judgement on the price effects of a famine, and his characterization of Wollo in 1973 as a 'slump' situation is further rendered suspect by the more extensive data collected by Cutler and Seaman and Holt.

Third, the view that transport problems were a principal factor militating against effective relief of the Wollo population - which, in contrast to Sen's presentation, has been highlighted above - might be questioned if it were the case that private trading in foodgrains, by bringing in supplies from other regions of the country, typically

<sup>23.</sup> Cf. Cutler's comment that, "It may be that Sen misread the situation in Wollo during the last crisis by relying on data from Dessie Market which was a provincial central market getting grain from a large highland non-famine area at that time." (1984 p.53).

<sup>24.</sup> More fundamentally, perhaps, given the well-nigh universal tendency of prices to rise to reflect scarcity values in a famine situation - either immediately, or with a lag (cf. Cutler 1984, p.53) - it is possible to question the analytical value of a formal distinction between 'boom' and 'slump' famines, if it is to be based solely on assumed differences in price movements in the two situations.

provided an important contribution to overall availability in Wollo. Notwithstanding the problems of organizing official relief, it could then be argued that food could potentially have been moved in by traders and surplus farmers (and, by extension, the fact that this did not happen, be taken as evidence that the failure of effective demand was the main causative agent behind the famine). The available evidence, contained in the occasional Reports issued by the Ministry of Agriculture, is patchy, but what there is does not point to interregional trade in foodgrains in Ethiopia occurring on the scale required to even out regional imbalances in production. While private trade was probably not negligible in Wollo in 1973 (since the zoning policies severely restricting it, associated with the post-1974 regime, did not then exist) it is highly improbable that this could have been significant enough to avert starvation during the famine (even assuming for the moment that the requisite purchasing power did exist). In any case, if the earlier argument holds, any substantial private transfer of food would have faced the same sort of logistical problems that, as discussed above, made official relief so difficult.

Insofar as a binding transport limitation accentuated the chronic food shortages caused by drought in the province, then, food availability decline has to figure as the major explanatory factor in the famine. Whereas the drought did cause a collapse in purchasing power and limited the ability of the poor in Wollo to command food from outside through the exercise of market pressure, it is clear that supply limitations caused a critical excess demand for foodgrains

and that this was reflected in an increase in prices. Despite the centrality of the food availability decline, however, a simple FAD framework cannot be resuscitated to analyse the ramifications of the famine. To fully understand the nature of the starvation and its incidence, we need a more elaborate structure. And a natural way to proceed is to examine the mechanisms through which the decline in food availability caused a collapse in entitlements. It is to this that we now turn.

#### 3.4 Agriculturists, pastoralists and the collapse of entitlements

The impact of the famine tended to vary from region to region, depending on the nature of the local economy and the types of entitlement structures in operation at the time of the drought. A detailed discussion is difficult in the absence of a systematic survey of the occupational status of the famine victims (as was done, for instance, in the wake of the Bengal famine of 1943). However, we have substantial field studies to rely on and from these a picture of the destitution can be reconstructed. Broadly speaking, the biggest group of destitutes in the Wollo famine came from an agricultural background, although the relative incidence of starvation was probably greatest for the pastoral people, particularly for the tribe of 'Afar pastoralists. As for the Harerghe famine, the pastoralists from the Ogaden Somali

<sup>25.</sup> See Gebre-Medhin, Hay, Licke and Maffi (1977), Gebre-Medhin and Vahlquist (1977), Belete et al (1977), Belete, Haile-Mariam and Wolde Gebriel (1974), Holt, Seaman and Rivers (1975), Seaman, Holt and Rivers (1974) and Maffi (1975). See also the analysis in Sen (1981) pp.96-112.

and Issa Somali groups suffered most, despite the fact that a substantial majority of the population in the province were agriculturists.

A study of the destitutes from the Wollo famine seeking refuge in relief shelters (Belete et al 1977) brings out the fact that the largest occupational category was that of the agriculturist.

Unemployed labourers and their dependents, rural water carriers, household servants and village artisans dominated the shelter population, although the 'Afar group of nomads were also represented.

What seems to have happened is that, as the crisis operated to reduced crops and the arable grazing land, servants and dependents of farmers were evicted, and were amongst the first to move to look for work elsewhere. Tenants also suffered eviction, and these as well as the small scale family land (rist) holders, were gradually forced to sell livestock, compounding the effects of losing them as part of the impact of the drought. Migration in search of work - never uncommon in Ethiopia - now became a generalized phenomenon. As regards the 'southern' famine, the mortality data from Harerghe 26 show higher rates of mortality amongst the Somali nomads from the Ogaden and Issa groups. Whereas animal mortality and falling livestock prices had a severe impact on rural households in most affected areas of the country, the effect on the southern pastoralists seems to have been nothing short of disastrous, and it is hardly surprising that they should figure most prominently amongst the destitutes. How exactly did the famine operate to pauperize these various groups?

See Seaman, Holt and Rivers (1978) and Gebre Medhin, Hay, Licke and Maffi, op.cit.

As far as the agriculturists are concerned, Sen argues that "[t]he entitlement decline here took the form of direct entitlement failure... without involving the market in the immediate context.

The output - typically of foodgrains - was severely reduced and this led to starvation in a direct way." (op.cit., p.101) Thus, the hunger of the Wollo peasant did not depend on the contraction of food output in the region as a whole: rather, it had, as Sen putsit, 'a more direct origin' viz. the decline of the food owned and grown by the family. Since the failure of his crop also amounted to a collapse of his source of market command (i.e. his income) he could not really supplement his reduced income by market purchase. There was insufficient effective demand for food in the market, and despite widespread starvation, food prices recorded very little increase.

There are, however, reasons to think that in the Ethiopian context, crop failure may work to increase market dependence rather than to decrease it 27 and this would, inter alia, accord with our earlier finding that pace Sen food prices did on the whole increase during the Wollo famine. When own production possibilities fail agriculturists are forced to find other means of obtaining food by exchanging their endowments - such as their labour or their livestock - in the market, and even by 'economising' on the quality of foodgrains which they purchase.

(Baulch, 1985) A failure of direct entitlements thus transforms itself into a desperate search, on the part of the agriculturists, for some kind of market-based entitlement. And as in most such ultimate

<sup>27.</sup> Thus Cutler and Stephenson (1984) comment, in relation to the current famine: "When farmers suffer crop failure, they actually become more dependent upon marketing their labour and other assets in order to survive. Even when outright famine rages, starving peasants desperately engage in petty trading in an attempt to make small profits for consumption."

situations, those closest to the margin of subsistence fall rapidly by the wayside.

Turning now to the fate of the pastoralists during the famine in both regions, their distress was accentuated, as we have seen, by the loss of animals, whether due to drought or to displacement from traditional grazing grounds. But as Sen (1981) points out, perhaps a more immediate reason for their travails was that the exchange entitlement associated with any given stock of animals vis-a-vis grain also fell dramatically. Since a pastoralist lives not only by eating animals or consuming animal products like milk, but also by exchanging animals for other means of sustenance like grains - and given that animal calories cost about twice as much as grain calories (Seaman, Holt and Rivers 1978) - a pastoral family can survive on a much lower holding of animals if it sells animals to buy grains. Indeed, it has been estimated that in normal times the typical pastoralist tends to meet about half his calorie requirements through agricultural rather than pastoral production. This relative price effect is therefore crucial to understanding the starvation of the pastoralist. Whereas in Wollo and adjoining regions the exchange rates between animals and grains fell sharply, the southern famine in Harerghe was notable for witnessing a precipitous fall in these indices.

The effect of exchange rate declines and losses due to mortality on the pastoral population have been illuminatingly analyzed by Sen in his study of the Harerghe famine, and some of the results can be seen in

<sup>28.</sup> Large tracts of good land in the Awash Valley were taken over during 1970-71 by foreign-owned companies for growing commercial crops, particularly cotton and sugar, and this obviously led to a serious reduction in grazing land. On this see Bondestam (1974) and Hussein (1976).

<sup>29.</sup> Rivers, Holt, Seaman and Bowden (1976) p.354.

TABLE 3

# GRAIN ENTITLEMENT LOSS DUE TO ANIMAL LOSS AND EXCHANGE RATE CHANGE

## AVERAGE STOCK OF CATTLE

	SOUTHERN OGADEN STRATUM	NORTHERN STRATUM	ISSA STRATUM
Value in Pre-Drought Holdings	1.0	1.0	1.0
Percentage Animal Loss owing to Exchange Rate (q)	48	57	79
Percentage total grain entitlement loss (p)	70	68	62
Percentage total grain entitlement loss (p+q-pq)	84	86	92
Ratio of exchange rate loss to animal ownership loss (p/q)	1.46	1.18	0.78

Source: Reproduced with some omissions from Sen (1981) Table 7.7.p.108.

### TABLE 4

### MORTALITY IN THE WOLLO AND HARERGHE FAMINES

# (a) EXCESS MORTALITY IN WOLLO (%) February 1974-February 1975

	All Ages	Infants
Wollo Province	61	119
- east	61	124
- west	61	103
Lowlands	63	128
- eastern	65	137
- western	62	106
Highlands	56	100
- eastern	54	98
- western	58	103

# (b) MORTALITY AMONGST UNDER FIVES REPORTED BY DIFFERENT GROUPS IN HARERGHE (YEAR ENDING 1974)

Area		<u>Pastoralists</u>		Farmers	
	Issa Desert	North Ogađen	South Ogaden	High- land	Main Areas
Deaths/1000 population 0-4.99 years	306	290	290	92	142

Source: (a) Maffi (1975) p.17

(b) Rivers et al (1976) p.354

Table 3 reproduced from his work. Notice, among other things:

(i) the percentage losses of grain entitlement from animal holdings as a combined result of animal loss and exchange rate deterioration are very large for all the pastoral areas viz. 84 per cent for southern Ogaden, 86 per cent for northern Ogaden, and as much as 92 per cent for the Issa desert (ii) in both southern Ogaden and northern Ogaden, the contribution of the exchange rate seems substantially larger than that of animal loss as such.

Given the lower cost of acquiring calories through exchanging animals for grain rather than consuming the animals themselves, hard times push the pastoralist to be more and more dependent on grains acquired through animal sales. Animal mortality combined with a deteriorating exchange rate for grains has therefore a doubly damaging effect on the pastoralist. Faced with such an alliance between nature and the market mechanism, there is really little that he can do to resist incipient starvation.

#### 3.5 Mortality patterns in the famines

The real crisis of starvation and death in the Wollo famine occurred from June to August 1973, during which time the relief camps were simply overwhelmed by destitute people. Mortality estimates for this period vary considerably. Whereas the official estimate of the Relief and Rehabilitation Commission suggests that only 10,000 people died, a UNICEF study puts the figure at between 50,000 and 100,000.

<sup>30.</sup> Quoted in Gebre-Medhin and Vahlquist (1977) p.197.

(At this time, the population of Wollo was estimated at 2.4 million of which less than one million lived in the main drought area). As far as the second phase goes, it appears that mortality had reached its peak by March 1975 when 30,000 people - mainly women and children - had settled around a few large centres in the Ogaden where camps were being organized. This number was far in excess of anything the authorities could handle, and the severe overcrowding and the unsanitary conditions it created made the situation potentially disastrous. Oxfam reports speak of a peak death rate of 150 children a day, which had not fallen below 50 a day by early April 1975. In the last months of 1975, some 88,000 people were still believed to be living in 19 relief centres. In total, then, between 1972 and 1975 there were, according to Rivers et al (1976), "an excess of at least 100,000 deaths due to starvation and associated diseases." (p.355).

The study of the shelter population in Wollo - referred to earlier - (cf. Belete et al 1977) documents the appalling conditions that obtained in many of the impromptu relief camps set up at the time. The lack of basic amenities made inevitable the spread of infectious disease - and these particularly affected children. Diarrhoea, measles, whooping cough and respiratory infections claimed a large toll of young lives, though precise estimates are lacking.

Further insights into the pattern of mortality in Wollo can be gained by considering the results of a study carried out by Maffi (1975), between February 1974 and February 1975 i.e. after the worst of the crisis was over. This allows insights into the famine's demographic impact in the immediate aftermath of the critical events. Notice from

Table 4(a), which reproduces some of Maffi's estimates, that the eastern lowlands - where a majority of the 'Afar pastoralists live - show the highest incidence of excess mortality (both over all age groups, and amongst children). It was suggested earlier that the eastern herdsmen were, in relative terms, the group worst affected by the crisis; here we find further support for this proposition in the mortality pattern that emerges. Another important point to notice is that the Table provides evidence of the very high proportion of excess mortality amongst infants, indicating once again the devastating impact of infectious diseases which particularly affected the young.

Turning now to the Harerghefamine, the results of surveys carried out in 1974, in the midst of the crisis, provide firm indications into the main trends in the destitution. 31 Nutritional measurements of sample populations showed that the worst effects of the drought had occurred in the Ogaden. Continuing rain failure there had forced pastoralists to migrate, and it is no coincidence that the worst nourished pastoral groups were found at seasonally unusual locations. 32 Table 4(b) gives evidence of a different sort on the pattern of underfive mortality in the province. In the year previous to the survey, i.e. 1973, this indicator of impending famine was virtually unchanged

<sup>31.</sup> See Rivers et al (1976) and Seaman, Holt and Rivers (1978).

<sup>32.</sup> Herdsmen tend to treat cattle as a better insurance against drought than carried-over stocks of grain. For this reason, they were tied to the land around water points for their cattle, and were reluctant to move in search of better weather conditions until it was clear that their own land would provide them with nothing. When they finally decided to do so, however, the available water points proved to be too far away, and they ended up suffering not only a harvest loss, but the loss of their cattle. For an elaboration, see Seaman, Holt and Rivers, op.cit.

for agricultural peoples but increased by about three-fold amongst pastoralists. The high mortality amongst pastoral groups is associated by the authors with food shortage, especially since this went together with, "a lower herdsize and a tendency to cluster along roads." (Rivers et al 1976 p.354) - presumably in search of relief shelters. The acute difficulties caused to the pastoralists as a result of falling animal prices, combined with the increase in grain prices, has already been discussed above; the mortality evidence just reviewed, then, serves as a grim reminder of what this process ultimately led to.

#### 4. THE FAMINE OF 1982-85

#### 4.1 Background

The recent Ethiopian famine, the final impact of which it is still too early to gauge, has been a much bigger catastrophe than the one just discussed. Some commentators have in fact likened it to the 'Great Famine' which ravaged the country in the last decade of the nineteenth century, and suggested that the same heavy toll in human lives would have been paid had not a last minute emergency programme begin to get underway in October 1984. In the event, excess mortality was estimated to have reached 175,000 by mid-1984 and it is all but certain that the total mortality figure will be in

<sup>33.</sup> Hancock (1985) p.66.

<sup>34.</sup> Cutler and Stephenson (1984).

in excess of one million. 35

The origins of the current famine actually go back to the intermittent food crises of the seventies, accentuated, among other things, by the effects of the Ogaden conflict of 1977-78. The social convulsions that shook the country during this period, consequent on the coming to power of the military regime, and the debilitating effects of the civil war which the regime was waging against separatist forces in the north of the country, also played no small part in increasing the country's vulnerability to the depredations caused by endemic food shortages. By 1982, the famine had come into its own in the northern provinces, though it took the international community another two years to recognize the true magnitude of the crisis. The regime's own belated recognition of the scale of the impending catastrophe and its increasing preoccupation with the tenth anniversary celebrations of the fall of the Imperial order also did much to delay relief efforts. Before the famine itself is analysed, therefore, it is best to begin with a brief review of the interplay between developments in Ethiopia and their perception abroad in the period when the famine was transformed from a localized crisis to a major international media event. This background is important in assessing both the delayed reaction of the international community and the callousness of the country's own regime as elements in the intensification of starvation.

<sup>35.</sup> To get an idea of the scale of the disaster, consider that an authority on famines like Aykroyd, writing in the mid-seventies could express the view that, "a death toll of perhaps over 100,000 [is] ... inexcusable at this stage in the history of famine." (1974, p.203).

#### 4.2 Discovering the famine

The existence of a major famine in Ethiopia only became apparent to the outside world in the autumn of 1984, when television crews managed to reach some of the worst affected relief camps and filmed excruciating scenes of starvation and death. In particular, the evocative reporting from Korem in Wollo by the BBC journalist Michael Buerk and the unforgettable camera work of Mohammed Amin 36 managed to capture worldwide public attention to such an extent as to render further complacency on the part of governments well-nigh impossible and made the organization of relief assistance an urgent political priority. The role of the media in firstly, providing a forum through which public concern could be channelized into effective public action -witness the stunning success of the Band Aid Concert organized by the singer and media personality Bob Geldof the following summer - and secondly, in making it impossible for governments to ignore the demands of a concerned electorate for narrow political ends deserves, then, in this context to be both highlighted and praised.  $^{37}$ 

But whereas the media exposure set in motion a sustained relief operation, and must have thereby saved countless lives, the fact that it came only in the closing months of 1984 meant that it had in an important sense come too late: by 1984 Ethiopi was a famine-devastated

<sup>36.</sup> The closing words of Buerk's commentary on the situation in the camp he visited have been much quoted in this context and well illustrate the dimensions of the human tragedy in what was taking place: "Dawn, and as the sun breaks through the piercing chill of night on the plain outside Korem, it lights up a biblical famine, now, in the twentieth century. This place, say workers here, is the closest thing to hell on earth."

<sup>37.</sup> For an account of the background to the famine, and in particular the role of the media in arousing public concern, see Gill (1986).

country and thousands of lives had already been lost. The apparatus of famine forecasting and alert had failed miserably.

Yet it was not as though no warning had been given of the impending crisis. As early as May 1981 a presentation to the United Nations Conference on Least Developed Countries from the Relief and Rehabilitation Commission (RRC) of Ethiopia provided evidence of an alarming deterioration in weather conditions in the country. It was argued that persistent rain failures and drought would certainly lead to famine in the near future unless a coordinated international relief programme was set in motion. This appeal, however, aroused as little international interest as the subsequent ones that the RRC advanced — with increasing stridency in 1982 and 1983 — as the continuing failure of the rains in the northern provinces confirmed its own worst fears about the gravity of the situation. That these were no false alarms should by then have been clear in view of the accumulating evidence in favour of an incipient crisis.

At the same time as the RRC pursued its international appeals, however, domestic political priorities in Ethiopia dictated that news about the famine should be played down. During the early part of 1984, official attention was directed to the twin tasks of establishing a new party and celebrating the tenth anniversary of the coming to power of the country's military rulers, and news of the famine came as an unwelcome reminder that the celebrations might just be masking a reality that was growing uglier by the day.

<sup>38.</sup> Major Dawit Wolde Giorgis, the head of the RRC, apparently did his best to get the Politbureau to respond appropriately to the emergency, but "they just didn't want to know." (Quoted in Gill, op.cit., p.100).

Groups of starving peasants - who had marched from the provinces of Wollo and Tigrai seeking - as their countrymen a decade ago had done - an escape from desperate hunger, were intercepted at roadblocks seven or eight miles north of Addis Ababa. At the same time, foreigners and particularly foreign journalists in the capital to cover the anniversary functions, were refused permission to visit the north of the country. Nothing, it appeared, was to be allowed to detract from the government's chosen aim of demonstrating its achievements of the previous decade in the most spectacular fashion.

In early 1984, in response to the growing sense of crisis, the UN's Food and Agricultural Organisation (FAO) prepared a list of 'calamity affected countries', largely based on expected crop failures, identifying no less than twenty-four countries in Africa in 1984 as in need of aid. There was, however, no attempt to discriminate amongst countries facing varying degrees of emergency and in particular, no effort was made to highlight the case of Ethiopia. This militated against any concentrated attempt to mobilise support for the famine, which by this time was affecting, on the RRC's calculation, more than five million people, and the relief of which needed some 900,000 tonnes of grain. 39

In subsequent estimates produced after a series of missions to the country, what seems to have dominated the FAO's thinking was a concern with how much food Ethiopia could distribute, so that as a general rule, any estimates put forward by the RRC were slashed on the grounds that the country did not have the logistical support system

<sup>39.</sup> This figure for the RRC's estimate at this period is taken from Gill op.cit.

to distribute what was being requested. This confusion - if such it was - between need and logistical capacity to meet need in the event unwittingly provided ammunition to those who wished to challenge the more alarming reports of deterioration in Ethiopia and justified the view that there was really enough grain in the country, the main question being one of adequately mobilising the available surplus. 40 It was actually only towards the end of 1984 that some sort of parity of views was achieved between the FAO and the RRC: both seemed to agree that the extent of the shortfall was between 1.7 million and 2 million tonnes (representing the consumption of between 6.5 and 8 million people). By then, of course, the famine was in full swing.

The picture, in sum, is one of unconscionable delay on the part of the international donor community in realizing the magnitude of the crisis and coordinating the appropriate response to it; the delay seems also to have been compounded by a faulty analysis of the situation. In addition, the misdirected political priorities of the regime and its inability or unwillingness to mobilise wholeheartedly against the famine further added to the problem. What impact did this tardy response have on the ability of the country to fight the famine? Could a well thought-out initial response have prevented the spread of the devastation? These are questions to be taken up once the famine itself is analyzed.

<sup>40.</sup> That port and transport facilities were at least initially hopelessly inadequate to cope with the volume of relief to be distributed and limited the effectiveness of the emergency ophrations is of course true and will be further discussed presently. Note, however, that this is, if anything, an argument for trying to improve the distributional capacity, not one for tailoring needs to an estimate of the extent to which they can be fulfilled: doing the latter only confuses the issue.

#### 4.3 Phases in the disaster

The recent events in Ethiopia that finally brought forth the international reaction discussed above can, broadly speaking, be partitioned into four phases:  $^{41}$ 

Phase I: from April/May of 1981 to March of 1983

Phase II: from April/May of 1983 to March of 1984

Phase III: from April/May of 1984 to September of 1985

Phase IV: October 1985 and thereafter

The current crisis first manifested itself in deteriorating conditions in the northern provinces of Wollo, Tigrai and Eritrea in 1980-81. But what we have called Phase I really revealed itself as the 1982 belg season failed in Tigrai and Eritrea (the culmination of five bad harvests in these two regions). An Oxfam study for the period notes that while "Eritrean dura (sorghum) prices more than doubled in 1982" sections of the population, "managed to survive eating wild fruits such as cactus and wild grass seeds." The belg-producing regions of Wollo, Bale, Gonder, Shewa and Sidamo - the last two of which had never previously experienced severe droughts - were now being affected. The meher rains were also below normal in several regions and there were alarming indications that the drought had transformed itself into something more than a regional manifestation.

<sup>41.</sup> There is, of course, an element of continuity underlying this division.

<sup>42.</sup> Quoted in Hancock (1985) p.76.

Some 2,270,000 were by then estimated to have been affected <sup>43</sup> although few indications existed at this stage of general famine mortality. At this stage migration in search of food had started and starving peasants from Korem in Wollo had trekked to the main road near their dwellings in search of relief. <sup>44</sup>

Phase II was marked by the renewed failure of the belg season in 1983, and conditions consequently worsened in the northern provinces. Reports speak of hunger and deteriorating health conditions, particularly in Gonder where the influx of people from western Wollo in search of food caused intolerable strains on the resources available. The deepening drought also increased the rate of cattle mortality in these regions, cutting at a stroke the principal source of livelihood for many pastoralists. At this stage, it was still possible to hope that further devastation could be averted. The RRC, as detailed above, was desperately trying to mobilize international assistance during this period. Indeed, the meher rains for 1983 actually brought some hope of improvement: the crop harvested was higher than in 1982 and food output in 1983 rose in provinces like Arssi, Gojjam and Illubabor (Table 6).

However conditions had deteriorated in Wollo, Tigrai and Eritrea, where even the meher season had brought no relief and where shortfalls continued to cause severe problems. An important indicator of the imminent spreading of famine conditions was the acceleration of population movement which took place around this period. There was

<sup>43.</sup> FAO Special Report on Foodcrops and Shortages (1983).

<sup>44.</sup> John Seaman: personal communication dated 13.8.1986.

TOTAL NUMBER OF PEOPLE AFFECTED

TABLE 5

	1981	1982	1983	1984	1985
Wollo	450,000	592,400	1,100,230	1,820,970	2,587,420
Shewa	239,000	533,000	195,000	204,310	851,830
Tigrai	500,000	600,000	1,000,000	1,300,000	1,400,000
Gonder	67,000	202,000	424,600	324,500	363,000
Harerghe	420,000	384,000	285,000	278,830	875,080
Sidamo	NA	303,000	145,000	355,040	532,500
Gamo Gofa	232,000	NA	NA	79,880	106,330
Balo	275,000	109,000	35,000	52,950	192,870
Arssi	185,000	220,000	60,000	20,530	81,610
Wellega	NA	NA	NA	NA	23,420
Illubabor	NA	20,000	NA	NA	20,400
Keffa	NA	NA	NA	NA	58,000
Gojjam	NA	83,600	20,000	35,250	76,120

Source: RRC Early Warning System Reports (1986)

large scale distress migration out of Tigrai to Gonder and Gojjam from early to mid-1983, involving 500,000 people according to one estimate. <sup>45</sup> In the latter half of 1983 a very heavy migratory spell to Sudan began; the migrants belonged to central Tigrai and northwestern Wollo and were middle peasants in origin (rather than the usual desperately poor migrant class) all of whom had been living on the sale of assets for two or three years prior to this move. Yet, in spite of all this, it was still possible to hope that the famine could still be contained in the few worst affected areas.

Such hopes were however cruelly exposed as hollow by the failure of the 1984 belg season. And as Phase III began, it was clear that the disaster was fated to reach epic proportions. Famine was now raging all over the north - the number of people affected in Wollo and Tigrai was now estimated at over two million (cf. Table 5) - and reports from the many hastily arranged relief camps suggested that the daily death rate had crossed the hundred figure mark and was climbing upwards. As the meher rains came late and very erratically, the country prepared for nature's coup de grace, which duly came with the failure of the 1984 main season. Eleven out of fourteen administrative provinces were now affected, in the grip of a famine the like of which Ethiopia had not witnessed since the 'kifu qan' (evil days) of 1888-1892. Overall output between 1984 and 1985 was down by between 25 and 20 per cent - i.e. representing the consumption of between 6.5 and 8 million persons. Besides the devastated provinces of Wollo, Eritrea and Tigrai, the famine had now spread to Bale, Gonder and Sidamo. Accounts of the situation in the worst affected areas from observers

<sup>45.</sup> Seaman, loc.cit.

34.

present during this period bear out in full the grim implications of these statistics.  $^{\mathbf{46}}$ 

The dramatic loss of cattle, the sharply reduced availability of seeds, and the continuing erratic behaviour of the weather, spelt trouble again for the next belg season. As expected, output was again drastically curtailed in Wollo, Tigrai and Eritrea (estimated to be down from normal levels by 70, 60 and 45 per cent respectively) 47 and the drought had by now spread to the prime producing areas of Arssi, Gojjam and Shewa, wiping out any potential surpluses that may have been available for distribution elsewhere. By March, only 45 per cent of the pledged aid had arrived and the number of people needing relief assistance was now, according to the RRC, reaching 8 million.  $^{48}$ Despite the international relief efforts now in progress, the limited internal distribution capacity of the country imposed a formidable constraint on the ability to deliver relief quickly. Mortality thus continued to be severe through the first half of 1985. meher rains in 1985 brought cautious room for optimism, signalling a possible change in overall weather conditions; the damage to the land

<sup>46.</sup> Cf. Peter Gill's account of a visit to Korem in Wollo in early October 1984: "It is surprisingly easy to remain the dispassionate outsider when presented with barely recognizable distortions of the human condition — the scores of bodies laid out each morning for burial, the unnatural quiet of tin huts full of the dying, the misshapen form of the grossly malnourished. Even the numbers involved — tens of thousands in Korem — tended to numb the senses. I found that I could just about cope with the dead and the dying. It was the despair of the living that finally put paid to my sense of detachment."

<sup>47.</sup> FAO Special Reports, op.cit.

<sup>48.</sup> Since the agricultural sector is a provider of food as well as a source of employment and income for agriculturists, many of these seeking relief would have suffered a loss of employment and hence income as a result of harvest failures. This is an important point to bring out and we shall have more to say on this, although lack of data on employment and trade prevents us from giving any detailed account of the secondary effects of output reductions.

Source: Columns (1); Columns (3)-(9): Computed from RRC: Food Situation in Ethiopia 1981-85 A Trend Analysis Report (1985).

Column (2): Computed from data on production/person/day in a 'normal' year from Table 1.

TABLE 6
TREND IN PER CAPITA PER DAY GRAIN PRODUCTION AVAILABLE FOR FOOD 1981-1985

			1981 = 10	0				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Region	Relative Weight in Production	1982	1983	1984	1985	Average Shortfall 1982-85	Weighted Average Shortfall 1982-85	Weighted Average Shortfall 1984-85
Wollo	0.076	83	49	46	14	-52	-3.95	-5.32
Tigrai	0.039	97	/497	7467 (46) 75	14 /14/ (14) 75	-52	-2.03	-2.73
Eritrea	0.034	104	<u>[49</u> ]	7467	(14)	-52	-1.77	-2.38
Gamo Gofa	0.049	75	114	75	75	+15	-0.74	-1.23
Harerghe	0.060	109	135	100	52	+1	-0.06	-1.44
Bale	0.079	183	225	146	62	+54	+4.27	+0.16
Keffa	0.059	68	105	105	65	+14	-0.83	-0.89
Sidamo	0.024	73	101	93	60	+15	-0.36	-0.58
Illubabor	0.081	122	194	213	100	+14	+1.13	+0.57
Gonder	0.082	106	149	96	80	+8	+0.66	-0.98
Shewa	0.091	80	108	84	59	+18	-1.64	-2.63
Wellega	0.098	117	129	112	63	+5	+0.49	-1.27
Gojjam	0.101	100	115	103	117	+9	+0.91	+1.01
Arssi	0.130	108	112	85	64	+8	-1.04	<u>-9.75</u>
TOTAL	1.00						-4.96	-27.45

# ${\color{red} {\tt NOTES}}$ (1) Per capita per day calculation is made based on the assumption that post harvest losses are at an average of 10%.

- (2) Population is estimated from the 1984 population census results which indicated a 2.9% rate of annual population growth.
- (3) The figures in columns (4)-(6) for Tigrai and Eritrea are not available. However, since it is known that these two regions along with Wollo suffered the most in the period 1983-85 we assume in the calculation that their average shortfalls were the same as that of Wollo. This explains why these figures are reproduced in brackets in columns (4)-(6).

had been such, however, that crop output for the year remained very low. Indeed, (Table 6) in some previously unaffected regions like Harerghe, the harvest was disastrously bad, reflecting the combined impact of the rain failure and the shortage of seeds in the previous season.

This latter development was indicative of a possible fresh crisis looming in the country. Looking at the trend, one could cautiously hope that the worst of the famine would be over at the end of Phase III. As our Phase IV began, however, there were reports of the prime cereal lands of the south and the southeast being hit by the drought and suffering an output collapse and indications that up to two million people might be in urgent need of food aid. But if we are witnessing the start of a fresh wave of devastation - with the famine moving now to the south and the southeast - this would in fact only replicate the pattern of 1972-75, when - as discussed above - the southern pastoralists in the main fell victim to the second attack of drought, the first having primarily claimed the agriculturalists of the north.

Taking an overall view of the nature and development of the famine, then, the following points stand out:

(i) The famine struck particularly hard in the northern regions of Wollo, Eritrea, Tigrai and Gonder, though in time it also engulfed the southern regions of Bale, Sidamo and Gamo Gofa and even threatened Shewa. Merely in terms of geographical coverage, then - not to

Paul Vallely 'Ethiopia food-producing sectors hit by drought', The Times, 2 December 1985.

<sup>50.</sup> John Madeley 'Ethiopia faces a new famine', The Observer, 26 January 1986.

mention mortality or social impact - it was clearly a much more impressive affair than its predecessor.

- (ii) As a result of successive droughts, the country suffered a catastrophic collapse in food output. For the majority of regions, this decline is most in evidence in 1984 and 1985 the years in which acute famine conditions had gripped most of the country. The trend witnessed, then, is one of sharp regional output collapses, followed by a nationwide decline in food output and availability.
- (iii) Since excess mortality in mid-1984 was estimated at 175,000 and total excess mortality for the famine by 1985 at more than one million, it appears that the bulk of the mortality occurred in the period mid-1984 to mid-1985 i.e. in what we have called Phase III (although the data available is not sufficient to fully confirm this.) Preliminary evidence of the scale of mortality associated with the famine is further discussed in Section 4.5 below.
- (iv) While international apathy in the initial periods of the crisis crucially delayed an early response to the spreading famine, the logistical difficulties in distributing large quantities of grain briefly, the inadequate port facilities, the shortage of trucks, the absence of spare parts and maintenance and the hopelessly inadequate road networks to the critically affected areas proved possibly the most binding constraint on the effectiveness of relief policy in saving lives. An effective early response to the famine was also, of course, rendered impossible by political constraints within the country: there was first the diversion created by the decennial

celebrations of the fall of the old order, but more critically the fact that the regions most affected by the devastation - Eritrea, Tigrai and parts of Gonder and Morthern Wollo - were also those more troubled by the military conflict between the government and the separatist forces.

#### 4.4 Food availability and entitlement collapse

It might appear from what has so far been said about the nature of the famine that a dramatic decline in food availability was its major causative agent - and this view is indeed borne out by a consideration of the available data.

Table 6 shows the trend in per capita availability of food between 1981 and 1985. Not only is there an overall decline in food availability per head in the country as a whole over this period, but the rate of decline increases as we move into the latter years (which happen to coincide with our Phase III). One can, in fact, identify two broad periods of decline, viz. (1) pre-1983 (the initial period when the famine set in) (2) post-1983 (when the famine intensified and covered virtually the whole country.) If one takes a weighted average of the decline it is, as one would expect, much more marked for the period 1984-85 than for the whole period.<sup>51</sup>

<sup>51.</sup> It is interesting to note that using the widely known FAO Production Yearbook data - rather than the RRC data we have used - would provide a different picture of output movements in the last five years. A glance at Table 9, which reproduces data from the FAO Yearbooks, shows 1982 to be something of a bumper harvest (with food production per capita in fact higher than in 1977, which was a 'good' year) and 1985 to be a year of output recovery. This, however, does not tally with what we know

However, different regions shared somewhat unequally in this drought-induced collapse of food output. The impact was clearly greatest in the provinces of Wollo, Tigrai and Eritrea and - in 1985 - in Harerghe. The belg-dependent provinces of Sidamo and Gamo Gofa also suffered, as well as, in the later stages, the normally surplus regions of Arssi and Shewa. For some regions, these aggregate figures do not give a true picture of the devastation that occurred; we know for instance that Gonder was critically affected well before 1984 (when output declined according to Table 6).

Table 5 puts the number of people affected in 1983 at 424,600.

It thus seems likely that a picture of increasing aggregate availability for the region as a whole masked the extent of starvation prior to 1983. This is an important point to emphasize, since the presence of more data at a more disaggregated district or 'woreda' level would enable us to highlight more such aspects of the destitution.

The finding that the recent Ethiopian famine was, in all probability, caused by a sustained decline in food availability is important, at one level, in confronting a naive distributionist view of the incidence of famines that we are sometimes faced with and,

footnote 1 from previous page....

about the famine's development and impact, and the RRC data are almost certainly more representative of the trend. The discrepancy between the two may be caused inter alia by

(i) a different definition of agricultural production used by the FAO in its computation (ii) a lower - and in fact obsolete - figure of population growth used for the purpose of deflation.

<sup>52.</sup> Since data are not available for the latter two, we have assumed that they shared the same fate as Wollo; this is a defensible assumption in view of what we know about the progress of the famine through the northern regions. Cf. notes to Table 6.

TABLE 7

REGIONAL PRICE MOVEMENTS 1981-85

Region and		Average monthly wholesale prices in Birr/quintal					
<u>Awrafa</u>		1981	1982	1983	1984	1985	
WOLLO							
Dessie Zuria	T	83	93	95	175	255	
	S	54		60	137	219	
Rayana Koba	T	50	75	107	194	252	
	S	33	50	67	111	184	
Ambassel	Т	72	90	93	198	276	
	S	63	65	63	138	226	
Average	Т	68	86	98	189	261	
J	S	50	62	63	129	210	
GONDER							
Gonder Zuria	T S	54	75 50	58	77	119	
	5	34	50	35	48	66	
Gayent	T	48	58	52	93	145	
	S	32	NA	30	68 	119	
Semien	T	55	63	60	72	122	
	S	23	30	27	39	78	
Average	T	52	65	57	81	129	
	S	30	40	31	52		
HARERGHE							
Chercher Adelna Gara							
Gurache	T	116	121	92	115	178	
	S	95	95	94	133	122	
Dire Dawa	T	115	125	120	178	216	
	S	93	113	73	150	137	
Harer Zuria	Т	NA	110	114	170	137	
	S	98	87	69	169	196	
Average	Т	116	119	109	154	177	
	S	95	98	79	151	152	

TABLE 7 (continued)

	1981	1982	1983	1984	1985
T	79	73	64	121	178
M	45	NA	42	78	133
T	82	82	74	106	144
M	34	37	30	65	91
T	58	63	61	109	118
B	33	36	30	58	62
T	72	76	60	122	97
M	48	31	28	73	75
T	61	66	67	115	151
B	39	34	30	70	84
T	70	70	60	75	102
M	42	41	44	64	78
T	82	66	61	105	104
M	47	33	35	58	78
	M T M T B T M T B	T 79 M 45  T 82 M 34  T 58 B 33  T 72 M 48  T 61 B 39  T 70 M 42  T 82	T 79 73 NA  M 45 NA  T 82 82 82 M 34 37  T 58 63 8 33 36  T 72 76 M 48 31  T 61 66 B 39 34  T 70 70 M 42 41  T 82 66	T 79 73 64 M 45 NA 42  T 82 82 74 M 34 37 30  T 58 63 61 8 33 36 30  T 72 76 60 M 48 31 28  T 61 66 67 34 30  T 70 70 60 M 42 41 44  T 82 66 61	T 79 73 64 121 M 45 NA 42 78 T 82 82 74 106 M 34 37 30 65 T 58 63 61 109 B 33 36 30 58 T 72 76 60 122 M 48 31 28 73 T 61 66 67 115 B 39 34 30 70 T 70 70 60 75 M 42 41 44 64 T 82 66 61 105

Notes: (1) T = Teff

S = Sorghum

M = Maize

B = Barley

- (2) Where one price figure is given for a cereal in a region, the average of prices in three  $\alpha \omega_{rej_{\alpha^*}}$  has been taken.
- (3) Prices in Eritrea and Tigrai are not given, because data was not available.

Source: RRC: Early Warning System Reports (1986)

TABLE 8 LIVESTOCK/GRAIN BARTER TERMS OF TRADE (quintals)

8:1	(1)	(2)	(3)	(4)	(5)
KOREM	Oct.1982	Jan.1983	July 1983	<u>0ct.1983</u>	May 1985
Oxen/Teff	2.6	3.3	1.0	2.5	0.6
Oxen/Sorghum	4.3	5.0	1.3	3.2	0.9
Goat/Teff	0.5	0.5	0.3	0.3	0.1
Goat/Sorghum	0.8	0.8	0.4	0.4	0.2
8:2	(1)	(2)	(3)	(4)	
KOMBOLCHA	Sept.1982	Nov.1982	Jan.1983	May 1985	
Oxen/Teff	3.1	3.5	2.7	0.9	
Oxen/Sorghum	4.1	4.0	2.6	1.0	
Cow/Teff	2.4	2.2	1.8	-	
Cow/Sorghum	3.1	2.5	1.8	-	

Source: Table &1 columns (1)-(4)

Table &2 columns (1)-(3) from Cutler (1984)

Table 8:1 columns (5)

Table 8:2 column (4) from Baulch (1985)

TABLE 9

FAO TABLES ON FOOD PRODUCTION IN ETHIOPIA(1974-76 = 100)

	FOOD	FOOD PER CAPITA
1974	96	99
1975	102	102
1976	101	99
1977	99	95
1978	110	104
1979	122	113
1980	117	106
1981	115	102
1982	127	110
1983	118	99
1984	110	90
1985	116	92

Source: FAO Production Yearbooks 1984

Monthly Bulletin of Statistics January 1985.

at another, in emphasizing the long term importance of investing in agricultural infrastructure, reforestation, soil conservation etc., so as to ensure a more secure food production situation. This latter point is especially crucial when, as in the Ethiopian case, a substantial proportion of the agricultural population depend on food production, not merely to satisfy their consumption needs, but for employment and incomes. As we have seen, when a decline in food production causes people to starve, such starvation can be understood as the collapse of certain kinds of entitlements to food. It is therefore important to enquire, once again, into the mechanisms through which such destitution occurs.

A drought-induced famine reduces food supply but it also cuts the earnings of the agriculturist or the pastoralist and thereby affects his command over food. If we take the case of Wollo, successive droughts will obviously drastically reduce the amount of food available within the province: if there is in addition a transport constraint - and the evidence for this, as we have seen, is not lacking - then, for a given level of demand, the supply of food coming into the province will be reduced. 53

In addition, when the impact of the famine makes itself felt, there is likely to be a local-level contraction in supplies. This tends to happen when farmers start withholding whatever small surpluses they have from the market, wanting to safeguard their own consumption

<sup>53.</sup> There are also disturbing allegations - which at this stage cannot be further substantiated - that Wollo was being 'starved' so that more grain could go to the resettlement areas to the south. (See Paul Vallely 'Starving Wollo: an Empty Excuse' The Times, 14 August 1985).

possibilities, or speculating that prices may rise on account of shortages caused by the famine.

On the other hand, the possibility of exerting effective demand pressures in the market for foodgrains will clearly be reduced on account of the collapse of purchasing power caused by the drought. However, as discussed in the context of the earlier famine, total demand for foodgrains is not always substantially reduced in these conditions. By cutting direct entitlements – or the possibility of meeting basic consumption needs from own production – and by killing off livestock, the crisis operates to force agriculturists to be more rather than less market dependent and the results may ultimately manifest themselves in more local level pressures on foodgrains sold on the market.

Looking at the price data in Table 7, the impact of these various effects can now be traced. It is interesting to note that prices did not show much movement in Wollo in the first two years of the famine viz. 1982 and 1983 (and in other less affected areas like Gonder actually recorded a fall). We know that output had been severely affected by 1983 (Table 6) and the failure of prices to react much is probably due to the fact that a reduced demand went hand in hand with a reduced supply. Prices did however rise considerably in 1984 - presumably after the failure of the belg crop in that season - and showed a big jump in 1985. Output recorded its biggest fall in this period (Table 6) and there must have been substantial withholding of small surpluses for the reasons discussed earlier, so that the reductions in overall supplies caused a shortage

which could manifest itself in price rises. 54 But probably crucial also was the increasing level of market dependence leading to local level pressures on prices, now that direct entitlements had been totally cut. The increase in migration in search of food at this period could also have had an impact on prices in Wollo. A combination of severely reduced supply and moderately increasing demand would then explain the price trend in the years 1984 and 1985.

So far our analysis has centred mainly on the agriculturists.

But the other main group to be affected by the famine was the community of nomadic pastoralists. A drought wreaks havor by killing off animals. Yet - as we saw in the case of the Harerghe famine of 1974 - this may not be the most immediate cause of starvation: what needs to be studied is the variation in exchange rates between livestock and grains.

Data on such exchange rate movmeents have been collected - again for Wollo - by Cutler (1984) and Baulch (1985). Table 8 presents these for Korem and Kombolcha - two major markets in Wollo.

Notice that, in both places, the barter terms of trade suffered a decline btween 1982 and 1985. Thus whereas one ox could buy 2.6 quintals of teff in Korem in October 1982 and 3.1 quintals of teff in Kombolcha, its exchange value had fallen to 0.6 and 0.9 respectively in these two markets by May 1985. The substantial decline post-1984 probably reflects the combination of the large food price increases

<sup>54.</sup> Prices of basic cereals like teff sorgum and maize have been controlled by the Government in the period since the midseventies and it is arguable that they are therefore less responsive to demand and supply pressures than if markets were free. It is clear, however, that even these controlled prices are responsive to changes in market conditions, especially when the latter are as pronounced as during a famine. See Saith (1985) for a discussion of price variability in Ethiopia.

in 1984 and the growing number of livestock deaths during this period. 55 More data on livestock and foodgrain prices would have enabled us to make more precise estimates of the grain entitlement loss due to animal loss and exchange rate depreciation. There is little doubt, however, that, as with 1972-75, the 'Afar community of herdsmen have suffered terribly in recent times. Once again, the market reinforced the depredations of nature, and both acted to decimate the pastoralist.

#### 4.5 Mortality during the famine

Estimates of the level of mortality during the famine vary widely; data collection of this kind was obviously not a priority amongst relief and medical personnel in the critical months when the starvation was taking its heaviest toll. In addition, access to the rural areas, where a vast majority of the deaths occurred, was often restricted on account of political and military considerations. As has already been suggested, what evidence there is leads us to suppose that:

(i) the estimate of one million deaths would constitute an absolute minimum for the entire famine period and the actual figure could turn out to be more than one and a half million.

<sup>55.</sup> Thus Holt and Cutler (1984) report from southwestern Gamo Gofa a region traditionally inhabited by pastoralists - that drought had forced up the price of grain to around three times its usual level, while the prices of sheep and goats fell to between one third and one tenth of normal.

<sup>56.</sup> Baulch (1985) quotes the Save the Children Fund Nutrition Field Workers Reports as saying the 'Afar were amongst the largest group of beneficiaries registered recently in Kombolcha for food distribution by the RRC'.

(ii) the bulk of the mortality took place in what we have characterized as Phase III, viz. April/May of 1984 to September of 1985.

There is, however, some additional information well worth considering. This is mainly drawn from the records and surveys of medical personnel who worked in roadside camps or in feeding centres set up in the affected regions. While some of the data is of a fragmentary nature, and often uneven in quality, making it difficult to draw any general inferences, the picture that it reveals does give us an invaluable insight into the nature and pattern of the mortality caused by the crisis. The discussion below draws on two studies of this nature, both of which are marked by the immediacy of personal experience.

An analysis of the operation of a child feeding centre at a roadside camp in Korem in Wollo by Tony Nash (1986) - a nutritionist working for Save the Children Fund (SCF) - provides an indication of the conditions prevailing in one of the worst famine-hit areas in 1984 and 1985. The camp registered people who had come from adjoining districts for the grain distribution organized by the RRC, and kept records relating to their medical and nutritional condition. In addition, SCF separately registered children for the purpose of medical surveillance and feeding.

The SCF Feeding Centre categorized children into three groups, suitable for (a) general feeding (b) intensive feeding and (c) supervised intensive feeding, depending on the severity of their condition as measured by weight loss. The mortality data is based largely on what happened to the children at this feeding centre.

Nash concentrated on the data relating to the period May to July 1984. The number of deaths as a proportion of the numbers fed each day were: May 121/2800, June 83/2700 and July 56/2400. This gives a monthly death rate per thousand of 43/1000, 31/1000 and 23/1000 for the months of May, June and July respectively. This should be compared to the <u>annual</u> figure for the age group of 1-4 for the country as a whole of 31/1000 deaths and an infant mortality rate of 155/1000 deaths.

The problems of comparing a monthly rate with an annual rate are clearly recognized in the analysis — especially as some of the mortality data collected is known to be biased for a number of reasons. But Nash argues that the July figure of 23/1000 is in all likelihood a minimum for the entire period between April 1984 and December 1985 during which time the feeding centre was active. If we take into account also the fact that child mortality formed the major proportion of total mortality in Korem (the bulk of fatalities, incidentally, affecting children fourteen months old) and that Korem was amongst the worst affected areas, the data gives us some indication of the minimum mortality rate that must have ruled in Wollo during the height of the famine. <sup>56a</sup>

Also instructive is another study by M.W. Otten (1986), this time based on a survey of Yifata na Timuga <u>awaraja</u> (or sub-district) in rural northern Shewa in the central region of Ethiopia. One of the objectives of the study was to estimate the contribution of food distribution and emergency health assistance to reducing the extent of famine mortality in 1985, which, as we know, was perhaps the most critical

<sup>56</sup>a. Perhaps more significantly, if one attempted, on the basis of Nash's figures, to make a rough calculation of the total mortality for the entire population in the Ethiopian highlands for the period in question, the resulting figure would turn out to be around 1.5 million deaths. (John Seaman: personal communication dated 4.2.1987.)

famine year; and for this purpose, a house to house survey of 51,274 households using both 7 day and 30 day recall methods was conducted. The mortality figure estimated for Yifata na Timuga before the nutrition and emergency health care operation had its impact in the awraja is of considerable interest, for it is one of the very few attempts made to obtain a figure of population mortality for an Ethiopian region for the year 1985. Otten estimates the crude death rate (CDR) for the awraja at 98.5 deaths per thousand population per year. 57 Of the deaths that occurred in this period (i.e. before any relief began) three causes viz. diarrhoea, lack of food and measles are reported to have caused all but 17 per cent of the deaths. It was apparently difficult to further break down the mortality pattern though it is obvious that - as in many other famines the lack of food would by itself have heightened susceptibility to both diarrhoea and measles, and that this would have had its impact mainly on the young.

The mortality figure obtained of 98.5 can be contrasted, bearing in mind the usual problems of comparability amongst different surveys relating to different population groups, with a non-famine CDR for Ethiopia as a whole (based on the 1980-81 double round national household sample survey) of 18.4 deaths per thousand per year. It is obviously difficult to extrapolate for the country as a whole from the survey just discussed, but since conditions in other regions,

<sup>57.</sup> It is worth point out, though, that following inputs of food and health care assistance, the CDR decreased from 98.5 to 27.5 in the first months of the relief operation and had dropped to 8.8 in its fourth month. It is remarkable, as Otten points out, that the CDR should drop to non-famine levels by the second month of a relief operation. However, since the region surveyed, Northern Shewa, was a relatively peripheral famine area, it is probably more realistic to take the pre-relief CDR in Yifuta as representative of mortality trends elesewhere, rather than the post-relief ones, and this is what the remainder of the section does. (This discussion owes much to two personal communications by John Seaman, both referred to earlier.)

especially in the north, were worse than in Shewa, the sort of magnitude that the figures convey in terms of demographic impact, viz. a mortality level four or five times the average, is probably no exaggeration in the current Ethiopian case.

#### 5. FAMINE RELIEF AND THE REHABILITATION OF VICTIMS

#### 5.1 Kinds of relief

In discussing relief policies in the context of famines, it is useful to make a distinction between (i) short term relief and (ii) long term rehabilitation. The first is proximately the more important one, being literally a life and death issue in the context of famines such as the ones we have been discussing, and has understandably engaged much attention. However, in terms of rebuilding the famine-ravaged economy and reducing future vulnerability to famine, the second should perhaps receive more careful consideration than it has done so far. Recent attempts in Ethiopia, in the wake of the recent famine, to orient short period relief policy to the demands of longer term relief (e.g. the organization of food for work or cash for work on soil conservation sites) are clearly a move in the right direction. In what follows, then, different approaches to the provision of relief and rehabilitation are considered, largely on the basis of the recent Ethiopian experiences. Since policies usually operate under huge constraints - only some of which can be foreseen - it is difficult to engage in any kind of prescriptive analysis. Rather, the attempt will be to highlight certain key issues.

#### 5.2 Food, nutrition and cash

Whether or not food availability decline has an important role to play in the causation of a famine, methods of <a href="block">breaking</a> it clearly call for a large increase in the amount of food available for public consumption. Issues of causation have in this sense to be distinguished from those of policy. This would, in fact, hardly need stating were it not for recent attempts to propound an odd new thesis suggesting that imports of food into the system can only be justified if a food shortage is diagnosed as the <a href="cause">cause</a> of the famine. Distributing free food and supplementary nutrients in camps and relief centres is one obvious step to take: this can be viewed as providing people with a 'direct entitlement' to food. Indeed, the thrust of relief policy in both famines was to achieve this sort of 'nutritional maintenance', although in 1983-85 the continuing military conflict made any consistent relief policy in the worst affected areas of Tigrai and Eritrea difficult.

The management of food supplies <sup>59</sup> thus takes on a crucial role and a critical problem is the matching of donor shipments with the available domestic carrying capacity. This has proved to be a major headache in recent times in Ethiopia, largely because of (a) totally inadequate port facilities and (b) severe shortage of trucks and spare parts for maintenance. In fact, when the first large relief

<sup>58.</sup> See Bowbrick (1986, 1987) and Sen (1986b, 1987) in that order!

<sup>59.</sup> The term 'food' is here used to include not only foodgrains, but also supplementary feeding materials for children, like the protein mix 'faffa'.

supplies arrived in 1984, the main Ethiopian ports of Assab and Massawa could handle only 8000 to 11,000 tonnes of material a month; the road transport system could, for its part, just handle 5000 tonnes a month. It was clear that this capability fell far short of what was needed for the massive relief programme to get underway. Strenuous efforts on all sides finally succeeded in increasing the capacity of the network substantially to around 100,000 tonnes a month by early 1985 and this considerably eased the initial constraints on administering relief. This does not alter the fact that, as a general rule, food distribution remains a difficult operation to manage, and the exploration of alternative options therefore becomes an urgent priority.

Whereas creating direct food entitlement might be an <u>obvious</u> choice in terms of relief, it is not the <u>only</u> way of ensuring that different sections of the population have the ability to command food. Depending on the situation in question, other policies (e.g. employment maintenance for attached servants thrown out of work) would also act as entitlement creating mechanisms. But by far the easiest to administer is simple cash disbursement. The idea here is to <u>stimulate</u> the working of the market mechanism rather than <u>supplant</u> it. In many instances, on account of a collapse of purchasing power following drought, the peasant or agriculturist may not have sufficient market clout in order to attract what little food there is. Cash relief will work by giving the deprived additional income and leaving the market and the traders to respond to the new 'pull' through moving food to the cash recipients.

<sup>60.</sup> For an elaboration in terms of the entitlements approach see Sen (1986a).

There are, of course, deep questions as to the performance of markets in a famine situation 61 and in an extreme situation, where any remaining small surpluses of food have been exhausted, there is no alternative to instituting emergency food relief. But cash relief is not without its merits. One can, in fact, think of advantages in terms of: (1) economising on the use of scarce transport facilities (released for use elsewhere) if cash relief is instituted (2) being able to reach areas where the inhospitable terrain would make food distribution (done by means of heavy transport vehicles) impractical (3) preventing speculative or other food movements out of famine affected areas by generating a certain amount of 'pull' (4) regenerating the local famine-struck economy via the 'lubricating' effects of more cash in circulation and (5) providing the basis for longer term development activities, for instance through instituting cash for work programmes. 62 The balance between the two types of relief systems is an issue that repays careful consideration; in fact, except in the critically affected areas - where emergency feeding is an overriding need - the two can probably be used in a

### 5.3 Famine shelters

complementary fashion.

One of the recurring problems of coping with an emergency like a famine is that it leads to unpredictable movements of population:

<sup>61.</sup> Besides the classic discussion of Adam Smith (1776) Book IV Ch.V see Rashid (1980) and Ravallion (1985).

<sup>62.</sup> Some of these putative benefits are admittedly of greater relevance to a region like Shewa than to a critically affected area like Wollo. In the former, cash distribution schemes sponsored by UNICEF appear, on the whole, to have been successful. For a discussion see Kumar (1985).

for the agriculturist, hunger makes migration in search of food the only survival strategy left, whereas for a pastoralist, the destruction of grazing land brought about by drought again necessitates movement in search of fresh pasture. As we saw, it was the sight of migrating destitutes from Wollo, stopping cars on the north-south highway, that provided the first indication of crisis in the famine of 1973; similar sorts of movements have been noticed in more recent years as the destitution reached the northern parts of Ethiopia.

In the Wollo famine of 1973, such movements were for a time accommodated by housing the destitutes in shelters. Studies of the shelter population in Wollo $^{63}$  bring out the strengths and weaknesses of this kind of relief. Among the first plus points that deserves to be noted is that these relief shelters provide quite an efficient and cost-effective way of administering food and medical assistance. This is especially important to note in a context where, as we have seen, it is otherwise difficult to reach many of the starving in the more remote rural areas. Gebre-Medhin and Vahlquist (1977) underline this point when they note that the shelters, "saved thousands of lives with their food distribution and delivery of at least simple health services." (p.198) They then go on to emphasize the dangers of such large populations of destitutes being housed in makeshift camps lacking proper sanitation and hygiene. First, not surprisingly, the conditions in the shelters made the outbreak of disease inevitable: in fact mortality was accentuated by the fact that many people - having

<sup>63.</sup> Gebre-Medhin and Vahlquist (1977) and Belete et al (1977), both referred to earlier, in the course of discussing the situation in Wollo.

walked long distances to reach the camps - were already in a state of exhaustion when they arrived. Second, shelter life often broke up families and created intolerable social and psychological strains on many of the inmates; there is, for instance, evidence of psychosomatic illnesses developing amongst some of them. 64

The latter problem may initially be considered less acute than the former; but if shelter life is to continue over a period of time, in the absence of any other succour, it may in time become more serious. This serves to highlight the fact that, while this form of relief has its merits - especially in the context of large and unforeseen migrations of destitutes - it should essentially be looked upon as a temporary relief measure. The return of normal social and familial living should be arranged at the earliest opportunity.

#### 5.4 Rehabilitation and resettlement

So far, we have mainly been concerned with various approaches to short term relief policy. Turning now to longer term questions, the overriding concern must be to prevent the recurrence of disasters like the ones earlier analyzed. While a full discussion of this complex issue would take us beyond the scope of this paper, there are some important points to make.

One of the main contributing factors to the weakness of the agricultural system and its proneness to drought and famine has been the deterioration of the natural environment in which agricultural

<sup>64.</sup> Gebre-Medhin and Vahlquist op.cit., p.197

production takes place. There has over the years been an extreme degradation of the soil and a massive loss of forest cover. It has been estimated that Ethiopia loses 80,000 hectares of land per year through soil erosion - enough in fact to feed 66,000 families. 65 Further, recent studies have emphasized the extent to which the processes of soil denudation and desertification are exacerbated by short-sighted development programmes which upset age-old migration patterns amongst pastoralists and make rampant over-grazing inevitable. A main priority must therefore be to restore the health of the agricultural system and increase its productive capacity. One promising way to start this process is to explicitly link relief and development work e.g. by investing substantially in say, afforestation programmes, and by instituting cash or food for work programmes as a means of carrying them out. <sup>67</sup> This would have the effect of simultaneously attacking destitution, opening up employment opportunities, creating productive assets and perhaps most important of all - enhancing the productive capacity of the agricultural system and making it less susceptible in future to the effects of drought.

Many of these programmes will yield benefits in areas where agriculture  $\underline{\operatorname{can}}$  be regenerated from the ravages of drought. In some of the worst affected northern areas, however, it appears that

<sup>65.</sup> Estimate quoted in D'Souza and Shoham (1985) p.527.

<sup>66.</sup> Cf.Sinclair and Fryxell (1985).

<sup>67.</sup> Note that even a simple increase in agricultural and food production, without an explicit employment target, will probably engineer an increase in employment and income - and hence create more secure entitlements to food - to the extent to which the agricultural sector is an employer as well as a producer.

soil regeneration is doomed to fail, owing to the scale of the devastatation. Rather than try and restart cultivation when faced with such obstacles, the Government's approach has for some time been to encourage a controversial resettlement programme, involving the movement of the affected population away from these wasted agricultural regions to areas in the south and south west, where the impact of the drought has been much less severe.

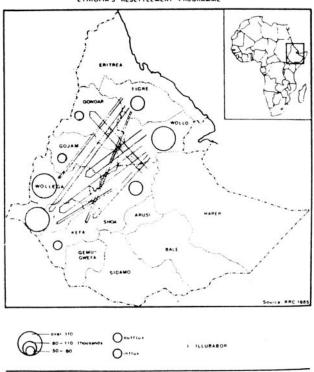
In October 1984, an acceleration of the resettlement programme was announced, involving one and a half million people from Tigrai, Wollo and Shewa being relocated in Wollega, Illubabor and Kefa (see map). There is, at one level, a socio-ecological justification for this policy, as will be evident from what has been said before: its proponents argue also that it will reduce vulnerability to famine in the highlands by reducing population pressure and improving the environment. But it is the political dimension of the move that has attracted the most attention, <sup>68</sup> and it has even been alleged that the main motive was to empty rebel niches of potential recruits by forcibly removing the population in the guise of resettlement. <sup>69</sup>

Given the charged political atmosphere, national and international and the backdrop of the civil war against which these policies are being carried out - the economic or ecological justifications for resettlement in the end get lost in the melee of charges and denials

<sup>68.</sup> While recognizing the hardship and deaths caused by the population movements, there is no need to take seriously some of the more extravagant claims of the policy's antagonists, which imply that more people died during the resettlement process than as a result of the famine.

<sup>69.</sup> This view is advanced in, for instance, a leader in The Times ('Feeding the Tyrants' 11 October 1985). For a more sympathetic account of the Government's motivation, see Hancock (1985).

#### ETHIOPIA'S RESETTLEMENT PROGRAMME



that pass for analysis on this question. Without delving any further into the rights and wrongs of the issue, we close this discussion with two general remarks. First, even if one grants that resettlement is a valid option for any government confronted with environmental degradation on a vast scale, it is difficult to escape the conclusion that it was attempted far too hastily and that little serious advance planning had been done as to how best to carry out the move.

Second, the policy requires a long term investment commitment which Ethiopia would very likely be unable to manage on its own; 71 this highlights the need to mobilise other sources of funding and for presenting the rationale of the policy in a much clearer manner than has been done so far.

#### 6. CONCLUDING OBSERVATIONS

"Famine seems to be the last, the most dreadful resource of nature ... premature death must in some shape or other visit the human race."

Thus wrote the Reverend Thomas Malthus in 1798, at the time of announcing his famous prognosis of doom. (Malthus 1798). Two hundred years later, we live in a world in which that counsel of despair has not, on the whole been borne out. The power of population

<sup>70.</sup> A pamphlet produced by the group Survival International (1986) argues that the proposed new sites in the south are completely unsuitable for cultivation, since no money has been spent on them, nor any machinery acquired for the purpose of the proposed cultivation.

<sup>71.</sup> Cf. Survival International (1986) which calculates (p.42) that the Government's target of resettling 1.5 million people would cost 2.1 billion birr - at the rate of 1400 birr each - whereas the entire national budget of the country is 2.9 billion birr.

has not been, "so superior to the power of the earth to provide sustenance" as Malthus visualized. Yet it would not be easy to convince a Malthusian visitor to Ethiopia - or indeed large parts of Africa - that his predilections were not grounded in fact. In these regions, there is evidence that food production is falling behind rates of population increase. The situation in Sudan, for instance, has recently sharply deteriorated and there are fears of an imminent emergency on the Ethiopian scale; to the south in Mozambique, conditions have been getting steadily worse and the lethal combination of war and famine could once again precipitate a crisis. And Ethiopia itself has witnessed mass outbreaks of starvation twice in the last decade and a half: there is in addition reasonable expectation of more to come. Is famine then the most dreadful resource of nature?

To say 'yes' would be to give an incomplete and possibly misleading answer. A falling level of food consumption per head on account of population increase may of course make a country more susceptible to the onset of a famine, but there is, as we have seen, no necessary connection between the overall availability of food in a society, and the propensity of some groups in it to starve. The analysis of famine causation has then to go beyond merely considering the broad parameters laid down by demography and nature to investigating the specific mechanisms at work that cause certain groups to starve for want of food. It is in this sense, illustrated by the Ethiopian examples of recent years, that famines are social and economic crises rather than demographic manifestations. And quite a number of issues relating to these crises have been specifically investigated in the course of the preceding analysis. Rather than

attempting an overall summary, then, some points may be worth underlining here while concluding in order to provide a perspective to the discussion as a whole.

First, we have seen that both the Wollo famine of 1973 and the current larger devastation were in important, though different, ways the result of a decline in food availability caused by drought. In the former case, the problem seems to have been that a collapse in food output in the province of Wollo itself created a fall in availability which was then compounded by an inability, largely on account of logistical constraints, to bring food from outside the province to relieve starvation. In the latter event, the country witnessed sharp regional shortfalls in food output, followed in this case by a countrywide collapse in output. This emphasizes, then, the critical role of food availability at a time of famines. Equally, in a policy sense, it highlights both short term and long term imperatives of ensuring a minimum level of availability for a population vulnerable to such devastations. The short term issues are concerned largely with overcoming transport and other problems in moving food during critical periods: they devolve naturally into considerations of the optimum form of relief during famines and are therefore more fully discussed under that head. The longer term issues, on the other hand, have to do with rebuilding the country's food-growing capability and ensuring more secure long-term access to food for the majority of the population; these in turn, relate to the question of long term rehabilitation of the famine-stricken economy and are further taken up then.

Second, emphasizing food availability does not mean than an analysis should concern itself only with this variable (as in a simplistic FAD framework). Though food availability decline played a major role in both the major famines discussed above, understanding the precise causal mechanisms at work that ultimately led to starvation requires an investigation of how the drought affected various occupational groups differently and this can be done to telling effect by using the analytical structure of an entitlements approach. Thus, we saw how, amongst the various groups affected by the two famines, own producers suffered a cut in direct entitlement and were forced to become market dependent, and thereby more vulnerable, whereas pastoralists were hit by a combination of livestock deaths and exchange rate variations and consequently saw a collapse in their exchange entitlements. Wage labourers paid in cash, on the other hand, saw a cut in the amount of food they could buy with a given wage and consequently lost their market-based entitlements. The point is that the distributional effects are crucial even when the causative agent is a collapse in food output.

Third, turning to the question of relief, the infrastructural and other constraints that the country was faced with did, as discussed above, severely limit the effectiveness of relief efforts even after international aid was forthcoming on the scale required. This highlights the necessity of adequate investment in transport infrastructure in order to augment future domestic distribution capacity at a time of regional shortfalls. Also, policy should concentrate in the short term on evolving a more decentralized food

stocking system, so that a mechanism is created to even out regional surpluses and deficits; it could also be used to establish stocks of food for emergency public distribution in case of sudden regional shortfalls. Given the existing limitations on the ability to distribute food aid quickly and efficiently, there may in certain cases be good grounds for trying out other forms of relief aid — most obviously cash disbursement — which help to economise an overstretched transport resources.

Fourth, despite the importance of devising more effective approaches to short term relief, the major challenge probably lies in the area of longer term relief, and specifically, in the extent to which the country's critical vulnerability to recurring famine can be reduced. This actually relates quite crucially to the issue of causation and food availability raised earlier. Long term policy would have to see a massive investment in agriculture, aiming to consolidate and extend domestic food growing capability, while at the same time promoting a more diversified crop-growing pattern.

Sustained efforts through soil enrichment programmes etc. would also be needed to rehabilitate the country's drought-ravaged environment.

Resettlement of population is in this context an option fraught with difficulties and could only have a limited role to play in any overall restructuring policy.

Fifth, it is apparent that relief would have been greatly helped in both famines - but particularly in the more recent one - had there been in each case an early response to the incipient crisis, from the

<sup>72.</sup> For a recent discussion of the critical issues involved in transforming African agriculture see Eicher (1986).

national governments involved and from international donors. While hard evidence on mortality is hard to obtain, it is clear that the toll of deaths in both cases was sharply increased because of delays in coordinating a proper response to the famine. There is on the other hand little doubt that both the famines were anticipated, in the sense that responsible groups had issued warnings about the scale of the crisis that was imminent, and that these warnings were in both cases initially played down for largely political reasons. One might therefore be tempted to argue that early warning systems have little impact, and that attempts to improve them would have very limited pay-offs. But this may be too negative a view. The better the quality of the warning system and the track record of the agency managing it, the more difficult it will be to avoid an early response. $^{73}$ An effective famine monitoring and anticipating system with guarantees of effective support in case of impending disaster could well form part of an international agreement amongst the potential donors to deal with future crises.

Whereas the potential for improvements in warning system may exist, however, the reasons for the lack of response - despite the warnings - in the cases we have studied deserve to be emphasized. And this, finally, brings us to the issue which perhaps underlies many others discussed here, namely, the essentially political nature of famines. And this political dimension shows up striking similarities in two otherwise very different situations. In both cases, the delay in co-ordinating a response to the crisis was on account of political expediency: the Imperial regime tried to

<sup>73.</sup> On the role of proper forecasting in reducing famine mortality, see the illuminating work of Ravallion (1987).

minimize the severity of the developing famine because it felt its own crumbling power base might be completely exposed by a crisis of this magnitude; the Dergue on the other hand were engaged in a process of consolidating power and did not want to let the untimely news of famine disturb the progress of populist celebrations. Both regimes initially used state resources for the purpose of self-aggrandisement, both were fighting a costly and debilitating war on the borders and both ultimately were forced to rely on massive foreign aid to relieve a starving population. The importance of the institutional, policy and other dimensions of the Ethiopian famines, discussed at length in this paper, should not of course be minimized. But what stands out in the end is the responsibility claimed by sheer human folly for the hapless plight of the famines' victims.

#### REFERENCES

- Abate, A. and F.G. Kiros 1983 Agrarian reform structural changes and rural development in Ethiopia, in A.K.Ghose (ed.) Agrarian Reform in Contemporary Developing Countries (London Croom Helm).
- Ashton, B., K. Hill, A. Piazza, and R. Zeitz 1984 Famine in China 1958-61. Population and Development Review, 10, 4 December.
- Aykroyd, W.R. 1974 The Conquest of Famine (Chatto and Windus, London).
- Baulch, R.J. 1985 Entitlements and the Wollo Famine of 1982-85 mimeo.
- Belete, S. et al. 1977 Study of Shelter Population in the Wollo Region, Journal of Tropical Pediatrics and Environmental Child Health, 23; republished from Courrier, (1976), 26.
- Belete, S., B. Haile Mariam and Z. Wolde Gebriel 1974 Profile of Wollo Under Famine (Ethiopian Nutrition Institute, Addis Ababa).
- Bondestam, L. 1974 People and Capitalism in the North East Lowlands of Ethiopia, Journal of Modern African Studies, 12.
- Bowbrick, P. 1986 The causes of famine: a refutation of Professor Sen's theory, Food Policy, Vol.11, no.2.
- Bowbrick, P. 1987 An untenable hypothesis on the causes of famine, Food Policy, Vol.12, no.1, February.
- Cutler, P. 1984 Famine forecasting: prices and peasant behaviour in northern Ethiopia, Diasters, vol. 8, no.1.
- Cutler, P. and R. Stephenson 1984 The State of Food Disaster Preparedness in Ethiopia (RRC, Addis Ababa).
- D'Souza, F. and J. Shohan 1985 The Spectre of Famine in Africa: avoiding the worst, Third World Quarterly, July.
- Eicher, C.K. 1986 Transforming African Agriculture, San Francisco, The Hunger Project, January.
- Gebre-Medhin, M., R. Hay, Y. Licke and M. Maffi 1977 Initial Experience of a Consolidated Food and Information System Analysis of Data from the Ogaden Area. Journal of Tropical Pediatrics and Environmental Child Health, 23.
- Gebre-Medhin, M. and B. Vahlquist 1977 Famine in Ethiopia: The Period 1973-75, Nutrition Reviews, 35.

- Ghose, A.K. 1985 Transforming Feudal Agriculture: the case of Ethiopia, Journal of Development Studies, October.
- Gill, P. 1986 A Year in the Death of Africa: politics, bureaucracy and the famine (Picador: London).
- Griffin, K. and R.Hay 1985 Problems of Agricultural Development in Socialist Ethiopia: an overview and a suggested strategy, Journal of Peasant Studies, vol.13, no.1, October.
- Hancock, G. 1985 Ethiopia: The Challenge of Hunger (Gollancz, London).
- Holt, J. and P. Cutler 1984 Review of the Early Warning System of the Relief and Rehabilitation Commission (UNICEF/RRC, Addis Ababa).
- Holt, J.F.J., J.Seaman and J. Rivers 1975 Famine Revisited, Nature, vol. 225, May 15.
- Hussein, A.M. ed. 1976 Rehab: Drought and Famine in Ethiopia (London: International Africa Institute).
- Kumar, B.G., 1985 The Ethiopian Famine and Relief Measures: An Analysis and Evaluation (UNICEF).
- Lipton, M., 1983 Poverty, Undernutrition and Hunger, World Bank Staff Working Paper no. 597 (Washington D.C.).
- Maffi, M. 1975 Wollo: Two Years after the Crisis (Consolidated Food and Nutrition System, Addis Ababa).
- Malthus, T.R. 1798 Essay on the Principle of Population as it Affects the Future Improvement of Society (London).
- Mayer, J. 1975 Management of Famine Relief, Science, 5, 9 May.
- Miller, D.S. and J.F.J. Holt 1975 The Ethiopian Famine, Proceedings of the Nutritional Society, 34.
- Mokyr, J. 1983 Why Ireland Starved: A Quantitative and Analytical History of the Irish Economy 1800-1850 (Allen and Unwin, London).
- Nash, T. 1986 Untitled [Report on the operation of the SCF Child Feeding Centre, Korem] mimeo.
- Otten, M.W. 1986 Nutritional and Mortality Aspects of the 1985 Famine in North Central Ethiopia, March, mimeo.
- Pankhurst, R. 1961 An Introduction to the Economic History of Ethiopia from Early Times to 1800 (London: Lalibela House).
- Pankhurst, R. 1966 The Great Ethiopian Famine of 1888-1892: A New Assessment, Journal of the History of Medicine and Allied Sciences, 21.

- Rashid, S. 1980 The Policy of Laissez-faire during Scarcities, Economic Journal, 90.
- Ravallion, M., 1985 The Performance of Rice Markets in Bangladesh During the Famine of 1974, Economic Journal, 98.
- Ravallion, M. 1987 Markets and Famines (Clarendon, Oxford).
- Relief and Rehabilitation Commission 1985 The Challenges of Drought (Addis Ababa).
- Relief and Rehabilitation Commission 1986 Food Supply Prospect: Crop and Livestock Dependent Food Supply System (Addis Ababa).
- Rivers, J., et al. 1976 Lessons for Epidemiology from the Ethiopian Famines, Annales Societe Belge de Medecine Tropicale, 56.
- Saith, A. 1985 The Distributional Dimensions of Revolutionary
  Transition: Ethiopia. Journal of Development Studies. October.
- Scrimshaw, N.S., J. Gordon and C.E. Taylor 1968 Interactions of Nutrition with Infection (WHO: Geneva).
- Seaman, J., J. Holt and J. Rivers 1974 Hererghe Under Drought (RRC: Addis Ababa).
- Seaman, J., J. Holt and J. Rivers 1978 The Effects of Drought on Human Nutrition in an Ethiopian Province, International Journal of Epidemiology, 7.
- Sen, A.K. 1977 Starvation and Exchange Entitlements: A General Approach and Its Application to the Great Bengal Famine, Cambridge Journal of Economics, 1.
- Sen, A.K. 1983 Development Which Way Now? Economic Journal, 93; reprinted in Resources, Values and Development (Basil Blackwell: Oxford 1984)[page reference to the latter].
- Sen, A.K. 1986a Food, Economics and Entitlements, Lloyds Bank Review, April.
- Sen, A.K. 1986b The causes of famine: a reply, Food Policy, Vol.11, no.2, May.
- Sen, A.K. 1987 Famine and Mr Bowbrick, Food Policy, Vol.12, no.1, February.
- Shepherd, J. 1975 The Politics of Starvation (Carnegie Endowment for International Peace: New York).
- Sinclair, T. and J.M. Fryxell 1985 The Sahel of Africa: ecology of a disaster, Canadian Journal of Zoology, vol.63.
- Smith, A. 1776 An Inquiry into the Nature and Causes of the Wealth of Nations.

- Survival International 1986 Ethiopia's Bitter Medicine: Settling for Disaster (London).
- Tilly, L.A. 1985 Food Entitlement, Famine and Conflict, in R.I.Rotberg and T.K. Rabb (eds.) Hunger and History (Cambridge University Press).
- Ullendorff, E. 1963 The Ethiopians: An Introduction to country and people (Oxford University Press).
- Wiseberg, L. 1976 An International perspective on the African Famines, in M.H.Glantz (ed.) The Politics of Natural Disaster: the Case of the Sahel Drought (New York: Praeger).
- Wolde Mariam, M. 1984 Rural Vulnerability to Famines in Ethiopia: 1958-1977 (Vikas: New Delhi).
- Woodham-Smith, C. 1962 The Great Hunger: Ireland 1845-9 (Hamish Hamilton: London).
- World Bank 1986 Poverty and Hunger: Issues and Options for Food Security in Developing Countries (Washington D.C.).

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