

The Malawi Famine of 2002: More Questions than Answers

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1. The purpose of the paper

This short paper is intended to direct our peers' attention to questions that need to be answered. We do not have the answers – but we believe that we have focused attention on some key questions. If, having read this, anyone can supply missing information, or give a view on the relative reliability of the figures that have been quoted, then this may help us understand what went wrong in Malawi in 2001/2 and draw appropriate lessons for the future.

Section 2 of the paper summarises a substantial report by Stephen Devereux that reviews and weighs the domestic causes of the famine. Section 3 adds a regional dimension, since one of the conclusions from Section 2 is that the non-arrival of imports in a timely fashion contributed to the famine.

Our initial idea was to discover whether changes in the region over the preceding decade could account for the severe impact of the fall in Malawian production. Is it less easy to supply deficit states with food than it was in the past? There are many plausible reasons to suppose that it might be. Widespread regional liberalisation of both domestic and foreign trade might have contributed. So might the change in South Africa's international status, a consequence of which has been increased pressure on its port and railway infrastructure (as it has moved from sanctions to economic growth).

But, surprisingly, an initial review of published statistics does not lead obviously to any of these changes as being critical. Rather, they paint a paradox: in essence, that there was an unexplained failure to order normal levels of imported cereals.

The paradox may be more apparent than real. Perhaps some of the data on which we are relying are false. Perhaps other information is available that would explain apparent inconsistencies. It is in the hope that our peers can help evaluate the relative robustness of the data we have used and supply additional information that we have put together this brief paper.

2. The evolution of the famine

Explanations for the food crisis earlier this year fall into two categories: the 'technical' and the 'political'. The crisis followed a sequence of adverse events: harvest failure, bad information, a depleted grain reserve, import bottlenecks, and unaffordably high food prices.

A food production shock, triggered by localised flooding in the central and southern regions during February and March 2001, reduced maize production from 2.5 million tonnes in 1999/00 to 1.7 million tonnes in 2000/01, and created a national maize deficit of 273,000 tonnes. However, the magnitude of the food gap was underestimated by the government and donors because of exaggerated forecasts of roots and tubers production. Owing to methodological errors the crop was estimated at a level which should have compensated for the maize gap. Some government and donor officials even blamed the 'inflexible food habits' (white maize preference) of Malawians for their 'failure' to switch to cassava and sweet potato instead of maize. This misguided belief – that Malawi had a 'maize deficit' but not an overall 'food deficit' – persisted until early 2002, and probably slowed the public response.

During 2001, the Strategic Grain Reserve (SGR) was sold on the advice of the IMF – partly to recycle old stock, partly to repay a debt of MK1 billion incurred by the National Food Reserve Agency (NFRA) when it was set up as a quasi-independent agency, and partly to

reduce the SGR from an ‘unsustainable’ 165,000 tonnes to 60,000 tonnes. The IMF advice was based on what turned out to be over-optimistic first-round production forecasts from the Ministry of Agriculture. Private traders and people close to the government profited from the sale of the SGR, buying maize cheaply and hoarding it until prices rose before reselling it for exorbitant profits. Moreover, donor–government relations were strained at this crucial time, because of concerns about SGR profiteering and various governance issues. As a consequence of all these problems, the government was unable to implement food distribution programmes and the donor response was delayed until civil society brought the food crisis to international attention.

Following the final-round crop production estimates in June 2001, which projected the maize deficit of 273,000 tonnes, the government announced that it would cover some of the shortfall by buying and reselling 220,000 tonnes of maize. The plan was that 70,000 tonnes would be bought locally, and 150,000 tonnes would be imported.

But the local purchase programme did not work well. ADMARC entered the market late and found few sellers at its initial purchase price of MK3/kg, or even when it raised its price to MK6/kg, then M12/kg.

In August 2001 the NFRA borrowed US\$33 million at 4% interest from ABSA, a South African bank, and ordered 150,000 tonnes of white maize from South Africa after the Cabinet Committee on the Economy directed it to import maize. The government acted as guarantor for this loan. However, instead of buying 150,000 tonnes, the NFRA eventually purchased 134,000 tonnes of maize at an average price of US\$245/tonne, because of delays in the import programme, price rises and adverse exchange rate movements. Prices started at US\$220 but rose as high as US\$265/tonne, as other food deficit countries in the region (like Zambia and Zimbabwe) also turned to South Africa to import maize.

The maize purchased from South Africa should all have been delivered between October and December, at a rate of 50,000 tonnes/month, but this forecast proved to be over-optimistic. If the maize had arrived by December 2001 the crisis might have been averted, but because of logistical problems there were fatal delays. The imports arrived only at an average rate of 15,000 tonnes/month. Actual arrivals totalled 94,000 tonnes by April 2002¹ and 111,000 tonnes as of 6 May.

The imports were hampered by logistical constraints, as the floods that caused the food production shock also disrupted the food import and distribution programmes. The floods washed away roads, bridges, culverts and railway lines, both in Mozambique and inside Malawi,² creating transport problems on routes into Malawi by road, rail and sea.

In an effort to protect household food security, the government attempted to increase the role of public distribution channels relative to the private sector. Firstly, a pan-territorial price of MK17/kg was imposed on maize purchased (for MK15/kg) from the NFRA. The problem was that this ‘disincentivised’ traders from supplying remote rural areas, where transport costs were much higher. The government also accused traders of ‘unfair business practices’ – profiteering by buying NFRA maize at MK15/kg and reselling it for much more than MK17/kg.

1 UK NGO Group on Southern Africa, **Southern Africa Food Crisis**, London, 8 May 2002.

2 Most of the public import and distribution of maize concentrated on southern Malawi and urban centres. Northern districts met their food needs through commercial imports from surplus maize-producing regions of southern Tanzania, but little of this imported food reached southern Malawi because of logistical constraints, poverty and market failures.

In December 2001, the Cabinet Committee on the Economy banned private traders from purchasing maize altogether from the NFRA, and made ADMARC the sole purchaser of NFRA maize. However, traders subverted this ban by paying consumers to buy maize from ADMARC for them, which they stockpiled and subsequently resold at much higher prices. It is also alleged that privately contracted transporters found ways to cheat the system. ADMARC was selling maize at MK850/bag. Although truckers who failed to deliver all the bags they had loaded from ADMARC depots were charged for each missing bag, the ADMARC price of MK850 was lower than the free market price (of, say, MK1,500), so the truckers pocketed the difference.

Finally – against the wishes of several donors – the government subsidised ADMARC to open hundreds of rural markets. The aim was to ensure that food supplies reached vulnerable communities at MK17/kg.

In February–March 2002, recognising the severity of the food crisis and the lengthy delays in import deliveries, the NFRA started sourcing maize from Tanzania, with which transport links are better. Traders were already importing maize informally from Tanzania to meet the needs of Malawi’s Northern Region. Up to 30,000 tonnes of maize were to be purchased.

Whilst it is clear that the road to this disaster was paved with many errors, two fundamental questions remain unanswered. One is why a relatively small production shock resulted in such a severe food crisis. Another is why imports were so slow to arrive in Malawi.

3. Putting the famine in a regional and historical context

This part of the paper provides a skeletal review of data collected from official sources (mainly FAO and the Famine Early Warning System Network – FEWS NET) covering the 1990 and 2001 drought periods and the intervening years. The reason for setting out the findings in such a skeletal, early form is that they appear to provide a wholly inconsistent picture. Some feedback is necessary to guide further work.

We can assume that some (or all) of the figures are wrong. But that doesn’t take us very far. If all data are totally suspect, and no basis exists for identifying the ‘more’ from the ‘less’ reliable information, then effectively we can say nothing at all of use. Hence, a fundamental assumption is that those knowledgeable about Malawi and Southern Africa can, trawling through their background knowledge, help to identify which figures appear to be more reliable (because they can be corroborated from other sources) and which are particularly suspect. They may also be able to suggest additional information that will explain the apparent paradoxes thrown up by this preliminary analysis.

Production

It is clear from accounts of the 1991/2 drought that it was widespread and occurred against a background of previous poor years. Harvest failures in the entire region from central Tanzania to the South African coast were predicted. The salient points of a comparison between the two periods are that:

- ◆ The 2001/2 famine is not different from the 1991/2 one in terms of regional extent; both affected the whole Southern Africa region.
- ◆ The 1991/2 harvest failure occurred after a poor year in 1990/1 which had led to a running down of grain reserves, so the sell-off of the Malawi SGR in 2001/2 – whilst foolish in retrospect – did not result in a situation that was wholly different from that in 1991/2. In the latter stocks had been run down because there was no

alternative; in the former they had been run down even though there was an alternative.

FAO and FEWS NET production data for Malawi for the period 1988 to 2001 (Table 1) put the 2001 harvest into perspective. The FAO 'year' 2001 is assumed to refer to the 12-month period ending with the 2001 harvest, i.e. May 2001. On this basis we have discounted the FAO forecast for 2001 and inserted instead the FEWS NET figures.

These figures suggest that the actual maize harvest in 2000/01 was similar to the harvest in 1998 (the year before the two bumper harvests) and actually higher than the harvest in eight of the ten previous years. This begins to make the 2002 famine look all the more remarkable. Not only did the production drop follow two bumper years, but this 'poor' harvest was actually high by historical standards.

No doubt part of the explanation is Malawi's increased consumption needs (following population growth, etc.). This is plotted in Table 2. Whilst *per caput* maize production in 2001 was lower than in much of the 1990s, it was not startlingly lower. Indeed, *per caput* production was higher than in four years over the period since 1988, including 1997. *Per caput* cassava production appears, from the FEWS NET figures, to have gone up.

As is explained in Section 2, the figures on cassava are particularly suspect. Could it be that production was not just over-estimated but was actually lower than in previous years? If so, it would have to fall quite a lot to dip below the levels recorded in the earlier years of the decade. Even if the FEWS 2001 figures are discarded as totally wrong, and the FAO figures for 1999 and 2000 are taken to be inflated, the *per caput* availability in 2001 would have to be slashed to one-sixth of the FAO estimate for the preceding year to get down to the levels recorded in 1992. Is there evidence for this?

Domestic marketing

Then there is the possibility that the food was around, but could not be moved because of the collapse of market institutions or infrastructure.

Table 1. Malawian production 1988–2001 (tonnes)

Year	Maize	Cassava	Roots & tubers total
1988	1,423,848	134,785	465,185
1989	1,509,513	154,762	495,162
1990	1,342,809	144,760	495,160
1991	1,589,377	167,818	528,218
1992	657,000	128,827	479,227
1993	2,033,957	216,005	586,405
1994	1,040,000	250,066	600,466
1995	1,661,457	328,424	704,431
1996	1,793,461	534,549	1,237,840
1997	1,226,478	713,556	1,688,969
1998	1,772,392	834,755	2,413,545
1999	2,479,406	895,000	2,593,235
2000	2,501,311	900,000	2,818,889
2000/01	1,713,064	3,362,401	9,181,584 ^a
Memorandum item:			
1999/00	2,501,311	2,794,617	4,873,370 ^a
1995/6-1999/00 average	2,004,486	2,154,466	3,592,409 ^a
<i>Note:</i>			
(a) Total of FEWS NET figures for cassava, sweet potatoes and Irish potatoes.			
<i>Sources:</i>			
1988–2000, FAO FAOSTAT Agriculture Data (http://apps.fao.org/page/collections?subset=agriculture);			
2000/01 and memorandum item, FEWS NET Monthly Food Security Update, 10 August 2001: Table 1.			

Table 2. Malawian *per caput* production 1988–2001 (kg)

Year	Production <i>per caput</i> (kg)		
	Maize	Cassava	Roots & tubers total
1988	165	16	54
1989	166	17	54
1990	142	15	52
1991	165	17	55
1992	67	13	49
1993	207	22	60
1994	105	25	61
1995	166	33	70
1996	176	52	121
1997	117	68	162
1998	165	78	225
1999	225	81	235
2000	221	80	249
2001	151 ^a	297 ^a	812 ^a
<i>Note:</i>			
(a) Calculated using 2000 population data.			
<i>Sources:</i>			
1988–2000, FAO FAOSTAT Agriculture Data (http://apps.fao.org/page/collections?subset=agriculture);			
2001, FEWS NET Monthly Food Security Update, 10 August 2001: Table 1 (data for 2000/01).			

But, again, what evidence is there for things being sufficiently worse in 2002 compared with previous years that a ‘good’ harvest coming after a ‘bumper’ harvest could result in more hunger than the succession of low harvests in mid-decade or the drought of 1991/2?

One clear difference between the two periods is the deterioration of ADMARC’s capacity. But unless this only happened in 2001/2, more of the bumper harvests should have ended up in the hands of farmers or private traders. If ADMARC wasn’t buying in 2000 and 2001, what did happen to the grain?

An explanation that relies heavily on ADMARC will require it to have been quite active in 2000 and 2001 in extracting the surplus from the rural areas and then much less active in 2001/2 in shipping it back again. This is an entirely plausible explanation, but it does require a rather detailed, month-by-month review of ADMARC’s capabilities.

Imports

The big puzzle on imports is that of Sherlock Holmes’s non-barking dog. It is not so much a question as to why the imports did not arrive; it is why so few were ordered in the first place.

Table 3 provides FAO figures on regional imports of cereals and maize for the period 1988 to 2000. At the bottom is our best calculation from FEWS NET as to what was actually imported into Malawi (together with Zambia and Zimbabwe) in 2001 and so far during 2002.

Table 3. Southern African cereals/maize imports, 1988–2000 (tonnes)

Commodity	Year	Malawi	Mozam- bique	Tanzania	Zambia	Zimbabwe	S. Africa	Total
Cereals^a	1988	132,264	619,469	147,910	168,579	84,000	389,663	1,541,885
	1989	190,229	467,000	63,793	123,000	52,000	389,573	1,285,595
	1990	151,463	451,389	91,773	142,311	117,648	915,304	1,869,888
	1991	212,982	594,393	151,602	54,591	40,798	1,374,744	2,429,110
	1992	439,412	1,075,242	211,784	718,368	1,408,442	4,849,013	8,702,261
	1993	575,809	677,509	214,872	352,830	596,109	2,433,218	4,850,347
	1994	510,818	529,917	336,780	67,922	91,299	1,215,997	2,752,733
	1995	304,770	538,528	223,558	152,445	121,042	2,229,175	3,569,518
	1996	175,918	404,228	162,390	136,410	453,984	2,163,374	3,496,304
	1997	172,126	366,603	283,495	106,823	213,995	1,399,146	2,542,188
	1998	402,460	539,694	351,743	494,705	294,435	1,316,828	3,399,865
	1999	120,332	381,207	595,248	84,608	243,664	1,546,016	2,971,075
2000	62,445	450,180	471,677	11,758	108,767	1,710,359	2,815,186	
Maize^a	1988	119,500	380,700	9,000	140,000	-	33,108	682,308
	1989	149,000	297,000	80	90,000	-	2,377	538,457
	1990	116,500	250,000	2,208	100,000	58	3,438	472,204
	1991	150,000	350,000	1,651	42,000	340	150,393	694,384
	1992	347,344	750,000	44,000	680,000	1,208,060	3,594,870	6,624,274
	1993	490,000	376,000	49,000	316,000	492,000	830,242	2,553,242
	1994	389,000	273,600	193,000	13,461	1,409	29,760	900,230
	1995	235,000	205,000	81,000	84,811	2,266	750,177	1,358,254
	1996	83,000	115,000	500	40,000	126,867	506,760	872,127
	1997	54,140	121,000	12,989	70,000	44,350	252,704	555,183
	1998	324,583	110,000	90,000	415,000	152,742	128,682	1,221,007
	1999	28,163	150,000	197,000	45,000	183,000	376,681	979,844
2000	340	150,000	50,300	630	11,211	251,012	463,493	
Maize^b	2001	40,000			26,100	0?		
	2002 (to May)	78,000			?	157,500		

Notes:

(a) Source: FAO FAOSTAT Agriculture Data (<http://apps.fao.org/page/collections?subset=agriculture>).

(b) Source: FEWS NET Monthly Food Security Updates.

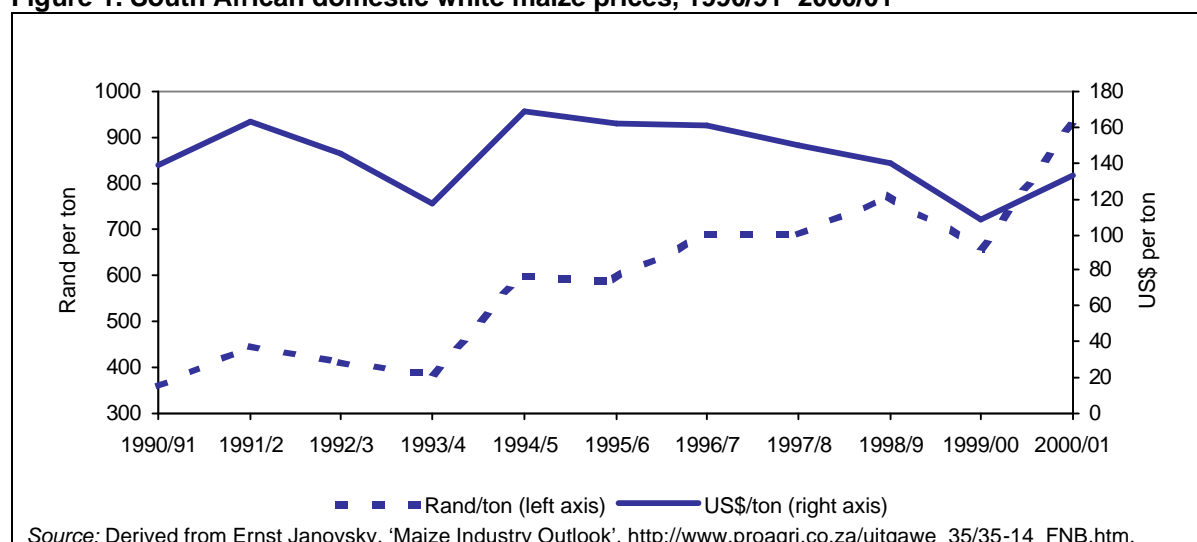
It is quite common for Malawi's maize imports to run into the hundreds of thousands of tonnes. In 1998, when production was apparently at a level similar to 2000/01, imports of maize totalled 324,583 tonnes. Yet Section 2 indicates that the government announced its intention of importing only 150,000 tonnes. The FEWS figures suggest that actual imports in 2001 were a paltry 40,000 tonnes, lower than in any of the years covered in Table 3 other than that of the bumper harvest, 2000.

From the very skeletal figures obtained for imports into other countries of the region, there is no evidence that the failure of Malawi to import was due to greater-than-normal demands by other countries. In both Zambia and Zimbabwe, the estimates of imports during 2001 and 2002 are rather low compared with their imports during the 1990s. Obviously, any information that can be supplied on the situation in the other countries of the region would help check further on whether regional demand squeezed out Malawi.

There is also no evidence from regional maize prices that such regional demand is the explanation. In the absence of widespread and reliable price data for neighbouring countries, the analysis so far has relied upon South African data. As the most developed white maize market in the region, the South African figures are suggestive, though of course a surplus in South Africa does not rule out the possibility of shortages elsewhere in the region due to infrastructure or institutional weaknesses in the regional market.

With this caveat, Figure 1 gives average South African domestic white maize prices for the period 1990/1 to 2000/01. Whilst the Rand price has risen steadily, the US dollar price was actually lower in 2000/01 than in 1990–92. The table does not include the most recent period, and it might be the case that availability fell sharply after 2000/01. Moreover, the Rand consumer price of white maize increased sharply at the end of 2001 in South Africa. This appears to give credence to the notion that the market tightened markedly.

Figure 1. South African domestic white maize prices, 1990/91–2000/01



However, a large part of the South African price increase appears to have been a function of the depreciation of the Rand. The import parity price of white maize in South Africa rose from Rand 1,560/ton in 2001 to Rand 2,001 in 2002. But in US dollar terms this represented a fall from \$185 to \$172.

There *may* have been a financing problem in Malawi. The foreign exchange required to import may have been lower than in earlier years (or the supply of concessional imports may

have been lower). But there does not appear to have been an absolute shortage on the world market, nor an associated increase in world price.

An initial hypothesis for this enquiry was that regional changes accounted for the slow delivery of imported grain, but the review suggests that the central problem is that too little grain was ordered. Delays in its transport merely exacerbated a problem that would have occurred anyway. Why? Is an explanation of the crisis to be found in a change in the importing structure? Who actually does the ordering? And are these people different from those who used to do it in the old days? Where did the funds come from to pay for imports in 2001/2 – and was this source different from earlier years?

4. Next steps

As explained in Section 2, a catalogue of errors contributed to the Malawi famine, and no single factor stands out above all others. But an addition to the catalogue is the apparent failure to order imports in a timely manner (which created problems that were then exacerbated by delays in delivery).

If any of the figures cited in Section 3 have any reliability at all, a major ‘abnormal’ thing about 2001/2 was the complete failure to order the normal volume of imports that Malawi traditionally requires. Explaining this failure appears to be central to an understanding of why one average-to-good harvest coming after two bumper harvests resulted in hunger-related deaths. Could it be that, in the process of trying to privatise marketing, the reforms created the paradoxical situation that central government (as opposed to a parastatal) had increased responsibility for international trade?

The next steps are to collect data on:

- ◆ the organisations (now and in the recent past) importing (commercial and concessional) cereals;
- ◆ the reasons why the imports that were ordered took longer to arrive than expected – and what ‘reasonable’ lag should be assumed when planning the appropriate size of reserve stocks;
- ◆ regional logistical capacity to move cereals around Southern Africa when poor harvests affect the entire region, given that both marketing structures (which have been liberalised) and infrastructure (which has often deteriorated) are different now from in the past.