Why was there No Famine Following the 1992 Southern African Drought?

The Contributions and Consequences of Household Responses

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1 Introduction

The 1992 southern African drought was the region's worst drought in living memory. Many wells and some perennial rivers dried. Well over a million cattle died: 1.03 million in Zimbabwe alone, more than 23 per cent of the national herd (Tobaiwa 1993). The drought affected around 86 million people in the ten countries which then comprised the Southern African Development Community (SADC), of whom around 20 million people were estimated to be at 'serious risk' (SADC July 1993). Aggregate cereal production in the nine severely affected countries (including South Africa) was 38 per cent of the previous 5-year mean, and only 22 per cent in Zimbabwe, often an exporting country. Cereal imports into the ten SADC countries and South Africa more than tripled during 1992/3, from 3.3 to 10.5 million tons (Clay *et al*. 1995).

Aggregate figures concealed even greater reductions among the poor. Many smallholders produced enough grain for only 2–3 months. Some harvested little or nothing, and some lost all their draught animals. In Zimbabwe's communal lands, maize production was only 9 per cent of the previous seven years' average, and maize yields were only around a third of the national average (Ministry of Agriculture, Zimbabwe 1996).

But there was no famine. Why not?

2 Changes in food sources

Most villagers in southern Africa are deficit food producers. Even in 'normal' years, most smallholders do not harvest enough to last them 12 months, for several reasons, including: insufficient and/or poorly distributed rainfall,[1] poor soils, shortages of draught power, insufficient labour and, in some areas, a lack of money for fertiliser.

Villagers already exploit a variety of food and income sources in non-drought years to compensate for production shortfalls. They therefore had few, if any strategies in reserve for obtaining food to compensate for production losses following the 1992 drought. Those activities sometimes described as 'coping strategies' were also affected by the drought. *Per capita* amounts of wild foods collected were less than normal due to reduced rainfall and increased numbers of people collecting them. Food

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(or cash) obtained in exchange for work on richer smallholders' land dropped in parallel with the reductions in harvests. Food gifts were reduced compared with normal; the drought also affected other villagers and urban relatives.

Drought relief and food-for-work programmes also did not provide enough food to compensate for harvest losses. Amounts received by the poorest villagers (15–25 per cent of their staple food requirements, on average) were generally considerably less than the amounts distributed, for several reasons. These included delayed distributions (so one month's ration had to last 6–8 weeks) due to logistical and organisational constraints, and inadequate targeting (Tobaiwa 1993), sometimes compounded by wealthier villagers and officials on distribution committees, who reserved part of the ration for themselves.

The inability of 'coping strategies' and drought relief programmes to compensate fully for production losses meant that grain and maize-meal purchases increased in virtually all households. Purchases were the largest single source of staple food for most people, especially among poor smallholders, who had even smaller harvests in 1992 than wealthier households, and no stocks from the 1991 harvest. Purchases generally provided 2–3 times as much staple food as drought relief programmes.

Food import statistics lend some support to this finding. Emergency food aid requirements for nine drought-affected countries in southern Africa in 1992/3 comprised around 14 per cent (1.45 million tons) of the total import requirement of 10.77 million tons. Omitting South Africa, the percentage was around 28 per cent (1.45 out of 5.27 million tons) (Clay *et al*. 1995).

Purchases had drawbacks: prices rose greatly during the drought, and supplies were erratic. In addition, cash shortages meant that many poor villagers could not buy as much grain or maize-meal as they wanted, so they reduced their consumption. Women in particular ate less, attempting to ensure that their children had enough. They sometimes ate only once a day and occasionally went for 1–2 days without food, especially during the hungry period – which was much longer than usual – before the 1993 harvest.

3 Changes in household incomes and income sources

Income from most sources fell during the drought. Earnings from crop sales dropped. In Zambia, a large proportion of the cash incomes of small-scale farmers normally come from maize sales (Banda 1993). Many deficit producers sell part of their grain harvest in normal years to finance 'lumpy' expenditure, such as school fees, or purchases of assets. Several income sources depend on water (beer-brewing, vegetable production, brick-making), and these consequently produced smaller earnings. Drought also reduced the amount of harvest work available for poorer households on larger farms.

Income from other income-generating activities (e.g. the sale of rural crafts) fell too, due to reduced demand; nearly all villagers increased their purchases of staple food, and so had less to spend on other purchases. For some richer households, remittances increased slightly. For others they fell, as they did for the few poor households who normally received them.

Smallholders intensified a few income-generating activities. In particular, livestock sales increased in many households (see also Banda 1993). However, as usually occurs during drought, livestock prices dropped, due to one or more of three factors: increased supply, decreased demand and – especially for cattle – the poor condition of the animals. Cattle prices dropped dramatically by mid-1992 in Zimbabwe (earlier in parts of Zambia, due to an outbreak of corridor disease): often by around 60–80 per cent. In some villages, the sale of a cow could buy only 20 per cent as much maize-meal in mid-1992 as in late 1991.

In a few villages the rural terms of trade dropped to around 10 per cent of their pre-drought level. Distress sales widened the economic gaps between rich and poor villagers. When poor smallholders sold cattle, the purchasers were richer people, who bought cattle at unusually low prices. Goat prices dropped in most districts during the drought – typically by 20–40 per cent: less than the fall in cattle prices, a reflection of their greater drought tolerance. Poultry prices also generally fell. Wood sales, mostly firewood, also intensified. In some

villages, increased numbers of villagers attempting to sell wood meant that deadwood supplies were exhausted, and villagers cut down trees. A minority of villagers sold household assets, and even fewer sold productive assets, such as ploughs.

Attempts to finance increased staple food purchases by increasing income had social consequences. In some households an adult, generally a man, left home for several weeks in search of work, but usually with little success, as the macroeconomic effects of the drought increased unemployment. A number of children dropped out of school, either to help their parents earn money, or to look after livestock and younger children, thereby enabling their parents to devote more time to income-generating activities. A few poor parents arranged marriages for their daughters earlier than usual, to obtain brideprice as an additional source of cash or livestock. Similarly, a few households sent children away, to work elsewhere: girls as domestic servants, and boys as cowherds, for example.

Only occasionally were new income-generating activities, such as gold-panning in southeast Zimbabwe (see Hicks 1993), initiated during the drought. Most rural people, but particularly the poor, live at the margins of economic life, and already exploit every possible way of earning money. Where earnings from a particular source increased, they were generally insufficient to outweigh the reduction in earnings from other sources. The assumption that villagers would increase their incomes during drought by resorting to 'coping strategies' was generally not supported in 1992. Overall earnings tended to reduce rather than increase, especially in poor households.

4 Changes in household expenditure

Increases in staple purchases were financed substantially by expenditure reductions, since rural incomes fell (see above) for many households, or, at least, did not increase sufficiently to cover increased purchases. These expenditure reductions tended to be greater among poor households, who experienced larger income reductions than better-off families. Expenditure reductions were greatest for clothes and household items, but a number of poor households also spent less on essential services.

Reductions in expenditure on education were greater than they superficially appeared, as the total cost of education comprises several different charges. These include national fees and several local charges, for example, levies for new buildings or for maintenance of existing buildings. In addition, books and sometimes uniforms had to be bought. Expenditure cuts on education (which comprised 10–20 per cent of total expenditure for many poor households before the drought) led to some school drop-outs. There were slightly more drop-outs among girls than boys, but the gender difference widened after the drought, when fewer girls returned to school than boys, due to pregnancy or early marriage.

Some poor smallholders also reduced their expenditure on farm inputs, mainly on fertiliser, though a few also cut expenditure on hybrid maize seed. Cuts in fertiliser purchases often interacted with draught power losses to reduce post-drought harvests below their expected levels.

A number of poor households also reduced expenditure on health, mostly by reducing the purchase of medical supplies, though reduced expenditure on drugs was partly due to supply shortages, which increased during the drought. They also spent less on transport, though the savings this produced were small.

5 Changes in livestock numbers

Most poor smallholders owning cattle in 1991 lost substantial proportions of their herds during the 1992 drought as a result of distress sales, slaughter for food, and deaths due to disease and shortages of water and grazing. The poorest households lost most or all of their cattle. The period of peak mortality was May–July, though in parts of Zambia it was earlier, due to corridor disease. Cattle ownership in Malawi among smallholders is largely confined to the south, so aggregate cattle losses during the 1992 drought were much smaller than in Zambia and Zimbabwe. In the mid-1990s only 37 per cent of rural Malawian households owned any livestock at all (Ministry of Economic Planning and Development, Malawi 1996). Proportional losses in 1992 were nevertheless substantial.

Villagers attempted to reduce cattle mortality in two main ways: they took their cattle considerably

further than usual in search of water and grazing, and they collected leaves and pods – sometimes cutting branches from trees – for use as fodder. When these attempts began to fail, in mid-1992, smallholders tried to sell their cattle. The poor condition of the animals, coupled with increasing supply and decreasing demand, reduced cattle prices dramatically by mid-1992, as noted above. Relatively little external assistance was provided to keep livestock alive.

The impact of cattle losses was greater on the poor than on the rich. Most richer households remained with some draught animals after the drought. However, many poor smallholders who had only a few draught animals in 1991 lost all of them during the drought. Consequently, they ploughed less land or they ploughed later – they waited to hire or borrow draught animals from wealthier farmers.

The drought also affected other animals. Mortality rates among goats were higher than normal, though generally lower than for cattle. Substantial numbers of poultry died during the drought due to outbreaks of Newcastle's disease. Household water shortages were also a factor.

6 Changes in water supplies and water sources

Many more water sources than usual ran dry during 1992: most shallow wells, many deep wells and boreholes – 44 per cent and 20 per cent, respectively, in Zimbabwe's communal areas by March 1992 (Taylor and Mudege 1992) – and some dams and rivers. Water yields dropped much more than usual in most of the wells and boreholes which did not run dry. Water shortages were exacerbated by pumps breaking down as a result of increased use, and by delays in repairing them. The frequency of breakdowns was increased by inadequate prior maintenance in many villages.

Villagers responded to reduced water availability in various ways. Women, sometimes helped by their children, fetched water from more distant water points. Households dug shallow wells in dry river beds, where these were accessible (such wells are dug in many villages even during normal years, but their number increased during the drought). Households rationed their own water use: villages established community rules restricting water use – for example, the sizes of water containers, and the times at which water could be collected were restricted in some villages.

Problems resulting from reduced household water supplies included: increased time spent collecting water – often several hours a day and taking 3–4 times as long as usual (Tobaiwa 1993) – with concomitant opportunity costs; increased exhaustion; increased incidence of diarrhoea (to which children are especially vulnerable); and greater concentrations of livestock (and, in some areas, game) around water points, sometimes resulting in contamination of water supplies.

These problems compounded those caused by overall reductions in groundwater supplies: increased livestock mortality, leading to reductions in area planted, smaller harvests, and reduced earnings from other water-dependent income sources.

7 Post-drought harvests

Distributions of free seed and, in some cases, fertiliser – mostly by the government (in Zimbabwe and Malawi) but also by NGOs (in Zambia and, to a lesser extent, in Zimbabwe and Malawi) – contributed to the larger than average aggregate cereal harvest which followed the 1992 drought. In Malawi, it was estimated (Henry 1996) that the distribution of free seed (fertiliser was not distributed in 1992 in Malawi) was responsible for around 15 per cent of the record harvest in 1993 of over 2 million tons.

In Zimbabwe, 56 per cent of farmers surveyed by SADC/ICRISAT obtained their maize seed from the government. However, disaggregation revealed the substantial efforts of drought-prone smallholders. Despite the severity of the drought, most of the millet and sorghum seed they planted – in lower rainfall areas than maize – had been retained from the previous harvest, contrary to the assumption that household seed stocks had been widely consumed (Friis-Hansen and Rohrbach 1993).

Many smallholders received free seed after they had already bought hybrid maize seed and a substantial number received it after they had already planted. Planting late generally resulted in lower yields, a

finding confirmed by the SADC/ICRISAT survey. In Zimbabwe, fertiliser deliveries were greatly delayed in some areas, and so in those areas the fertiliser was not used during the 1992/93 season (Tobaiwa 1993).

Aggregate cereal production figures concealed substantial differences between households. Even though the rains that followed the drought were greater than average, many poorer farmers planted smaller areas and thus had smaller post-drought harvests than expected. Factors contributing to this varied, but included the following:

- food shortages forced them to work away from their own land for longer than usual during the agricultural season, on richer farmers' land, in income-generating activities or on food-for-work projects;
- cattle sales and deaths left poorer cattle owners (those with only a few cattle) with no draught animals after the drought: in the short term they had to cultivate by hand (some pulled ploughs themselves). It took some many years to restock, and some had not restocked 9 years later;
- others waited to hire draught animals from richer farmers; but planting later also contributed to reduced harvests;
- for very poor households, a shortage of cash to buy seed and/or fertiliser was also a factor.

The need for poor farmers to work away from their own land for even longer than usual towards the end of 1992, to meet short-term requirements for food and money, was one of the transmission mechanisms by which the adverse impacts on rural livelihoods of some smallholder responses to the drought continued after the rains returned. This contributed to a lower than expected post-drought harvest, which further tightened the vicious circle in which poor smallholders are trapped. It meant that, once again, in late 1993, they were forced to work off their land for longer than they otherwise would have.

Another such transmission mechanism, in the case of Malawi, was the collapse of the agricultural credit scheme, caused partly by the inability of most poor farmers to repay farm input loans after the drought, due to the large reductions in their 1992 harvests. The collapse of the scheme reduced access by the poorest farmers to seed and – particularly – fertiliser and thus again contributed to lower than expected post-drought harvests.

Generally, richer smallholders did not reduce the total area they planted. They usually had sufficient draught animals after the drought for ploughing, though they too experienced substantial losses. Moreover, they had sufficient labour – either their own, or the labour of poorer farmers – and sufficient earnings from various income sources to maintain pre-drought hectarages.

8 Conclusion

Most of the effective responses to the 1992 drought consisted of activities undertaken by those most affected by it, particularly women (see also SADC, September 1993). Drought-affected villagers obtained 70–80 per cent of their staple food from non-aid sources – mostly through purchases, which increased substantially. Purchases provided 2–3 times as much staple food as drought relief programmes in many poor households.

The major role of purchases during the 1992 drought should not be surprising. Johnson (1996) and Corbett (1994) describe their importance for poor households in a normal year in Malawi and Zimbabwe respectively. They are especially important in female-headed smallholder households (which comprise over 30 per cent of rural households in Malawi), where farm labour shortages are even more of a constraint than in male-headed households. In Zambia, over 40 per cent of food consumed by female-headed households in a normal (early 1990s) year was bought (World Bank 1993).

During the 1992 drought, harvests and 'coping strategies' produced even less staple food than normal. Various factors imposed a ceiling on the contributions of relief food distributions, which provided only 15–25 per cent of a household's cereal requirements. Given these two decreases, and the absence of famine, it was logical that purchases should have increased (as this study found). Consumption reductions offset the size of the increase in purchases to a certain extent, but nevertheless purchases generally rose.

Table 1: The 1992 drought in southern Africa: a summary of its impacts, consequences and lessons for policy

The importance of household responses to food crises

- Those most affected by a crisis, especially poor people, often contribute a large and underestimated proportion of the overall responses to it.
- Famine following the 1992 southern Africa drought was averted largely by the activities of those it affected most, particularly women.
- Some activities helped poor households survive the 1992 drought in the short term at the cost of compromising their medium-term livelihood security.

Cereal purchases and their consequences

- Purchases comprised the largest source of cereals for most villagers in 1992; for many households purchases provided 2–3 times as much staple food as relief programmes.
- Financing these purchases had adverse longer-term consequences, mainly due to severe deteriorations in the rural terms of trade.
- Poverty forced the poorest drought-affected households to variously cut expenditure on education and agricultural inputs (as well as on other less essential items), work off their own land for longer than usual; and, in some cases, sell assets.

Poverty, drought and inequity

- Poverty amplified the harmful effects of the 1992 drought on livelihoods. Correspondingly, the drought deepened the poverty of the most under-resourced households.
- Markets for both food and rural commodities worked against most households. Earnings from many income sources (particularly water-dependent sources) decreased, especially among poor smallholders.
- Economic inequities were worsened by the drought. These inequities also reduced access by some of the poorest people to relief and rehabilitation programmes.

The relatively small role of relief and rehabilitation programmes

- Food aid received by the poorest drought-affected people accounted for just 15–25 per cent of a household's cereal requirements. In addition to relatively small receipts, villagers also complained of late or infrequent deliveries, and poor targeting: richer villagers sometimes received more drought relief food than poor villagers.
- Villagers received little external support for their livestock, very little help to reduce non-survival expenditure, and no assistance to maintain their purchasing power.
- The 1992 southern Africa relief and rehabilitation programme was a success, in conventional terms. But it illustrated a double deficiency of most food aid programmes of the last two decades: a failure to adequately involve those people most affected by food crises in these programmes, and a failure to address the adverse impacts of changes in market processes on household livelihood security during those crises.

Policy implications for food crises

- Interventions before and during food crises should complement and support the activities of the poorest and most vulnerable households.
- The people most affected by crises should participate in the planning and implementation of emergency aid programmes, to maximise their effectiveness.
- Particular emphasis should be placed on interventions that minimise reductions in the purchasing power of the poorest households during crises.

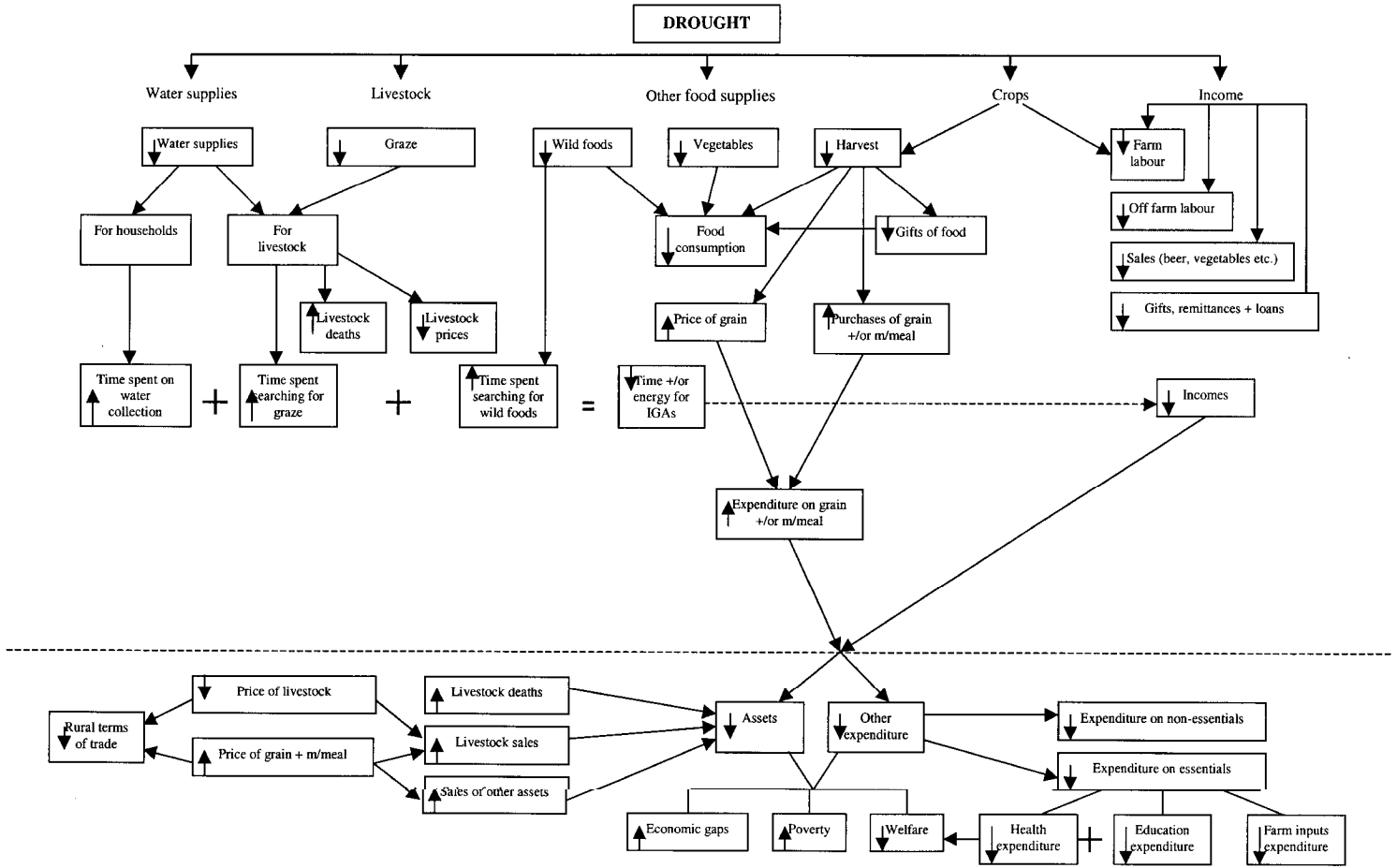

Figure 1: The effects of the 1992 drought in some areas of southern Africa and the responses of villagers

Financing these increased purchases often involved compromising longer-term livelihood security to an even greater extent than usual, especially for poor rural households. Most villagers intensified a few non-water dependent income-generating activities, some sold their last remaining draught animals, and some cut expenditure on education and agricultural inputs. To obtain staple food during the planting season, they worked off their own land for longer than usual, contributing to a smaller than expected harvest.

Although purchases increased, and were the largest source of staple food for most poor smallholders, villagers received almost no assistance to maintain their pre-drought purchasing power. There were virtually no attempts to stabilise staple food prices at pre-drought levels. Nor were any significant efforts made to prevent livestock prices falling. These – often large – decreases, coupled with substantial increases in the price of staple food, greatly worsened the rural terms of trade. Villagers' attempts to reduce livestock mortality dwarfed the little external assistance that was provided.

Similarly, the largest proportion of responses to water problems comprised activities by villagers. ODA's emergency water programmes in Lesotho, Mozambique and Zimbabwe made little immediate difference to the majority of drought-affected people during the drought (Clay *et al*. 1995). By mid-November 1992 only 11 per cent of the target of 4,086 handpumps had been installed at water points in Zimbabwe's rural areas (UNDP 1992). However, the emergency programme improved water supplies in a number of villages over the longer term – this figure doubled to 24 per cent by April 1993 (Tobaiwa 1993).

In proportionate terms, the distribution of seed in late 1992, largely carried out by governments, was the most successful type of external assistance (though this was post-drought rehabilitation and not a drought relief programme). However, for drought-tolerant cereal crops (millet and sorghum), the largest percentage of seed varieties planted came from smallholders themselves.

The limitations of the various components of the 1992 relief and rehabilitation programme are common to most emergency operations, which appear to have a receipt ceiling. Most seem unable to ensure that the poorest smallholders receive much more than 15–25 per cent of the *per capita* monthly cereal requirement, for example. This constraint merely serves to highlight the relative effectiveness of the unquantified responses to the 1992 drought by the 20 million people estimated to be at 'serious risk' of starvation in southern Africa (SADC, July 1993).

Future relief programmes should therefore be used as precision instruments, rather than as scatterguns. They should complement these responses and support them, where they do not damage sustainable livelihoods, especially since smallholders' responses to the 1992 drought probably compromised their ability to respond equally effectively to future food crises. In particular, relief interventions should aim to minimise the large decreases in poor people's purchasing power, which normally occur during food crises. This is important for two reasons. First, to maximise effectiveness, support should be focused on a major activity likely to be undertaken by drought-affected people themselves: buying staple food. Second, maintaining the pre-crisis purchasing power of the poorest households will help protect livelihoods, which are compromised by their attempts to finance increased food purchases.

Interventions which minimise reductions in the purchasing power of the poorest households include subsidies, fee waivers, livestock price stabilisation, and cash-for-work projects (Eldridge 2002). Tight and accurate targeting, perhaps undertaken using vouchers, is essential if these measures are to be effective.

Within the limits of conventional emergency programmes, the 1992 relief and rehabilitation programme, one of the largest and best coordinated ever undertaken (Clay *et al*. 1995), was a success. Nevertheless, famine in southern Africa in 1992/3 was averted largely by the activities of those most severely affected by the most calamitous drought in half a century, though the context was important: there was no conflict in the worst affected countries, governments generally reacted responsibly, if belatedly, and donors were unusually responsive.

This account of the 1992 drought from the perspective of those most affected by it began with

the question: why was there no famine in southern Africa in 1992? It ends end with two more questions: why, despite the passage of over 20 years since Sen's entitlement approach (Sen 1981) emphasised failures of demand in food crises (see also Devereux 1993; Devereux and Maxwell 2001) have few, if any, subsequent relief programmes addressed demand issues? And why, given the many roles that drought-affected people play in responding to drought, are they not more involved in the planning and implementation of drought relief and rehabilitation programmes?

Notes

* This paper is based on the findings of a participatory study, involving 936 households in 72 villages in Malawi, Zambia and Zimbabwe, of how smallholders responded to the 1992 drought. It was conducted while the author was head of Save the Children-UK's Regional Office for Southern Africa.

1. The 1991/2 drought in Zambia was an agricultural rather than a meteorological drought: total rainfall was not significantly below recent norms, but its early cessation inhibited the maturation of maize (World Bank 1993).

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