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FIFTY YEARS OF RESEARCH ON PASTORALISM AND DEVELOPMENT

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1 INTRODUCTION

Insufficient information to predict famine was widely seen to be a central reason for the failure of national governments and the international donor community to prevent famines in Africa in the mid 1980s. Since then, there have been substantial improvements in the development of purpose-built information systems to predict famine. Many new famine early warning systems (EWS) have been set up, but the goal of famine prevention remains elusive. At least in the Sahel and Horn of Africa, the information now provided is not being used adequately to trigger timely and appropriate response. These EWS have tended to be evaluated internally, for the validity and timeliness of the information they produce with little account taken of what happens to the information once it enters the decision-making process. It is only by situating EWS in the wider political and institutional context within which they operate, that obstacles to the effective exploitation of the information to trigger response can be addressed.

This article summarizes the results of research into how early warning (EW) information is used in relief response planning in five African countries (Ethiopia, Sudan, Chad, Mali and Turkana District in Kenya). The research sought to investigate why more information has not always led to better response. Results indicate that famines are not necessarily hard to predict. The challenge is how to prevent them; information tends to play only a peripheral role in the process of famine response. The central policy challenge is no longer to develop ever more sophisticated indicators, nor information systems capable of tracking and analysing them. To realize the benefits of EWS, constraints on the response side of the equation must be tackled.

The main findings of this analysis of the use of EW information are:

- that better generation and use of information do not automatically lead to greater use of the knowledge thus gained;
- that the transition from provision of information to the use of knowledge is especially complex when

multiple actors are involved in information generation and in decision-making, and when the decisions involve high profile famine relief activities;

- that the process of negotiation between the main actors and the terms and conditions under which this takes place are central determinants of whether and how knowledge is used;
- that inappropriate, often centralized, bureaucratic structures can block knowledge flows, or render them irrelevant;
- that the political value of information (in turn determined by the political environment) far outweighs its accuracy, timeliness, relevance or accessibility when assessing why or whether it is used;
- that the coincidence of war and famine in much of Africa raises the political stakes of famine EW information and its use even higher;
- that the economic value of information (for example, intervening early and thereby reducing the high cost to donors and government of late response to famine) has been inadequately documented, but is also very difficult to calculate accurately.

In many respects, EWS are caricatures of how information and knowledge are - or are not - used in development planning. The necessarily incomplete information provided, pressure for timely use of information and the inevitable conflicts of interests over allocation of famine relief and its high profile all conspire to make this case an especially problematic one. But precisely because famine prevention is so inextricably bound up with the use or misuse of information, the case offers insights into other, less clear-cut cases of information use to trigger public action.

2 BACKGROUND

The study period (May/June 1990 to November/December 1991), was a year of drought across much of the Sahel and Horn of Africa, with early indications that food crises would be widespread.

CHARACTERISTICS	ETHIOPIA	SUDAN	CHAD	MALI	TURKANA, KENYA
Level of development of EWS	medium to high	low	medium	high	high
Centralized/ decentralized EW and response system	centralized	centralized	centralized	centralized	decentralized
Donor/government relations	poor, until coup in 1991	poor	good	good	good
International profile of famine prevention activities	high profile	high profile	low profile	low profile	medium profile
Insecurity/conflict affecting food security	yes (civil war, coup)	yes (civil war)	yes (coup, limited)	yes (coup, limited)	yes (livestock raiding)

Many EWS were being tested for the first time. The five countries studied were chosen to reflect differing EWS and predictive capacities; political and cultural environments; institutional arrangements for response; and national positions of influence or impotence *vis à vis* western donor countries. Table 1 summarizes the principal differences between the five countries. Four of the main donors of humanitarian relief to Africa were also included in the study: the World Food Programme (WFP), the European Community (EC), the United States Agency for International Development (USAID) and the Overseas Development Administration of the UK (ODA).

The analysis of how EW information is used concentrates on the EWS themselves, and on two groups of decision-makers: governments and donors, the key players in relief response planning and negotiations. It is they who control resources and who exercise power, particularly the international donor community which provides most of the emergency relief to the Sahel and Horn of Africa. (Indeed, it should be noted that donors have played a major role in providing funding and technical support to many EWS, including those in

Chad, Mali and Turkana). Potential beneficiaries of timely response - famine-prone people themselves - should be crucial actors in the formal EW/response process. Their 'interests' are, however, usually negotiated over from a distance. Although they have their own well-developed information and response mechanisms, there is a wide gulf between them and the formal EWS response decision-making. This article focuses on the formal systems.

The main characteristics of EW and decision-making in each of the five countries studied are summarized in Table 2. The nature of the decision-making process is a reflection of the political context within which it is operating. Thus, where donor/government relations were strained, as in Sudan and Ethiopia, there was little transparency in decision-making, and donor agencies set up parallel structures to government. In Mali, in contrast, where donor/government co-ordination over EW and response was rooted in long-standing collaboration over cereal market liberalization, negotiation over response took place in a comparatively cooperative and well-planned context. The analysis presented here incorporates, rather than ignores, political influences.

The research investigated information use within multiple bureaucracies with very different characteristics and working to a range of political agendas which are themselves changing. This article analyses some of the key triggers and barriers to information use, especially those encountered during the year of investigation - 1990/91. However, it should be noted that relationships between providers of information and individual administrators are built up over time, and there is inevitably a degree of instability and

unpredictability. Most of the bureaucracies in question are well-developed and do have a degree of flexibility within the constraints we describe.

3 WHAT ARE FAMINE EARLY WARNING SYSTEMS?

Famine EWS can be defined as systems of data collection to monitor people's access to food in order to provide timely notice when a food crisis threatens

Table 2: Characteristics of early warning systems and decision-making in five countries in 1990/91

CHARACTERISTICS	ETHIOPIA	SUDAN	CHAD	MALI	TURKANA, KENYA
1 Availability of EW information (a) nationally/ in-country (b) internationally	medium	low	high	high	high
	medium	medium	high	high	high
2 Significance of informal information channels	high	high	medium	low	low
3 Significance of 'disaster tourism'	medium	high	medium	low	low
4 Predictive capabilities of EWS	medium	medium	medium	medium	medium
5 Single vs. multiple indicator use: (a) in EWS (b) in decision-making	multiple	multiple	multiple	multiple	multiple
	single	single	single	single	single
6 Transparency of decision-making	no	no	yes	yes	yes
7 Parallel donor decision-making system to government system	yes	yes	no	no	no
8 Existence of programmed response options	no	no	no	yes	yes
9 Geared to free food aid distribution response	yes	yes	yes	yes	no

and thus to elicit response (Davies *et al.* 1991: 6). The first major drive to establish EWS in Africa occurred after the 1972/73 famine in the Sahel, which the international community failed to recognize in time. As a result, EWS were set up to service existing donor and UN food aid institutions and to mobilize the international food aid system; this has remained their *raison d'être* ever since. The second era of famine early warning in Africa, marked by even greater investment in EWS, occurred after the severe famines of the mid-1980s, when lack of information was often blamed for the lack of timely response. However, despite some significant advances in technology and a far greater understanding of the dynamics of food crisis, there have been few changes in either the underlying assumptions on which EWS are built, or the structural relationships between donors and recipients of food aid - between resource-rich and resource-poor states.

During the 1980s, there has been a paradigm shift in the theory and understanding of famine, at least amongst 'outsiders'. Narrow definitions of famine, based on increases in mortality have been broadened to take account of the social and economic collapse within acutely food insecure communities. By the 1990s, famine in Africa falls into two broad categories: famine triggered by drought; and famine triggered by war and its impact on local populations, sometimes in conjunction with drought. The hardest to predict - and also the most severe - are those founded on the trioka of war, drought and underlying impoverishment. Famines linked to conflict have specific EW needs, including indicators of political and military activity, on which little progress has been made so far. Their consideration is beyond the scope of this short article.

Most progress has been made with regard to drought-related EW. Design of EWS in this context has evolved as our understanding of the causes of food insecurity has advanced from a preoccupation with food supply to recognition of factors associated with access or entitlement to food. Thus, a minimalist approach to EW, using the single-indicator national food balance sheet as a proxy for food security status, has shifted towards a more multi-dimensional, maximalist approach using socio-economic indicators to provide information about access to, as well as availability of, food. Other developments include advances in measuring the vulnerability of different population groups to food crisis or famine, and monitoring people's coping strategies in the face of drought

as indicators of how seriously they are affected and of their options to alleviate its consequences.

The shift away from a minimalist approach to EW is to be welcomed. Where famines are **not** linked to endemic conflict (e.g. in the Sahel and much of southern Africa), minimalist EWS risk being redundant for much of the time, capable only of detecting major collapses of food economies, which occur perhaps once every ten years. On the other hand, the maximalist school argues that famine prediction will only ever be sustainable - or, indeed, of any real use - if it is incorporated into wider information systems which can serve multiple planning needs.

While ever more sophisticated EWS are developed in Africa, some authors argue that the problem needs to be approached via a much broader democratization of information flows within society as a whole. Drawing especially on the experience of India, the most effective EWS is thus held to be a free press (Drèze and Sen 1989). This is certainly important, but the role of the media as a form of **early** warning should not be exaggerated. Since 1984/85, when the western media exposed the famine in Ethiopia, donors have been more reluctant to ignore the potential threat of media coverage in their own countries. But only full-blown famines are newsworthy, when the visual images are guaranteed to shock and the crisis is sufficiently large scale to make international news. Thus the media can be most effective at triggering response when it is already too late.

In 1991 there was some coverage in the western media of the food crisis in North Sudan, focusing especially on the fraught political negotiations which surrounded the relief operation. Putting western and Sudanese politicians on the spot, in radio and television interviews, exerted some pressure to speed up the delayed relief operation, but not until well into 1991, when the Gulf War no longer dominated the media - too late for food relief to arrive in Sudan in time.

4 RESPONSE

Response to prevent famine can be defined as additional resources (over and above normal developmental aid, including programme and project food aid), which are channelled to famine-prone people in order to assist them in withstanding the effects of declining access to food. In almost every case, such response is limited to emergency food aid, usually

distributed as free food rations to vulnerable populations or sometimes via food-for-work programmes. Most relief resources for countries in the Sahel and Horn of Africa are provided by the international donor community. The following two sections therefore focus on the international humanitarian relief response.

Most famine relief seeks to save lives. Emergency food aid is intended to protect the consumption of people threatened by starvation. The system is most successful in reaching vulnerable people who are already far down the famine spiral - somewhere between destitution and death as shown on Figure 1 (see next page). Genuinely timely response would, however, seek to preserve **livelihoods**, intervening much earlier in the spiral at a stage between livelihood insecurity and destitution, as represented in Figure 1. This rarely happens in practice.

The results of the research in Sudan, Ethiopia and Chad in 1990/91 show a very poor record of late response, and an inherent weakness of emergency response procedures.

In each case most relief aid reached the country, let alone the potential beneficiaries in remote regions, after the hungry season during which assistance was needed most. In Chad, one of the worst cases, the time lag between recommendations for relief being made and international food aid arriving in country was 12 months. The arrival of the food coincided with a bumper harvest.

There are few examples of EWS linked to pre-programmed response options. In the case study countries, these are limited to the Turkana Drought Contingency Action Plan at sub-national level and the Stock National de Sécurité at national level in Mali. There are obvious advantages to these systems: above all, they eliminate the time-lag required to mobilize international relief resources. The case of Turkana in 1990/91 shows the advantages of choosing the most appropriate response from a range of possible options. But setting up a pre-programmed response system is difficult to achieve. It requires a long-term commitment of resources on both the donor and government sides - hence good relations between them - to maintain both a contingency plan and institutional preparedness in between periods of need.

5 BARRIERS TO INFORMATION USE

Prior to the development of EWS in Africa, it was implicitly assumed that the provision of systematic EW information could oil the wheels of decision-making processes and reduce conflicts of interest between actors involved in food crisis prevention in an impartial manner. The way in which information was perceived has been likened to a 'silver bullet', which could solve problems by itself, irrespective of the wider institutional, social, economic and political constraints to intervention (de Kadt 1989: 504). This is a seductive idea for governments and donors, but it does not work. The failure of EW to trigger timely response is testimony to this misconception. As information has become more widely available, there is a growing awareness of constraints to information use which are external to the EWS and over which it has little control.

Table 3 (see page 75) summarizes the principal barriers to, and triggers for, information use identified in the five case study countries. A significant number of these are directly related to the ways in which information is used.

The notion of information being used as an 'escape-hatch' for inaction is a common phenomenon in the tale of EW. To some extent, the quest for ever more sophisticated and detailed early warning data is testimony to this: 'we cannot act until we are sure **who is at risk and why**'. This can be a convenient way of evading action when decisions are tough and the political climate is not conducive to response.

The following are some of the major barriers to the use of early warning information, borne out by the results of the research in the five countries studied.

Accessibility of information

Much of the thrust towards developing information systems to predict famine was premised on the misapprehension that a lack of information was the principal obstacle to prevention. Attention has therefore focused on the technical aspects of prediction. But poor rural people who are vulnerable to famines have always had highly developed information systems to help them to predict and plan for food shortages. Such intelligence networks are central to their survival (Davies 1993). Predicting severe drought-related food shortage has rarely been a problem of an absolute lack of information, but rather a question of who has access to it, who controls it and who owns it.

The boom in famine EWS since the mid 1980s in Africa has improved decision-makers' access to information which they can understand, although most of these EWS still do not tap the

indigenous knowledge of famine-prone people, relying instead on arms' length indicators, such as market prices, crop assessments and nutritional measurements.

Figure 1: The downward spiral of famine

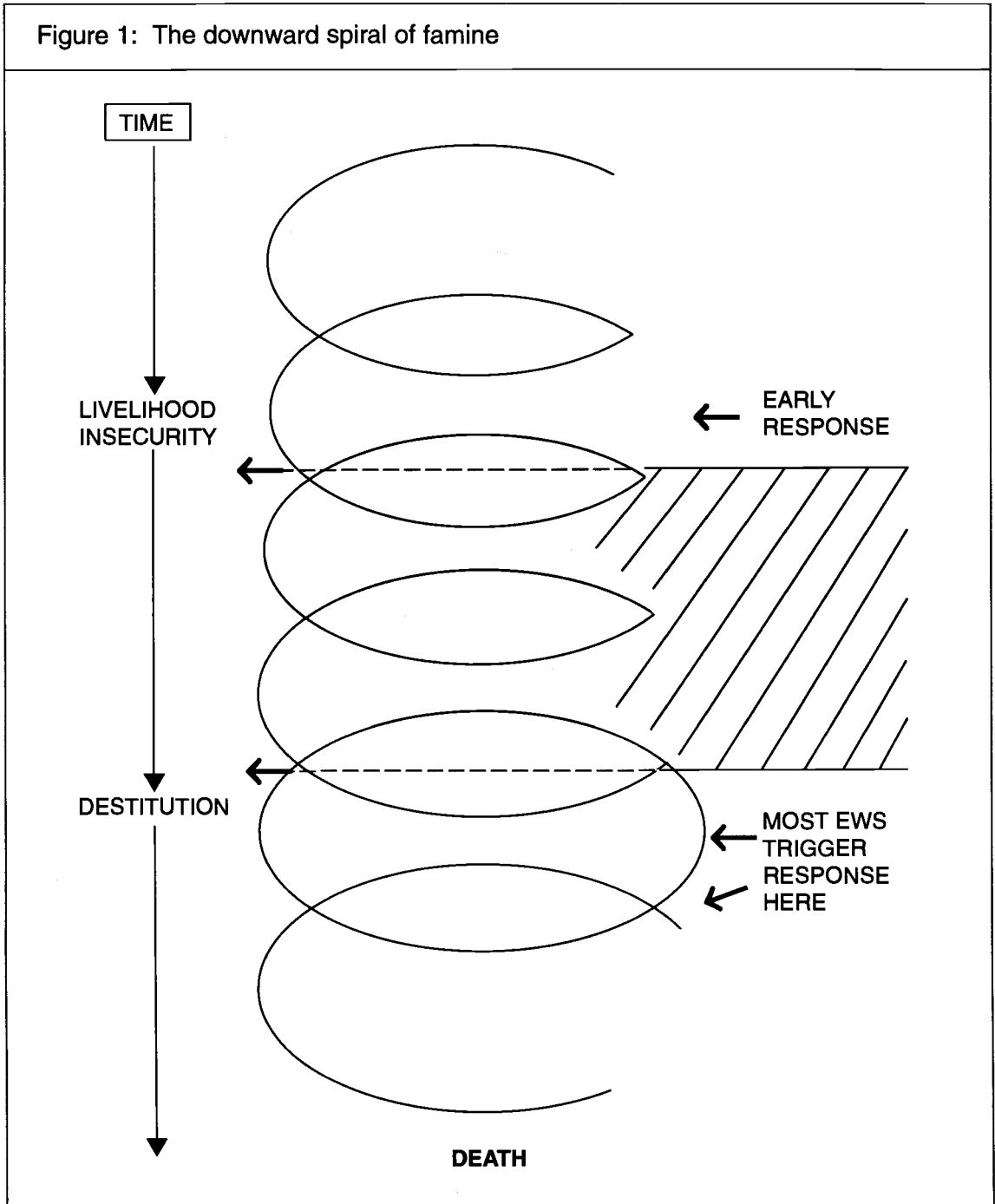


Table 3: Triggers and barriers to response process to EW in 1990/91

TRIGGERS/BARRIERS	ETHIOPIA	SUDAN	CHAD	MALI	TURKANA, KENYA
1 EW practitioners involved in decision-making	no (except within govt)	no	no	no	yes
2 International EW information as trigger to response decision-making	yes	yes	yes	yes	no
3 National EWS information used for targeting	limited	limited	limited	yes	yes
4 Crisis indicators as trigger	yes	yes	yes	no	no
5 Influence of western media	yes	yes	yes	no	no
6 Transparency of decision-making	low	low	high	high	high
7 Bureaucracy and logistics of international relief delivery system as a barrier	yes	yes	yes	no	no
8 Logistics of national relief delivery system as a barrier	yes	yes	yes	no	yes
9 Pre-programmed response options facilitate response	no	no	no	yes	yes
10 Flexible response options	no	no	no	no	yes
11 Donor co-ordination	good	poor	good	good	not relevant
12 Donor-government relations	very poor	poor	adequate	adequate	adequate
13 Conflict as a barrier to response	yes	yes	no	no	no

What is EW information used for?

In theory, EW information is used to inform decision-making and to trigger a response designed to prevent famine. In practice, how it is used depends on the user's agenda. The most common discrepancies in how EW information is interpreted occur between international donors and

national governments. The former may wish to minimize the allocation of scarce relief, or be reluctant to provide it to a government towards which it is ill-disposed. Meanwhile, it may be in the interests of an impoverished national government to maximize food aid receipts which are a valuable external resource. As a result, the same EW informa-

tion may be translated - even manipulated - into very different assessments of needs by each actor. This was the case in both Chad and Mali in 1990/91. A further complicating factor for foreign NGOs is that they are invariably the preferred agents of donors for delivering emergency relief. Food aid allocations may correlate more closely with the geographic area of operation of an NGO, than with evidence of need provided by the EWS.

What kind of information triggers response?

On the information generation side, attempts have been made to adapt methodologies to reflect the diversity of drought-induced famines. Similar changes have not been made with respect to the type of information which is used to trigger response. Busy decision-makers swamped with information tend to gravitate towards simple, straightforward messages - often rather crude indicators. Those controlling response tend to remain preoccupied with supply-side factors, with a narrow emphasis on identifying required levels of emergency food aid. Thus, at international donor level, the principal source of EW information used by senior bureaucrats in their annual bid for food aid allocations remains the FAO Harvest Assessment and the national food balance sheet constructed on the basis of it. This occurs despite the availability of more detailed data from national EWS which address some of the distributional aspects of access to food as well. The harvest assessment is quantitative and tends to be used as if it were not controversial, despite widespread recognition (not least by FAO) that the Harvest Assessment is a highly approximate indicator. Using the Harvest Assessment in this way can lead to information from national EWS being held in abeyance until the Harvest Assessment (which tells only part of the story) is completed and agreed. This was the case in Chad in 1990.

Credibility of information

Information must be seen to be credible by all negotiating parties involved in the allocation of scarce resources. Much of the energy devoted to developing ever more accurate, reliable and timely indicators to forecast shortfalls in food supply and access to food, has been directed towards a quest for (usually quantified) objectivity. Such objectivity is inevitably tenuous given the difficulties associated with collecting accurate information in many famine-prone areas, and the complexity of the causalities of famine. Indeed, it is rarely an 'objective'

assessment of the accuracy of the data which ultimately determines the credibility it is accorded. Credibility depends on more specious determinants, such as:

i) **Who 'owns' the information:** an information system which is entirely 'owned' by national government is less likely to hold sway with international donors than one in which they too have a vested interest. They do not trust it. Instead, they rely heavily on assessments carried out by the international donor community, usually by UN agencies. These assessments possess the critical requirement of the international stamp of credibility; hence the emphasis placed on FAO's Harvest Assessment. The irony is that the information in these assessments is usually only as good as that of the national EWS on which they depend for data. But the international EWS is given the benefit of the doubt, whereas the national EWS is not (for example, in Ethiopia under the Mengistu regime).

ii) **Donor/government relations:** where relations are already strained due to political differences, there is immediately a heightened suspicion and mistrust on all sides about the interpretation of EW data, which is implicitly assumed to be politically biased. This may be complicated by conflicting assessments carried out by different parties which hardly communicate with one another. Better information can only go some way towards improving credibility, which is as much a function of wider relations of trust and co-ordination, as a characteristic of the information itself. The fundamental paradox of EW information is that it is least likely to trigger effective response when it is most needed: when donor/government relations are poor.

The influence of crisis indicators

Donor decision-making appears to be driven by downstream not upstream events. The urgency with which response is treated depends on indications that a crisis is already underway, thus losing the benefit of early warning. Evidence of human stress is most influential as a crisis indicator (high rates of malnutrition or increased mortality), even though these are not early indicators, but signs of the outcome of failure to respond in time. This is most true in countries where donors are least well-disposed to helping government, such as in Ethiopia and Sudan during 1990 and beginning

of 1991. The danger of this scenario is that a vicious circle is set in motion. If donors only respond to crises, those trying to trigger donor response bid up the severity of the situation to initiate some action. This can backfire, if the exaggerated prophecies are not fulfilled. In Sudan, for example, forecasts of numbers of vulnerable people were translated into predictions of 'megadeaths' if agencies failed to provide relief. The relief operation fell way below target, and the exaggerated prophecies did not materialise, so donors felt they had been misled, which may influence their willingness to respond next time. Under these conditions, everyone misses what is really happening as a result of the failure to provide adequate relief: a continuous undermining of people's ability to feed themselves, and increasing vulnerability to the next drought.

Aggregation of information

Most EW and response systems are highly centralized. EW information has to be aggregated to fit with this bureaucratic structure, thereby losing whatever understanding of local food economies, or of local people's coping strategies, the EWS may have detected. Decisions to respond and the mobilization of resources are often taking place hundreds (or even thousands) of miles from where help is needed, by people who are far removed from what is happening on the ground, with little sense of urgency.¹ The EW and response system in Turkana provides an interesting counter-example of a decentralized system, the potential advantage of which is that decision-makers are much closer to the action. They have a much better understanding of what is required and of how quickly it is needed, especially if livelihoods are to be preserved, rather than simply people kept alive. The Turkana system used this advantage in 1990/91 when EW recommendations were translated rapidly into firm decisions to respond. A deterioration of environmental indicators alone, before human welfare indicators deteriorated, was sufficient to trigger a response². But a decentralized EW and decision-making system must be supported by decentralized access to relief resources if the full benefits of more timely and appropriate response are to be realized.

Political barriers to Information use

The political context is a critical determinant of how EW information is used. An EWS cannot cut through antagonistic political relations, and guarantee a timely response. On the contrary, it becomes a pawn in political controversy and negotiation. Poor political relations can undermine or destroy the whole EW/response process, especially in situations where humanitarian relief is the only available resource due to the anterior breakdown of donor/government relations. Sudan in 1990/91 is a classic example. The Sudanese government was not prepared to admit the scale of the food crisis nor the need for international relief until well into 1991. Such a position would have undermined their policy of food self-sufficiency and increased their dependence on western food aid donors from whom they were trying to distance themselves. Meanwhile, donor agencies were reluctant to provide resources to a government towards which they were ill-disposed and were suspicious about how relief resources would be used, or mis-used, if they did not have complete control over them, a condition unacceptable to a government which resented being dictated to by western donors. The result was stalemate in the response planning process for a number of months.

Inappropriate bureaucratic procedures

It is in the nature of emergency relief that most decisions about its allocation cannot be pre-programmed. Examples of planned response mechanisms are rare and tend to operate in rather exceptional circumstances (as in Mali, for example, where EW and response are linked into wider structural adjustment initiatives). In-built bureaucratic rigidities militate against effective exploitation of EW of famine in many donor agencies which are set up to respond to famine, not to protect insecure livelihoods. Such rigidities include the timing of decisions about relief allocations which are over-reliant on internationally recognized assessments at the expense of earlier indicators available from national EWS, and which bear little or no relationship to the seasonality of the relief needs of the hungry and food insecure in Africa. Emergency and development activities are usually clearly compartmentalized within donor agencies, even though information

¹ On the other hand, targeting decisions may make greater use of local knowledge and information.

² It is noted, however, that the EW and response system did not work so effectively in Turkana in 1992, when the political climate was less conducive to timely response. Once again, this underlines the enormous significance of the political context of a famine prediction and prevention system.

may suggest that the distinction is inappropriate. Obstacles to timely response in donor headquarters are further exacerbated by planning constraints imposed by the financial year rather than the seasonality of hunger in Africa. Information cannot, by itself, alter the functioning of bureaucratic structures.

Lack of accountability

Lack of accountability in famine EW is illustrated by the role EW plays in other sectors, such as intelligence and forecasting systems for financial markets, or defence strategies for governments. What distinguishes these information systems from famine EWS is that the interests of the instigators and the users of the information generated are directly threatened if the information is incorrect or not exploited in a timely manner. In these circumstances, those who are responsible for EW have a vested interest in ensuring that the information system fulfils its prescribed function. By way of example, the profitability of a financial trading house is contingent upon market intelligence, of which a significant proportion is the ability to forecast future trends (Davies *et al.* 1991). This internal accountability does not operate for famine EW in the Sahel and Horn of Africa. The potential victims of famine are neither those who request the setting up of an EWS, nor is it they who use the information to influence decisions. Even if they had access to the information, the capacity and power poor people have to make preventive choices on the basis of EW is severely constrained by lack of resources and of access to decision-makers and political systems. This is not to underestimate the importance of poor people's coping strategies employed to mitigate the threat of famine, but their ability to respond to signals additional to their own information networks is finite.

Governments have an indirect interest in preventing famine, but it is part of a wider political, social and economic agenda; famine-prone populations may be even more vulnerable in the absence of accountable political processes. Failure to react to EW entails a set of costs and perhaps benefits (e.g. greater quantities of emergency relief when a late response eventually occurs), which governments can assess at arm's length from the direct threat of starvation. The accountability of international aid donors is limited to western public opinion, which may act on behalf of southern famine victims, but this is a weak and attenuated link and is critically influenced by the access and interest of the media. The context

within which famine EWS operate are divorced from the contexts about which they provide information.

Sustainability

The sustainability of EWS is questionable in several respects, especially in terms of their cost-effectiveness, utility and the priority attached to information systems. A discussion of sustainability and who pays for the system cannot be divorced from the issue of 'ownership' and credibility of information. EWS are generally projects set up with donor funding, sometimes - but not always - based on existing government structures. This is particularly the case in the Sahel and Horn of Africa. The implicit assumption is that eventually they will be taken over by government, but information systems - however useful - are rarely at the top of a resource-poor government's agenda. On the donor side, evaluations of the effectiveness of EWS are difficult to achieve: they tend to be limited to the internal mechanisms of the information system itself and do not address the response which they succeed or fail in triggering. Cost-effectiveness is even more troublesome: whereas direct costs are relatively straightforward to determine, opportunity costs are much harder to account for. These would have to be calculated according to the relative costs of late and timely response. The effectiveness side of the equation cannot be fully measured either, given that many of the obstacles to exploiting information are external to the system. Calculating the 'economic' value of EW information in a comprehensive way is uncharted territory, and highly problematic. However, to talk about sustainability of an EWS only in terms of cost partly misses the point. Who 'owns' the information is critical to how it is used, as described above, and this is a function of who funds the system. The evidence points to the advantages of a jointly 'owned' EWS, by both donors and government. If both have a stake in it, both have a vested interest in using the information.

6 CONCLUSIONS AND POLICY IMPLICATIONS

Developing more comprehensive information systems cannot improve famine prevention unless the response side of the equation is also tackled. There are no easy answers; fundamental improvements on the response side will inevitably challenge a wide range of political, financial and institutional relationships between donor and recipient states. The problem lies in (i) the political implications, in terms of ownership and control over resources, both within

and between states, and (ii) the economic implications: recurrent expenditure required to sustain a national food security system is often very high.

Although it is not difficult to set out criteria for establishing a more logical and efficient system for preventing famine, the obstacles tend to be political and economic rather than mechanical. Timeliness of the warning is often cited as one of the central obstacles to response, but in fact the more complex and serious barriers are rooted in the political economy of information use. The clearest message is that information - however accurate and timely it is - can only oil the wheels of the decision-making process.

Predicting famines is a necessary but insufficient precondition for famine prevention. Systematic information about the likelihood of famine is by no means redundant: without EWS the process of resource allocation is even more fraught with difficulty, as decision-makers are forced to rely on 'disaster tourism' and other forms of informal assessment, which are often wrong, late and incomplete. What then are the policy issues which need to be addressed to improve the use of information in famine prediction and prevention?

Early Warning should continue but its remit should be widened

EWS must be able to predict famines when necessary. But this objective should not determine everything that the information system does or is used for. The remit of an EWS should be extended beyond famine prediction. Food information systems, which can be used for a multiplicity of planning tasks, and are sensitive to the threat of famine through continuous monitoring, are more appropriate and useful to the food security planning needs of African countries.

EWS should be jointly-funded ventures

National and sub-national EWS are most likely to be used by all parties, and to be sustainable, if jointly-funded by donors and government, so both have a stake in the system. This is feasible where donor-government relations are good. Where they are not, co-operation over information is less likely to succeed.

End-of-year harvest assessments should play a less prominent role

Present decision-making relies too heavily on harvest assessments carried out at the end of

the growing season, which results in late response by the international community. In the absence of food security reserves in-country, agreed end-of-year assessments leave little time to respond to food crisis. A phased response based on earlier assessment would facilitate timely action.

Information collection and use needs to be decentralized

A decentralized EWS can take better account of local variations in the food economy, can be more sensitive to local coping strategies and vulnerability to food stress, and hence can recommend more appropriate interventions. The management of EW information is usually less cumbersome if decentralized. Disadvantages of a decentralized EWS include problems of standardization of data, of co-ordination and the risk of providing too much detail for busy decision makers. In-country decentralization of decision-making means that decision-makers are closer to what is happening, interpretation of information is less distorted, and they usually have a greater sense of urgency to respond to a problem close at hand. Against this, such decentralization is impossible in a highly centralized bureaucracy, and if adequate personnel capacity does not exist at local level. There is little sense in decentralising EW and decision-making if control over resources and the capacity to respond are not also decentralized.

Sovereignty and accountability

Responsibility for famine prevention is seen to lie with national governments, but in practice, most African governments require additional resources from the international aid community to respond to widespread food crisis. Reaching agreement over food aid needs is not the only issue to be negotiated between governments and donors. The targeting and distribution of aid can also be highly contentious. National governments are in most cases reluctant to hand over to an external donor responsibility for the geographical allocation of resources, or for the identification of beneficiaries. Donors are similarly reluctant to let go, for fear that 'their' aid may be diverted for uses other than feeding the victims of famine. They remain accountable to their own sovereign institutions (Parliament, Congress etc.). Better EW information, even if it provides data relevant to targeting, can do little on its own to address the fundamental conflict between national sovereignty and ownership of internationally donated relief resources.

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