

NETWORK HPN
paper**Drought, livestock and livelihoods:
lessons from the 1999–2001 emergency
response in the pastoral sector in Kenya**

by Yakob Aklilu and Mike Wekesa

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ABSTRACT

The livestock intervention programme that took place during the 1999-2001 drought in Kenya's pastoral areas was the largest the country had ever seen. Donors made more funds available than ever before; more types of intervention were carried out; more agencies were involved in implementing programmes; a larger geographical area was covered; and coordination at national level was more extensive than ever before.

This paper documents the experiences and lessons learnt from the livestock interventions in response to the drought. It focuses on the arid and semi-arid

districts of Kenya, where the drought's effects were most severe. The first chapter describes the severity and impact of the drought, introduces some of the response activities that were implemented, and underscores the livestock sector's importance to Kenya's economy. The second chapter describes in more detail the range of livestock-related interventions that were implemented, and discusses their broader socio-economic impact. In chapter three, the costs and benefits of the various interventions are laid out. The paper concludes with the key lessons of the intervention, and offers recommendations and suggestions to guide future work.

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Layout and production: Publish on Demand Limited

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Acknowledgements

The authors would like to acknowledge the assistance provided by the staff of the agencies featured in this report. These include: ACK-MDO (Marsabit), VSF-Belgium (Lodwar), COOPI, CIFA and RAMATI, World Concern (Narok), CARE-Wajir and NORDA in Mandera. The authors are also grateful for the financial support provided by OFDA/USAID, which made this study possible. This research first appeared as a Feinstein International Famine Center Working Paper, entitled Livestock and Livelihoods in Emergencies: Lessons Learnt from the 1999-2001 in the Pastoral Sector in Kenya, published in September 2001. Feinstein's working paper series is available at www.famine.tufts.edu.

A note on methodology

The research for this paper involved interviews with donor representatives and the staff of implementing agencies. Group interviews were also conducted with district-level stakeholders, such as District Steering Group committee members and beneficiaries. Field visits were made to Mandera, Garissa, Wajir, Narok, Turkana and Marsabit; in all, ten projects were visited. Finally, a review of related materials was carried out.

Costs and prices given in this paper are normally quoted in Kenyan Shillings. This paper uses an exchange rate of 75 Kenyan Shillings to the US dollar.

ISBN: 0 85003 617 8

Price per copy: £5.00 (excluding postage and packing).

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The drought crisis and Kenya's pastoral sector

The 1999–2001 drought was both more extensive and more severe than previous episodes, in 1992–93 and 1996–97. It affected not only the perennially drought-prone arid districts of northern Kenya, but also the marginal agricultural areas of Eastern, Coast and Rift Valley provinces, as well as high-rainfall areas such as the Central Province. Although widespread, the effects of the drought were felt most keenly by pastoralists in the districts of Garissa, Wajir, Mandera, Tana River, Moyale, Marsabit, Isiolo, Turkana, Samburu, Baringo, Laikipia, Koibatek, Kajiado and Narok.

According to the World Food Programme (WFP), over 2.5 million Kenyans needed food aid between February and June 2000 alone; UN estimates in early 2001 put the total population affected at around four million.¹ Nearly three million pastoralists and agro-pastoralists were at risk. In Wajir, one of the worst-affected zones, surveys by Save the Children UK in mid-2000 put the prevalence of acute malnutrition in central Wajir at 22.5%, and in western Wajir at 21.6%; about 70% of the severe malnutrition was kwashiorkor, a form never previously seen in the north-east.

Box 1: Saving lives through livelihoods

In areas such as the drought-prone regions of northern Kenya, pastoral communities are engaged in both short- and long-term management of acute and chronic threats to household food security. In the short term, these cycles directly threaten lives by attacking the basis for pastoral survival: their livelihoods. Over time, the accumulated shocks these communities face mean that the resilience of pastoral households decreases.

The difficulties of providing life-saving humanitarian assistance to pastoral communities are well known to all who have tried to aid these highly mobile, livestock-rearing communities. Food aid can permanently disrupt migration routes. Water interventions can lead to environmentally-damaging concentrations of herds and to overt, water-related conflict. Health and education interventions are most effective when matched to the mobility of pastoral communities – but managing such interventions can be extremely difficult.

The humanitarian imperative underscores the right of vulnerable populations to receive assistance tailored to their needs. Effective and appropriate humanitarian assistance for pastoral communities rarely resembles humanitarian interventions for settled communities. Rather, it is geared towards supporting the *livelihood base* that is their lifeblood, and is grounded in the knowledge that there is no substitute for the pastoralists' reliance on livestock in times of plenty and scarcity. Appropriate and effective humanitarian assistance for pastoralists includes, for example, the provision of community-based animal health care, market support to stabilise grain purchases (in order to maximise the terms of trade between livestock and cereal products) and direct interventions to maximise returns to pastoralists who engage in drought-related livestock sales. Through this approach – through 'saving lives through saving livelihoods' – the humanitarian community is best able to support communities' own strategies for surviving the vagaries of harsh and marginal climates.

Table 1: Estimated economic losses from livestock deaths³

	Livestock species		
	Small stock	Cattle	Camels
Northern rangelands	43% mortality	35% mortality	18% mortality
Southern rangelands	16% mortality	25% mortality	Negligible
Average	30% mortality	30% mortality	18% mortality
Total at risk at peak of drought	8m	3m	80,000
Likely number lost	2.4m	900,000	14,400
Average price/animal during drought year	KSh500	KSh5,000	KSh6,500
Total loss/species	KSh1.2bn (\$16m)	KSh4.5bn (\$60m)	KSh94m (\$1.25m)
Grand total loss	KSh6bn (\$77m)		

As a direct result of the drought, an estimated two million sheep and goats, over 900,000 cattle and 14,000 camels worth some six billion Kenyan Shillings (\$80m) were lost (see Table 1). The social impact of these losses among pastoralists was equally severe.² The drought undermined households' social position, caused families to break down and split and damaged social safety networks, friendships and borrowing capacities based on livestock ownership. In addition, it bred a sense of helplessness among its victims and increased households' vulnerability to future food insecurity as pastoralists and agro-pastoralists dropped out of the production system and moved off the land to settle near food distribution centres. This provided fertile ground for sedentarisa-

tion, environmental degradation, destitution and absolute poverty.

Overview of the drought response

Food relief and livestock interventions

As in past drought crises in Kenya, emergency food relief was one of the first responses. The WFP and the Kenyan government began a food relief programme in February 2000, and by the close of the year the number of beneficiaries stood at more than three million. Food relief extended even to areas not typically prone to drought, such as Nyeri and Kiambu districts. By February 2001, the government had spent nearly KSh4.8bn in food relief. According to the

Box 2: Livestock production and the Kenyan economy

Livestock production is a major source of employment in Kenya, and makes a significant contribution to the economy. Over the past decade, it has on average accounted for a quarter of the country's gross domestic product, and more than half of the income of small farmers. Overall, however, Kenya's livestock production does not meet domestic demand, and exports of livestock and livestock products are almost non-existent. Over the last five years, livestock production has grown at a rate of 2.2%, compared with an average population growth slightly over 3%. Kenya is thus likely to become a net importer of meat and meat products in coming years.

Kenya's livestock sector is roughly evenly split between areas of high rainfall, and arid and semi-arid lands (ASALs), which account for around 80% of total land area. Here, pastoralism is an efficient way of using scarce resources.⁴ As Table 2 shows, pastoralist areas hold some 45% of all the country's livestock; altogether, ASAL districts hold an estimated KSh70bn (\$1bn)-worth of livestock.⁵ Dairying (mainly cattle) is a major livestock activity in higher-rainfall areas, while in the ASALs the focus is on meat and milk production, from both large and small stock. Livestock-keeping in the ASALs tends to be at a subsistence level, and at a commercial level in areas where rainfall is higher.

Table 2: Estimated livestock distribution in Kenya

Species	Pastoral areas	Rest of the country	Total national herd
Dairy cattle	Negligible	3m	3m
Other cattle	4m	5m	9m
Goats	6m	6m	12m
Hair sheep (the local breed)	4m	3m	7m
Wool sheep (imported animals, such as Merinos)	Negligible	1m	1m
Camels	1m	Negligible	1m
Total	15m	18m	33m

Source: Kenyan Ministry of Agriculture and Rural Development, January 2001

government's Department of Relief and Rehabilitation, by the end of June total expenditure on emergency food, from the WFP, the government and other stakeholders, was an estimated KSh 15bn, twice what was spent during the 1996–97 drought.

In addition to this massive food relief programme, the Kenyan drought also saw an unprecedented level of livestock-related interventions in pastoral areas. By September 2001, 21 livestock-related projects were under way or had been completed in ten districts. Projects included destocking interventions in Mandera, Garissa, Wajir, Turkana, Narok and Marsabit districts; animal health activities in Wajir, Mandera, Garissa, Marsabit, Samburu, Moyale, Kajiado and Laikipia; the provision of livestock transport subsidies in Turkana and Mandera; livestock feed in Turkana,

Garissa and Marsabit; restocking in Marsabit; and cross-border harmonisation and peace initiatives in Turkana. Some 13 agencies were involved, from the Arid Lands Development Focus, an NGO working in Wajir district, to major international concerns such as CARE and Oxfam.

The operation supported the purchasing and slaughtering of nearly 40,000 sheep and goats (referred to here as 'shoats'), some 200 camels and approaching 6,000 head of cattle; the vaccination and treatment of hundreds of thousands of animals, and transport subsidies to move thousands more to Nairobi; feed for 8,000 shoats; the restocking of hundreds of families; and access to pasture for 100,000 head of cattle across the border in Uganda. For those interventions on which data is available, an estimated \$2m-worth of livestock were saved and salvaged; the total value gained may be as much as \$10m.

Overall, donors provided close to \$4m for these livestock interventions between June 2000 and January 2001. Major donors included the Community Development Trust Fund (CDTF), a European Union (EU)/ Kenyan government poverty-reduction programme; the EU itself; the UK's Department for International Development (DFID); and the US Agency for International Development (USAID). Of this \$4m, nearly \$977,000 was disbursed for destocking or off-take; \$1,159,000 for animal health; \$119,000 for transport



A WFP food aid distribution in Turkana

© Thierry Green/WFP

subsidies; \$137,000 for livestock feed; \$110,000 for restocking; and \$73,000 for border harmonisation. (The remaining \$1.5m went on projects such as water development, which are not covered in this paper.) The geographic distribution of funds depended less on the relative magnitude and nature of the problem in a particular district, and more on the willingness of donors to finance projects proposed by implementing agencies. The highest level of funding went to Turkana district, and the lowest to Narok.

Coordination structures

As Kenya moved into a period of drought stress and potential emergency, the existing UN, government, donor and NGO coordination structures assumed increasing importance. The Kenya Food Security Meeting (KFSM) was given new direction, Geographical Review Teams (GRTs) were formed and the Kenya Food Security Steering Group (KFSSG) was established. These three structures formed the core of Kenya's drought response system at the national level, providing and exchanging information and promoting coordinated and appropriate responses. In addition, UN-led sector working groups were established covering health and nutrition, water and sanitation, livestock and agriculture.

The livestock sub-sector working group played an instrumental role in highlighting the plight of pastoralists, and galvanising responses in this area; indeed, the unprecedented level of drought-related livestock interventions is mainly attributed to the coordination role it played. The group, led by the Food and Agricultural Organisation (FAO) and the Arid Lands Resource Management Project (ALRMP) and the Organisation of African Unity Inter-African Bureau for Animal Resources (IBAR), comprised Oxfam, World Concern, CARE and the Kenyan Ministry of Agriculture and Rural Development. Through regular meetings, the group facilitated the exchange of information among donors, implementing agencies and the Kenyan government, and played an important role in screening proposed interventions on donors' behalf. This ensured that information existed on which projects had been proposed, which had received funding and which had not, and made the monitoring and evaluation of programmes much more systematic and organised than in the past. However, although donors and implementing agencies were interested in identifying linkages between different interventions and were persuaded of the need to work jointly, there was little enthusiasm to adopt the working group as a central funding mechanism; while donors accepted the group's utility

in screening proposals made by implementing agencies, they retained individual funding authority.

The changing role of government

One of the notable differences between this drought response and earlier ones was that, for the first time, the Kenyan government was centre-stage. In previous crises, the response had been driven by the UN, donors or NGOs. This time, the government was notably more proactive, responsive and transparent. In addition to the material contribution the government made to financing the relief effort, officials chaired the KFSM and sub-sector working groups, while regular meetings with donors and embassies and the preparation of credible funding appeals galvanised international support.

This new-found engagement stemmed from important changes within the government itself. The ALRMP lobbied hard to influence the government, notably in the Office of the President, the Treasury and the Ministry of Agriculture and Rural Development. In addition, reforms within the government in response to changing economic circumstances ushered in a new generation of managers, creating a new and more open decision-making culture. For the first time, the government acknowledged the need to use technical data in decisions about targeting relief. At community level, responsibility for relief distribution was removed from the District Commissioners, and communities themselves identified vulnerable households and individuals. Even in emergency destocking programmes, beneficiaries were selected based on household poverty assess-

Box 3: The role of parliament and the media

The government's response to the drought was also conditioned by the media, and by lobbying by parliamentary groups and individual politicians. MPs from affected districts worked hard to attract government attention to the developing emergency, and the Pastoralist Parliamentary Group was quick to counter attempts by administrators and civil servants to downplay the severity of the gathering crisis. In addition, the press, led by the Nation Media Group, publicised worsening conditions, printing photographs of emaciated animals and seeking out anyone willing to speak. The Nation Group set up a widely-publicised fund to assist drought victims in Turkana, and for the first time Kenyans were themselves asked to make donations. The response was massive: within six months, over KSh20m had been raised.

ments or wealth-ranking exercises. Community groups were informed in advance of the kind and quantity of relief assistance they could expect, making handling structures much more transparent and reducing the diversion of relief supplies.

Relations between the government and key stakeholders, such as donors and the UN, were also noticeably better than in previous emergencies. The developing dialogue between the government and other stakeholders over food security, embodied in structures such as the KFSM and the KFSSG, reduced some of the mutual mistrust that had marred relations in the past; in May 1999, for instance, the Dutch government, a long-standing source of assistance, suspended bilateral cooperation because of alleged poor governance.

As time went on, it appears to have become increasingly clear to donors and others that working with the government and seeking to influence its decisions and policies through positive engagement would in the long term be more effective than establishing the kind of parallel structures for relief that had marked earlier emergency responses. For the first time, government relief goods and the contributions of other stakeholders were disbursed through a single system.

Early-warning systems and drought-management mechanisms

Kenya's early-warning and drought-management systems were first developed by the Drought Preparedness Intervention and Recovery Programme (DPIRP), an initiative funded by the Dutch, in cooperation with the Kenyan government, between 1995 and 2000.⁶ In 2000, the ALRMP took over management of the early-warning system, which operates in ten northern districts. In general, such systems can be classified according to the level at which they operate, ranging from global allocations of food aid to the targeting of interventions to individual households or villages.⁷

The ALRMP's drought-monitoring system has the following features:

- It covers selected drought-prone areas in depth, rather than aiming for national coverage, which would be prohibitively expensive.
- The design of the monitoring system (i.e. what data to collect and how to interpret it) is based on a close analysis of local livelihoods, rather than the



Food aid being collected at a WFP distribution centre, September 2000

standard general indicators often collected by centralised national systems. Indicators are selected to pick up changes in the environment, local economy and human welfare.

- Information is collected through monthly 'ground monitoring' by locally-recruited field monitors, at household and community level (a random sample of households is used).
- Monthly bulletins classify the local situation, according to a comparison of indicators with the expected range of fluctuation, at one of four 'warning stages' – normal, alert, alarm, or emergency. In this way, decision-makers can immediately see whether action is needed.
- If the monitoring report appears to warrant a relief needs assessment, the District Steering Group deploys a local Rapid Assessment Team (RAT) to identify the type and quantity of assistance needed. This recognises that monitoring is designed to give early signals of problem areas, but cannot directly answer the 'how much' questions.
- Food aid is not the first response sought by this monitoring system, but a last resort. The primary focus is on community, district and national-level response where possible, and on prevention or development measures in preference to relief.
- Rather than providing early-warning signals and other information on an impending crisis, the drought-monitoring component of the system is complemented by the response component, which supports quick-mitigation intervention measures.

The 1999–2001 intervention provided an opportunity to put this model to the test. The ALRMP raised

Box 4: Traditional early-warning systems

Pastoralists have been using their own traditional early-warning systems for centuries. Some they can read themselves, while the more complicated indicators are interpreted by astrologers and 'wise men'. The following are some of the indicators used by Gari pastoralists.

Forecasting from flowers

If some species of tree fail to flower or if the leaves do not turn green after flowering, this is an indication of the approach of drought. Pastoralists focus on some species of acacia and other trees such as *midbura*, from which they make tea, for such predictions. The direction and movement of the wind is also used for prediction.

Forecasting from the seasons

Gari pastoralists divide the spring (*hagai*), autumn (*gun*), summer (*bira*) and winter (*adoles*) seasons into eight-, 15- and 50-year cycles. Each season falling in a particular cycle is attributed to a day of the week, such as 'the spring of Monday', 'the summer of Wednesday' or 'the autumn of Thursday'. Gari astrologers use a combination of the cycle, the particular season and the day of the season in the cycle to predict good and bad years.

Astronomy

Traditional astronomers use the position of the stars to predict the future. If, for example, the morning star does not reappear within seven days of its disappearance, this is taken as a bad omen.

Forecasting from animal behaviour

If cattle move away immediately from the water point, this is taken as a sign of a good season, or that rain is approaching. Cattle behaviour that indicates the approach of bad times includes bulls isolating themselves from other cattle and showing temperamental behaviour, like scratching ant hills with their horns; cows sitting at water points and refusing to leave; cows urinating while sitting; camels crossing their hind legs while urinating; and lost cattle not finding their way home as they normally would.

Forecasting from the belly of a goat

The belly of a freshly-slaughtered goat (usually the position of the intestine or the colour of the organs) is read to predict the future.

Interpreting the call of the bararato (the 'rain angel')

The call of the bararato bird, also called the rain angel, can be read as an indicator of drought or rain. Drought is likely to occur if the bararato makes a noise that sounds like 'chichichi'. If this is followed by 'shashashasha' then the drought is likely to be broken.

the alarm as early as January 1999. However, live-stock-related interventions in affected districts such as Turkana began only in August 2000, in effect midway through the crisis stage of the drought. In other words, the ALRMP functioned effectively in as much as it provided timely information to decision-makers at district and national levels; what it failed to do was trigger a sufficiently timely response.

The role of local coping mechanisms

Throughout the drought crisis, pastoralists and agro-pastoralists employed their own coping mechanisms. While some were brought into play by rising drought stress, others were merely an intensification of pre-existing strategies used during non-drought periods.

In short, pastoralists were already employing every mechanism at their disposal to survive the drought. Coping strategies included:

- migration: the Turkana, for instance, crossed the border into Uganda;
- herd management, such as maintaining female-dominated herds;
- diversification of livestock species;
- keeping herd sizes large;
- dividing livestock into core and satellite herds;
- unregulated breeding, resulting in the birth of livestock during all phases of the drought cycle, thereby spreading the risk;
- supplementing livestock feeds using commercial

- feeds as well as shrub/fodder, tree materials and crop residues where available;
- disease management, including avoiding susceptible areas, ensuring hygiene and using veterinary drugs and ethno-veterinary remedies;
- social safety networks, including assistance from relatives and the community in general, mainly in the form of milk cows, grain and money; and
- unconventional coping mechanisms, such as grazing animals in the streets of Nairobi.

2

Livestock-related interventions: case-studies of agency practice

This chapter gives an overview of the livestock-related interventions visited by the authors in the course of preparing this paper. These interventions fell into five broad categories: destocking and restocking; supplementary livestock feeding; cross-border peace initiatives; emergency veterinary

programmes; and transport subsidies. This chapter describes a range of different interventions in these areas, indicating the districts in which interventions were implemented, the implementing agency, the donor and the value of the intervention. Figures cover the period July 2000–May 2001.

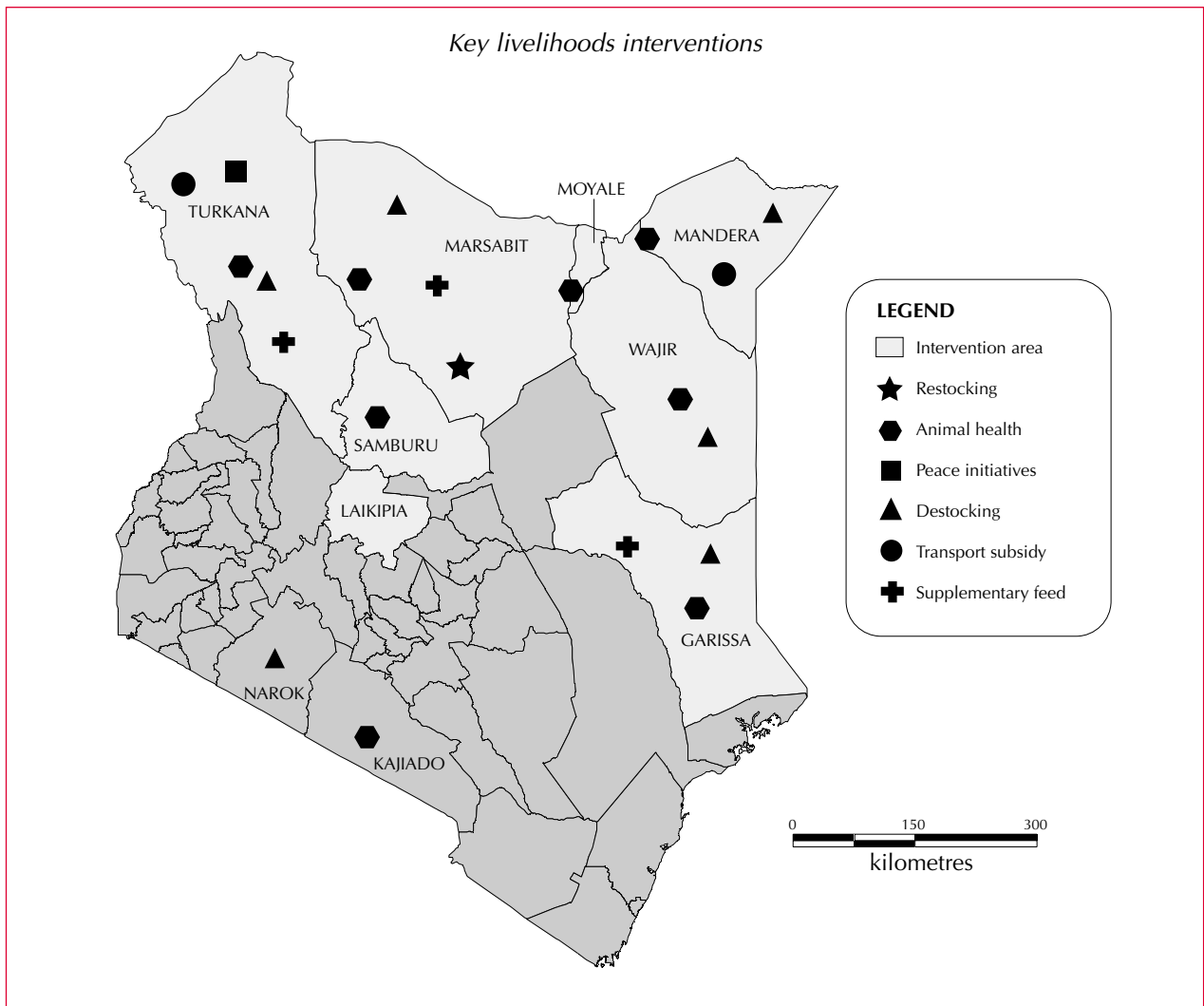


Table 3: List of livestock-related interventions implemented

Category	District	Implementing agency	Donor	Value (US\$)	Comments
Destocking/ restocking	Marsabit	ACK-MDO	DFID	174,650	Fresh, dried meat
		CEC	CDTF	157,646	Fresh meat only
	Mandera	NORDA	USAID	102,907	Fresh meat only
	Narok	World Concern	CDTF	93,300	Fresh meat only
	Turkana	VSF-Belgium	CDTF	120,000	Fresh, dried meat
	Garissa	CARE-Kenya	Gates Foundation	65,000	Fresh meat only
	Samburu	COOPI/RAMATI/ GoK	ECHO	N/A	Dried meat only
	Garissa	CARE-Kenya	USAID	106,924	Fresh meat only
Wajir	ALDEF	OXFAM-GB	193,587	Fresh meat only	
Wajir	ALDEF	USAID	73,045	Fresh meat only	
			<i>Total value</i>	<i>1,087,059</i>	
<i>Supplementary livestock feeds</i>	Garissa	CARE-Kenya	USAID/OFDA	14,241	Not implemented
	Turkana	VSF-B/SNV	CDTF	2,667	Not implemented
	Marsabit	ACK-MDO	DFID	48,000	Concentrate feeds
	Kajiado	SARDEP	CDTF	72,023	Concentrate feeds
			<i>Total value</i>	<i>136,931</i>	
<i>Cross-border initiatives/ conflict- management</i>	Turkana	OAU-IBAR	CDTF	72,646	Intervention builds on initiatives by OAU-IBAR
				<i>Total value</i>	<i>72,646</i>
<i>Emergency vet programme</i>	Turkana	VSF-B/ SNV/OAU-IBAR	CDTF	95,504	For 3 districts
	Samburu/ Marsabit/ Moyale	COOPI/RAMATI/ CIFA	ECHO	353,600	
	Laikipia	SARDEP	CDTF	136,187	
	Kajiado	SARDEP	CDTF	99,467	For 3 districts
	Mand, Wajir,	VSF-Switzerland	ECHO	426,133	
	Garissa Garissa	CARE	OFDA/USAID	48,422	
			<i>Total value</i>	<i>1,159,313</i>	
<i>Transport subsidy</i>	Turkana	VSF-Belgium	CDTF	51,021	Internal, external
	Mandera	NORDA	USAID	46,232	External only
	Wajir	NORDA	USAID	21,464	External only
			<i>Total value</i>	<i>118,717</i>	
			<i>Grand total</i>	<i>2,502,200</i>	

Destocking/restocking

Case-study 1: Anglican Church of Kenya-Marsabit Development Office (ACK-MDO), Marsabit

Project facts

Funding agency: DFID

Allocated funds: \$174,650

Planned number of animals to be destocked: 4,800 small stock and some cattle

Actual number of animals destocked: 6,026 shoats and 45 cattle

The proposal

The Anglican Church of Kenya-Marsabit Development Office (ACK-MDO) submitted a proposal for destocking to the livestock sub-sector working group in May 2000, though funds were not actually received until August. Oxfam-GB provided stop-gap funds, which were reimbursed once DFID's funding was received. The District Steering Group in Marsabit was involved in approving the proposal, and ACK-MDO staff regularly attended coordination meetings in Marsabit.

The proposal was based on the needs of pastoral households in the lowlands of Marsabit. Delegations

of pastoralists from the lowlands had been arriving in Marsabit town to request help for their animals in the form of animal feed. The objective of the proposal was to salvage the value remaining in some of the animals, to provide meat to vulnerable household members and support the purchasing power of households through livestock purchase.

The destocking programme became a restocking programme following rains and a consequent change in the community's needs; about half of the funding allocation was spent on restocking.

Implementation

In partnership with local communities, the ACK-MDO purchased male goats in eight local trading centres in northern Marsabit. The goats were exchanged for a combination of cash (KSh300) and a 20kg bag of high-protein high-energy concentrate for the most valuable animals. One goat was bought from each household, thus giving everyone a chance to sell. ACK-MDO staff worked with the community relief committees to ensure that the process was fair and unbiased. Men were hired to slaughter and skin the animals immediately after purchase, and women were hired to preserve the meat.

Key messages

- Destocking/restocking was the most successful livestock-related intervention because of the high level of community interest and involvement that it generated. Such interventions provide markets where there are none, generate income that can be used to maintain remaining stocks and to meet other needs, act as a cheap source of protein and promote business activity and trade in the local community.
- In all cases looked at here, more animals were offered for sale than the interventions could handle, indicating that pastoralists are willing to sell their stocks at need.
- Compared with dry meat, fresh meat is cheaper and simpler to produce, faster to distribute, entails minimum wastage, is more satisfying and is, above all, preferred by pastoralists.
- With proper planning, fresh meat can be distributed at regular intervals like relief food, thereby raising the possibility of replacing plant protein (beans and chickpeas) in the relief food ration with animal protein at a much reduced cost.
- Preparation of dried meat should only be considered where destocking has started too late, and large numbers of animals are at risk of death, necessitating immediate slaughter.
- Buying relief meat supports the local economy and livelihoods directly; the benefits are far greater than the costs, and should be considered as a form of economic investment.
- Given donor flexibility, funds allocated for destocking can easily be used instead for restocking should circumstances change.
- Restocking prevents pastoralists from falling out of the production system and becoming destitute.
- The key is to encourage small-scale community-implemented restocking projects (targeting up to 50 families at a time).
- Female animals meant for restocking should be provided with feed until pasture is available.
- Restocking should supplement traditional systems, not replace them.

Results

In total, 6,026 male sheep and goats and 45 male cattle were purchased. The total amount of money injected into the economy as a result was KSh3.84m (\$51,208). After rains fell in some parts of the project area, the intervention was changed to restocking, and a total of KSh8.2m was spent on restocking poor households.

A total of 16,708kg of fresh meat, 2,671kg of dried meat and 814 litres of animal oil was distributed, benefiting 6,063 people in 1,288 households in northern Marsabit. The restocking programme provided at least 400–450 poor households with 30 small stock for breeding purposes, and a loading camel to facilitate mobility. In addition, veterinary inputs were provided.

Impact

The nutritional status of vulnerable members of the community improved significantly. The purchasing power of community members also increased, allowing the purchase of drugs to maintain remaining animals, household goods such as sugar and tea and the payment of school fees. Restocked families were able to remain in pastoralism and to breed their animals.

Strengths, weaknesses and lessons learnt

The community-based approach of the intervention made it more effective and more efficient in implementation. The ability to switch from destocking to restocking in response to changing needs was also critical. However, households were not given a choice in how they were paid for their stock during the destocking phase (i.e., in cash alone, or only in feed), nor could they sell old female animals not ideal for breeding.

One of the lessons of the intervention was the importance of donor flexibility: without the need for a second proposal, DFID was able to approve the implementing agency's switch from destocking to restocking within two weeks.

Case-study 2: NORDA, Mandera

Project facts

Funding agency: USAID

Allocated funds: \$17,300 (plus a second tranche of \$85,607)

Planned number of animals to be destocked: 1,580 shoats

Actual number of animals destocked: 1,200 goats and 60 cows

Project duration: December 2000–March 2001

The proposal

NORDA's proposal for destocking 1,580 shoats in Mandera district was approved in December 2000,

with the immediate release of funds from Tufts University.

Implementation

Once the proposal was approved, NORDA identified the shoats to be slaughtered in Elwak sub-district and Takaba division based on the number of relief beneficiaries. Relief Committees in Elwak and Takaba made further allocations to locations and sub-locations (15 in Elwak and five in Takaba). The criteria for selecting beneficiaries (those eligible to sell livestock and those who would receive meat) were explained to the Relief Committees, who then made their selections during community meetings. In Worgedud, for example, beneficiaries were selected mainly on an inability to pay borehole fees for their animals. In Takaba, those selected had the most pressing cash problems, for example families with members needing medication, families whose children were threatened with expulsion from school for non-payment of fees, or families unable to afford basic commodities like sugar and tea.

Market dates were fixed during initial meetings in each village. Shoats were purchased in most areas, and cattle in those few villages in highland areas where there were no goats. Purchases were carried out in the presence of the Relief Committees, and those receiving meat chose or rejected the animals on offer against a fixed price set by NORDA. Beneficiary families (those receiving relief food) were asked to organise themselves into groups – four families per shoat or 30 families per cow – and each group slaughtered, flayed and distributed the fresh meat among themselves. Meat was distributed only once in any of the operational areas. In most cases, bound by traditional norms, beneficiary families shared the meat with those not included in the list. Most families reported that the meat they received lasted two to three days.

Results

The destocking operation took place in some 20 centres. Around 1,260 pastoralists benefited, with a direct income of KSh1,125,000. Some 13 tons of fresh meat were distributed to a total of 6,600 families.

Impact

As a result of the destocking, the nutritional status of the drought-affected population improved. Income from the sale of animals was used to buy water for livestock, medicine and veterinary drugs, to pay school fees and to set up small businesses such as teashops. The programme was especially appreciated by elderly members of the community.

Strengths, weakness and lessons learnt

One of the key strengths of the intervention was that adequate consultation took place at the Relief Committee level. Most of the destocking took place during Ramadan, reflecting the useful application of local knowledge, and despite the modest size of the programme wide geographical coverage was achieved, including remote and hard-to-reach areas. The intervention had the lowest operational and overhead cost of any destocking project (less than 10%), and was notable for its efficiency, not least given that this was NORDA's first field operation. As for weaknesses, consultation was limited to the Relief Committee, and was inadequate at community levels. There was also confusion over the use and disposal of hides and skins.

The lessons of the intervention include the importance of local knowledge for the smooth operation of any intervention programme, and the importance of agency commitment in achieving set objectives.

*Case-study 3: World Concern, Narok***Project facts**

Funding agency: Community Development Trust Fund (CDTF)
 Allocated funds: \$93,300
 Planned number of animals to be destocked: 3,621 cattle
 Actual number of animals destocked: 4,683

The proposal

World Concern's proposed intervention had three main objectives:

- to reduce environmental stress through destocking of 4% of the cattle population at risk in Narok District;
- to provide food relief (meat) to vulnerable and food-insecure households; and
- to restore six silted-up reservoirs to make water available to surviving livestock.

Implementation

The destocking project targeted pastoralist households. There were 32 livestock-purchasing centres distributed around drought-affected parts of the district. The purchase, slaughter and distribution of fresh meat took place six days a week, with a particular day allocated to a particular division. The administrative divisions included: Mau, Osupuko, Mara, Loita, Ololulunga and Central. Out of a total of 633,543 cattle in the district, 201,192 were at high risk. While the aim had been to target 4% of these, or 8,000 head, the proposal was approved only for 3,621 cattle. The average price per animal was to be

KSh2,000, and a total allocation of KSh7.5m was approved. Purchasing committees were formed, and casual workers employed to slaughter the animals. Fresh meat was distributed to poor and needy households, and to primary and secondary schools in affected areas. Local administrative leaders identified beneficiaries in each location. The rehabilitation of the six water sources was undertaken through a direct contract with World Vision-Kenya, Narok Office.

Results

The destocking programme began in November 2000, which was later than planned due to a lack of rapid-response funds. A total of 4,683 cattle were purchased in two months. The total amount paid to livestock owners was KSh7,956,705. Fresh meat was distributed to anyone present, despite the targeting of 120,000 vulnerable community members in the proposal. The implementing agency bowed to pressure to purchase worthless animals, leading to a huge budget overrun.

Impact

Livestock sales injected KSh7.9m into the local economy. This money was used by livestock owners to, for example, purchase cereals and pay school fees. The nutritional status of vulnerable members of households improved, especially the elderly and children under the age of five years. The impact on the environment was, however, negligible.

Strengths, weaknesses and lessons learnt

In targeting cattle, the intervention identified a crucial and vulnerable resource, and with many at risk the distribution of fresh meat was a key strength, as was the incorporation of a water element. Weaknesses included inadequate involvement and participation of other agencies, especially from the government. The District Relief Committees were not actively involved in the project, and information-sharing was poor. Poor quality animals were bought, and many of the cattle were unfit for human consumption. In addition, too many animals were slaughtered in a particular location in a day, which meant too much meat, which could not be dried or preserved. Community accountability was weak, and it seems that there was little control over the people implementing the intervention. A lack of preparation and experience seems to be to blame for these problems, while poor management meant that capacity to implement the intervention was inadequate. Weak financial management led to huge cost overruns.

Lessons learnt include the need for accountable community-based structures to oversee the implementation of emergency interventions. In addition,

an intervention of this size should have included officials from the government; it appears that the district authorities had no interest at all in this intervention. Finally, previous experience with similar interventions is essential when choosing an implementing agency.

Case-study 4: Vétérinaires Sans Frontières (VSF)-Belgium, Turkana

Project facts

Funding agency: CDTF
Allocated funds: \$120,000
Planned amount of dried meat to be purchased: 18,000kg
Actual amount of dried meat purchased: 5,951kg
Fresh meat purchased: 1,702kg

The proposal

The destocking proposal had four main objectives:

- to salvage some of the capital in the animals at risk by providing the opportunity for livestock owners to sell stock before it died;
- to support relief efforts by distributing dried meat to vulnerable groups, such as schoolchildren, and feeding centres;
- to increase the cash available to pastoralists; and
- to relieve pressure on scarce water and pasture resources.

The CDTF approved the proposal in September 2000, and KSh9m was allocated for the purchase of 18,000kg of dried meat. A further KSh20,000 was set aside to buy polythene bags, in addition to overhead and administrative costs. The proposal was discussed both in the DSG and in the Livestock Service Providers forum. This was followed by Community Dialogue Workshops organised by VSF-B and the Netherlands Development Organisation (SNV) in all the targeted areas: Kaaleng, Kaikorr, Lodwar, Lorigum, Kalokol, Lokori and Lokichar. The objective of these workshops was to promote the proposal, receive feedback from the community and enlist their participation and involvement.

Implementation

The project began in November 2000, and lasted until January 2001. Initially, a price of KSh500 was agreed for each kilo of dried meat, but this was later upped to KSh1,200/kg. Small stock was bought with beneficiaries' own money, then they were slaughtered, the meat

was inspected by Public Health Technicians, dried, then weighed and bought.

Results

The intervention did not take place in northern Turkana because the communities refused to slaughter small stock for dried meat, claiming that to do so was alien to their culture. The intervention was implemented in Central and Southern Turkana, providing a total of 5,951kg of dried meat and 1,702kg of fresh from 13,000 small stock. The project paid KSh7.4m to buy the meat, giving an average of KSh569 per animal. The total cost of preparing dry meat from one animal was KSh950. This meat was sold to the project at KSh1,200 shillings, for a profit of KSh250 per animal. The offal was sold separately for KSh150, giving a total profit of KSh400. No cattle were slaughtered because most had moved to the hills and to Uganda in search of pasture, while camels were seen as too precious to be slaughtered so easily. The main reason why dried meat was chosen over fresh was that schools (the main beneficiaries of the intervention) were closing by mid-November, which made it sensible to dry the meat and store it until the schools reopened.

Impact

Women and youth groups targeted by the intervention benefited in terms of business and employment, with a total of KSh7.14m being injected into the economy. A total of 9,036 school children in 41 schools benefited, while TB patients in the district hospital were given the meat in their meals. In addition, the intervention created cohesiveness in community groups and caused them to feel proud that meat from their animals could be used to feed their own children. The impact on water and pasture resources was, however, negligible.



In the Turkana destocking intervention, camels were seen as too valuable to be slaughtered

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The intervention was stopped a month earlier than planned because its budget was used to pay fraudulent transport subsidy claims from a separate, less successful intervention. As a result, some women's groups were left with unsold livestock. Since buyers assumed that they had a guaranteed market in the implementing agency, they bought stock at above market rates. This meant that reselling stock at market prices would result in a loss.

Strengths, weakness and lessons learnt

After funding was secured for the project, there was adequate community consultation, participation and involvement. In addition, the intervention targeted the most severely hit aspects of the pastoral production system. However, the implementing agency predetermined the type of meat to be processed, when this decision should have been taken in consultation with community groups. Slow reimbursement from the donor meant delays in payment to beneficiaries, which caused anxiety since they had put their own money up front. Agency staff came under pressure from people who were owed money, and the issue became a source of some frustration and anger. Lessons learnt included the need for implementing agencies to ensure that interventions are culturally acceptable. Each intervention should have a separate budget to ensure against the poor performance of one project impinging on another. Funding agencies should work out simpler and faster reimbursement procedures, and unless circumstances dictate otherwise, should always plan to distribute fresh, rather than dried, meat.

Case-study 5: CARE-Kenya, Garissa

Project facts

Funding agency: Bill Gates Foundation/USAID
 Allocated funds: KSh2.4m (not covered in this paper); \$106,924 (inclusive of overheads)
 Planned number of animals to be destocked: 1,126 cattle
 Actual number of off-take: 850 head of cattle and 250 sheep and goats

The proposal

The proposal had four objectives:

- to reduce the number of animals becoming unmarketable;
- to provide some cash for beneficiaries;
- to enable some investment in credit facilities; and
- to distribute the meat as a relief ration.

The first phase of the destocking, in Northern Garissa, was met with funds from the Bill Gates

Foundation, and 2,400 goats were slaughtered in 48 centres under this programme. Funds for the second phase, in Southern Garissa, were released in December 2000.

Implementation

Destocking took place in February 2001, and the intervention targeted nearly all the relief centres in Southern Garissa. The objectives of the programme were discussed with Relief Committees, including their responsibilities in identifying beneficiaries and fixing the dates for the purchasing of stocks. The Committees were also entrusted with giving the hides and skins to women's groups. Each beneficiary centre was allocated either 25 head of cattle or 50 shoats. CARE staff witnessed the slaughtering of the animals, but distribution of the fresh meat to beneficiaries was left to the Relief Committees. This minimal supervision was partly because CARE covered more centres than it had staff or vehicles for. Some centres were some distance from Garissa and not easily accessible, and some required military escorts due to security problems. Payment to beneficiaries was through vouchers, which were put into the name of a trusted community member for cashing at CARE's Garissa office. CARE also stated that 'other vouchers were given collectively to one person to collect the cash, or were exchanged for cash with traders, who then brought the vouchers to the CARE Garissa office to be redeemed'. The voucher system was introduced because of security problems associated with travel to operational sites with cash. As a result, the number of people who benefited from selling stock is not known, though CARE estimates that 45% of stocks were purchased from people targeted for relief food, and the rest from 'better off' members of the pastoralist community with stocks to dispose of.

Results

The operation was delayed by two months despite the transfer of funds to CARE in December. In February alone, 850 head of cattle and 250 shoats were purchased, at a price of KSh5,000 and KSh1,000 respectively. The destocking of a further 1,130 shoats took place in April–June 2000. A total of 39 centres (34 of them in Ijara) were covered in this operation.

Impact

The intervention injected KSh4.8m into the pastoral economy. Income from the sale of hides and skins enabled women's groups to start small businesses, such as basic commodity shops and supplying camel milk to Garissa town. Some 60 tons of fresh meat was distributed to 1,943 households.

Strengths, weaknesses and lessons learnt

One of the strengths of the intervention was its wide geographical coverage, in comparison to most other NGOs. This was despite security problems, the large distances involved and access difficulties. Weaknesses included its operations and overhead costs, which per unit were the highest overall. The intervention also lacked sufficient knowledge of local traditions, and the allocation of equal numbers of livestock to each centre ignored variations in the number of needy people.

One of the lessons that emerged from the intervention was that allocations to beneficiary centres should be made according to the level of need. The intervention also proved the importance of consulting people. On the plus side, the intervention also demonstrated that even hard-to-reach and insecure areas can be accessed given sufficient determination.

Case-study 6: Community Education Concern, Marsabit

Project facts

Funding agency: CDTF
Allocated funds: \$157, 646
Planned number of cattle to be slaughtered: 1,260
Planned number of small stock to be slaughtered: 2,520
Actual number of livestock destocked: 222 cattle valued at \$14,800 and 1,359 small stock valued at \$10,872

The proposal

The main objectives of the proposal were to ease the impact of the drought on household food security, salvage value in drought-stricken animals, increase the purchasing power of pastoral households and provide protein-rich meat to malnourished and vulnerable people through destocking.

Implementation

The intervention targeted those areas of Marsabit where drought stress was most severe: Central, Gadamoji, North Horr, Maikona and Loiyangalani. Seven livestock buying centres were opened in Kargi, Sagante, Karare, Olturot, Kalacha and Maikona, which are centrally placed in the major livestock marketing supply routes. In addition, the intervention undertook capacity-building capacities, strengthening the District Livestock Marketing Council and training eight livestock-marketing groups in business management skills. A target population of 5,500 people was identified, and public meetings in targeted areas raised awareness of the programme. Livestock auction days were also agreed. Although the implementing agency and collaborating agencies supervised the destocking, food committees

were responsible for buying, targeting and registering beneficiaries, as well as monitoring the actual slaughtering and distribution programme.

Results

By mid-2001, 222 cattle and 1,359 small stock had been slaughtered, and meat distributed to vulnerable community members. Most of the food committees decided to sell the skins and hides from slaughtered animals, and invest the money in community projects such as education and livestock marketing. A total of KSh77,960 had been realised from these sales.

Impact

Most vulnerable livestock was saved through this scheme, thus improving the purchasing power of pastoralist households. Household diets improved due to the availability of meat, which was provided fresh and not dried.

Strengths, weaknesses and lessons learnt

One of the strengths of the intervention was its strong link between relief and development through its capacity-building component. The key weakness lay in the power of the livestock food committees, which began to dictate terms and conditions. The intervention also suffered from a degree of political interference, with councillors from areas where drought stress was less severe demanding that their people also benefit from the intervention. The implementing agency allowed this to happen in some areas. In addition, there was poor targeting of vulnerable households, and more meat was available in a particular location than was sometimes needed.

Among the lessons was that community-based committees need to be legitimate, and there needs to be a rigorous selection of credible and just individuals from the community. This should be done by community members themselves. The direct payment of committee members, as happened here, should be discouraged. Targeting of vulnerable community members should be based on technical data, not on political considerations.

Case-study 7: ALDEF, Wajir

Project facts

Funding agency: Oxfam/DFID
Allocated funds: KSh7,228,540 (first phase, September–October 2000); KSh7,290,481 (second phase, February–March 2001), excluding USAID funding of \$73,045
Planned number of animals to be destocked: 950 cattle/camels, 7,500 shoats
Actual number of animals purchased: 9,963 shoats, 95 cattle, 194 camels

The proposals

ALDEF submitted two proposals to Oxfam-GB for two phases of destocking, the first in September–October 2000 and the second in February/March 2001. Altogether, ALDEF planned to destock 950 cattle/camels and 7,500 shoats. Target beneficiaries were mainly the peri-urban poor close to Wajir town, high-school students, hospital patients and orphans. Few rural beneficiaries were incorporated in the proposals.

Implementation

Communities were involved in setting up the criteria for the selection of beneficiaries. Vulnerable households were targeted, and the list of beneficiaries was read out in public. People unhappy with the list were given the right to appeal to the 'livestock off-take committee'. The dispute was then referred back to the Selection Committee for a final decision. These off-take committees also oversaw the destocking operation (as well as curbing the power of the Relief Committees). In addition to selecting beneficiaries, they were entrusted with receiving livestock from contractors and distributing it to eligible families; signing delivery documents; witnessing the slaughtering process; collecting skins and hides; managing any disputes; and liaising with ALDEF. Communities also identified trustworthy contractors from among themselves to supply livestock to the programme. These included members of the 200-plus women's groups in peri-urban areas, which were already supported by ALDEF with a micro-credit programme. This group supplied the bulk of the shoats in both operations, although men were contracted in the few rural areas that the scheme targeted. Individual women contractors also supplied cattle and camels to schools and hospitals.

The purchasing price was fixed at KSh1,000/shoat, and at KSh4,500 for each head of cattle or a camel. During the second operation, this was raised to KSh1,200/shoat, KSh5,000/camel and KSh5,500/cattle. Contractors were instructed on the type of animals to buy (those that were too weak to survive the drought; generally male animals; females with udder defects, old or barren stock and animals with a history of abortion). Agreement was reached between ALDEF and the contractors on the number and types of animals each had to supply. The contractors sold the shoats to ALDEF at the fixed price, retaining the profit for themselves. Purchased animals were handed over to the committees, and delivery notes issued to effect payment. Sick animals requiring treatment were

kept until they regained their health, for distribution in the next allocation. Infected organs were condemned after post-mortem examination by Public Health Technicians. Livestock that communities considered too small for the price offered had to be replaced. Committee members and ALDEF monitors witnessed the distribution of the meat.

Results

The project covered seven peri-urban and seven sparsely populated rural areas. Meat was distributed regularly to beneficiaries: two shoats between eight families per week for the duration of the operation. Livestock was distributed at the rate of two bulls/camels per week per school, for three and later four high schools; six goats/week to a hospital; three per week to a TB centre; and goats and one bull/week each for six orphanages. A high level of community involvement meant that project activities were completed in time in both phases. Slaughtering took place twice a week in all operational sites.

Impact

In total, KSh11,254,800 was paid to over 7,000 pastoralists. Meat was made available to 17,000 beneficiaries, including 1,800 students, 270 patients and 520 orphans over the project period. School fees were paid for 64 bright but poor students through the provision of meat valued at KSh325,000; school attendance increased and communities were empowered through their involvement and through the formation of task-oriented committees to run the programme. Nutrition in schools, orphanages and hospitals all improved.

Strengths, weaknesses and lessons learnt

One of the key strengths of the programme was its meticulous planning, in which the community was involved. Trust was placed in the management ability of communities, the urban poor were specifically targeted and strong support was extended to women's groups. Weaknesses included limited geographical coverage; most rural areas were ignored. Profits for contractors meant lost income for pastoralists.

As for the lessons learnt, the programme showed that communities are adept in managing programmes if they are given the opportunity to do so; a little creativity in relief programmes, such as paying school fees for the 60 or so students, can go a long way; and that, just like relief food, meat can be distributed on a regular basis.

Supplementary livestock feeds

Case-study 1: ACK-MDO, Marsabit

Project facts

Funding agency: DFID
 Allocated funds for livestock feeds: \$48,000
 Actual value of feed used: \$16,000

The proposal

The ACK-MDO implemented this intervention as part of its destocking programme in Marsabit, so that some payment for livestock was given in the form of feed to enable weak breeding stock to survive.

Implementation

In all, 180 tonnes of animal feed was purchased at a cost of KSh3.6m, and transported to six communities. A system of wealth ranking enabled the most needy to be targeted. The original plan was to exchange a goat for half feed, but this was later modified to one 22.5kg bag of feed (priced at KSh400) for every three small stock per household, the balance to be paid in cash. The feed was purchased from Sigma feeds in Nairobi, who mixed a special high energy, high fat, high protein formulation. Each small animal would use 22.5kg of feed over a three-month period.

Results and impact

The feed purchased by the programme was sufficient for 8,000 small stock. Those pastoralists who used the supplementary feeds obtained astounding results. Each bag sustained one sheep or goat for three months, with ample watering and veterinary inputs such as de-worming. However, feed moved more

slowly than anticipated, and just half had been used by April 2001. This is because some areas received unexpected rains, while some pastoralists did not know how effective the feed was, and so did not use large amounts. Concentrate feeds had a significant positive impact on milk production from small stock, especially after the rains.

Strengths, weaknesses and lessons learnt

One of the strengths of the intervention was that it built on pastoralists' own resources and capacities; there is great potential here for private enterprise. Weaknesses included the need for better storage to prevent high-nutrient feeds from spoiling. There was also inadequate attention paid to promoting the use of the feed among pastoralists.

Among the lessons learnt was that concentrate feeds have great potential in drought mitigation. They should be formulated closer to pastoralists, and on a commercial basis. Consideration should also be given to establishing livestock famine relief camps for weak animals, to be returned for a fee once they have recovered.

Case-study 2: CARE-Kenya, Garissa

Project facts

Funding agency: USAID
 Allocated funds: \$14,241 (inclusive of overheads)

The proposal

CARE planned to purchase and distribute 100 tons of cattle feed in Northern Garissa. The proposal stipulated the creation of jobs for local people, who would be employed to collect acacia pods to be used as cattle feed. It was also envisaged that this scheme would lay the ground for a locally-based feed business.

Implementation

The initial plan was unrealistic as collecting acacia pods in sufficient quantities to feed a large number of animals was virtually impossible. CARE eventually elected to buy cut grass from the Boni Forest in Ijara, where coastal rains ensured that it was of high quality. The plan was to make crude bales, and distribute these at watering points in Northern Garissa. CARE also assumed that this initiative would in the long term lead to the development of a local business, whereby livestock traders in Garissa market would buy baled grass from Ijara. A pilot hay-baling centre was set up at Sangailu with three prototype balers, and people were trained in cutting and packing grass. However, with the coming of the rains and given a shortage of labourers, the programme was discontinued.

Key messages

- The provision of supplementary feed concentrates during a drought is more cost-effective than restocking or buying fresh animals once the drought is over. Small stock in particular respond extremely well to feed concentrates.
- Successful livestock feed operations depend upon previous experience in handling readily-available concentrates.
- Lack of local knowledge can severely damage a livestock-feed programme.
- Relying on a single supplier of feed increases the likelihood of failure; agencies should seek more than one source of supplementary livestock feed.
- Agencies could look into establishing 'famine relief camps' for livestock, allowing concentrates to be more widely and efficiently used.

Results and impact

In all, 648 bales were given to the Goreale Relief Committee for distribution. A further 1,200 were procured and transported from Nakuru, and distributed to north-eastern parts of Garissa. The number of animals saved through this intervention is not known.

Strengths, weaknesses and lessons learnt

There were several important weaknesses in this intervention. There was a lack of clear ideas, and the implementation process was unusually slow. The proposal was prepared without consulting local communities, and too much time was spent entertaining alternative ideas, without seeking technical advice from experts in the field. Whether livestock could have been saved at such a late stage in the drought cycle by the provision of cut grass, with its low nutritive value, is doubtful. The programme did not target core breeding animals, and feed was distributed indiscriminately.

Lessons learnt include the ever-present need for local consultation and the establishment of clear aims at the outset. Arguably, this intervention over-stretched the implementing agency.

Case-study 3: VSF-Belgium/SNV, Turkana

Project facts

Funding agency: CDTF
 Allocated funds: \$2,667
 Planned number of livestock to be fed: 140 small animals over a three-month trial period
 Actual number fed: Nil

The proposal

This intervention aimed to carry out small-scale experimental supplementary feeding of reproductive stock, using drought pellets (concentrated feeds). The objective was to test supplementary feeding as a drought-coping strategy, and whether the pellets were a suitable intervention in times of drought and pasture scarcity. The plan was to keep reproductive stock alive so that they could be the take-off point at the end of the drought.

Implementation

The intervention was never implemented. The five 20kg bags of pellets initially supplied became spoilt, the feed source – an agent of a South African company – disappeared and a local alternative source had difficulty meeting the specified quality standards.



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A woman chases after her goat herd. Herd management is an important strategy for coping with drought

Results and impact

No supplementary feeding of reproductive stock took place.

Strengths, weaknesses and lessons learnt

Despite its failure, the intervention was willing to try drought pellets and did recognise the need for supplementary feeding for reproductive livestock. However, the lack of follow-up, especially by SNV staff, was a major failure. Lessons to draw from the episode include the crucial importance of working with reputable suppliers, and the need for contingency plans should things go wrong. Alternative concentrate feeds such as dairy meal, which were readily available, should perhaps have been tried.

Cross-border peace initiatives

Case-study 1: OAU-IBAR, Turkana

Project facts

Funding agency: CDTF
 Allocated funds: \$72,646 (inclusive of overhead costs)
 Peace initiatives planned: five border meetings between different tribes
 Actual peace initiatives facilitated: seven meetings

The proposal

The objective of this initiative was to use animal health to facilitate peace and reconciliation meetings between antagonistic tribes, decreasing raiding and banditry and making water and pasture resources accessible.

Implementation

The target area for this intervention included north-east Uganda, south-east Sudan, south-west Ethiopia and north-west Kenya. The intervention built on work by the OAU-IBAR PARC-VAC project, which between April and November 1999 conducted seven two- or three-day workshops for influential elders from the different tribes within the cluster. The project facilitated meetings by arranging transport, food and accommodation. Crucially, these meetings were free of politicians and government officials.

Results

Meetings between the Turkana, Toposa and Nyangatom and the Turkana, Merille and Nyangatom concluded in peace resolutions. The Merille returned five Turkana camels and a gun, while the Turkana returned Merille guns and some stolen cattle. In January 2000, the Turkana returned 11 stolen donkeys.

Impact

As a result of improved relations, borders were reopened, and access was restored to hitherto closed water and pasture resources in areas such as Nadapal and Kapetadie in Lokichoggio division. An estimated 100,000 cattle from Turkana were in Uganda at the height of the drought. Reduced tension along the borders and greater freedom of movement made it easier to carry out cattle vaccination on either side of the common borders.

Strengths, weaknesses and lessons learnt

The key strength of these meetings was that elders were able to meet without external interference. The intervention was, however, costly in terms of overhead, and these types of undertakings can never be sure of tangible success. Elders took no responsibility for the meetings, nor did they share any of these costs. Nonetheless, the intervention did show that

Key messages

- The movement and migration of pastoralists, including the cross-border utilisation of resources, is key to their survival.
- Peace initiatives can play an important role in facilitating this movement in areas where relations between the various groups are antagonistic.
- Where possible, such interventions may benefit from building on pre-existing reconciliation initiatives, which can be stepped up when the onset of drought makes the need for free movement more acute.

conflict and reconciliation projects can be powerful tools in managing drought among pastoralists in the Greater Horn.

Emergency veterinary programmes

Case-study 1: COOPI/RAMATI/CIFA, Samburu, Marsabit and Moyale districts

Project facts

Funding agency: ECHO
Allocated funds: \$353,600
Planned number of animals to be treated: 25,000 cattle, 10,000 camels and 400,000 sheep and goats
Actual number of animals treated (at end-April 2001): 40,255 shoats, 2,509 cattle, 3,774 camels and 72 donkeys

The proposal

This intervention aimed to assist pastoral communities to combat livestock diseases and reduce parasitic load in the most important livestock populations, namely breeding stock, lactating females and loading camels. It included both treatment and vaccination of livestock.

Implementation

The intervention was implemented by COOPI, an Italian NGO involved in animal health work in the Greater Horn, together with two local NGOs, RAMATI (in Samburu) and CIFA (in Marsabit and Moyale). There was also close collaboration with District Veterinary Offices. Animal health services were delivered on a private basis, using community-based animal health workers. Payment was in the form of goats, which were slaughtered, and their meat dried and distributed to schools. One goat was paid for every 25 cattle, ten camels, 50 shoats or ten donkeys treated.

Results

Each month, between 5,000 and 6,000 households benefited from the services provided by the intervention. A hundred community animal health workers were recruited and trained in treatment and vaccinations. Appropriate veterinarians were also recruited. Off-take activities went smoothly, with a total of 1,293 goats (the revenue from animal health services) slaughtered. By the end of April 2001, 40,255 small stock, 2,509 cattle, 3,774 camels and 72 donkeys had been treated.

Impact

A total of 9,794 schoolchildren in 36 schools received 621kg of sun-dried meat. Assuming that 20% of the animals treated under this programme were saved from death, and pricing cattle, small stock and camels at KSh5,000, KSh600 and KSh6,000 per animal

Key messages

- Emergency animal health interventions, such as the provision of veterinary drugs for deworming, can prolong the life of vulnerable animals for several months, even where pasture and other conditions remain unchanged.
- Ring vaccination of animals against enterotoxaemia in sheep, Contagious Caprine Pleuropneumonia (CCPP) in goats, Blanthrax in cattle and *Haemorrhagic septicaemia* in camels greatly reduces the outbreak of these diseases during periods of stress.
- In order to minimise subsidies on drugs, emergency veterinary programmes should go hand in hand with destocking operations to enable communities to pay for drugs and veterinary services.
- In pastoral areas of Kenya, where veterinary services are inadequately developed, establishing decentralised animal health systems and using community animal health workers to treat livestock can encourage increased efficiency and effectiveness without creating dependency.

respectively, then the intervention saved animals worth KSh11,632,600, or \$155,100. This does not include future value.

Strengths, weaknesses and lessons learnt

The intervention was appreciated by the pastoralists who benefited from it. It had a community-based approach, and inculcated in pastoralists the need to pay for veterinary services, even in times of emergency. The intervention was also innovative in its mode of payment, and in its use on a private basis of community animal health workers. The intervention showed the importance of establishing a strong link with district-based agencies, and ensuring the effective involvement and participation of target groups and beneficiaries.

*Case-study 2: CARE-Kenya, Garissa***Project facts**

Funding agency: USAID
Allocated funds: \$48,422 (inclusive of overhead costs)

The proposal

CARE planned to provide veterinary support to pastoralists in the emergency programme, in collaboration with District Veterinary Offices (DVOs), OAU-IBAR and community animal health workers.

The direct programme cost was estimated at \$34,000. The cost recovery rate for the distribution of drugs was not specified in the proposal, but was supposed to be worked out later in consultation with stakeholders and the authorities.

Implementation

Decisions were made regarding the types of drugs and vaccines to be purchased after consultation with OAU-IBAR veterinarian in the district. Clearance was obtained for the purchase of the drugs and the vaccines from USAID in January-February 2001. However, implementation was delayed because VSF-Switzerland had already initiated a similar programme in the north-east.

Results

Standard drug kits were distributed at 50% of cost to some 36 community animal health workers identified by the DVO. These were sold to end-users at a 10% profit. Some 5,000 doses of vaccines were given to government workers to contain an outbreak of black-quarter disease in Jalish location in May 2001.

Strengths, weaknesses and lessons learnt

One of the intervention's strengths was the way that practical aspects of implementation were discussed and agreed with all the relevant actors in the field, including communities. Distributing drugs through community animal health workers was a positive step towards sustainable community-based animal health delivery. A supervision system was put in place, with government field personnel monitoring health workers' drug usage. There was, however, a lack of qualified veterinary staff and appropriate experience, which entailed relying on other institutions for technical assistance. The involvement of the agency in diverse intervention programmes delayed the programme for far too long.

*Case-study 3: VSF-B, Turkana***Project facts**

Funding agency: CDTF
Allocated funds: \$95,504 (inclusive of overhead costs)
Planned number of animals to be treated/vaccinated: 108,000 livestock treated and 200,000 goats vaccinated

Implementation

The initiative involved eight community meetings and 40 follow-up meetings. Meetings were held in Lokichoggio, Lorugum, Kakuma, Lokichar, Kalokol, Lokitaung and Lokori, and included local leaders, field monitors, Public Health Technicians, the District Veterinary Office, village bank members, butchers

and chiefs. Monitoring sheets were collected, and drugs supplied to community animal health workers. Three supervisory visits by government officials were also organised.

Results

By the end of March 2001, a total of 73,983 animals had been treated and 96,923 goats had been vaccinated against CCPP. To meet a shortfall in vaccine, 30,000 additional supplies were borrowed from UNICEF Sudan.

Strengths, weaknesses and lessons learnt

One of the strengths of this intervention was its cost-recovery component; depending on the drug, between 5% and 50% of the cost was recovered. However, transport facilities were inadequate, and only a small area was covered. A second proposal was later formulated covering the rest of the district. The intervention's target of treating 108,000 livestock and vaccinating 200,000 goats was also probably over-ambitious. There were difficulties in obtaining vaccine, and some pastoralists were reluctant to present their goats for vaccination.

One of the lessons of the intervention was that involving government officials in planning and implementation at the district and community level provides NGOs with administrative and technical capacities that they themselves may not possess. The intervention also highlighted low levels of vaccine production in Kenya, and showed the importance of finding ways to procure CCPP vaccine from outside the country. Finally, livestock vaccination campaigns can impose onerous logistical burdens, which should not be under-estimated.

Transport subsidies

Case-study 1: NORDA, Mandera

Project facts

Funding agency: USAID

Allocated funds: \$32,200 (excluding a second USAID tranche of \$14,032)

Planned number of shoats to be transported: 21,600

Actual number of shoats transported: 21,940

The proposal

The objective of this programme was to increase the off-take level of shoats by subsidising the transport of animals from the district to markets in Nairobi. The proposal assumed a subsidy of a third of transport costs from any point in the district. On average, this amounted to KSh90 per shoat. The subsidy was open to all traders regardless of their capital base, and there were no restrictions on the number of truckloads for which an individual could receive a subsidy.

Key messages

- Transport subsidies can be instrumental in the off-take of large numbers of animals from drought-stricken areas to terminal markets.
- Tight control mechanisms are crucial to avoid abuse and fraudulent claims for subsidies.
- Subsidies for transport within a district, as opposed to between a district and a terminal market in Nairobi, are less easy to control and more vulnerable to abuse, and so should be discouraged.
- Such an intervention needs to draw on local trading experience gained in non-drought periods, and effective and thorough planning in conjunction with local traders is vital.

Implementation

NORDA held meetings with traders in all the operational areas. The objectives of the programme were discussed and the criteria for qualification explained. NORDA also set up a verification system to ensure that traders did actually transport their animals to market. To do this, NORDA retained copies of each trader's 'movement permit', as well as their identity cards. The trader was issued with a stamped form describing his or her identity-card details, along with the registration number of the truck and the number of shoats being transported. The trader handed this form to the Controller at Kutulo, some 250km from Mandera, where it was checked, stamped and returned. On unloading the shoats in Nairobi, the trader paid a 'cess' or tax. The subsidy was paid on presentation of proof of payment of the cess, along with the form stamped by the official at Kutulo.

Results

In all, 28 traders received subsidies for loads ranging from several hundred to several thousand shoats. A total of 21,940 shoats valued at some KSh22m were transported to Nairobi between December 2000 and March 2001, at a total cost of \$26,388.

Strengths, weaknesses and lessons learnt

One of the key strengths of the intervention was the control mechanism put in place, which was properly executed and effective. However, the agency was unable to produce figures for the actual increase in off-take as a result of the transport subsidy. It was felt nonetheless that this had increased over preceding years. Moreover, while the control system worked well, there was still room for improvement: the control point could be moved to Nairobi to ensure that the shoats are unloaded where they are supposed

to be, and changing Controllers at intervals would reduce the risk of bribery.

Case-study 2: VSF-Belgium, Turkana

Project facts

Funding agency: CDTF

Allocated funds: \$51,021

Overhead costs: 9.65%

Planned number of animals to be moved: 12,000 small stock and 900 cattle out of the district, and a \$6,000 subsidy for transporting livestock within the district

Actual number of animals moved: 1,175 cattle and 3,584 sheep and goats moved out of the district; 20,688 sheep and goats moved internally

The proposal

The goal of this intervention was to increase off-take rates by encouraging pastoralists to trade their livestock.

Implementation

The project allowed for two kinds of subsidies: one for itinerant traders who were buying livestock from the Turkana people and reselling, either to markets within the district or to large-scale traders; and another for large-scale traders who were exporting to terminal markets outside Turkana. A 40% subsidy was agreed between the implementing agency and the traders.

The implementing agency set up a series of procedures for paying the transport subsidy. These included

a verification form, completed and signed by the control officer at the district's terminal point in Kainuk, including photographs of the vehicles used to transport the animals; receipts to the county council or other authorities where the livestock was off-loaded; transport receipts; and letters from the local chief and from the veterinary officer detailing the origin, type and number of livestock, the date of departure from the point of purchase and any other relevant information.

Results

In total, 1,175 cattle and 3,584 sheep and goats were transported to markets in Nairobi, and a further 20,688 sheep and goats were transported from one area of the district to another, either for fattening or for slaughter. In all, subsidies came to KSh3,618,880, which was KSh228,880 over budget. The animals moved to Nairobi were valued at KSh8,025,400.

Strengths, weaknesses and lessons learnt

One of the strengths of the intervention was its accounting and administration, both of which were good. Nevertheless, fraud proved very difficult to control, and the budget was rapidly exhausted. Although collaboration with chiefs, marketing associations and local government officials was vital to the project's success, this left it vulnerable to corruption. In addition, cash flow was a problem, and some payments had to be postponed, sometimes for as long as several weeks. Clearly, strong, credible and transparent community-based institutional structures are crucial, and should be managed by community members themselves.

Costs, benefits and impact

This chapter analyses the overall economic and social impact of the various interventions described above. It focuses in particular on costs associated with distributing fresh as against dried meat, and assesses the economic value of each type of livestock-related intervention studied in this paper: destocking; supplementary feeding; cross-border initiatives; emergency veterinary work; and transport subsidies. However, it is also mindful that such an analysis cannot exclude the less tangible though still vital ‘ripple effects’ that interventions can have for the social cohesion and wellbeing of a community.

An economic assessment of the livestock-related initiatives

Delivery costs for NGOs

Operational and overhead costs for delivering similar services varied across the NGOs looked at in this paper. In general, such indirect costs were typically lower with smaller NGOs, which were generally more efficient than their larger counterparts, probably because they had fewer operations, enjoyed better local knowledge and were able to function with a minimum of financial, personnel and material requirements. At the same time, high operational and overhead costs did not necessarily correlate with a better level of performance in the field. These were rather manifestations of the size, accounting principles and operational ethics of the agency in question.

Not all the NGOs examined in this paper were forthcoming with budget breakdowns regarding their operations. However, of those that provided this information:

- in destocking, the highest proportion of operational and overhead costs to the purchase price of individual animals was 42.5%, and the lowest 9.5%;
- in animal health, the highest indirect costs for each \$1-worth of drug was 41.7% and the lowest 19.7%;
- in transport subsidy interventions, the proportion of indirect costs incurred for each shoa transported from Mandera district to Nairobi was 24% (computing the data for Turkana was not possible due to irregularities); and
- in livestock feed, an indirect cost proportion of 42.5% was budgeted by one NGO (though not implemented), whereas in two other cases the budget for feeds was lumped together with other interventions, making it difficult to separate the unit costs.

Different agencies also applied different criteria to cost recovery. For veterinary drugs, for instance, VSF-Switzerland applied a 20% cost recovery rate in Mandera, Wajir and Garissa. COOPI charged one goat for each 25 head of cattle or 50 shoats treated/vaccinated in Moyale and Samburu, while CARE applied a 50% cost recovery rate in Garissa. VSF-Switzerland planned to raise the cost recovery rate to 100% in these same districts.

Table 4 summarises the operational and overhead costs incurred by various NGOs as a proportion of direct costs per unit in question. Operational costs are costs associated with staff and vehicle hire, equipment, transport, communications, training, workshops and the like. Overhead costs refer to management, administrative or contingency costs usually estimated at 5%, 10% or 15% of the total project, depending on the agency. Direct costs refer to costs incurred for the purchase of items such as livestock, drugs and feed. All costs are in Kenyan Shillings.

Dry versus fresh meat

In terms of cost, these interventions demonstrate that distributing fresh meat is cheaper than distributing

Table 4: Proportion of operational and overhead costs of NGO operations

Agency	District	Unit	Direct cost (A)	Operational cost (B)	Overhead cost (C)	Total cost/unit	Proportional cost (B+C/A)	Remarks
Destocking								
ALDEF	Wajir	1 shoat	1,200	158	70	1,428	19%	
NORDA	Mandera	1 shoat	750	71	–	821	9.5%	Costs not separated
CARE	Garissa	1 shoat	1,000	295	130	1,425	42.5%	
ALDEF	Wajir	1 camel	5,000	660	290	5,950	19%	
ALDEF	Wajir	1 cow	5,500	726	319	6,548	19%	
NORDA	Mandera	1 cow	3,750	375	–	4,125	10%	Costs not separated
CARE	Garissa	1 cow	5,000	1,473	647	7,120	42.4%	
CEC	Marsabit	1 cow	5,000	1,369	417	6786	35%	
CEC	Marsabit	1 shoat	800	216	64	1080	35%	
World Concern	Narok	1 cow	1,699	323	–	2022	19%	
VSF-B	Turkana	1 shoat	569	110	–	679	19.3%	
Transport subsidy								
NORDA	Mandera	1 shoat	90	21.75		111.75	24%	Mandera–Nairobi
Veterinary drugs								
CARE	Wajir	\$1-worth of drugs	76	22	9.7	97.7	41.7%	
VSF-B	Turkana	\$1-worth of drugs	76	11	4	91	19.7%	
Livestock feed								
CARE	Garissa	\$1-worth of feed	76	22	9.7	97.7	41.7%	Not implemented

Note: Indirect costs of the transport subsidy for Turkana were not calculated due to fraudulent cases. Indirect costs of destocking and livestock feed were not calculated for Marsabit (ACK) since the overhead costs were lumped together and the payment for shoats was given half in cash, and half in concentrates. Data on operational and overhead costs were not available for COOPI's animal health programme.

dried, particularly if the live animal is slaughtered and distributed by beneficiary communities themselves. This also avoids the wastage usual in the preparation of dried meat, as well as reducing theft and administrative and logistical costs.

Table 5 summarises the cost of processing and distributing dry meat, using field experiences in Turkana which are more-or-less similar to the Marsabit operation described above. On average, a goat sold for KSh600 during the drought provided a carcass weight of some 6.5kg, or a boneless meat

volume of 4kg. In turn, this produced close to 1kg of dried meat.

As this table shows, processing dry meat costs twice as much as distributing fresh meat, where the slaughtering and distribution is carried out by beneficiaries. If the cost of packing, collecting, storing and distributing the meat is included, costs may well rise above KSh1,200 per kilo. More importantly, while processing dry meat provides jobs for local people, the offal (which could feed a significant number of people in a large operation) is not available.

Table 5: The cost of processing 1kg of dried meat

Cost item	Price
Purchase price of 1 shoat ¹	KSh600
Cost of slaughtering	Ksh10
Wages for watchmen (when drying)	KSh3
Storage cost	KSh50
Salt	Ksh10
Meat inspection	KSh25
Water	KSh2
Labour	KSh250
Sub-total	KSh950
Profit margin	KSh250
Total cost of 1kg of dried meat	KSh1,200

Note: ¹ For each 6.5kg carcass, 4kg = boneless meat; 1kg = dried meat

Destocking

Table 6 shows the total value of stocks salvaged through the destocking intervention as at the end of March 2001.

Supplementary feed

Table 7 shows a cost–benefit analysis of using supplementary feeds, based on the field experience of the ACK–MDO project in Marsabit, where animals left to die by their owners were salvaged, and later used

for restocking purposes. Two levels of comparison are made:

- between the cost incurred in saving the animals and the value of the same stock if sold in open markets after the drought; and
- the cost of restocking using the same number of animals when compared with the cost incurred to save the animals through supplementary feeding, using concentrate feeds.

Cross-border peace initiatives

Table 8 presents an estimate of the economic value associated with facilitating cross-border access to pasture and water resources. It suggests that there are immense benefits for pastoralists when prevailing conditions permit the free movement of people across borders, whether as a coping strategy, for trade or for access to better services. The example used here refers to the migration of the Turkana to Kidepo in Uganda during the height of the drought. The migration was made possible as a result of the peace agreement between the Turkana and the Karamoja, initiated and facilitated by OAU–IBAR. Various sources put the number of cattle that migrated to Uganda at 100,000. The proportion of cattle that could have been lost as a result of the drought without this migration has been conservatively estimated at 20%, and the price per head put at KSh3,500, since the herd contained a mixture of large and small cattle. At the time, the market price was KSh5,000/head.

Table 6: Stocks salvaged through the destocking programme

Agency	District	Shoats purchased	Cattle purchased	Price/shoat	Price/cattle	Value
NORDA	Mandera	1,200	60	750	3,750	1,125,000
ALDEF ¹	Wajir	9,963	289	1,089	5,164	12,342,103
CARE	Garissa	250	850	1,000	5,000	4,500,000
VSF-Belgium	Turkana	13,000	–	569	–	7,397,000
ACK	Marsabit	6,026	45	600	5,000	3,840,600
World Concern	Narok	–	4,683	–	1,699	7,956,417
CEC ²	Marsabit	1,359	222	800	5000	2,197,200
COOPI ³	Marsabit, Moyale, Samburu	1,393	–	800	–	1,114,400
Total value of livestock salvaged through destocking						40,472,720

Notes: ¹ The price paid for camels and cattle has been averaged; ² This programme was not completed at the time of writing this report;

³ COOPI was not as such involved in the purchase of stocks for destocking, but is included here because the agency charged one goat for every 50 shoats or 25 head of cattle treated/vaccinated.

Table 7: Cost of supplementary feed versus value of livestock saved

Cost of 180 tons of supplementary feed	KSh3.6m
No. of shoats fed over a period of 3 months	8,000
Cost of supplementary feed/shoat for 3 months	KSh450
Estimated administrative/operational cost/shoat	KSh250
Total cost of 8,000 shoats @ KSh700/shoat	KSh5.6m
Average value of 8,000 shoats @ KSh1,200/shoat	KSh9.6m
a) Value saved from 8,000 shoats (8,000 × KSh500)	KSh4m
Cost of restocking 8,000 shoats @ KSh2,000/shoat (inc. vet drugs, monitoring, rations, transport and admin costs)	KSh16m
b) Total value saved through supplementary feed in lieu of restocking	KSh10.4m

Table 8: Value of livestock saved through the peace effort

Estimated number of cattle that migrated to Uganda	100,000
Estimated number of cattle that could have died without migration (20%)	20,000
Value of cattle saved @ KSh3,500/head	KSh70,000,000

Admittedly, this table does not provide the complete picture. First, the costs incurred in facilitating the peace process by OAU–IBAR and others, including other NGOs and the authorities in Kenya and Uganda, are not included. Unfortunately, reasonable estimates of these costs were not available because so many actors were involved. Second, the gains of the peace initiative should be measured not only in terms of the value of animals saved, but also in terms of what could have happened in the absence of such an agreement, particularly at a time when resources had become so scarce. These associated costs include killings, abductions, cattle rustling, the destruction of property, the break-up of families and restrictions on movement. If these gains could be approximated in monetary terms, the value of cross-border peace initiatives could run into hundreds of millions of shillings.

Emergency veterinary programmes

One apparent problem of analysing the cost-effectiveness of veterinary drugs in an emergency situation is knowing the exact number of animals saved through vaccination and/or treatment, as stockowners migrate from place to place in search of pasture and water. Obviously, the effectiveness of veterinary drugs is reduced in times of drought because of the scarcity of food. Nevertheless, the provision of dewormers is likely to prolong the life of an animal by one to two months, while vaccinations are effective in reducing the incidence of disease.

The analysis presented in Table 9 below is based on a conservative assumption that 20% of the livestock treated and/or vaccinated survive the drought. The figures are from Turkana. At the time of writing,

Table 9: Cost of veterinary drugs versus value of animals saved

Number of cattle/camels treated	19,919
Number of shoats treated	54,064
Number of shoats vaccinated	96,929
Total cost of treatment/vaccination (until end-March)	KSh4,297,510
Estimated value of cattle/camels saved (20%) @ KSh5,000/cattle/camel	KSh19,920,000
Estimated value of shoats saved (20%) @ KSh600/shoat	KSh18,119,160
Total value of livestock saved	KSh33,741,650

Table 10: Value at source of sheep and goats marketed through transport subsidy

Mandera	
Total number of animals transported	21,940
Number of animals transported under subsidy (30%)	6,582
Value @ KSh1,000/shoat	6,582,000
Total cost of transport subsidy including overheads	2,447,200
Net value of shoats saved from Mandera District	4,134,800
Turkana	
Total number of cattle transported	1,175
Number of cattle transported under subsidy (40%)	470
Value @ KSh5,000/head	2,350,000
Total number of shoats transported	3,584
Number of shoats transported under subsidy	1,434
Value @ KSh600/shoat	860,400
Total cost of transport subsidy including overheads ¹	3,618,880
Net value of animals saved from Turkana	408,480 ²
Net total value of livestock saved (Mandera+Turkana)	3,726,320

Notes: ¹ This cost is the total transport subsidy paid to traders for all the livestock moved to internal and external destinations; ² The value of the animals moved within Turkana district has not been calculated.

COOPI's budget breakdown was not available, and CARE had yet to start its operation.

Transport subsidies

Table 10 above attempts to quantify the value of the livestock transported to terminal markets, mainly in Nairobi, through transport subsidy operations. Figures for the subsidy are based on what was paid by NORDA in Mandera (30% of the transport cost), and by VSF-Belgium in Turkana (40% of the transport cost). In other words, these operations provided for the off-take of 30% and 40% respectively of the animals that were transported to Nairobi. Thus, the *value* of these subsidy operations is assumed to be represented by 30% and 40% of the total value of the stock transported.

Other socio-economic benefits

In addition to the 'hard' benefits analysed above, these livestock-related interventions had a number of 'soft' ripple effects. These were either observed by the authors themselves in the course of research for this paper, or emerged during discussions with communities, implementing agencies and local officials. These included:

- the cultivation of a sense of self-worth among beneficiaries;
- the enhancement of community-based group cohesiveness, for example among women's groups involved in destocking;
- strengthened family cohesion;

- increased purchasing power of households;
- generation of income from the sale of animals, which was used to pay for water for animals, to buy medical supplies for people and animals, to purchase commodities like sugar and tea, to meet school fees and to settle debts;
- schoolchildren, orphans and hospital patients were fed using meat from community sources. Meat was made available to high schools, where student attendance had been decreasing due to shortages of food in Turkana and Wajir. One of the schools in Wajir, for example, owed its suppliers some three million shillings, and in turn the school was owed some four million shillings in outstanding fees;
- the creation of employment for needy members of households, for example in programme coordination, monitoring, guarding meat and preparing dried meat;
- support for traders, including women;
- the establishment of small businesses such as teashops, made possible by income from animal sales; and
- the nutritional status of vulnerable groups improved as a result of a regular intake of meat and animal fat.

Beneficiaries' views

One of the notable features of these interventions, perhaps because of their novelty, was the extent to which community views and perceptions were engaged. Communities ranked the benefits they received as follows:

- the opportunity to sell their animals at their doorsteps, as opposed to having to travel to distant markets;
- the availability of meat (many could not remember the last time they had eaten meat);
- the income from the sale of animals; and
- *sedeka* (generosity): community members particularly appreciated the generosity of the interventions, in that ‘meat was bought from them and given back to them’.

In terms of timing, beneficiaries considered that the interventions were carried out at roughly the right time. However, these opinions were necessarily limited to operations in the beneficiaries’ own vicinity. In addition, for many beneficiaries this was their first experience of interventions of this type, and so they had little prior knowledge to inform their judgements; indeed, questions of timing were secondary to an appreciation that these interventions had taken place at all at a time when all the beneficiary areas were suffering drought.

In general, communities thought that prices for shoats and cattle were fixed too low. However, such comments were immediately withdrawn when communities were reminded that none of the sellers had declined the price

offered, and that the meat sold was given back to them. It appears, in all cases, that there was an implicit acknowledgement by communities that the price offered was reasonable under the circumstances; some may have been trying their luck, to see if a complaint would prompt an increase. That said, there were some genuine problems about the size of the budgets available to buy stock; in Mandera, for example, on average just 30% of the animals offered for sale were bought under the livestock-related interventions.

As for the transport subsidies, opinions were mixed. At a meeting held at Elwak, three of the nine traders who attended said that they would have transported the same number of shoats with or without the subsidy. However, these traders were operating with a fairly large capital base; the others stated that the subsidy had increased their profits and reduced their turn-around time, implying that they had transported more shoats with the subsidy than they would have done without. Asked if this was in fact the case, they reported that it was difficult to tell since they did not keep records. At the end of the meeting, several remained behind to say that what the large traders had claimed was untrue, and that their comments had been motivated by a desire to stop the subsidies, and so reduce the competition from small traders.

Conclusion Key steps

In many ways, the response of the Kenyan government and other stakeholders to the 1999–2001 drought was significantly more effective than any that had gone before. Yet however effective a disaster management system may be, it cannot and should not replace work to reduce long-term social vulnerability to droughts and chronic food insecurity. An effective disaster management system must go hand in hand with an appropriate community-based development approach that aims to increase community capacities and to reduce social, economic and environmental vulnerabilities. Although great strides have been taken over the past decade, a lot more remains to be done. This paper concludes with an overview of some of the key steps at four levels: the community; nationally; regionally; and in policy formulation at international level.

The community level

At the level of communities, there is a need to strengthen affected people's own capacities to withstand the effects of drought. Pastoralists live in some of the world's most adverse environments, and have evolved their own coping mechanisms. However, a decade of drought has weakened coping mechanisms and considerably reduced the household asset base. As a result, even a minor shock in the system translates into major food insecurity.

Rather than undermining or replacing pastoralists' own capacities, external interventions should rather seek to reinforce them. Assistance should aim to enable pastoralists to cope with the effects of crises through resource management and capacity-building. Strengthening local resource-management capacity may mean building on indigenous institutions, or establishing new primary-level institutions such as pastoral associations. It might also be useful to consider federating local resource management institutions into regional or national bodies, encouraging

drought preparedness and making pastoralists more resilient to shocks when they come.

Drought-related interventions should aim to build the technical and management skills of individuals, groups and associations. Even in emergencies, interventions should look for ways to integrate a training and capacity-building component. People could, for example, be trained to oversee the targeting of food aid in a community, or in repairing, managing and maintaining existing water sources, such as boreholes. Community-based animal health workers could be trained in treating livestock for drought-related problems. These training activities could potentially have an impact well beyond the immediate drought period. Other areas of possible attention include initiatives to improve livestock marketing, assistance with getting animals to market and conflict-management projects in areas where antagonism between groups restricts access to pasture or water sources.

The case-studies documented in this paper are also clear in the need for community participation in the planning and implementation of drought-related interventions, as well as the benefits of using local NGOs and local expertise wherever possible. Typically, projects have been planned by outsiders; beneficiaries have perhaps provided information, on local conditions for instance, but may have had only limited input into shaping the actual design and implementation of an intervention. By contrast, local people were closely involved in the management of interventions in Marsabit, Turkana, Wajir and Mandera. The data gathered by this paper suggests that, in addition to less tangible benefits to do with empowerment, this participation had a direct impact on the interventions' cost, efficiency and acceptability. These interventions reinforce the value of women's participation. In most of the destocking projects looked at here, women were closely involved

in planning and implementation. One of the key lessons must be that women have an active role to play, not just in providing unpaid labour but also in participating in interventions that affect their lives. Identifying and supporting women as livestock owners, animal health care providers, feed gatherers, birth attendants and users of livestock products is central to the effective implementation of gender-responsive interventions.

The national level

At national level, one of the most striking aspects of the drought intervention was the unprecedented level of involvement, cooperation and openness exhibited by the government. Whereas in past interventions, agencies had in effect sidelined or excluded government structures from their drought responses, this time the government was at the heart of the response, playing a significant coordinating role at the national level, chairing key bodies like the KFSSM, providing significant resources of its own, galvanising international support through regular meetings with donors and embassies and preparing credible appeals for assistance. Notably, for the first time the government abandoned its conventional approach to distributing food relief, embracing the WFP-led community-based targeting system and accepting and using the technical information provided by the EWS.

The success of the drought response largely lies in the openness with which the government worked in partnership with other stakeholders. This multi-agency approach was an important development, and is a crucial lesson if responding bodies are to overcome the continued institutional impediments to effective drought management in Kenya. It is clear that more can be achieved when the government is given a central role, with other stakeholders in support, than when agencies and donors set up different, parallel structures to the government bureaucracy. In particular, the drought response highlighted the value of coordination structures such as the KFSSM, the KFSSG and GRTs in facilitating proper targeting and effective response.

The livestock sub-sector working group in particular was pivotal in initiating and implementing the intervention programmes in pastoral areas. The group gathered information from drought-affected areas, raised awareness among the donor community, prepared and screened proposals, coordinated between NGOs and donors and acted as a centre for information exchange. It is clear that such a group is crucial in galvanising timely support. Based on recent experiences, the working group's remit could be extended beyond the immediate drought spell to

include assessing important issues facing pastoralists during normal periods, such as the privatisation of drugs, marketing constraints, water and pasture problems and inter-clan tensions. Forging strong links between this group, the pastoralist group in the national parliament and the national livestock marketing council should be encouraged.

Another notable development at national level was the engagement of the media and the private sector more widely. Accurate and timely reporting can bring additional pressure to bear on the government, helping to ensure that steps are actually taken to deal with drought. Journalists should be briefed on how the drought management system works, and what it is expected to do in a crisis. It may be worthwhile for the KFSSG or the livestock sub-sector working group to organise occasional trips to northern districts for groups of journalists. The media, particularly the Nation Group, was also instrumental in raising funds from the Kenyan public itself, demonstrating clearly that ordinary Kenyans are willing to help their drought-stricken fellows. The potential of the country's private sector could also be usefully explored, perhaps in contributing funds or underwriting some of the costs and risks incurred by small traders providing feed or drugs.

There is also a need to strengthen the structure and mechanisms of drought-monitoring and response in Kenya. The early-warning system worked well in as much as it provided a range of detailed information, covering such things as cereal and livestock prices, range conditions, household food security, the welfare of pastoralists, the condition and availability of water sources and displacement and migration patterns. The environmental monitoring of climate and range conditions and gathering of socio-economic indicators of economic status and food security undertaken by the ALRMP have been instrumental in providing information on drought status and the body condition of livestock, especially in the ten arid districts of northern Kenya. However, the system was unable to forecast climatic changes, and was limited to local indicators, incapable of providing objective comparisons across districts or regions.

Moreover, the early warning system is weak in providing the kind of indicators that would trigger actions aimed at preserving the condition and economic value of livestock, not just saving them from death. Applying EWS in livestock production systems would mean refocusing existing systems so as to improve their predictive capability. For example, multi-seasonal climate forecasting may add consider-

able value to the EWS, especially within the climate-dependent spheres of agricultural development and natural resource management that come together in pastoral development.⁸ Another important aspect would be developing the capability to detect changes in the wellbeing of free-ranging livestock before pastoralists themselves normally spot them. This is already under way as part of the USAID-funded GL-CRSP livestock early warning system project covering Eritrea, Kenya, Uganda, Tanzania and Ethiopia. Conflict resolution mechanisms, regular on-the-ground surveys and monitoring programmes, the involvement of crisis-vulnerable groups, the incorporation of traditional early-warning indicators and coping mechanisms and improved natural resource management – all auger well for an effective livestock EWS.

As this latest experience of drought crisis in Kenya shows, simply having an early-warning system does not guarantee an early response; early warning has to be combined with a strategy to enable the government and donors to respond and mitigate its effects. Existing district-level drought contingency plans can form the basis of this, though they need updating on a regular basis. Outstanding issues here include the need to include community-level contingency planning and to involve communities in this process; and continued difficulties in guaranteeing a rapid flow of funds from central government and donors. The ALRMP/DPIRP has begun preparing strategic drought management plans for ten districts, and those for Isiolo, Marsabit, Turkana and Samburu are well advanced. The aim is to involve all the stakeholders in the district. The process starts with a week-long workshop to analyse drought problems and possible responses. The initial output is a strategic plan identifying the main lines of action, followed by a plan of operations written as a log-frame, with detailed sectoral contingency plans of activities to be prepared during non-drought periods for rapid implementation in a drought.

The regional and international level

Droughts, livestock diseases, peace initiatives, marketing and trade transcend national boundaries, so regional perspectives need to be developed. Institutions exist to facilitate this, such as IGAD, the

OAU, the East African Corporation and regional early-warning programmes such as that funded by USAID and the cross-border animal health projects of OAU-IBAR.

At the international level, the experiences of this latest drought intervention suggest that the policy framework of drought response needs to be rethought, and more innovative responses applied. Typically, the immediate reaction to a drought-related crisis, in Kenya and elsewhere, is grain-based relief. In the Kenyan example studied here, significant amounts of food relief, perhaps as much as KSh15bn, were distributed to drought-affected areas across large parts of the country, even in places where rainfall is usually high.

Food relief clearly has a crucial role to play in meeting the immediate survival needs of drought-affected people. However, the pastoralist interventions described in this paper show the value of moving beyond food relief as the first and primary response to looking at emergency programmes to support and maintain, not people themselves, but their capacity to trade and support their livestock through programmes such as off-takes, veterinary assistance and transport subsidies and cross-border reconciliation work.

Food relief is likely to continue on its current massive scale for a variety of institutional, commercial and political reasons. However, effective food security and drought management should aim to postpone for as long as possible the use of free food relief; rather than being the first response, food aid should be seen as a last resort.⁹ The primary focus should be on planning and eliciting timely and appropriate community, district and national responses, and prevention and development measures. In effect, food relief is an indication that other measures have been either inappropriate, or applied too late; food relief is necessary when all else has failed, or when nothing else was done to address the emerging crisis.¹⁰ When food aid is integrated as an asset into household resources, it can strengthen economic recovery. But when it is used after all other assets have already been depleted, because of inability to respond early in the drought cycle with non-food interventions, it becomes counterproductive, creating dependency and eroding local initiative and coping capacity.

Notes

¹ See Helen Young, Susanne Jaspars, Rebecca Brown, Jackie Frize and Hisham Khogali, *Food-Security Assessments in Emergencies: A Livelihoods Approach*, Network Paper 36 (London: ODI, 2001).

² G. Oba and J. W. Lusigi, 'An Overview of Drought Strategies and Land Use in African Pastoral Systems', paper presented to the Pastoral Development Network, ODI, London, 1987.

³ In the absence of reliable data, losses are estimated based on livestock mortality rates during the 1996–97 drought. The source for 1996 losses is J. Ndikumana et al., *Coping Mechanisms and their Efficacy in Disaster-Prone Pastoral Systems of the Greater Horn of Africa*, ILRI Project Report, 2000; data is also drawn from ALRMP Drought Monitoring Bulletins.

⁴ S. G. Mbogoh, *Effects of Drought and Other Types of Crises on Livestock Production and Marketing in the Greater Horn of Africa*, background paper prepared for the ASARECA/ILRI Workshop on Crisis Mitigation in Livestock Systems in the Greater Horn of Africa Region, Naro Moru River Lodge, Kenya, July 1997.

⁵ R. Muriuki, *A Review of Livestock Marketing in Kenya*, paper prepared for the ALRMP, 2000.

⁶ Jeremy Swift, *The Institutional Structure for Drought Management in Kenya*, consultancy report for the ALRMP, August 2000.

⁷ Margie Buchanan-Smith, *What is a Famine Early Warning System? Can it Prevent Famine?*, paper prepared for Action Aid, 1998; Mike Wekesa, *Livestock and Drought – The Early Warning Systems Experience with Special Reference to East Africa*, paper presented at the International Workshop on Livestock and Drought, Cairo, 1999.

⁸ C. B. Barret and M. K. Jeppesen, *Extending Early Warning Systems on the African Range: Using Multi-seasonal Climate Forecasts To Improve Pastoralist Livelihoods*, unpublished research proposal, Utah State University, 1997.

⁹ C. R. Field, *Emergency Strategies for Assisting Pastoralists during Drought and Famine: The Options*, unpublished paper.

¹⁰ International Livestock Research Institute, *Coping Mechanisms and Their Efficacy in Disaster-Prone Pastoral Systems of the Greater Horn of Africa*, ILRI Project Report (ILRI: Nairobi, 2000).

Network Papers

Network Papers are contributions on specific experiences or issues prepared either by HPN members or contributing specialists.

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- 3 *General Food Distribution in Emergencies: from Nutritional Needs to Political Priorities* by S. Jaspars and H. Young (1996)
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Funding support for HPN is provided by institutional donors (DFID, Ireland Aid, DANIDA, SIDA, MFA Netherlands, OFDA and ECHO), non-governmental organisations (the British Red Cross, Save the Children UK, Oxfam GB, Médecins Sans Frontières and CARE International), and UN agencies (WFP, UNDP and OCHA).

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