

**Policies, Practice and Participation in Complex Emergencies: The Case of
Livestock Interventions in South Sudan**

**A case study for the Agriculture and Development Economics Division of the
Food and Agriculture Organization**

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Abbreviations

AGA	Animal Production and Health Division of FAO
AHA	Animal Health Auxiliary
AU/IBAR	African Union/Interafrican Bureau for Animal Resources
CAHW	Community-based animal health worker
CBO	Community-based organisation
CBPP	Contagious bovine pleuropneumonia
CPE	Community Participatory Evaluation
ESAF	Agriculture and Development Economics Division of FAO
FAO	Food and Agriculture Organization
FIFC	Feinstein International Famine Centre
FMD	Foot and mouth disease
GoS	Government of Sudan
ICRC	International Committee for the Red Cross
IDP	Internally displaced person
JP-15	Joint Project 15
MoAR	Ministry of Animal Resources, GoS
NGO	Non governmental organisation
NPA	Norwegian People's Aid
NSCSE	New Sudan Centre for Statistics and Evaluation
OIE	Office international des epizooties
OLS	Operation Lifeline Sudan
PACE	Pan African Programme for the Control of Epizootics
PARC	Pan African Rinderpest Campaign
PIA	Participatory impact assessment
PRSP	Poverty Reduction Strategy Paper
RASS	Relief Association of South Sudan
SAAR	Secretariat for Agriculture and Animal Resources (of the SPLM)
SSAHATI	Southern Sudan Animal Health Auxiliary Training Institute
SPLA	Sudan People's Liberation Army
SPLM	Sudan People's Liberation Movement
SRRA	Sudan Relief and Rehabilitation Association
SRRC	Sudan Relief and Rehabilitation Commission
TCE	Emergency Relief and Rehabilitation Division of FAO
Unicef	United Nations Children's Fund
VCC	Veterinary Co-ordination Committee
VSF-B	Vétérinaires sans frontières Belgium
VSF-CH	Vétérinaires sans frontières Switzerland
VSF-G	Vétérinaires sans frontières Germany

Executive Summary

In January 2005 the Government of Sudan (GoS) and the Sudan People's Liberation Movement (SPLM) signed a peace agreement which ended a devastating civil war lasting more than 20 years. Generations of southern Sudanese had experienced a chronic conflict which the international community found convenient to label a "chronic emergency". In part, this labelling provided the justification for an international aid response positioned almost exclusively within the relief sections of donors and UN agencies, and characterised by repeated back-to-back cycles of short-term emergency inputs delivered through the UN system and NGOs. Following famine in southern Sudan in 1988, Operation Lifeline Sudan (OLS) was created through a unique tripartite agreement brokered by the UN with the GoS and SPLM. Within OLS, Unicef became the lead agency for the co-ordination of relief programmes in southern Sudan.

Approximately 70% of southern Sudanese are commonly categorised as agropastoralists or pastoralists, and their livelihood strategies are based on the acquisition and use of livestock assets. In particular, the aspirations and behaviour of many southern Sudanese revolve around cattle. Cows and bulls are providers of food and income, and are the currency used to enact a wide range of social contracts and obligations, including indigenous and complex systems of social support. In the early 1990s the cattle population in southern Sudan was being decimated by a disease called rinderpest. Despite the best efforts of the Global Rinderpest Eradication Programme, the Organization for African Unity, the GoS and OLS Unicef Livestock Programme to support rinderpest eradication, vaccination teams were unable to penetrate insecure areas and vaccination coverage was poor.

This case study examines how alternative approaches to rinderpest eradication evolved in the complex emergency context of southern Sudan, and how initial experiences informed the establishment of a large-scale community-based animal health worker (CAHW) system. The case study focuses on policy processes, the attitudes and understanding of different policy actors at different points in time, and the role of co-ordinating bodies in facilitating policy dialogue and ensuring harmonised practice among NGO partners. As the case study shows, policy actors included agencies working in southern Sudan and a number of external players.

The case study also reviews how information was generated and used, with an emphasis on the use of impact assessment to inform policy debate. The case study takes a critical look at monitoring and evaluation within the livestock programme, and the extent to which the reporting requirements of relief donors influenced organisational learning within donors and NGOs.

According to the terms of reference for the case study, an underlying theme is "developmental relief" and the influence of development theories and approaches within a complex emergency. While conventional relief thinking sees people as passive recipients of aid which is designed and delivered by outsiders, developmental relief takes a more long-term and people-centric view. It recognises the capacity of people, however poor or vulnerable, to analyse their situation and work with outsiders to design, implement and evaluate interventions. It follows that developmental relief approaches relate to concepts of sustainability. This includes attention to local skills, knowledge and capacities, and the potential to strengthen these local attributes rather than override them. It also means looking at questions of cost and payment, particularly when in a development context the service or input in question would be classified as a private good. Rather than revisit long-running debates on the various possible linkages between relief and development, the livelihoods approach provides scope for addressing both immediate human needs while also safeguarding and enhancing assets and systems. The case study reviews experiences during three distinctive periods viz, pre-OLS (before 1989), the initial period of community-based approaches within the livestock programme

co-ordinated by Unicef (1993 to 2000), and the most recent period of co-ordination under the Emergency Relief and Rehabilitation Division of the Food and Agriculture Organization (FAO TCE).

Factors for success

The introduction of developmental approaches in the OLS Livestock Programme from 1993 onwards produced dramatic results in rinderpest eradication and the provision of general primary animal healthcare in southern Sudan. These achievements can be explained by several factors:

- Regardless of the relief environment, an understanding of livelihoods and attention to local knowledge and skills, local institutions (e.g. the cattle camps) and local demand was developed and encouraged.

There is little doubt that when the community-based approach to rinderpest vaccination was first conceived in southern Sudan, cattle owners were crying out for rinderpest control. Rural development approaches were applied which recognised livestock keepers as the starting point for project design and delivery. An understanding of traditional institutions and decision-making enabled the programme to work effectively with communities to prioritise and analyse problems, and agree a way forward. An understanding of livelihoods helped to reveal livestock as a crucial form of social capital in addition to more widely recognised economic benefits.

- The belief that some of the basic elements of a sustainable system could be initiated, if not necessarily fully implemented e.g. payment for services.

Contrary to usual OLS practice, payment for services in the livestock programme was introduced as early as 1994. Again, this was influenced by concepts of sustainability which are usually associated with development rather than relief. Although cost recovery proved difficult to implement in terms of managing the revenue collected, the basic principle of payment for clinical services was established.

- The interpersonal skills of senior programme staff who were able to negotiate a space for innovative approaches to be tested, and then persuade UN agencies, NGOs and donors to continue to support the new approach; The ability to bring agencies together to agree on common policies and guidelines.

The aid environment in OLS was confined to relief efforts. Policy incoherence existed at various levels within and between players, but apparently rigid bureaucracies in UN agencies and donors were stretched to accommodate alternative ways of working. Creating space to use funds in unconventional ways requires donors and managers to take risks, but also to feel confident that there is a good chance of success. A combination of technical credibility, political awareness and communication skills in Unicef/Tufts co-ordinators inspired confidence and encouraged senior management and donors to buy into the community-based livestock programme.

In a complex emergency like southern Sudan, particularly in the early years of OLS, it was difficult to conduct surveys and research, or collect information in a systematic way. In these situations professional judgement drives policies and implementation, and such judgement is most likely to be correct when the people concerned are technically proficient and experienced in complex emergency environments. It also means that policies are less likely to come from an analysis of data *per se*, and more likely to be based on a critical mass of opinion among players. In reality of course, this is how most policies arise whether in complex emergencies or in politically-stable or developed countries. The institutionalisation of the Livestock Co-ordination Meeting as a forum for

sharing information and agreeing on policies was the programme's key success. Even when specific policies later proved to be difficult to implement, at least a system for reviewing experiences was in place.

- The field experience of senior programme staff and their capacity to bring realities on the ground into decision-making forums.

When community-based approaches were first introduced into the livestock programme only Unicef and Oxfam were operational on the ground; initially the Tufts vet seconded to Unicef was the only vet in both programmes. Real knowledge on how-to-do community-based animal healthcare was limited to a very small number of people. Although other agencies came on board, they lacked technical experience on CAHW approaches. In this situation it was relatively easy for Unicef to lead the programme, particularly as dramatic results were quickly achieved.

- Delivery of resources to NGOs

In addition to strong technical direction, Unicef delivered vaccines, medicines and equipment to NGOs. While leadership was a pull factor in co-ordination, control of key resources was a push factor.

- Strong links with global and regional disease eradication programmes run by FAO GREP and AU/IBAR.

The livestock programme received moral and technical support from GREP and AU/IBAR with regards rinderpest eradication. Although neither player was convinced about CAHWs in early 1993, they soon recognised the benefits and threw their technical and political weight behind the approach. This support has been maintained for many years.

- Since 1999, NGOs have realised that community involvement in the programme need not be restricted to design and implementation, but could also include impact assessment.

Before 1999 impact assessment was regarded in isolation from project design and implementation. Although communities contributed a great deal to identifying problems and operationalising projects, their views were often sidelined during impact assessment. The introduction of "Community Participatory Evaluation" (CPE) by some NGOs helped to bridge a gap between the need for information and the need to involve local people in assessing change. Participatory approaches to impact assessment can also improve understanding of project attribution, and the fragility of sector-specific benefits in chronic conflicts. In the case of southern Sudan, the creation or protection of material assets such as livestock was constantly threatened and frequently destroyed by conflict.

Co-ordination and policies: lessons for UN agencies and donors

The case study shows that the existence of coherent developmental relief policies in UN agencies and donors would have greatly assisted the OLS Livestock Programme, and other sectoral programmes, in southern Sudan. Among the UN agencies FAO has a mandate to lead livestock interventions in complex emergencies, but lacks technical guidelines for livestock work based on developmental relief or, perhaps more importantly, livelihoods principles. The existing FAO Technical Handbooks are inadequate with regards livestock programming in complex emergencies and within FAO TCE or AGA there seems to be limited analysis of lessons learned from different livestock relief interventions around the world.

Within Unicef there appears to be minor interest or organisational memory of the OLS Southern Sector Livestock Programme, despite the dramatic impact on rinderpest in

southern Sudan. While Unicef housed the Household Food Security Programme in OLS for many years, the livestock programme was marginal to Unicef interests and to some extent, this created space for the team from Tufts University working within Unicef to test alternative approaches. Strong links between a small team of Tufts workers in the northern and southern sectors enabled north-south co-ordination under the umbrella of OLS.

The case study clearly points to important differences between Unicef and FAO TCE in their style of programme co-ordination. Although Unicef had no in-house technical expertise in livestock and no mandate to support a livestock programme, an innovative and developmental approach to primary veterinary care evolved using expertise seconded to OLS from Tufts. Today, with hindsight, we recognise this experience as fitting very much within a livelihoods approach. In contrast, FAO TCE had a clear mandate to co-ordinate agricultural programmes but was restricted by a focus on short-term programming and a bureaucracy which hindered alternative approaches. Despite its mandate, technical expertise in the area of livestock interventions in complex emergencies was also limited in FAO TCE (and FAO AGA). As previously mentioned, the organisation seemed to lack best practice guidelines or systematic reviews of experiences in complex emergencies from other African countries or beyond. Although the case study is limited to experiences in southern Sudan, these findings have implications for UN interventions in other complex emergencies in Africa and elsewhere.

For Africa the African Union/Interafrican Bureau for Animal Resources has initiated the process of formulating livestock development relief guidelines and with the Feinstein International Famine Centre (FIFC) of Tufts, is proposing a broad collaborative effort with practitioners from NGOs and other agencies based on the Sphere methodology. It would make sense for FAO to join this initiative if experienced practitioners in relevant FAO divisions could be identified. Among donors, the Office for Foreign Disaster Assistance of USAID already has guidelines for livestock interventions and these guidelines were influenced by experiences in southern Sudan. The AU/IBAR and FIFC process for an international best-practice guide to livestock developmental relief should assist donor co-ordination, although realistic funding periods (greater than one year funding cycles) will also need to be agreed to support more developmental approaches.

Within new policies and guidelines there are also opportunities to review donor reporting requirements - in particular, the current fixation on process rather than on impact. It seems inappropriate for NGOs to spend considerable time and effort collecting and submitting data which fulfils little more than a bureaucratic function. This does not mean that process information is of no value, but that a far more appropriate balance between process, impact and organisational learning needs to evolve in complex emergencies. Organisational learning could have been the driving force to move OLS as a whole away from an almost exclusive relief approach.

South Sudan and future policy needs

Regardless of the varying styles of co-ordination of the programme under Unicef and then FAO TCE, one of the main achievements has been the continuation of the livestock co-ordination meetings and the institutionalised practice of NGOs and Sudanese partners discussing key policy areas. In early 2005 AU/IBAR provided technical assistance to the Secretariat for Agriculture and Animal Resources (SAAR) of the SPLM to draft a provisional livestock policy framework for South Sudan. This process involved consultation with NGOs and TCE technical staff, and was very easy to organise. All three SAAR veterinarians have direct experience of community-based approaches.

In common with neighbouring countries, SAAR now faces the challenge of elaborating the draft livestock policies based on meaningful dialogue with livestock keepers, and addressing the trade offs between 'pro poor' policies and policies which primarily benefit

wealthier people or commercial interests. Findings could feed into the Poverty Reduction Strategy Paper for South Sudan (or the southern component of the Sudan-wide document). No doubt the debates around privatisation versus subsidy will continue, as will discussion on government employment of large numbers of livestock workers versus contracting out services to the private sector. SAAR will also need to integrate livestock policies with a complex set of other policies, such as those relating to land tenure, trade and private sector development. There is also the possibility of formulating specific policies on livestock developmental relief.

Over the next few years SAAR will be faced with a diverse set of donor interests. Setting clear policies early on will help SAAR set the agenda and develop programmes which meet the priorities of South Sudan. The developmental relief approach adopted by the OLS Livestock Programme means that considerable experience already exists in the area of primary veterinary services, privatisation and epizootic disease control, and therefore veterinary policies should be relatively easy to formulate. However, numerous other aspects of livestock development will also need to be considered.

1. Introduction

In 2003 the FAO Agriculture and Development Economics Division (ESA) was increasingly recognised the dearth of appropriate policies and strategies for strengthening livelihoods in complex emergencies. Following the *International Workshop on Food Security in Complex Emergencies* convened by FAO-ESA in September 2003, a series of case studies was proposed with the aim of learning lessons from real-life interventions in long-term emergency contexts. The Feinstein International Famine Centre (FIFC) of Tufts University was requested to prepare a case study on experiences with livestock interventions in southern Sudan, and this report presents the case study findings and conclusions. This thematic case study is intended to complement an area-specific case study focusing on the Nuba Mountains being prepared by Sara Pantuliano, and a general overview paper on southern Sudan prepared by Luca Russo.

1.1 Research questions

The southern Sudan case studies are based on seven groups of research questions as follows:

- Question 1 What have been the constraints embedded in the humanitarian mandate to a sustained and equitable recovery process? What have been the effects of the underlying political dimension of the humanitarian intervention on the responses undertaken by different actors?
- Question 2 What have been the distinct features that have characterised the promotion of food security related recovery and development responses in the Sudan emergency context?
- Question 3 Looking at typical food security emergency interventions in Sudan, what factors can be identified as creating the precondition for longer term responses and what elements could have affected the recovery process?
- Question 4 To what extent has the process of elaborating and implementing food security related responses been shaped by the information flows currently existing in Sudan?
- Question 5 What have been the gaps in terms of information production and analysis, and institutional set up that may have somehow constrained the development of responses with a longer-term perspective?
- Question 6 What have been the key food security related responses undertaken at all levels by local institutions? What have the strength and weaknesses of these responses?
- Question 7 What has the role of international assistance with regarding support to locally based responses been? What elements of the international interventions can be identified as strengthening/weakening those responses?

In an attempt to answer these questions, we have used three main approaches. First, we give an overview of the livelihoods of the main livestock-rearing communities in southern Sudan, focussing on livestock issues but putting livestock within a broader livelihoods framework (section 2). Second, we analysed interventions and formal and informal policies in the Operation Lifeline Sudan Livestock (OLS) programme in the south from the perspective of policy process. This includes historical perspectives and an account of policy actors, narratives and interactions between actors, both within and outside the programme (section 3). Third, we conduct a technical assessment of information in the

programme focusing on impact and the extent to which evidence of impact is collected and used (section 4). In the final section, we draw out the overall lessons learned and make recommendations for future work (section 5).

1.2. Methodology

The methodology for the case study was described in the terms of reference set by FAO ESA and involved an initial peer review workshop *Food Security Responses to Protracted Crisis Situations: Somalia and Sudan Case Studies* held in Nairobi in January 2005, and organised by FAO ESA. The workshop identified key issues to be followed up through a literature review and interviews with Nairobi-based staff. Section 2 of the report is based on a literature review whereas sections 3 and 4 are based on the literature and personal interviews.

As we wanted to review experiences over more than 10 years, we identified key informants who had occupied, or who still occupy technical or co-ordination positions in UN agencies or NGOs. We focussed on informants who had experienced co-ordination of the OLS Livestock Programme under both Unicef and FAO TCE. Given the rapid turnover of staff in relief programmes many potential informants had moved on; we had to trace some informants in Ethiopia and the United States. As the case study progressed we contacted a total of 12 key informants as follows: five current or ex-TCE staff from the livestock programme in southern Sudan; six senior NGO workers, some with field experience in southern Sudan dating back to 1995; one informant who worked as the OLS Unicef Northern Sector Livestock Programme coordinator from 1996 to 1999. Two of the authors of the case study also have extensive experience in southern Sudan. Tim Leyland co-ordinated the OLS Unicef Southern Sector Livestock Programme from 1993 to 1997, and Suzan Bishop worked for VSF Belgium in southern Sudan from 1999 to 2003. From 1993 seven people worked as OLS Livestock Programme co-ordinators in either the southern or northern sector, and for either Unicef or FAO TCE. Six out of seven of these programme co-ordinators are represented in either the informant sample or as study co-authors.

2. Pastoral and Agropastoral Livelihoods in Southern Sudan

The main livestock-rearing communities in southern Sudan can be broadly categorised as pastoralist and agropastoralist. Occupying relatively dry, lowland areas in Eastern Equatoria the pastoralists include the Toposa, Jie, Murle and Nyangatom. The agropastoralists include the Dinka, Mundari and Nuer who occupy the flood plains of Bahr el Ghazal, Lakes, Jonglei and Upper Nile. A second, smaller cluster of agropastoralists live in the hills of Eastern Equatoria. Although these communities access and use a variety of assets, the ownership of cattle is a common and overriding livelihood strategy. This section provides an overview of pastoral and agropastoral livelihoods in southern Sudan, but in line with the thematic focus of the case study, highlights livestock issues. An early caveat is that care is needed when categorising people as 'agropastoralist' or 'pastoralist'. People may shift from one category to another, or they may become settled farmers either temporarily or permanently. Various and complex livelihood opportunities and pressures at particularly points in time influence these shifts.

2.1 Livestock and livelihood assets

2.1.1 Livestock and landscapes

The physical geography ("natural capital") of southern Sudan comprises a horseshoe of ironstone hills running along the eastern and southern borders, and enclosing a huge basin of low-lying flood plains and river systems. The hills are infested with tsetse flies and therefore generally unsuitable for livestock. Consequently, the main livestock rearing areas are the semi-arid region of Eastern Equatoria, the flood plains around the Nile tributaries, and the Nile Corridor where people live close to four of the major rivers of southern Sudan: the Nile, the Sobat, the Pibor and the Zeraf. Livestock are kept in smaller but still significant numbers in the hills and mountain zone east of the Nile in Equatoria.

In common with other dryland areas of Africa, rainfall is the main determinant of livestock production systems and movement. In the easterly, semi-arid parts of Eastern Equatoria the Toposa, Nyangatom, Murle and Jie practise transhumant pastoralism and they move to and from permanent, wet season homesteads. In the flood plains further north and west, both Nuer and Dinka communities follow seasonal movements as the flood waters rise and fall. Receding floods result in good dry-season grazing areas called *toic*. Herds move away from the *toic* as the rains begin because vegetation becomes covered with water. The transhumant movement back and forth from homesteads to *toic* varies from a few hours to several days walk. In areas adjacent to the tsetse-infested hills, seasonal movement also occurs. During the dry season tsetse populations fall and this allows some access to these areas. Rainfall leads to higher tsetse numbers which forces herds back to the lowlands. In the far north of southern Sudan, Baggara and Fellata pastoralists move into the south during the dry season.

Estimates of livestock populations vary, with most attention given to cattle numbers. Jones (2001a) estimated 6.8 to 7.8 million cattle in the whole of southern Sudan, with around 5.8 million in rebel-held areas and 1 to 2 million in government-held areas. More recent WFP reports suggest a figure of 5 to 6 million cattle. As discussed in 4.2.4 these figures should be viewed very much as estimates, not least because livestock keepers tend not present outsiders with accurate information on their livestock holdings.

Figure 2.1
Ethnic groups in southern Sudan (source: Jones, 2001a)

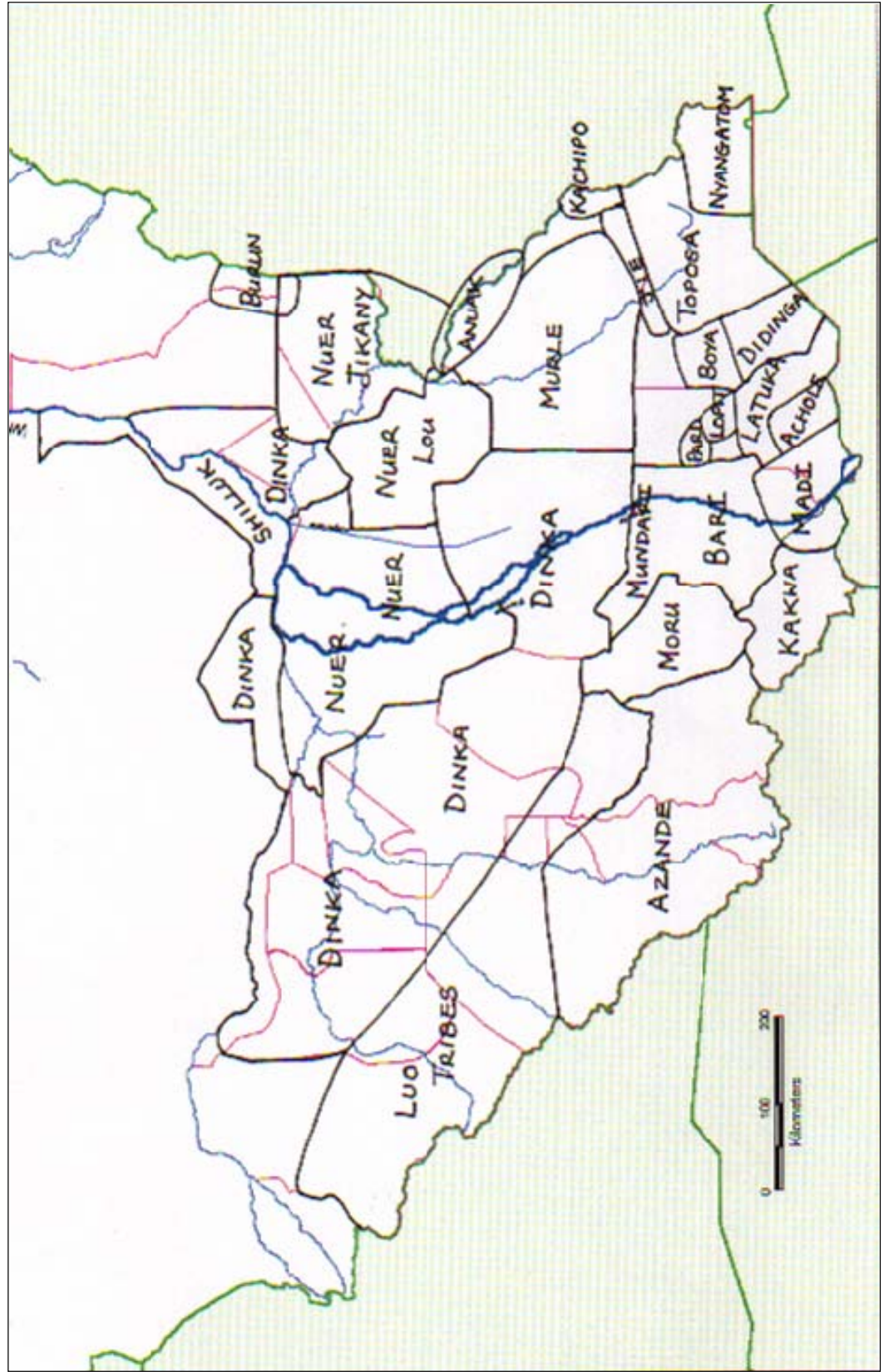
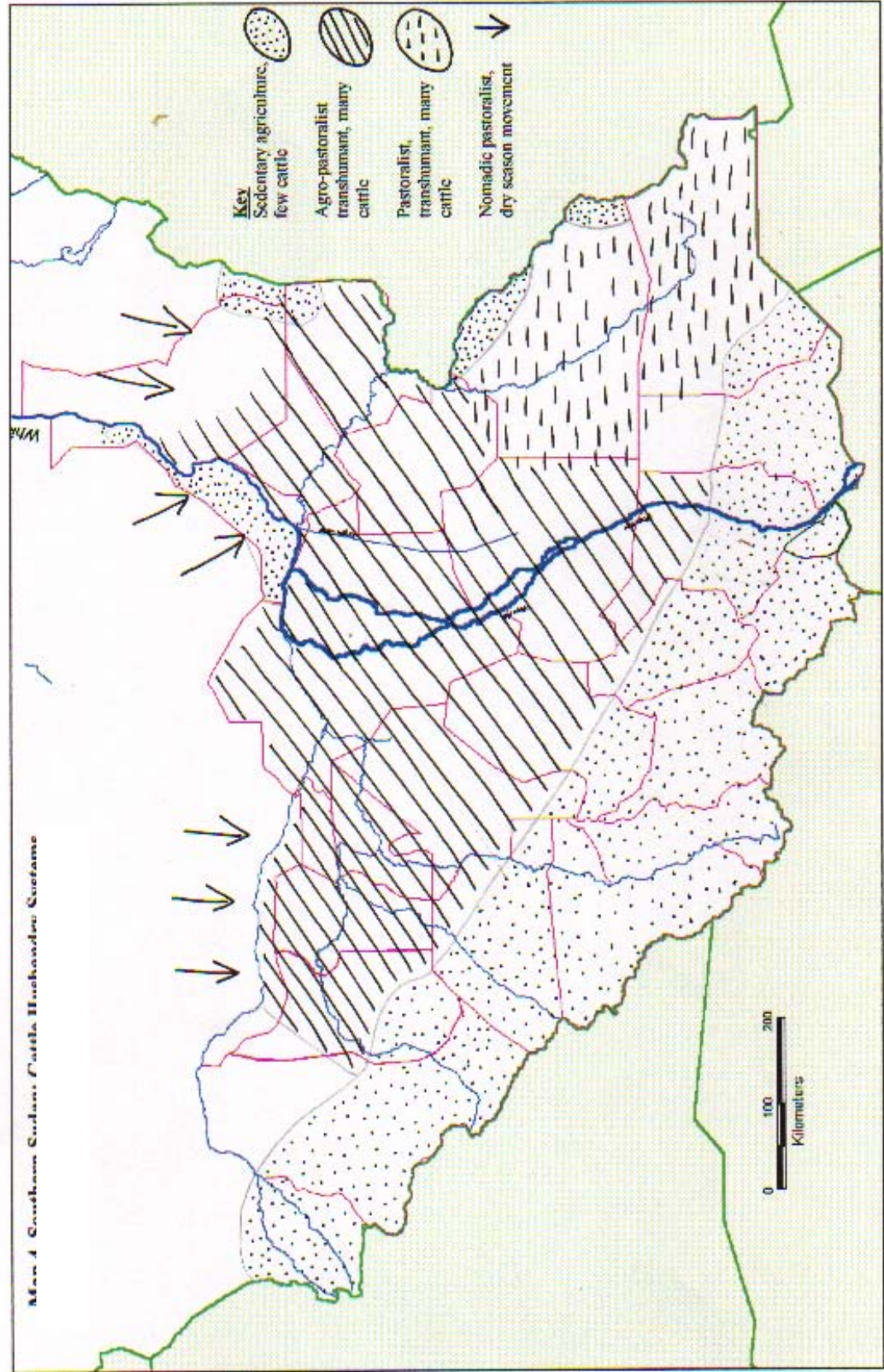


Figure 2.2
Cattle husbandry systems in southern Sudan (source: Jones, 2001a)



The value of livestock in southern Sudanese pastoral and agropastoral groups relates to their contribution to food, income, agricultural production, kinship ties and marriage. Within a livelihoods framework livestock can be viewed as key components of natural, social, human and financial capital. Both agropastoralists and pastoralists keep mixed herds of cattle, sheep and goats which provide meat, milk, manure, and hides and skins, and which can be exchanged or sold for grain. Chickens are also kept, particularly by poorer Dinka households. Crop production is more important to the agropastoral groups (Table 1.1) although the Dinka, Nuer and Toposa all grow sorghum and other crops such as sesame and millet. Fishing is important to both the Dinka and Nuer.

Table 2.1
Food economies of pastoralists and agropastoralists in southern Sudan (adapted from Fielding *et al.*, 2000)

Food item	Ethnic group, animal husbandry location					
	Dinka, agropastoral, Bahr el Ghazal		Nuer, agropastoral, Central Upper Nile		Toposa, pastoral, Eastern Equatoria	
	Normal year food economy (%)	Households with few cattle (%)	Normal year food economy (%)	Households with few cattle (%)	Normal year food economy (%)	Households with few cattle (%)
Milk	25	5	30	15	20	20
Meat ¹	5	0	10	10	45	45
Exchange	15	5	20	10	5	10
Fish	20	15	10	20	-	-
Wild food	10	20	5	10	5	5
Crops	25	55	25	35	25	10
Gift	-	-	-	-	-	10

¹ Categorized as meat and blood for the Toposa.

The natural environment in the main livestock rearing areas is well-suited to a range of parasitic and vector-borne diseases. Trypanosomiasis, fascioliasis, haemonchosis, tick-borne diseases and biting flies are important, usually chronic problems causing gradual production losses. Various infectious diseases are also present, and these cause both chronic and acute losses. Examples include contagious bovine pleuropneumonia (CBPP) and foot and mouth disease (FMD).

2.1.2 The social value of livestock

In African pastoral society, the concept of "social capital" is meaningless outside the possession of livestock (RWA International/Vetwork UK, 2000):

"The major life cycle events such as births, marriages and deaths often involve ceremonies that require the provision or exchange of livestock. Marriage is more commonly an alliance between groups than a personal relationship of two individuals. A union between a man and a woman – even one to which children have been born – will not be socially recognised unless livestock have been exchanged as bride wealth or dowry. Compensation for crimes and misdemeanours is often paid in livestock. It is because livestock are indispensable in building and consolidating social relationships, as much as for economic reasons, that a pastoralist without livestock not only lacks the means of physical survival, he also ceases to have a social identity".

In southern Sudan cattle are by far the most important type of livestock with regards social capital. The desire to acquire cattle (and other livestock) tends to dominate how people behave and their interactions with each other, their environment and the world in general. For the Nuer,

".....most of their social behaviour directly concerns their cattle.....They are always talking about their beasts. I used sometimes to despair that I never discussed anything with the young men but livestock and girls, and even the subject of girls led inevitably to that of cattle. Start on whatever subject I would, and approach it from whatever angle, we would soon be talking of cows and oxen, heifers and steers, rams and sheep, he-goats and she-goats, calves and lambs and kids. I have already indicated that this obsession - for such it seems to an outsider -is due not only to the great economic value of cattle but also to the fact that they are links in numerous social relationships. Nuer tend to define all social processes and relationships in terms of cattle. Their social idiom is a bovine idiom. Most of their social activities concern cattle and 'cherchez la vache' is the best advice that can be given to those who desire to understand Nuer behaviour."
(Evans-Pritchard, 1940: 18-19)

Over 50 years later and despite the influences of religion, money, conflict and aid the neighbouring Dinka were still cattle-centric:

"Cattle play an essential role in Dinka society, providing not only milk and dowry, but performing important social functions and determining a man's position and influence in the community. A song bull, while not productive in the sense of providing milk and meat, is a source of great pride, prestige and possible influence. The value of a song bull is determined by an animal's size, colour and shape of the horns. To be Dinka you must own cattle. Cattle provide the means by which kinship ties are made and maintained, a process for ensuring the long term viability of the household and a means of receiving support and animals in the event of disaster."

(Iles, 1994: 12)

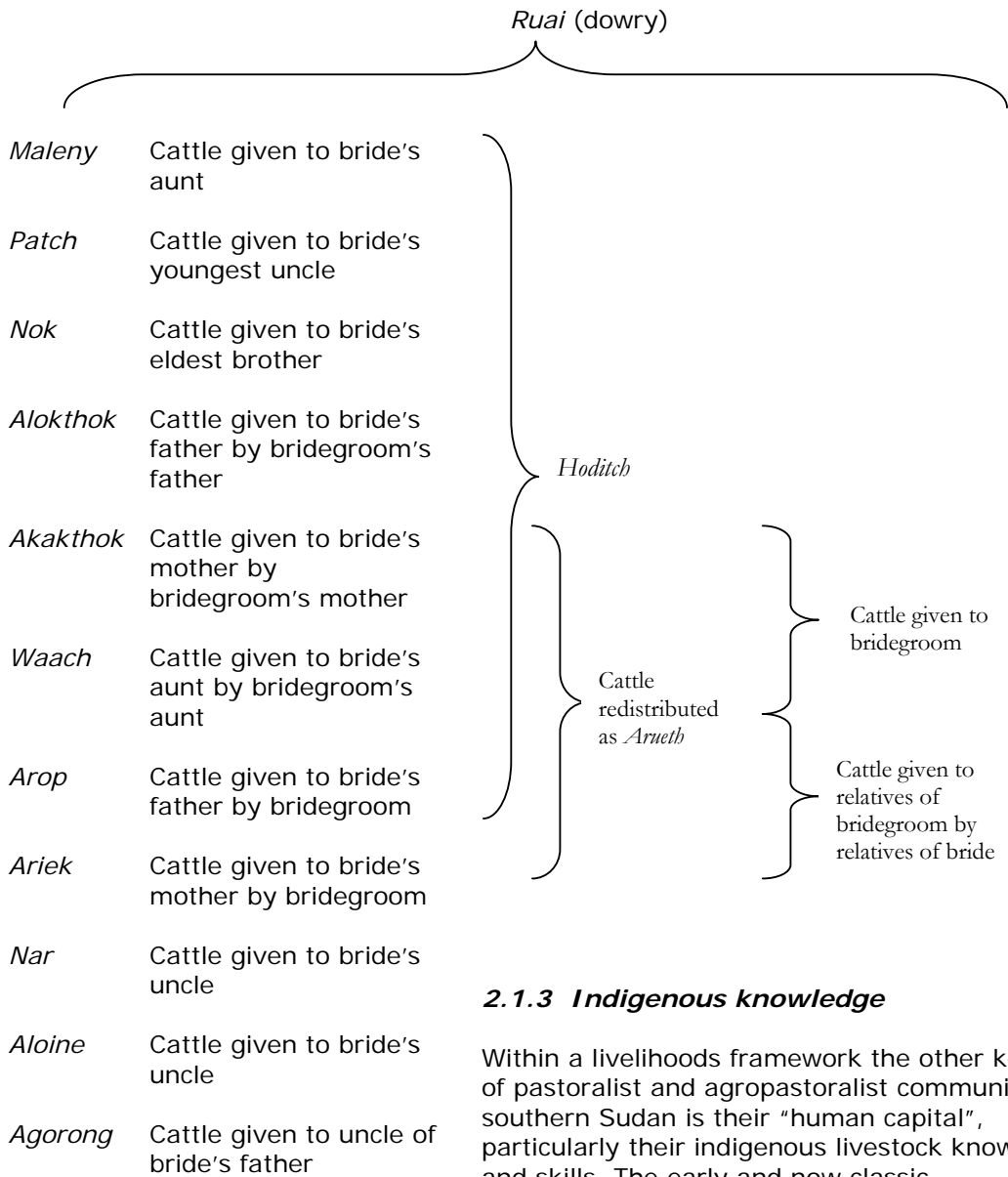
Social cohesion is based on the exchange of cattle during marriage plus complex systems of loans, gifts and co-ownership or joint decision-making about cattle between kinfolk and friends. Among the Dinka and Nuer, daughters are prized as future sources of cattle to be acquired through marriage, and young unmarried men strive to acquire cattle as soon as possible in order to marry. Deng (1987) provides a detailed explanation of the way in which *"The Dinka family is founded on bride wealth"* and explains how the exchange of cattle at marriage extends far beyond an economic transaction into the core of Dinka kinship relationships. Similarly, Harragin (1998) describes how bride wealth cattle are sometimes called *hok ruai* (the cows of relationship) *"because of the relationship they create"*.

When assessing traditional restocking mechanisms in southern Sudan, Iles (1994) noted the importance of the marriage of daughters as a means for poorer households to re-acquire cattle. The complexity of dowry payments was explained, including the transfer of cattle from the bridegroom's relatives to their opposite number in the bride's family (a process called *hotich*), plus the transfer of cattle to both the bride's and bridegroom's families (a process called *arueth*). The complicated two-way flows of cattle act to *"form new kinships and cement existing relationships"* (Figure 2.3).

The outcome is that the bride's father may acquire about half of the animals in the dowry and her relatives receive about 25%. The bridegroom's family receive about 10% of the dowry and the bridegroom himself between 15% and 25%. Traditional restocking systems were judged to be so robust in 1994 that restocking by aid agencies was considered to be unnecessary (Iles, 1994). Although traditionally the focus has been on

cattle, bride wealth can now include other types of livestock and in some cases, the use of non-livestock items or cash (Hutchinson, 1996). Regardless of these changes, cattle are still the basis for social transactions in the livestock-rearing areas of southern Sudan.

Figure 2.3
Example of the distribution of cattle as dowry, Agar Dinka, Akot (source: Iles, 1994)



2.1.3 Indigenous knowledge

Within a livelihoods framework the other key asset of pastoralist and agropastoralist communities in southern Sudan is their "human capital", particularly their indigenous livestock knowledge and skills. The early and now classic anthropological texts on the Nuer (Evans-Pritchard, 1940) and Dinka (Leinhardt, 1961) note numerous local names for livestock diseases and parasites, and describe rational practices such as the use of smoke to repel biting flies. In the veterinary literature, a Dinka word for tsetse fly *mau* was noted in 1869 and a Dinka name for trypanosomosis *jong alel* derives from the origins of the disease in the southerly ironstone hills (Lewis, 1949). More recently, Dinka indigenous veterinary knowledge was described by Schwabe and Kuojok (1981). This account noted an understanding of basic anatomy and provided detailed descriptions and names for livestock disease, plus awareness of disease-spread by direct contact between animals and by vectors. Surgical and obstetrical procedures were also described. As explained

later in section 3, recognition of indigenous livestock knowledge and skills proved to be an important and unusual aspect of livestock interventions in southern Sudan from 1993 onwards, particularly in relation to the design of community-based interventions and training methods.

2.1.4 Livestock, cash and markets

The sale of livestock for cash has taken place in the south since monetarisation, and the changing attitudes of the Dinka (Deng, 1987) and Nuer (Hutchinson, 1996) concerning the exchange of cattle for money are well described in the literature. Although pastoralists and agropastoralists are widely perceived as highly conservative, experiences in southern Sudan match a general trend among herders in the Horn of Africa towards greater use of markets and diversification of livelihood strategies, assuming that markets and services become available. The extent to which markets have functioned in southern Sudan is a major livelihoods issue, particularly from the perspective of changing market opportunities during the last few years. These trends are discussed in more detail in section 2.2.4.

2.2 Vulnerability

Despite an apparently strong asset-base, pastoralist and agropastoralist communities in southern Sudan are among the most food insecure groups. Their vulnerability relates primarily to exploitation and conflict over nearly 200 years, resulting in a gradual erosion of traditional safety nets and social networks. Superimposed on the persistent conflict were repeated shocks such as droughts, crop pests and animal disease epidemics, and seasonal variations in food availability.

2.2.1 Conflict and vulnerability

Although the civil war in Sudan from 1956 indicates that conflict is a relatively modern (albeit long-term) phenomena, agropastoral and pastoral groups in the south have been subjected to violent interventions from the north since the early 1820s or before. For example, in Bahr el Ghazal successive periods of Turko-Egyptian and Mahdia rule were characterised by slavery and repeated raiding of Dinka grain and livestock (Keen, 1994). Early British rule included suppression of Dinka and Nuer uprisings (a response to forced labour and heavy livestock taxes) leading to widespread destruction and appropriation of Dinka cattle. The British also marginalised the south in terms of access and development, preferring to invest their infrastructure and education in areas of the north that could produce cash crops such as cotton.

The onset of civil war in Sudan in 1956 and the alignment of the Dinka with the southern rebels led to counter-insurgency warfare based on raids by Arab Rizeigat and Misseriya militia into Dinka territory which were repeated over more than 25 years. The early 1990s saw increased GoS military expenditure, greater commitment to counter-insurgency and adoption of scorched-earth tactics i.e. the systematic destruction of areas harbouring rebels and the forced displacement of local communities (Deng, 1999; 2002). In Dinka areas these tactics consistently included large-scale cattle raiding.

In contrast to other capital assets, livestock have sometimes been regarded as a useful asset in the face of conflict. Assuming that sufficient warning of conflict is given animals can be moved to safe areas whereas crops and other less mobile assets are left behind. There are exceptions to this general rule. For example, splits in the SPLA in 1990s led to the emergence of an anti-SPLA militia under the command of Kerubino Bol. Unlike the seasonal raids of Arab groups, the Kerubino forces were Dinka militia who were present all year round and who also knew how best to attack Dinka communities. Deng (1999) cites SRRRA estimates of livestock losses during the 1990s at almost 60% in northern

Bahr el Ghazal, with more than 40% of families losing all their animals. Livestock losses during the 1990s were a contributory factor to the famine in Bahr el Ghazal in 1998.

In addition to violence and vulnerability associated with war is the practice of cattle raiding between neighbouring pastoral and agropastoral groups. Traditionally such raiding was regulated by social norms, such as not killing uninitiated boys and women. Raiding was a way of obtaining cows for marriage or as a restocking mechanism after severe losses from disease epidemics. It did not result in significant human deaths. The introduction of small arms, breakdown of social norms and increased vulnerability due to the civil war and drought changed this. In the 1980s and 1990s, inter-ethnic livestock raiding between the Nuer and Dinka within southern Sudan became a serious problem. Around the same time, raiding across borders also occurred, particularly between the Toposa in the south and the Turkana in northwest Kenya. These raids were characterised by excessive violence and the theft of such large numbers of animals that whole communities were left destitute and even more vulnerable. Large areas of potential grazing land became 'no go' areas and traditional contact mechanisms (inter-marriage, negotiations over grazing rights and water access) between groups broke down. The militarization of youth made matters worse with revenge attacks, breakdown of the authority of the elders and a growing cycle of violence that could be exploited by politicians and militias.

This situation was compounded in the late 1990s by the GoS drive to access the oil beneath Nuer grazing lands of Western and Eastern Upper Nile. Rather than risk their investment and the safety of foreign oil company workers, a scorched earth policy was used to shift populations sympathetic to southern rebels away from oil wells, pump stations and pipelines. The arming of militias to carry out this work was relatively easy because youths and young men had become accustomed to war and conflict, and the capacity of traditional leadership to control them was waning. Re-arming of militia groups also enabled them to carry out revenge attacks to recover raided cattle. The GoS strategy was very effective, and was followed up with spurious development projects by the oil companies, keen to win the support of people who were left behind.

The conflict, raiding and land clearances were devastating in terms of providing effective relief or any development work. As described later in the case study, the OLS Livestock Programme coped better most other sectors because it had invested in raising awareness of livestock owners and training community-based animal health workers (CAHWs) - the livestock programme moved with the people. However, the programme also had to adapt to the conflict by finding ways to supply highly mobile CAHWs with drugs and vaccines, and with further training of Nuer stock persons in Lokichokio rather than Upper Nile.

In Eastern Equatoria the situation was relatively better than Upper Nile. In the later 1990s the African Union/Interafrican Bureau for Animal Resources (AU/IBAR) had started to link animal health service delivery with community-based conflict management and resolution. These efforts proved extremely effective in reducing the scale of livestock raiding (Minear 2001; AU/IBAR 2005). However it should be noted that Eastern Equatoria had not seen the same levels of north-south conflict or oil-related violence as Nuer and Dinka areas of Upper Nile and Bahr el Ghazal. The successes in Eastern Equatoria led to an expansion of the community-based conflict management linked to livestock peace dividends within USAID's Sudan Peace Fund which teamed up PACT, New Sudan Council of Churches, AU/IBAR, Christian Aid and numerous CBOs in a joint capacity building and peace effort.

2.2.2 Seasonality and drought

The pastoralist year, such as that of the Toposa, is characterised by marked seasonal variations in food availability by food type. Milk supply depends on the time of calving,

and available and accessible grazing resources and water. Most pastoralists manage livestock breeding so that births coincide with good pasture. This means that offspring are born during the wet season or early dry season, and that milk, for both calves and people, is most available from around May through August. Crop production is also planned according to the wet season, with planting in April and May, and harvesting in July and August. As the dry season progresses from November onwards, supplies of grain and milk begin to decline and there is increasing reliance on wild foods, blood from cattle (sometimes mixed with milk) and the sale or exchange of livestock for grain. At this time the market value of livestock tends to be low because animals are in relatively poor condition, but market supply is high. In contrast, grain prices are high due to high demand for grain but relatively low supply. These seasonal trends result in a regular, annual period of human nutritional stress commonly, called the "hunger gap", towards the end of the dry season and into the main wet season. Similar seasonal patterns of food availability are evident in agropastoral areas. However, the dry season cattle camps in the *toic* provide relatively good grazing and milk supply can be maintained until the rains. Children, teenagers and the few adults who accompany the cattle to the cattle camps rely on little more than milk, fish and wild foods for up to four months or more.

Marked seasonality in pastoral and agropastoral systems relates directly to vulnerability. If the rains are delayed or shortened, the result is less milk and less grain leading to a longer hunger gap at the end of the dry season and into the wet season. If conflict affects access to grazing areas, such as good dry-season *toic*, milk supplies fall. Other forms of conflict can cause displacement during the planting season and then harvests are poor and cannot be recovered until the following year. In drought years, agropastoralists and pastoralists are especially vulnerable because both crop and milk production depends on rainfall. Consequently, drought is a major shock resulting in slaughter and sale of livestock, and increased risk of raids by neighbouring groups (who want to replenish their own herds).

The literature on pastoralism, drought and famine not only highlights the linkages between animals, rain and human hunger but also the disproportionate impact of drought on children. Pastoralist children are particularly susceptible to interruptions in milk supply because they consume relatively more milk than adults (who consume more grains) and infants (who are breast-fed), and they depend more on mixed milk-grain dishes (such as various types of porridge) as a means to digest grain. The Dinka and Nuer are known to prioritise milk as a food for children, with adults ensuring that when milk supply is limited, children still have access to it. Contrary to famine data from many pastoralist or agropastoralist areas where child mortality far exceeds that of adults, child deaths among Dinka children were only marginally higher than adult deaths in the 1998 famine in Bahr el Ghazal (Deng, 1999).

Erratic rainfall in the southern Sudanese lowlands means that on average one in three crop plantings fail. Risk of crop failure is further increased by conflict (having to flee before harvest), bird damage, disease and army worm attacks. Crop failures can be remarkably localised with one district having poor harvests whilst neighbouring districts have surplus production. This vulnerability to shortage of food grains has encouraged sophisticated exchange mechanisms to develop both within pastoralist communities and with neighbouring tribes who enjoy more reliable and higher rainfall, and who therefore specialise in crop production. Exchange of livestock, particularly cattle, for grains remains strong and mainly occurs during the pre-harvest hunger gap and post harvest. The rate of exchange depends on the success of the harvest within given districts and the abundance of cattle (see section 2.2.2). In some areas of south western Bahr el Ghazal symbiotic relationships exist between Dinka and agricultural tribes whereby the Dinka keep the cattle belonging to these tribes in return for the grains they grow.

2.2.3 Livestock diseases as livelihood shocks

The dependency of agropastoralists on livestock and crops makes them vulnerable to epidemics of animal and crop diseases. In the case of livestock, when a disease like rinderpest disappears from an area it can be difficult to appreciate its former impact. Rinderpest is an acute and highly contagious viral disease which primarily affects cattle, but also some species of wildlife. The disease was introduced into Africa in the late 1880s when cattle were the main source of wealth in rural African communities, from settled farmers to pastoralists. By the early 1890s it had spread throughout the continent and killed 90-95% of the cattle population. The impact on rural people was devastating. In Ethiopia oxen were used in the highlands for ploughing and in the lowlands by pastoralists. Cattle deaths due to rinderpest led to massive reductions in the availability of grain, milk and meat. Approximately one-third of Ethiopians died – by today's figures this would amount to around 20 million people. In east Africa the disease effectively changed the face of pastoralism. Powerful tribes such as the Maasai became impoverished and less able to resist pressures from colonisers, agriculturalists and ranchers. The Maasai never recovered their former wealth and influence, and today are among the many marginalised pastoralist societies in Africa. One hundred years later rinderpest was still a major problem in Africa. For example, an outbreak in Nigeria in the early 1980s caused losses in the region of \$2 billion (Baird, 2000)¹.

The southern Sudanese have various names for rinderpest and these names tend to reflect the devastating nature of the disease on their cattle and livelihoods. For example, the Dinka Bor call it *nyan tek* meaning 'one calf remains'. When community-based animal health services were first introduced into southern Sudan under UNICEF-OLS in 1993, rinderpest was reported almost daily (Riek Gai Kok, cited in Tunbridge, 2005). Annual mortality in endemic areas is approximately 10% although losses in naïve herds can be much higher. Although rinderpest is now under control, other epidemic diseases affect southern Sudanese livestock. Foot and mouth disease continues to cause important production losses and calf deaths, CBPP is endemic, and East coast fever is an important emerging problem in Equatoria and Jonglei.

2.2.4 Livestock marketing trends

Livestock auctions have been a feature of southern Sudan market towns since before independence. As conflict and insecurity cut off the supply of goods and services for purchase, these auctions were curtailed. However since the mid 1990s the supply of goods and services gradually increased again. NGOs started to bring in commodities such as soap and salt to pay their workers and these items often ended up in markets. As border and road access improved, second-hand clothes and consumables found ready markets.

From 1994 the community-based animal health programme of OLS introduced payment for services and so livestock keepers had to acquire cash to pay for veterinary care. This usually meant selling animals, and local markets in some areas began to grow. Marketing activities gradually gained momentum and increased rapidly in 1998 and 1999. Livestock traders taking cattle out of Sudan found few border controls and they returned with trade goods for sale and purchased more cattle from the proceeds. By 2002 trade had again reduced and a pattern that still exists was established.

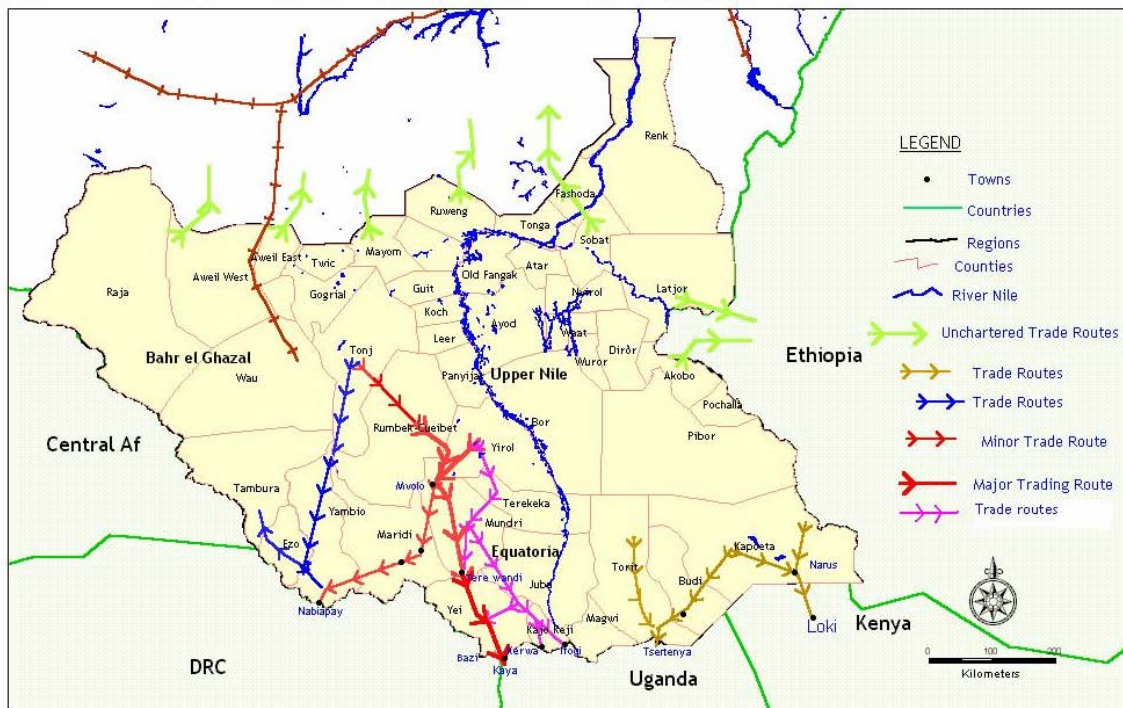
A major livestock trade route was for cattle to be walked from Bahr el Ghazal and Lakes to northern Uganda (35-40 days) and then trucked to slaughter (Figure 2.4). A smaller route existed whereby animals were walked from Toposa areas of Eastern Equatoria to

¹ In 1999 the World Food Prize (the "Nobel Prize for Food") was awarded to Dr. Walter Plowright, the veterinarian who developed the first tissue-culture rinderpest vaccine (Baird, 2000). This international recognition of the link between livestock disease and human food security reflected the impact of rinderpest eradication on livelihoods. FAO estimated that increased livestock production in India due to rinderpest control between 1965 and 1998 amounted to \$289 billion and in Africa, \$47 billion.

Narus and then trucked through Lokichokio to Nairobi for slaughter. Small numbers of animal would also be walked northwards to Kordofan and Darfur from Bahr El Ghazal, and to Malakal and Ethiopia from the Sobat Basin. It was estimated that animals crossing from Western Equatoria into northern Uganda declined from 24,000 heads per year in 1999 to 10,000 head per year in 2002 because the Ugandan authorities tightened their cross-border movement controls (King and Mukasa-Mugerwa, 2002). Also, traders formed a cartel to keep prices high in northern Uganda by restricting the number of animals crossing the border, and there were bureaucratic delays and unofficial taxes by the SPLA and border officials which made the business less profitable.

In response to rapidly growing trade to Kenya, an agreement was brokered by AU/IBAR and Unicef OLS between Kenya's Department of Veterinary Services, Kenyan traders and SRRA officials to control, but not stop, the flow of animals across the border. However the last outbreak of rinderpest in southern Sudan in 1998 quickly led to the closure of the border to official trade.

Figure 2.4
Cattle trade routes in southern Sudan (source: King and Mukusa-Mugerwa, 2002)



Despite these institutional barriers to cross-border trade the future prospects for trade in livestock are good, particularly for cattle. With the signing of the peace accord it should be possible to invest in infra-structure, trade agreements and policies to promote trade. Key constraints include lack of recognised and serviced stock routes with watering points, unofficial taxation, and lack of holding grounds or quarantine agreements. Enabling policies and institutions will be crucial for encouraging private sector investment. Cross-border livestock trade opportunities are numerous and include trade of animals with Uganda, Kenya, Democratic Republic of Congo and northern Sudan. Ironically, trade with the north will be influenced by problems in Darfur and reduced movement of livestock out of Darfur. Although the SPLM outlook is towards its southern neighbours, the GoS has proved adept at opening up markets in the Middle East and Egypt. The private sector in the north has invested heavily in slaughter and holding

facilities (Aklilu, 2003). Potentially, these benefits could be passed on to the southern livestock keepers, if equitably administered.

Other opportunities for southern livestock owners arise from urbanisation, and relatively high demands for meat and milk from town dwellers. The rehabilitation and expansion of major towns in the south, plus inflows of returnees, could provide a growing urban market for livestock producers.

2.2.4 Vulnerability and complexity

Despite the separate listing of vulnerability issues in the preceding sections, severe food deficits and famine in southern Sudan have often arisen due to a combination of factors. In his detailed analysis of the famine in Bahr el Ghazal in 1998, in which 100,000 people died, Deng (1999) explains the interplay between historical trends, drought, and the depletion of herds and interruption of planting due to severe conflict (between pro-GoS Dinka militia and the SPLA). He also discusses the failure of exchanges, including the behaviour of markets and the inability of traditional redistribution mechanisms to cope with livestock and grain losses on a very large scale. The response of the SPLM and OLS was also inadequate. The Bahr el Ghazal famine was unusual because conflict-related livestock losses were partly attributable to fighting within the Dinka community rather than between the Dinka and other ethnic groups. In this situation, wealthier households with more cattle were more susceptible to violence because their attackers had intimate knowledge of cattle ownership and distribution (Deng, 2002). Here, cattle could be regarded as a liability unless higher-level and non-supportive policy and institutional frameworks for asset ownership are considered (see section 2.3). Given the intimate character of the Dinka-Dinka conflict, virtually any physical and removable item associated with wealth would be targeted.

The pastoralist areas of Eastern Equatoria have been one of the most food insecure areas of southern Sudan for many years due to conflict between tribes (including cattle raiding and competition for grazing land and water), but exacerbated by drought. Conflict has reduced human and livestock movements, and opportunities for trade. Food economy surveys report reduced cattle production, especially milk yields (Fielding *et al.*, 2000). Exchange of cattle from the semi-arid areas with grain grown in the more fertile and higher rainfall areas of Western Equatoria is a major strategy for accessing food in years with poor harvests. Insecurity and changes in the control of towns between the GoS and SPLA restricted access to trading centres. In 2003 local peace agreements between some of the tribes reduced cattle raiding, improved mobility and agricultural production. Livestock prices were expected to rise due to high grain surplus in the area and improved cross-border trade (ANA 2003-2004).

A general finding is that for all of the main livestock-keeping areas in southern Sudan, changes in food insecurity and poverty have been consistently linked to ownership of livestock or access to livestock-derived benefits.

2.3 Policies and institutions

This section summarises the general policy and institutional determinants of pastoral and agropastoral livelihoods in southern Sudan. More specific livestock-related policies and institutions are discussed in section 3.

For decades, the overriding institutional framework affecting people in the south was one in which the GoS and SPLM pursued a violent resolution to the civil war. Despite being signatories to the tripartite agreement which allowed OLS to exist, persistent conflict hindered access to vulnerable communities and repeatedly undermined or destroyed their assets. In the context of this relentless insecurity, meaningful investment in, or protection of any material asset becomes difficult to achieve. Whether your wealth is

measured in cash, jewellery, livestock or other items, the big institutions affecting your life simply don't want you to be anything other than chronically vulnerable. GoS development policies in the north were largely irrelevant in the south, even in GoS-controlled areas. Economic policies focussing on the export of oil and livestock were commonly expressed as violent interventions by GoS forces and more so, militias in the south.

At the macro-level, the international community allowed war and atrocities to continue. For decades, foreign governments, the UN, IGAD and the OAU lacked either the will or the capacity for meaningful facilitation of conflict resolution. The combination of complex regional politics linked to the Middle East, key resources in Sudan such as oil and water, and GoS political guile led to a chronic conflict which was often forgotten on the international scene. Around one million people died and about three million people were displaced in southern Sudan during the early and mid 1980s. It was not until 250,000 people died in 1988 that OLS was created via a UN agreement with the GoS and SPLA/M. Although OLS was certainly a milestone in the history of humanitarian intervention and has kept large numbers of southern Sudanese alive during the last 15 years, the "lifeline" in OLS has been the thinnest of threads. In early 2005, southern Sudan has the some of the worst poverty indicators anywhere in the world. The New Sudan Centre for Statistics and Evaluation (NSCSE) estimates that 90% of the population lives on less than one US dollar a day, primary school enrolment is the lowest in the world, infant mortality is 150/1000 live births and under-five mortality is 250/1000. While this analysis of the macro-institutional environment may seem overly harsh, the status of the Darfur conflict at the time of writing in early 2005 re-enforces the notion of chronic impotence within global and regional institutions.

Despite the humanitarian successes of OLS, there is little doubt that repeated cycles of short-term relief have contributed to the limited structures, systems and capacity which are now on the ground. In addition, policy incoherence between and within donors, and between and within UN agencies, has been a feature of OLS as much as it is a feature of aid in general. For example, in 1993 the US government began supporting capacity building in southern Sudan with a view to addressing relief needs while also developing a rehabilitation perspective. In 1996 the Clinton Administration's inter-agency review of its Sudan policy opened the door for US development assistance to support democracy and good governance programmes in SPLM-controlled areas, which were later approved in 1997. The message was clear – the US does not recognise GoS sovereignty in the south. Almost simultaneously DFID was sending a very different, albeit muddled message, by adhering to a strict relief policy and the principle of neutrality (Harvey and Campbell, 1998). Here the message was "nothing but food aid until a 'representative government' is present in the south".

In the post 9/11 period the policies of nearly all the major donors have shifted from "aid for poverty reduction" to "aid for security". The often unwritten component of these aid policies emphasises security concerns in relation to international terrorism and states which are perceived by the west to support Islamic fundamentalism. It follows that conflicts involving these states tend to be prioritised by western governments, and war in Sudan is no exception. Following the signing of the Comprehensive Peace Agreement between the GoS and SPLM in January 2005 at least two distinct bodies of opinion are evident in terms of future directions. One group see the peace agreement as the start of a linear process of rehabilitation and then development. In this scenario peace is lasting and conflict will not seriously interrupt a 'transitional period'. This scenario is appealing to donors because large sums of money can be earmarked for an apparently seamless shift towards strong, representative southern governance and economic growth. The alternative view predicts a more chaotic scenario in which conflict at various levels will continue to seriously affect livelihoods and the South Sudan administration will be exposed to a myriad of large-scale but incoherent donor interests. In this scenario, the

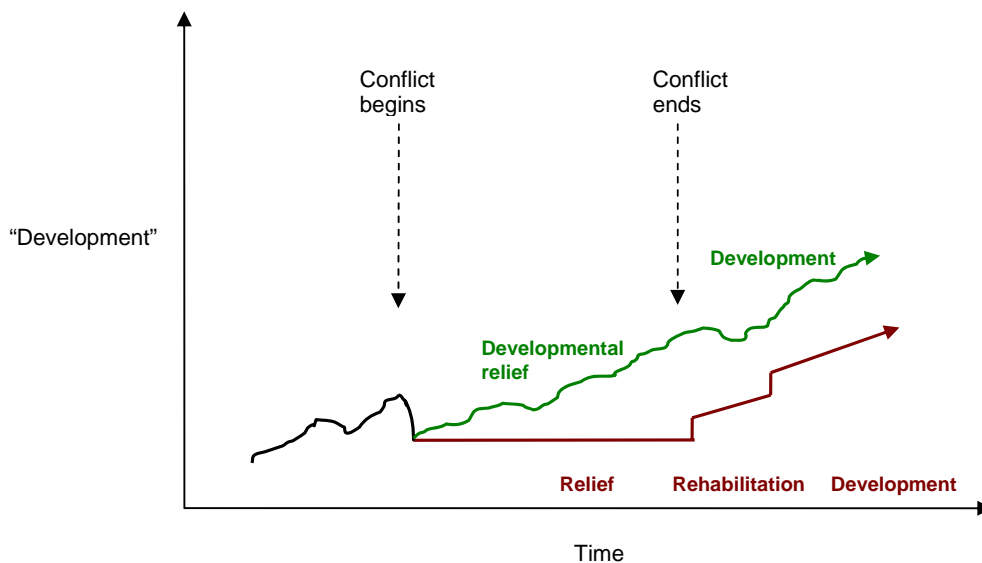
capacity of the new administration to manage donors becomes a major determinant of sustainable development.

3. Livestock Interventions and Policy Process

Typical relief interventions are short-term, rapid and aim to save human lives. Agencies operate within a framework of humanitarian principles which stresses the importance of neutrality and impartiality. In contrast, developmental relief thinking assumes that something more than relief is possible, particularly in chronic emergencies. Rather than seeing people as passive recipients of aid which is designed and delivered by outsiders, developmental relief looks more at community participation and joint identification of problems and solutions. Inevitably, working with local actors can compromise conventional humanitarian principles. The implications of developmental relief are many, but include far more effective use of aid during a chronic emergency and greater impact on people. In the case of chronic conflicts, it is assumed that developmental relief allows for a smoother resumption of development approaches when conflict is resolved.

The differences between a conventional relief-to-rehabilitation-to-development progression and developmental relief are illustrated in a simplified form in Figure 3.1. The red line traces the transition according to the structures and funding arrangements of most aid actors. There are clear separations between relief, rehabilitation and development, and a linear relationship between them. As conflict ends, a rehabilitation phase kicks in to be followed by development. During the relief phase there is no development because aid policies focus on saving humans lives; in long-term crises relief involves repeated cycles of emergency inputs. In contrast, developmental relief aims to encourage development-like processes as soon as possible and prepare people, organisations and institutions for peace and development. The implications of developmental relief are also illustrated viz. a higher level of development at the cessation of conflict and a smoother transition towards the onset of development support.

Figure 3.1
Developmental relief versus the relief-to-rehabilitation-to-development transition



Thinking on livelihoods approaches in complex emergencies moves on from developmental relief and encompasses both immediate needs, and the protection and enhancement of assets. It also includes attention to policy and institutional issues, at various levels, which affect livelihoods.

Livestock relief interventions in pastoralist areas of Africa can take various forms including destocking, restocking, supplementary livestock feeding, provision of water, veterinary care and transport subsidies (for traders). With the aim of learning lessons from a long-term set of relief interventions which adopted a more developmental-relief approach, this section of the case study focuses on the OLS Southern Sector Livestock Programme from 1993 to early 2005. We describe the historical context of the programme and explain how various internal and external actors influenced how policies arose and were implemented. These policies included rinderpest eradication, support to community-based delivery systems, and policies on payment for services, local capacity building and involvement of the southern Sudanese diaspora. Strong co-ordination mechanisms were developed, best practice guidelines were formulated and used, and residential training centres for animal health workers were established. In 2004, these centres were handed over from NGO management to the SPLM. Clearly, these achievements fall outside of relief work as it is commonly defined. Other than animal health, livestock interventions have been patchy and localised. They include assessment of the use of animals for draught power and traction (Simalenga, 1996), and development of improved small livestock production systems (poultry, rabbits, guinea pig). In some cases, comprehensive feasibility studies have been conducted which indicated that certain types of intervention were not needed; the study on restocking is a good example of this (Iles, 1994).

The main actors involved in livestock policy processes in southern Sudan can be considered by reference to three distinct periods of interaction viz. the period immediately before the onset of OLS, the initial period of community-based delivery systems under UNICEF (1993 to 1999), and the recent period of co-ordination under FAO TCE (2000 to present).

3.1 The pre-OLS period (before 1989)

Dominant policy narrative *“Rinderpest eradication is a waste of time. We can only do ‘fire engine’ livestock interventions and these must all be free-of-charge. Involving local people compromises our neutrality – anyway, what do pastoralists know?”* (The veterinary establishment, NGOs, SPLA)

Up to the point of independence in 1956 the development of livestock policies and services in Sudan followed a similar pattern to many other African countries. Colonial administrations invested heavily in livestock services. Veterinary legislation, government departments, vaccine and diagnostic laboratories, and veterinary schools appeared in the early to mid 1900s (Jack, 1961). The onset of war exacerbated the relatively weak services in the south, although policies and services in the north continued to influence the south along the transition zone and in government-held areas.

Policy actors in the period immediately before OLS included donors, NGOs and the SPLA. Both the donors and the SPLA played fairly dominant roles with the former providing the funding and the latter largely determining how projects were implemented on the ground. Heavily influenced by the Marxist ideologies of the Mengistu regime in neighbouring Ethiopia, the SPLA used NGOs such as Norwegian People’s Aid (NPA) to provide free veterinary inputs in SPLA-controlled areas. Although they were more independent in their operations, ICRC also provided free inputs in limited geographical areas of the south. These inputs included relatively modern and expensive veterinary medicines.

In terms of veterinary expertise, neither NPA nor ICRC had much in-house capacity or policies on relief livestock interventions. The prevailing policy narratives of these NGOs were based on conventional short-term relief inputs.

Table 3.1

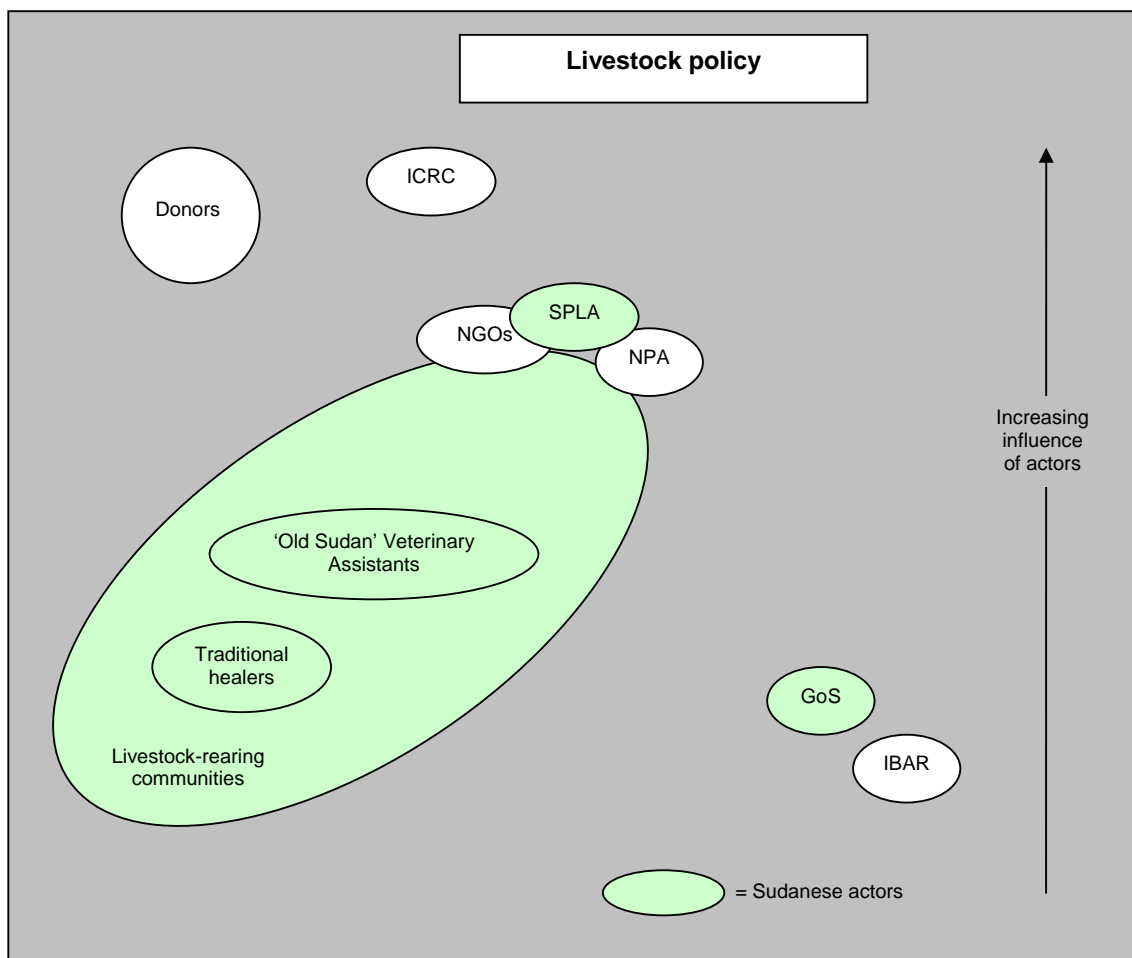
Time-line of policy process in the livestock sector in southern Sudan (source: adapted from Silkin and Kasirye, 2002)

1899-1955	Anglo Egyptian Condominium; Civil Department of Veterinary Services established; first veterinary laboratory built at Malakal, producing rinderpest vaccine; Livestock laws enacted; veterinary school established at the Gordon Memorial College to train diploma holders. Diploma course later extended to a 5-year Bachelor of Veterinary Science programme. War begins in 1955 in the south.
1956-1972	Sudanese independence. An autonomous Ministry of Animal Resources is created. In the north a period of relative economic prosperity with foreign investment in crop and livestock production around Khartoum. Changes in land law encourage mechanised farming schemes which encroach on pastoral lands; increased demand for vets following increase in intensive livestock production; new Faculties of Veterinary Medicine established; "disease free zone" and livestock routes established; 10 regional labs developed. Some private practitioners operating illegally; drugs start to be imported privately, but illegally. The JP-15 programme is launched as a means to eradicate rinderpest in Africa. Addis Ababa agreement (in 1972) ends war and brings a limited degree of autonomy to the south.
1973-1982	Ministry of Animal Resources absorbed into Ministry of Agriculture and provision of livestock services through the Sudanese Directorate of Animal Resources; conventional vaccination campaigns and treatments via government clinics - though an improvement, still limited coverage and ineffective. JP-15 ends in 1976. Despite vaccinating 70 million cattle in 22 African countries, rinderpest sweeps across Ethiopia into Sudan in 1976.
1983-1988	Abrogation of Addis Ababa agreement and re-division of the south. Sudan's legal codes accommodate <i>sharia</i> . War in south intensifies and veterinary services deteriorate. Resumption of civil war. SRRA veterinary co-ordinators appointed in SPLM-controlled areas; government ceases automatic employment of veterinary graduates. The International Monetary Fund declares Sudan bankrupt in 1986; in 1988 ~ 250,000 people starve to death in southern Sudan. In 1986 the multi-donor Pan African Rinderpest Campaign (PARC) of OAU/IBAR is launched. PARC aims to both eradicate rinderpest and promote privatization of veterinary services in Africa.
1989-1992	National Islamic Front government comes to power in late 1989. International isolation contributes to worsening economic conditions. Emergence of the OLS Livestock Programme under Unicef, with focus on vaccination using heat labile vaccines and cold chains; free vaccination and treatments. SPLM splits in 1991/92; increased conflict and government retains control of large areas of the south; access for vaccination teams in greatly reduced. In the north, economic liberalisation initiated. Fee-for-service principle introduced into the public sector; spontaneous privatisation encouraged by liberalisation of drug supply. Free veterinary services discontinued. Livestock and Meat Marketing Corporation privatised as Animal Resources Bank. Veterinary Surgeons Ordinance revised to accommodate private practice.
1993	PARC struggles to control rinderpest in southern Sudan. A new approach to rinderpest vaccination using CAHWs and heat stable rinderpest vaccine. OLS Southern Sector Livestock Co-ordination meetings are re-convened by Unicef in May with participants from SRRA, Tufts University and three NGOs. The need to broaden the programme to cover other livestock diseases is recognised.

- 1994-2000 1994 the SPLA sets up civil administration; relief operations continue to fall under SRRA. Other NGOs invited to join the OLS programme; number of NGOs increases to 12 by 2000; service coverage increases to ~ 80% of rebel-held areas. Unicef leads co-ordination meetings.
- **cost recovery** for drugs introduced in 1994 at a rate of 20%; a radical departure from OLS
 - local **Veterinary Co-ordination Committees** begin to be established for local management
 - MoAFR agrees to set up CAHW programmes in government-held areas (Juba, Malakal, Kapoeta) in 1995; Tufts seconds adviser to the northern sector.
 - second-tier **Animal Health Auxiliaries** supported via establishment of **SSAHATI** in 1996
 - **CAHW manual** for programme implementation and CAHW training developed and adopted in 1997
 - **Northern vets** start attending co-ordination meetings in Lokichokio in 1997
 - Last confirmed outbreak of rinderpest, Torit, 1998.
 - **Minimum Standards and Guidelines** adopted by programme in 1999
 - UNICEF hands over livestock programme to FAO TCE in 2000
- 2000-2004 Global and regional policies on privatised CAHWs emerge from OIE and IBAR respectively. In the north, pro-CAHW policies are consolidated and a new central-level CAHW unit is formed in the MoAFR. Southern Sudan's neighbours – Uganda, Kenya and Ethiopia – develop pro-CAHW legislation and establish central CAHW units. Security gradually improves in many areas of the south, other than Upper Nile. SAAR begins to take on the livestock policy role for the south. SSAHATI handed over to the SAAR.

For the international community, GoS, OAU/IBAR, FAO and livestock keepers, rinderpest control was a priority. Locally, rinderpest was continuing to kill large numbers of cattle in the south but the Pan African Rinderpest Campaign (of OAU/IBAR) was struggling to control the disease. In FAO, the Global Rinderpest Eradication Programme (GREP) realised the importance of the Sudan problem both for Africa and globally. Consequently, the need to eradicate rinderpest was a common objective for a diverse range of policy actors and this commonality continued up to the point of writing in early 2005. In practical terms, insecurity prevented sufficient access to cattle-keeping communities and alternative approaches to vaccination. Reports from FAO and the OAU from around this period reflect a mood of despondency with regards rinderpest eradication. In the north and in GoS held areas of the south, livestock policies focused on mechanised farming schemes and intensive livestock production.

Figure 3.2
Changing policy actors and linkages over time: Before 1989



Regarding community-based approaches, NGOs began supporting CAHW projects in the north and south from the mid 1980s. For example, Oxfam supported a paravet project with Beja communities in North Tokar (Dahir, 1993) and they also worked with ACCOMPLISH², a local NGO in Eastern Equatoria (Almond, 1987). In common with many other NGO CAHW projects in Africa up to the late 1990s, the Sudan projects were effective but often small-scale and isolated from policy debates at national or sub-national levels. Concepts of community participation, indigenous knowledge and local

² Action Committee for the Promotion of Local Initiatives in Self-Help.

capacity to deliver were still largely unheard of within the veterinary establishment in Sudan, its neighbours or the international veterinary establishment.

3.2 Community-based delivery systems under Unicef (1993 to 2000)

Emerging policy narrative *“Rinderpest eradication is possible using community-based approaches. We must involve local players and introduce systems related to future sustainability”* (Unicef, NGOs, AU/IBAR, SPLM, GREP)

With the creation of OLS in 1989, Unicef joined Oxfam, NPA and ICRC as the main agencies involved in livestock work in the south. Rinderpest eradication was still the priority and cold chain delivery systems the approach. Due to heightened conflict, by the end of 1992 ICRC had pulled out of livestock work and the Unicef programme had stagnated.

3.2.1 The introduction and initial impact of community-based delivery systems

In January 1993 a veterinarian from Tufts University was seconded to Unicef to co-ordinate the livestock programme³. At this time, the Tufts vet was the only vet in the programme and the UN base camp in Lokichokio, northern Kenya, was little more than a small collection of tents. The Tufts vet was one of a handful of livestock workers in East Africa who were familiar with new thinking on rural development and in particular, emerging interest in community participation and participatory rural appraisal. Central to these approaches was recognition of local knowledge and skills, and the capacity of poor and marginalised people to conduct their own problems analysis, and suggest solutions. By the early 1990s, such thinking was evident in only a small number of NGO livestock development projects in Africa and Asia and had not been applied in complex emergency situations, other than Afghanistan (by same the Tufts vet).

Using his experience of community-based approaches and participatory assessment gained in Afghanistan, the new Unicef co-ordinator immediately conducted baseline surveys in Bahr el Ghazal and Upper Nile, where rinderpest was rife. These initial surveys were conducted against a background of severe human malnutrition, with 80% of children under-five categorised as critically undernourished⁴.

It was soon realised that Dinka and Nuer herders were extremely knowledgeable about livestock diseases and could be trained to deliver a new heat-stable rinderpest vaccine. Using the principles of participatory rural appraisal a series of social contracts were agreed with community leaders, and local vaccinators were trained and supplied with the vaccine. The key philosophy behind the approach was explained some years later by Leyland (1996) at an FAO GREP technical consultation:

- build on what people already know;
- use and develop people's abilities and skills to analyse and evaluate their findings;
- reveal whether human and material resources are being used efficiently and effectively;
- help people to analyse their individual situations and see how their activities may be altered in a beneficial manner, thus setting local priority needs;
- enable people to study their own methods of organisation and management;

³ Tufts University seconded senior technical staff to fill co-ordination roles in the OLS Livestock Programme in the south from January 1993 to September 2003. From 1996 the Feinstein International Famine Centre of the School Nutrition Science and Policy at Tufts provided these personnel.

⁴ Surveys by the Centre for Disease Control and Prevention, 1993.

- provide good information for making decisions about planning and programme direction;
- increase the sense of collective responsibility for programme development, implementation, monitoring and evaluation;
- identify indicators for monitoring and evaluation to be recorded;
- conclude with a community action plan (sometimes called a social contract).

At this point in time, the programme focussed on working with traditional local institutions and their leaders – the cattle camp leaders, chiefs and sub-chiefs - who were influential and able to mobilise and organise livestock keepers. The cattle camps were existing, well-organised and well-managed groups of livestock keepers under traditional leadership which represented the ideal entry point for the programme⁵. The philosophy and approach of the programme was warmly received on the ground (Leyland, 1996):

Cattle and human diseases are related. Our lives revolve around our cattle. If our cattle die then we start to think about the future of our children and we cry. Sometimes if our cattle die we have to move away from our areas for example to Khartoum..... We like the idea of training people from our communities (to help keep the cattle alive).

(Gatnyoc Tut, head chief, Leek, Western Upper Nile Province)

The cow is considered to be our grand mother. You see me now, I am alive because of the cow. I do not take beer and the best drink is milk. I have 38 wives, these wives where not enslaved but bought with cows in good times. The idea of training people in our communities is a very good one..... The cow is like a human. If our wife is infertile we struggle to take her to the hospital. It is the same for our cows because without our cows our children will die. We must particularly fight the diseases which kill our young cows.

(William Ruei, head chief, Ganyiel, Western Upper Nile Province)

The use of community-based approaches quickly achieved results:

- At the onset of the Unicef OLS Livestock Programme in 1989 the cattle population of southern Sudan was estimated at around 3.75 million. Between 1989 and 1991 the programme vaccinated approximately 284,000 cattle per year using heat-labile vaccine and conventional cold chains. In 1992 the programme came to a virtual standstill as insecurity disrupted cold chains and vaccination teams; only 140,000 cattle were vaccinated that year.
- Community-based animal health approaches and heat-stable vaccine were introduced from 1993, and the number of cattle vaccinated in 1993, 1994 and 1995 was 1,489,706, 1,743,033 and 1,070,927 respectively. Outbreaks of rinderpest were widespread and severe in 1993 and so the vaccination strategy was to cover as many vulnerable animals as possible. The strategy also took account of local knowledge and attitudes. For example, pastoralists knew that older animals which had previously been infected with rinderpest but survived would be immune, and therefore the most vulnerable cattle in need of vaccination were young stock. The use of the PARC method for identifying vaccinated cattle was very unpopular with pastoralists. A clover-leaf ear punch was the official PARC method but this removed a large piece of ear tissue and interfered with

⁵ Note that in development projects, the use of traditional leaders *per se* as a means to access livestock communities is not normally recommended. In contrast to the very practical use of traditional leaders to organize rinderpest vaccination in a relief context, development projects should, ideally, seek a broad range of opinions from community members who differ in terms of status, wealth and gender.

traditional identification and decoration of cattle. The ear punch was replaced with a more acceptable V-shaped ear notch, and this speeded up vaccination.

The dramatic increase in vaccination led agencies such as IBAR and FAO to seriously reconsider the feasibility of rinderpest eradication in Sudan. The 1996 FAO GREP technical consultation commended the “pioneering work” and community-based approaches in southern Sudan. The renewed optimism was justified. Confirmed outbreaks of rinderpest decreased from 11 outbreaks in 1993 to one outbreak in 1997. There have been no confirmed outbreaks of rinderpest in southern Sudan since 1998 and in 2002 the GoS was preparing to declare Sudan provisionally-free of the disease on a zonal basis (Jones *et al.*, 2003).

The SPLM attitude towards rinderpest eradication also changed. At a personal level, SPLM leaders and commanders were cattle owners who saw the impact of rinderpest control using CAHWs. At the level of the movement, immediately before and during the initial period of community-based animal healthcare, the SPLM relationship with OLS and NGOs started to change. For example, in 1991 and 1992 the SPLM/A was weakened by Riak Macher’s split to form the SPLA United and RASS. This caused the SPLA’s siege of Juba to crumble just as the town was about to fall, and left the SPLA in disarray. In 1991, the Mengistu regime fell and the SPLA lost all its bases in Ethiopia; Sudanese refugees and boys had to flee to Kapoeta and Kakuma. In 1992, Kapoeta – the main base for the SPLA in Eastern Equatoria – fell to GoS and Toposa militias; Yirol also fell to the GoS in 1992. By 1993 the SRRA was virtually on its knees. It had no real policies and was extremely reliant upon NGOs and OLS. In this weakened state, the SRRA was very open to suggestions and ideas. This was a dramatic change relative to the more heavy-handed dealing of NGOs by SRRA and SPLM up to 1991.

As early as mid-1993 it became clear to the Unicef/Tufts co-ordinator that a broader community-based animal health programme was feasible in southern Sudan. Livestock keepers were already noticing the impact of rinderpest vaccination and they wanted other diseases to be controlled. In May 1993 he convened the first OLS Livestock Co-ordination Meeting with NGOs, SRRA and RASS, and it was agreed that the programme should expand to include vaccinations and treatments for other diseases. As livestock inputs were not a normal part of Unicef’s work, funding for the livestock programme was always small relative to other programmes (education, water, neo-natal feeding programmes and primary health care). However by 1994 the livestock programme had gained the attention and commitment of both OFDA and ECHO. It was fortunate that the programme advisor within ECHO at the time was willing to bend ECHO rules (which strictly limited their support to humanitarian relief work) to ensure that the more development-orientated livestock work was funded. With the prospect of funding commitments to the sector from these donors, Unicef invited NGOs to join the programme and set up CAHW projects in under-served areas.

3.2.2 Co-ordination, participation and policy

The initial period of community-based delivery systems under Unicef was characterised by strong co-ordination of increasing numbers of NGOs and trained Sudanese animal health workers within OLS (Figure 3.2). Although only Unicef and Oxfam were involved in the programme in 1993, by 2002 there were 1,500 CAHWs under the supervision of approximately 150 local Veterinary Supervisors and Co-ordinators, and 40 NGO field veterinarians and livestock officers from 12 NGOs⁶ (Jones *et al.*, 2003). Some of the specific co-ordination roles included:

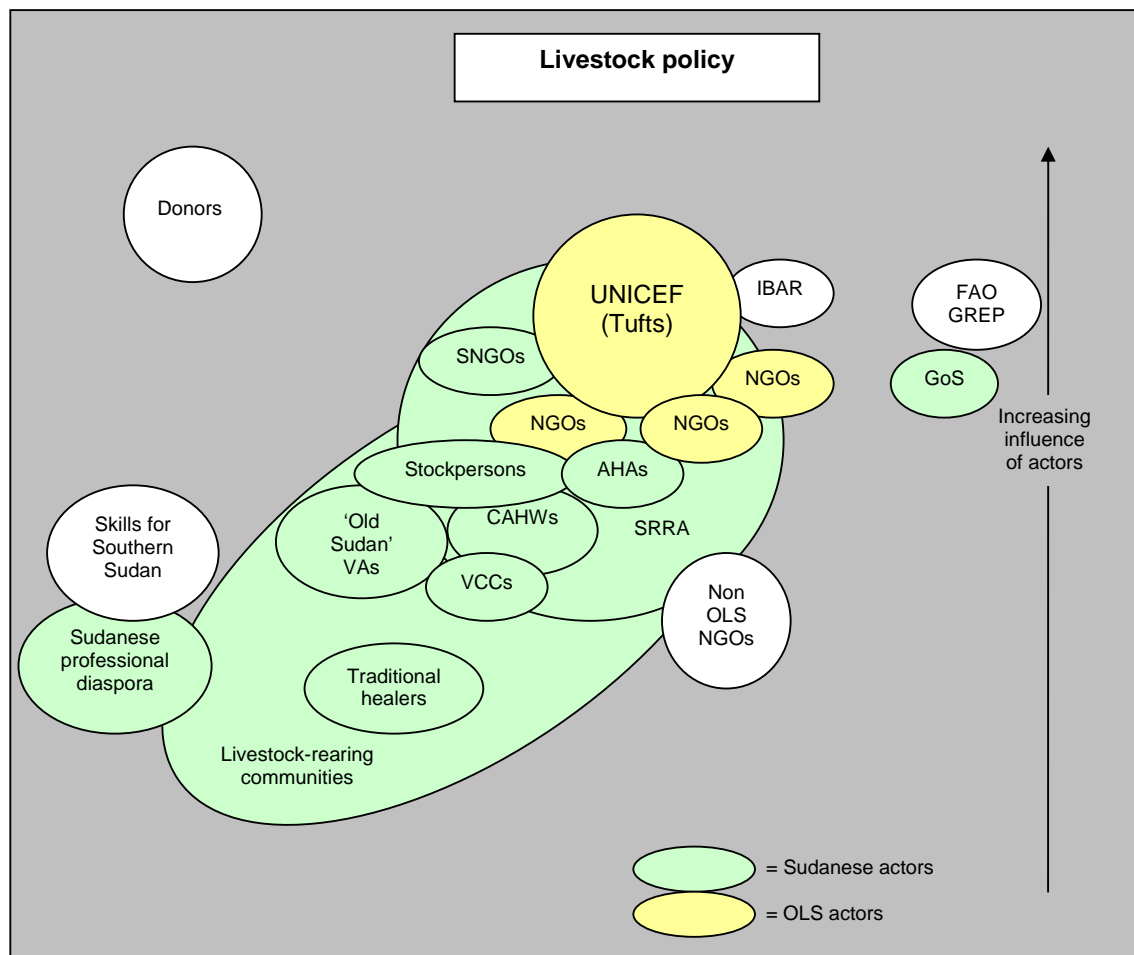
- strategies and supervision of rinderpest vaccination;
- liaison with SRRA and RASS at all levels;

⁶ ACORD, ACROSS, ADRA, CDOT, NPA, Oxfam-GB, SC UK, VSF-B, VSF-CH, VSF-G, Vetwork Services Trust, and World Relief.

- policy direction based on consultation with consortium members;
- rationalisation of the geographical areas to be covered by the various NGOs;
- recommendations and guidance on the approach to working with communities;
- standardisation of participative information collection and training methods;
- standardisation of cost recovery mechanisms (see section 3.2.4);
- standardisation of monitoring indicators and methods;
- bulk purchasing of drugs, vaccines and vaccination equipment;
- provision of basic diagnostic laboratory support;
- contact with international laboratories, particularly for rinderpest diagnosis;
- general technical assistance
- fund raising and support for NGO fund raising.

A standardised training manual for CAHWs was adopted by the programme in 1997 and minimum standards and guidelines in 1999. The training manual covered everything from how to conduct a participatory baseline survey, to how to monitor CAHWs in the field. It also included the standardised CAHW training curriculum.

Figure 3.3
Changing policy actors and linkages over time: UNICEF-OLS 1999



Although not a livestock agency, Unicef's leadership of the programme was assured through its overall leadership of OLS and its successful field application of community-based approaches to rinderpest vaccination and basic veterinary service delivery. Unicef/Tufts staff tried and tested new approaches, and they were able to use practical field experience to inform co-ordination and policies. Their day-to-day field work provided the credibility to lead, without a mandate within the UN system for Unicef to co-ordinate livestock interventions. In addition to this technical know-how, Unicef largely controlled the supply of medicines and vaccines to NGOs. Therefore, another element of co-ordination was the capacity of Unicef to withhold supplies from NGOs who were considered to be non-compliant with best practices.

A review of the dynamics and direction of the livestock co-ordination meetings indicates that policies evolved largely based on clear objectives, and personal interaction and negotiation between actors. The policy objectives were usually identified by Unicef, meaning the small team comprising the Tufts vet and colleagues rather than other Unicef workers involved in the more conventional Unicef activities. These objectives were based on technical experience of Unicef/Tufts livestock staff, lessons from its projects in the field, a constant overview of what the NGOs were doing, plus the consultations with stakeholders. The overall policy agenda centred on the move toward sustainability, bearing in mind that when the war ended the relief money would dry up.

Although NGOs presented progress reports in the co-ordination meetings and referred to data on coverage, input supply, training courses and so on, few policies were supported by research or evidence of impact. As described in sections 3.2.4 to 3.2.7 below, some of the policies proved to be more successful than others. In some cases, such as the VCCs, there were problems even in stable development contexts in neighbouring countries and with hindsight, the application of these approaches in southern Sudan was overly ambitious.

A common point of misunderstanding about the nature of the co-ordination was the level of participation. It might be assumed that because a programme was promoting a community-based system and participatory approaches at community-level, then co-ordination of agencies would be based on some form of complete or absolute involvement and consensus among Unicef and NGOs. In reality, Unicef provided technical direction and led the co-ordination, often by introducing and explaining new ideas to NGOs with limited expertise in community-based animal healthcare. Contrary to UN co-ordination of other sectors within OLS, space was created for consortium partners to voice opinions and concerns, and therefore the co-ordination meetings were novel and relatively participatory events. However, Unicef always had clear objectives. As Dr. Simon Mwangi of VSF-B and formerly of ADRA recalled:

"We sat as equal partners, there was a lot of dialogue and lots of chances for us to air our views. People really shared information at that time. There was a lot of learning going on among the NGOs. But I don't remember much argument, because what was proposed by Unicef often seemed to make sense relative to the conditions on the ground."

Initially dominated by expatriate and Kenyan vets, as more southern Sudanese workers gained experience they became very active participants in co-ordination meetings. A number of informants we interviewed specifically mentioned this 'empowering' aspect of the co-ordination and the rising voice of the Sudanese over time.

As a major group of policy actors in the programme, more analysis of NGO roles is useful. From a livestock perspective the NGOs fell into two main camps. The far bigger camp might be called 'multi-sectoral' NGOs. This group implemented livestock projects, but often as a component of larger programmes; they usually lacked in-house technical capacity to implement veterinary projects. Although these NGOs may have had previous

experience of livestock work, livestock was often regarded as a marginal issue, and key experiences and lessons were rarely collated or contributed towards an organisational memory. The NGOs bought-in veterinary expertise for specific projects - personal experiences and skills were easily lost once the project was completed. For these NGOs, Unicef staff acted as mentors and provided considerable hands-on and material support. For example, if a new NGO joined the programme and their vet was unsure how to train CAHWs, Unicef would work alongside them in the field until the vet gained experience and confidence.

A smaller group of NGOs specialised in livestock work. Despite their common technical interests, they were still a mixed group. Some possessed relatively limited hands-on experience and had a policy of deploying young, often naive expatriate workers in the field. These 'volunteers' often lacked specialised knowledge of tropical production systems or diseases, and had limited understanding of concepts such as community participation. Over time, some 'livestock NGOs' developed long-term, in-house livestock expertise and a few now have considerable organisational memory and know-how. As indicated in Figure 3.2, the 'VSF Group' can now be considered as a specialised group of livestock NGOs with important influence on policy.

3.2.3 Links with the north

An unusual aspect of the livestock programme was co-ordination with government veterinary services in the north. Links with the north were initially tenuous because FAO had an office in Khartoum and was the mandated UN agency to do livestock work with the GoS. Each year FAO would request funding for livestock work from OLS but it never received funds. Eventually it agreed informally that Unicef could proceed with livestock work in government controlled areas of the south and the transition zone. The southern sector livestock co-ordinator (from Tufts) spoke in earnest with Unicef Khartoum and Federal Ministry of Animal Resources about establishing CAHW systems in these areas. Following field assessments and proposal writing, OFDA provided funding for this work and Sudanese vets were training in community-based approaches. The effort was co-ordinated by a new Tufts adviser seconded to OLS northern sector to co-ordinate the livestock programme from Khartoum.

An important element of the evolving north-south collaboration was a pre-existing animosity between Unicef Southern Sector (in Nairobi) and Unicef Northern Sector (in Khartoum) - for workers in the south, Unicef Khartoum was too close to the GoS. By working within the overall OLS umbrella but operating relatively autonomously within Unicef, the small team of FIFC co-ordinators and advisers for the two sectors were able to communicate directly and facilitate contact between vets in the north and south. The collaboration was a result of a shared goal *viz.* rinderpest eradication, and increasing recognition in the north of the value of community-based approaches. As Unicef in the north started to implement projects in GoS garrison towns such as Bentiu, Malakal and Wau they quickly realised that both livestock keepers and CAHWs were constantly crossing the porous boundaries between GoS and rebel-held areas. Therefore, there was a need to harmonise training courses for CAHWs between northern and southern sectors. In addition, GoS areas were sourcing veterinary drugs from Khartoum whereas the southern sector was supplying drugs via Lokichokio in Kenya. Consequently, there was also a need to harmonise prices for CAHW services.

A milestone was a Livestock Co-ordination Meeting in Lokichokio in 1997 attended by vets from the north. These north-south co-ordination meetings were institutionalised and took place regularly from 1997 onwards, sometimes in Lokichokio and sometimes in Khartoum⁷ (e.g. PARC Sudan 1999; 2000). Centred on the need for a co-ordinated north-south approach to rinderpest eradication, the links were fostered by the overall

⁷ The 9th North-South Livestock Co-ordination is due to take place in Khartoum in June 2005.

regional co-ordination of rinderpest activities by AU/IBAR, and AU/IBAR's experience in convening 'Cross border harmonisation' meetings in east Africa. In the late 1990s the UNICEF OLS Livestock Programme co-ordinators in the north and south were both FIFC-seconded staff, and so communication between the two sectors was relatively easy; this also helped to bring vets together from the two sides.

3.2.4 Payment for services

Contrary to other UNICEF programmes and the overall relief mandate of OLS, the livestock programme quickly moved towards the concept of payment for CAHW services. Here the thinking was towards development and sustainability, despite the complex emergency context defined by most aid actors. It was assumed that 'volunteer' CAHWs would not continue to work because in the long-term, people worked for incentives. It was also felt that some level of payment, however small, could be gradually increased over time. The experience of Unicef/Tufts was that livestock keepers were actually willing to pay for services, but the NGOs were reluctant to accept the idea.

The 'fee for service' principle had been introduced in veterinary services in northern Sudan already and within PARC, many countries bordering Sudan were gradually introducing veterinary privatisation policies⁸. Although the direct effect of these policies on southern Sudan was limited, it was also feasible that free veterinary medicines in some parts of the south would fall into the hands of traders and be moved to areas where profits were highest. Veterinary medicines are low-volume high-value commodities in pastoral areas of Africa. The Unicef/Tufts team felt that in the absence of any payment for services in the south, when peace finally arrived services and policies in the south would be far behind neighbouring countries and northern Sudan.

There is little doubt that over the years the service payment policies of the livestock programme were often difficult to implement. In some areas there was simply no cash and so payments were made in kind, or CAHWs provided credit which was never recovered. When in-kind payments were made to CAHWs in animals, there were no markets to convert the animals into cash. Even when payment was made in local currency, the money could not easily be converted to hard currency by NGOs and used to purchase more inputs. Consequently, mechanisms had to be developed to handle the cash and decide how it should be used. In some cases, funds were made available for local projects whereas in other areas, the cash simply disappeared. Despite these problems, there was a clear attitudinal change at community-level and recognition that veterinary care was not automatically provided free-of-charge by aid agencies. All other relief inputs from OLS were free at this time. In early 2005 southern Sudan is surrounded by countries with increasing commitment to privatisation and the possibility of a return to free clinical services by government or NGOs in the south seems unlikely.

3.2.5 Employing southern Sudanese in the programme

In the early 1990s and in-line with typical relief thinking on neutrality, OLS had a strict policy of not employing Sudanese. However, the livestock programme was based on strong communication with livestock keepers and there was a clear need to use local people as translators and trainers. Despite strong opposition within UNICEF, the programme recruited a Dinka interpreter – the first Sudanese to be employed by the UN in southern Sudan. This opened the door and over the years, it became normal practice for the UN agencies and NGOs to employ southern Sudanese in all types of posts, from logistics to professional staff. The use of southern Sudanese vets in the programme was

⁸ It is notable that even when veterinary services are provided by government on a subsidized basis, such as in countries surrounding southern Sudan in the early 1990s, anecdotal evidence points to livestock keepers paying commercial rates for drugs and services from government officers. In other words, the official subsidized fees are unofficially adjusted to local market conditions.

also encouraged by links with the organisation Skills for Southern Sudan which was able to locate vets in the diaspora and place them with NGOs to gain field experience. Some stayed on and are still working. Dr Agol Malok Kwai was a Dinka vet living in Harrogate in the UK in the early 1990s. He is now Director of Animal Health and Disease Control in SAAR⁹.

3.2.6 Local capacity building: Veterinary Co-ordination Committees and Sudanese NGOs

Capacity building, in all its guises, has a long and contentious history in humanitarian assistance (Smillie, 2001) and southern Sudan is no different to other areas in this regard. Community-level groups and committees associated with aid interventions in southern Sudan date back to the mid 1970s. Joint Relief and Rehabilitation Committees, Community-based Relief Committees, Inter-Church Committees and Village Health Committees were among the various groups which were either defunct or still operational by the time USAID supported the OLS Institution and Capacity building Programme in 1993. The Village Health Committees were responsible for organising the payment of stipends to community health workers, and dated back to the 1970s. By the mid 1990s some of these had been renamed Village Development Committees. In addition to committees, a plethora of local NGOs, co-operatives and networks have emerged.

By the time the OLS Livestock Programme proposed the creation of Veterinary Co-ordination Committees (VCCs) in the mid-1990s, the concept of some kind of local control over community-based workers was far from novel. Over time, VCCs have become a controversial part of the programme (Bishop, 2003). Their roles vary from place to place but essentially they were established for:

- community awareness raising and mobilization;
- management of project resources (drugs, cost recovery);
- supervision of animal health workers;
- planning livestock activities with the community and animal health workers;
- planning the use of cost recovery funds with the community.

In reality the VCCs were often seen by livestock owners and animal health workers as a revenue-collecting body for treatment and vaccination services, and a policing structure for the NGOs, rather than representing the interests of livestock owners and animal health workers. Contrary to the earlier approach of working with the cattle camp structures and leadership, the VCCs were an externally-driven and artificial grouping compared with indigenous systems. When viewed from this perspective, the subsequent weakness of the VCCs and the limited long-term investment in traditional structures was an important deficit in the programme. There was confusion about what a VCC was and what it should do for NGOs, local authorities, communities, animal health workers and the VCCs themselves.

In early 2005 the VCCs were no longer functional in most areas, or had been dissolved and re-formed in an attempt to become more representative. Their members frequently include the local authority, the executive chief and various other senior or elite members of the community. As such, they are not well known by livestock keepers or respected as a means of engaging the programme. The accountability of the VCCs, especially in dealing with cost recovery funds has been questionable with some serious mishandling of funds. Some VCCs have been successful in dealing with their ascribed responsibilities,

⁹ This initial placement of Dr Kwai with VSF-B was organised by Skills for Southern Sudan but funded from the emergency appeal in Britain for the Bahr el Ghazal crisis. Oxfam received approximately \$300,000 for livestock work, and this included funding for three Sudanese vets on six-month placements, three vehicles and other inputs.

but these success have often been due to specific individuals within the group and support provided by NGOs e.g. awareness raising about VCCs, training in their formation and management, bookkeeping and on-going field support.

Despite the problems with VCCs, it is notable how NGOs are persevering with local capacity building work. In some cases, this includes attention to the future role of local groups in policy processes. In 2003 AU/IBAR commissioned a review of linkages between the OLS Livestock Programme and more general community development issues, and a long-term commitment was recommended (Bishop, 2003). This fits with experiences in other areas of Africa which point to the need for a very long term engagement when it comes to establishing and strengthening community-based organisations or associations in pastoralist areas¹⁰.

In 1998 the first southern Sudanese NGO dedicated to livestock work was established and joined the OLS consortium. Initially called Vetwork Sudan and later Vetwork Services Trust, it received considerable material and moral support from Unicef and AU/IBAR, as well as capacity building support from Christian Aid, PACT and other agencies.

3.2.7 Training centres for Animal Health Auxiliaries

By the end of 1994 the livestock programme was considering ways to strengthen the basic CAHW system by providing better field-level supervision through a cadre of middle-level veterinary workers. Although some very knowledgeable 'Old Sudan' veterinary assistants were still around, many were too elderly for supervisory work. Unicef sourced funding for two South Sudan Animal Health Auxiliary Training Institutes (SSAHATI) and asked VSF-B to run the institutes. The first training institute was established in Marial Lou, Tonj County in 1996 and a second centre was opened in Mankien, Upper Nile in 1997. Due to insecurity, the Mankien centre was later moved to Mading, but here too, fighting related to livestock raiding forced its closure. Subsequent trainings for RASS areas had to be held in Lokichokio until peace resumed.

The AHA training was a four-month residential course and more successful graduates received an additional five months of training and became qualified as Stockpersons. The centres also provided refresher training for AHAs and short specialized training courses (VSF Belgium, 1997). As AHAs started to graduate they soon became active both in the field and in the regular Livestock Co-ordination Meetings convened by Unicef.

Although managed by VSF-B, the SSAHATIs were a good example of how the livestock programme co-ordination functioned. Each NGO identified its training needs with regards AHAs and contributed towards the training fees. In 2004 the Marial Lou institute was absorbed into the New Sudan Livestock Training Centre under the Livestock Training Centre Act 2004 (Laws of New Sudan). This effectively marked the handover of the centre from an NGO to South Sudan government ownership and control.

3.2.8 The role of donors

The developmental approaches described above would not have occurred without considerable flexibility on the part of relief donors. In the case of OFDA the principles of self-sufficiency, enhanced recovery, participation and strengthening local capacity consistently guided their support to the programme. Interestingly, the programme reciprocated and provided specific lessons learned for livestock work which featured

¹⁰ For example, the initial commitment of Oxfam UK/Ireland to pastoral associations in northeast Kenya was nine years. In the East Africa region Reconcile and the International Institute for Environment and Development are working on a 15-year pastoralism and civil society project. In Somaliland, ActionAid made a ten-year commitment to community-managed programming. Efforts to development pastoral associations in West Africa have been in progress for well over 20 years, with very mixed results.

prominently in USAID's 1998 foreign disaster assistance guidelines (USAID, 1998). It also fed into the OFDA guidelines for livestock interventions (OFDA, 2002). For some donors and during different periods, good ties, real donor interest in programmes successes and problems, and an understanding of the realities on the ground evolved. With the exception of OFDA, lessons learned remained with individuals and were not incorporated into donor policies or guidelines. As people moved on, new staff arrived with limited knowledge of southern Sudan or awareness of developmental thinking in chronic emergencies.

Although relief donors such as OFDA and ECHO were willing to push and even overstep the boundaries of conventional relief funding, there is little doubt that the developmental relief approach promoted by the livestock programme was seriously constrained by short relief funding cycles, donor bureaucracy and lack of encouragement of other sectors to move towards developmental relief. This developmental relief approach included a conscious effort to address long term sustainability and thus led to the introduction of a uniform cost-recovery strategy, investment in local management systems (the VCCs), employment and capacity building of Sudanese and formulation of development orientated objectives. Short funding cycles consumed huge amounts of Unicef and NGO staff time because of the almost constant need to write proposals and produce reports on existing projects. Developmental thinking was hindered because longer term strategies, strengthening of civil society, advocacy groups and local administration were difficult to formulate in the absence of committed funding and when other sectors were not thinking along similar lines. Indeed, the shift away from an exclusive relief approach within OLS, which some of the more experienced practitioners clearly desired, never seemed to gather momentum. Developmental approaches require more staff time for facilitation, technical support to local partners and organisational learning. Relief funding emphasised the material inputs such as veterinary medicines and equipment. Some donor policies specified how project budgets should be designed, with a clear preference for hard over soft inputs. At the same time, donor procurement requirements for materials such as medicines were sometimes intensely bureaucratic, thereby diverting technical expertise away from more important tasks. In some cases, donor priorities with regarding funding of hard versus soft inputs was based on unwritten policies and the personal whims of donor staff.

3.3 Co-ordination under FAO TCE (2000 to present)

Policy narratives *"Why are we promoting payment for services in an emergency programme? Working with the SPLM on policy formulation isn't our mandate. Besides, the programme only helps rich cattle owners"* (FAO TCE, ECHO).

"We support rinderpest eradication" (FAO TCE).

AU/IBAR, *"Momentum for rinderpest eradication in southern Sudan must be maintained at all costs. We're almost there"* (FAO GREP, NGOs, SPLM).

South *"Peace is coming. Now is the time to think seriously about development, supporting the SPLM and drafting policies for Sudan"* (some NGOs, IBAR, FIFC, SPLM).

3.3.1 TCE as co-ordinator and policy actor

In 2000 the co-ordination of the OLS Livestock Programme in the south was handed over from Unicef to FAO TCE. When we were trying to track the reasoning behind the transfer of the programme, it seems to be that in the late 1990s there was a general agreement within the UN system globally that agencies should adhere more strictly to their

mandates. Consequently although only Unicef and WFP were present in OLS up to 2000, numerous UN agencies later moved into southern Sudan. For Unicef the more focussed approach on the UN system meant discharging agriculture and livestock interventions within the OLS programme to another agency. With FAO being the UN agency responsible for agriculture and TCE having the mandate for relief interventions, the movement of the livestock programme from Unicef to FAO seemed to make sense in terms of mandates. Furthermore, the positioning of GREP within FAO might allow in-house expertise in rinderpest eradication to feed into TCE activities. With these opportunities in mind, one might expect strengthened co-ordination and policy development within the programme under TCE relative to Unicef. Furthermore, given the relief focus of TCE one would also expect some capacity for rapid takeover and an ability to grasp and respond to key issues quickly.

In reality, evidence of improved co-ordination and policy development under TCE is difficult to find. Since 2000 there seems to have been less policy coherence and direction in the programme for a number of reasons:

- The thinking, policies and practice of TCE focused on short-term typical relief work rather than chronic complex emergencies and livelihoods analysis. While there was clearly debate within TCE over the relevance of conventional relief in the southern Sudan context, more developmental relief thinking was slow to emerge. Some NGOs in the south had already been supporting developmental approaches for many years.
- For livestock interventions FAO emergency guidelines were very superficial, particularly in relation to complex emergencies (FAO, 1998). The Animal Health and Production Division (AGA) of FAO had developed guidelines for strengthening veterinary services but these guidelines were out-of-date (FAO, 1991) and were intended to inform policies and structures in politically stable countries, not complex emergencies. Neither TCE nor AGA had documented experience of livestock interventions in complex emergencies in Africa¹¹. To some extent, this deficit was offset by the continued secondment of a co-ordinator from FIFC/Tufts to the southern sector programme until 2003.
- FAO TCE attracted less donor confidence than Unicef. Whereas the capacity of Unicef to co-ordinate was partly influenced by its delivery of inputs to NGOs, TCE had a reduced role with regards input supply. For example, whereas Unicef had supplied all vaccines to NGOs, TCE supplied around 70% of NGO vaccine needs. As NGOs procured more supplies directly or through specialist NGOs (such as Pharmacies Sans Frontières), linkages between NGOs and TCE increasingly relied on technical advice *per se*.
- Credible leadership partly depends on field experience. In the early years of OLS, Unicef was a field implementer in addition to co-ordinating the overall programme. It was able to feed local-level innovation and experience into the policy debate, particularly through the Livestock Co-ordination Meetings. In contrast, TCE struggled to implement CAHW projects on the ground due to funding constraints and bureaucracy. For example, VSF-B had shared the Tonj area of Bhar el Ghazal with Unicef up to 2000, and then saw TCE takeover the Unicef field project. According to Dr. Simon Mwangi of VSF-B:

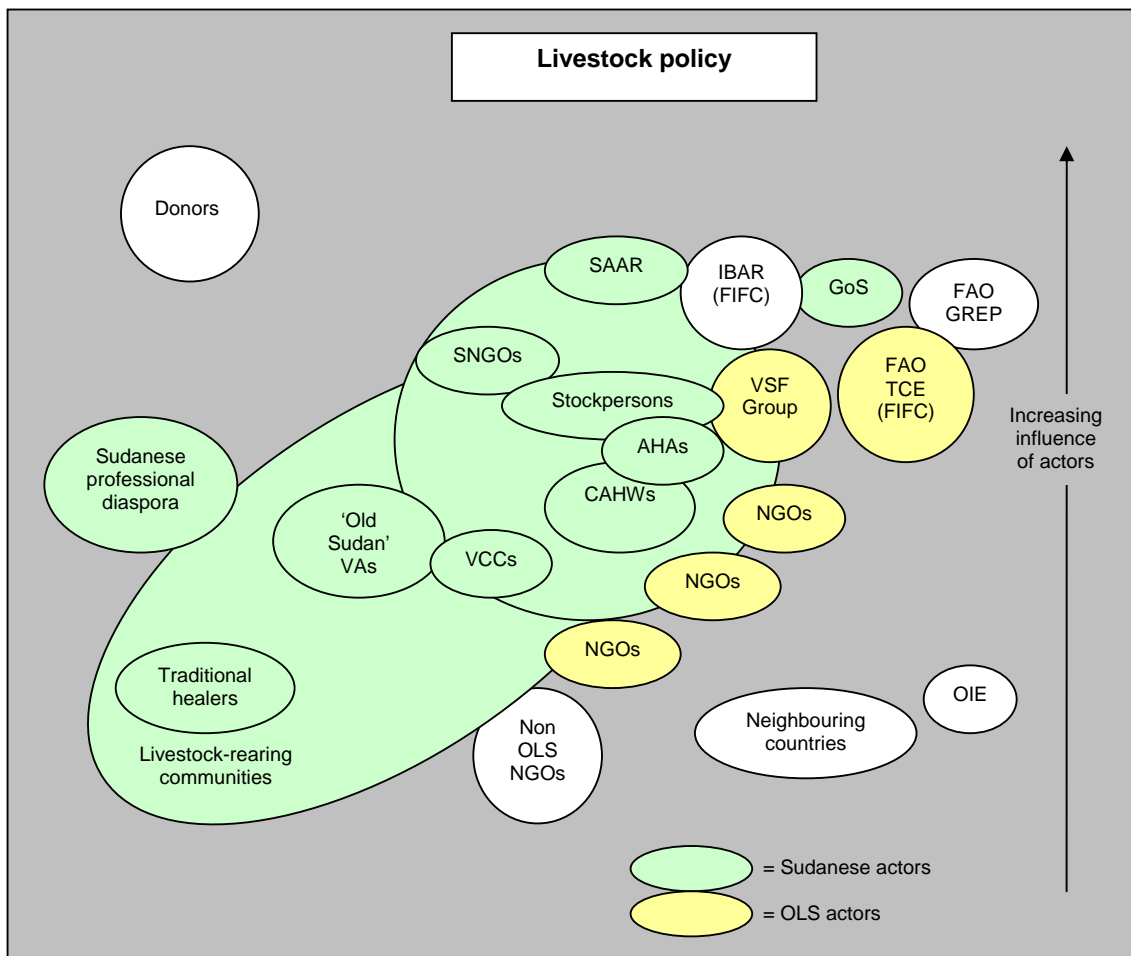
When Unicef was implementing we were constantly getting support from them such as technical advice, or medicines if our supplies ran low. When TCE

¹¹ The FAO website only has one report relating to livestock interventions in a situation which might be called a complex emergency. Produced by the Sustainable Development Department, this report focuses on gender mainstreaming in Afghanistan and describes how this was promoted within a livestock programme (FAO, 1997).

or *moved in, it was the other way round. They were coming to us for advice support, because they had no medicines, vehicles or even a radio.*

- Soon after TCE took over the programme, there were also changes in rinderpest eradication in southern Sudan in terms of both activities and programme structure. The new Pan African Programme for the Control of Epizootics (PACE) of AU/IBAR was a five-year development project funded by the European Development Fund (EDF) of the EU, the objectives of which included the final eradication of rinderpest from Africa. Working in 32 countries, PACE was designed to work through government veterinary departments but in southern Sudan, the "Fight Against Lineage One Rinderpest Virus Project" was awarded to VSF-B. VSF-B was able to source technical support directly from AU/IBAR and GREP without necessarily liaising with TCE. Furthermore, the surveillance focus of their project enabled VSF-B to strengthen and expand various data and information systems related mainly to rinderpest eradication, but also useful for general management and co-ordination of the overall livestock programme.

Figure 3.3
Changing policy actors and linkages over time: Early 2005



The onset of TCE co-ordination of the livestock programme in 2000 coincided with a general improvement in security in many areas of southern Sudan, although Upper Nile remained highly problematic. The Wunlit peace agreement between the Dinka and Nuer

in 1999 proved to be a lasting arrangement. Access to communities improved and NGO staff spent more time on the ground talking to people and reviewing experiences. Interest in local capacity building, through various means, was revived. Oxfam worked with local communities to establish veterinary users associations, and AU/IBAR and VSF Belgium conducted feasibility studies into the privatisation of veterinary practices.

As markets began to open up, trade improved and options for working with the private sector became clearer. The SSAHATI was formally handed over to the SPLM as part of a new Livestock Training Centre in Marial Lou, supported by the training policies of the SPLM. Within the SPLM Directorate of Animal Resources and Fisheries, three southern Sudanese veterinarians were appointed in key positions related to livestock development. All three had direct experience of CAHW systems.

Although the opportunity for creative thinking on policy and the future direction of the programme was never more apparent, TCE appeared to be slow to respond. Indeed, as more agencies began talking about and getting involved in policy and capacity building initiatives, the rather protective narrative from TCE was “business as usual, it’s still an emergency and we cannot directly support capacity building of the SPLM”. Despite this general attitude, under FIFC direction FAO TCE did manage to maintain momentum in some policy areas, most notably privatisation.

The changing nature of co-ordination under TCE relative to Unicef is exemplified by the emergence of NGO training manuals which appear to be initiatives of individual NGOs. Both VSF-G and VSF-CH released their own training materials in late 2004 and early 2005 and it is noticeable how these materials are branded as NGO-specific, rather than OLS programme materials with clear endorsement by the consortium. This is not a comment on the quality of these training materials, but more an indication that to some extent, NGOs had started to operate independently of the overall programme.

After producing the first draft of this report, we circulated the above account of TCE co-ordination to five current or past TCE technical informants. We were aware that our consultations had revealed important weaknesses in TCE, and we wanted to verify our findings. We also broadened our net of informants, focussing on four NGO senior workers who had been in the field during both Unicef and TCE co-ordination.

Of the five TCE technical informants who saw the draft report, three informants stated that the report was a reasonable assessment of TCE co-ordination. The other two suggested that the comments might be toned down but in essence, the account was valid. They also suggested that the programme had become more complicated since 2000 because of the growing breadth and number of livestock issues to be addressed. Despite the complexity, the budget for programme co-ordination had remained static at around \$600,000 to \$750,000 per year. TCE also continued to supply drugs and vaccines to areas not covered by NGOs, and channelled some financial assistance to Sudanese NGOs. Among the four NGO informants who viewed the draft report, one person agreed with the report as written and three people advised that we had not gone far enough in describing the problems.

At the timing of writing this final version of the report in March 2005, there was no livestock programme co-ordinator in place for the southern sector in TCE, and the very experienced southern Sudanese counterpart was not working because he was without a contract. A regional livestock programme co-ordination meeting in Ganyiel in Upper Nile was being organised by a TCE administrator with no technical expertise in livestock. For the NGOs and southern Sudanese workers attending this meeting, many with long-term experience in southern Sudan, it is easy to see why confidence in TCE co-ordination is waning.

3.3.2 Technical support from Tufts University

Up until the final days of Unicef co-ordination Tufts University had seconded technical staff to Unicef as programme co-ordinators. The two veterinarians who had occupied the post successively between 1993 and 2000 had both implemented community-based livestock projects at field level in complex emergencies before joining Tufts, and this field experience was a primary reason for their recruitment.

Tufts also seconded two livestock programme co-ordinators to TCE between 2000 and 2003. The main advice from Tufts at the onset of each of these contracts was simple: "Go to the field as quickly as possible, meet the NGOs, understand what they're doing and learn about the situation on the ground". Due to bureaucracy and a need to seek travel clearance from both Nairobi and Rome, the most recent Tufts co-ordinator spent only 5% to 10% of his time in the field. He estimates that at least 50% of his travel requests were not approved, and that TCE management preferred him to stay in Nairobi and work on administrative issues. In comparison, the two Tufts vets who were seconded to Unicef between 1993 and 2000 estimated that on average they spent between 15% and 60% of their time in southern Sudan. If field exposure and dialogue with partners at field level is an important part of co-ordination, TCE were providing a very different working environment relative to Unicef.

3.3.3 Donor incoherence

Under TCE co-ordination and despite TCE support to rinderpest eradication, a number of issues arose around donor policies and the need to encourage donors to harmonise their approaches. Incoherence was evident both between different sections of the same donor, and between different donors.

The design of the VSF-B "PACE" project is an example. It proposed the use of development funds (channelled via the EU and AU/IBAR to VSF-B) to complement NGOs field activities to be funded by relief donors (including ECHO). For example, veterinary workers at field level in NGO projects were expected to become part of a large-scale disease surveillance system under the technical supervision of VSF-B at area-level and AU/IBAR at regional level. Given the five-year timeframe of PACE, the implication was that relief donors such as ECHO and OFDA would support the VSF-B project over a time period which far exceeded normal arrangements for relief funding. Indeed, VSF-B recognised this support as a 'risk or assumption' in their project logical framework.

Given the importance of rinderpest eradication in southern Sudan and substantial investments by the EU over many years, it might be assumed that the development and relief sections of the EU would have liaised to ensure that sufficient funds could be guaranteed. However, it seems by mid 2003 ECHO was reviewing its support to the livestock programme and proposing 20% to 50% cuts in support to CAHW projects¹². In the early 1990s ECHO began to assess different sectoral inputs to southern Sudan on the basis of unit cost per beneficiary. Over time this evolved into the notion that an understanding of impact would assist ECHO to prioritise and allocate resources to different sectors. In the livestock sector there was a particular concern that the cost recovery system was not working, and may not even be appropriate. We discuss donor monitoring and evaluation requirements in detail in section 4, but an important point here is that ECHO reporting frameworks for NGO projects focussed almost entirely on the measurement of process indicators (things being done) rather than impact indicators (the outcome of things being done). Consequently, a situation arose in which a donor was suddenly requesting more information on livelihoods impact from NGOs but for many years had restricted NGO reporting to measures of project implementation. To a large extent, NGOs had adhered to this approach and not collected evidence of impact

¹² ECHO seemed not to have documented this proposal, at least not in correspondence with NGOs or FAO. The 20% to 50% cut was proposed in meeting with NGO partners; no minutes were disseminated.

for their own organisational learning or revised programming. Nor was TCE able to intervene with a programme-wide overview of the issues or a recommendation that a comprehensive and representative study on impact was long overdue.

Policy incoherence also existed between the relief and development sections of other donors. In 2000 DFID support to southern Sudan focussed on conventional relief inputs, partly due to a long-running debate in London around the need for neutrality and impartiality in the south, and the definitions of "relief" and "rehabilitation". Funding was largely restricted to short-term material inputs. At the same time, DFID committed funding to a four-year development project in AU/IBAR which aimed to facilitate supportive policy and institutional arrangements for community-based animal healthcare in the Greater Horn of Africa region. This project arose from a regional analysis of pastoral livelihoods using the DFID version of the sustainable livelihoods framework. Including southern and northern Sudan, the project worked initially with the GoS, NGOs and professional bodies to develop policies and laws governing privatised CAHW systems (e.g. Anon, 2003). The project also supported various activities in the south related to policy, such as studies on veterinary privatisation, livestock marketing and capacity building. Furthermore, by early 2005 the project was also engaging the SPLM directly and providing technical support to them to develop policy frameworks for the livestock sector. While the message from the relief wing of DFID avoided notions of sustainability or engagement of local actors, the message from the development wing was rather different. These examples of policy incoherence reflect the commonly-reported policy and structural divisions between the relief and development departments of major donors (e.g. see Macrae and Hamer, 2004).

In addition to incoherence within donors were various levels of policy disconnects between donors. For example, the capacity building elements of USAID support to southern Sudan contrasted markedly with the DFID focus on conventional relief inputs. USAID supported the OLS Institution and Capacity building programme as early as 1993 (see section 3.2.6) and have continued to fund various community-based and civil society strengthening initiatives ever since.

3.3.4 National, regional and global trends

As mentioned above, from 2000 a regional project in AU/IBAR worked with countries in the Greater Horn of Africa region to develop policies and legislation to support privatised and veterinary-supervised CAHW systems. This project was driven by the contradicting realities of the strong impact of CAHWs in pastoralist areas but at the same time, their illegality. By early 2005, government veterinary services in southern Sudan's northern, eastern and southern neighbours were all supporting CAHWs with varying levels of legislation. Kenya, Uganda, Ethiopia and northern Sudan also had central-level 'Community Animal Health Units' in their veterinary services departments. These units managed the quality control and co-ordination of CAHWs, and the promotion of private veterinary facilities linking CAHWs to veterinarians or diploma holders. Given these trends and the need for overall regional harmonisation of policies relating to CAHWs, shifting the TCE livestock programme co-ordination role to SAAR seemed like a logical step. However, TCE seemed reluctant to engage SAAR or even discuss the concept of handing over the co-ordination role to the southern Sudanese.

At the global level, AU/IBAR had worked with the Office international des epizooties¹³ (OIE) to revise the international standards on veterinary services to include CAHWs as one type of veterinary para-professional (Catley *et al.*, 2005; Wolmer and Scones, 2005). This change effectively created global acceptance of CAHWs according to international standards. AU/IBAR published its Africa-wide policy on CAHWs in 2002.

¹³ The OIE is mandated by the World Trade Organization to set global animal health standards as they relate to international trade, and under the Sanitary and Phytosanitary Agreement.

3.4 Combining a long-term perspective with immediate food security needs

Within FAO ESA a twin-approach is being developed which proposes analysis of food security interventions which recognises dual investments. On one hand there is the need to support agriculture and rural development approaches, on the other hand there is the need to address immediate food-access issues.

Table 3.2 presents the livestock programme interventions using the twin track framework. The table shows the emphasis of the programme on more developmental issues and in particular, issues of stability. At the same time, the main threat in terms of immediate access to food is also addressed i.e. rinderpest control.

Table 3.2
Livestock interventions in southern Sudan using the FAO ESA twin track approach

Twin track approach	Availability	Access and Utilization	Stability
<p>Rural development/ productivity enhancement</p>	<p><i>Sufficient numbers of CAHWs trained</i></p> <p><i>Systems for supply of medicines and vaccine established</i></p> <p><i>Address range of animal health problems</i></p>	<p><i>CAHWs close enough to communities to provide services</i></p> <p><i>CAHWs selected by community and are trusted</i></p> <p><i>CAHWs trained in topics relevant to community</i></p> <p><i>Quality control of CAHWs by AHAs and other mechanisms</i></p> <p><i>Involve communities in impact assessment</i></p>	<p><i>Local selection of CAHWs and AHAs</i></p> <p><i>Establishment of second-tier AHAs</i></p> <p><i>Introduce payment for services</i></p> <p><i>Respond and adapt to emerging livestock issues at community-level</i></p> <p><i>Promote markets</i></p> <p><i>Begin to address policy issues with formally or informally-mandated players</i></p> <p><i>Promote harmonized approaches e.g. best-practice guidelines</i></p> <p><i>Institutionalise forums which foster multi-stakeholder dialogue on policy issues</i></p> <p><i>Links policy processes to neighbouring countries; understand the cross-border and regional issues</i></p>
<p>Direct and immediate access to food</p>	<p><i>Protect livestock assets against diseases causing high mortality e.g. rinderpest</i></p>	<p><i>Understand indigenous distribution of livestock assets to most vulnerable</i></p>	<p><i>Affordable CAHW services</i></p> <p><i>Link to peace-building initiatives</i></p>

4. Impact, Information and Policy

Since 1989 the OLS Livestock Programme has produced a huge number of reports, including quarterly and annual progress reports, evaluations, impact assessments, reviews and specific studies. Agencies involved include Unicef, NGOs, FAO, AU/IBAR, FIFC and various donors, consultancy companies and individuals. Studies have been conducted on livestock marketing, veterinary privatisation, local capacity building and specific disease problems such as rinderpest, CBPP and FMD. Databases have also been created, initially in Unicef and later in FAO.

This section of the report examines this apparently substantial body of information from the perspective of policy process. In particular it aims to identify evidence of impact and show the relationship, if any, between this evidence and policy development or change.

4.1 Impact assessment in animal health: some general considerations

When considering the impact of animal health services in southern Sudan, it is worth noting that in veterinary medicine there are no gold standard indicators or methods for assessing impact. For example, none of the global agencies dealing with veterinary services have quantified indicators for measuring the success or failure of an animal health service.

4.1.1 International standards

Perhaps the nearest thing to a global standard is the section of the OIE Terrestrial Animal Health Code dealing with the evaluation of veterinary services¹⁴. These standards provide detailed guidelines on the required structure, management, accountability and scope of a national veterinary service but crucially, do not provide numerical indicators such as the number veterinary workers required in different situations. Central to the standards are the principles of audit and control i.e. a veterinary authority should be able to demonstrate who is doing what, where and why, and under whose control. The OIE Code also details guidelines for formal recognition of freedom from four animal diseases/infections (including rinderpest¹⁵) on a country basis. In the case of rinderpest and of particular relevance to southern Sudan is the so-called rinderpest eradication pathway. Various stages of the pathway have clearly defined targets based on quantified epidemiological indicators and procedures.

4.1.2 Service indicators

Drawing on approaches from human health, veterinary researchers have sometimes adapted indicators of service provision to assess impact viz. accessibility, availability, affordability, acceptance and quality. Depending on the research objectives, special attention has been given to certain aspects of service provision such as the technical competence of animal health workers or financial sustainability (particularly in the context of privatisation). In common with the OIE Code, these studies avoid gold standard definitions or quantitative descriptions of an optimal service.

4.1.3 Production and causation

Other researchers have tried to look at the impact of animal healthcare from a production perspective. This approach involves the measurement of production variables such as milk off-take or calving rates¹⁶, and tries to demonstrate relationships between

¹⁴ The OIE Code details international animal health standards in relation to trade and the Sanitary and Phytosanitary Agreement of the WTO.

¹⁵ The other three diseases are FMD, CBPP and bovine spongiform encephalopathy ("Mad cow disease").

¹⁶ 'Calving rate' is used here because most of these studies have looked at diseases of cattle.

the prevention or treatment of a disease (or diseases) and changes in production. It can also include cost-benefit analysis of disease control options. These studies can provide strong evidence for or against specific interventions but are difficult to design and implement, particularly in marginalised areas or conflict zones¹⁷. Although they tend to examine only a single disease, confounding variables are often numerous or elusive, and so specialised epidemiological expertise is required during study design. As epidemiological input increases, so does the tendency to examine every possible variable and production trait, and so complexity increases. A further constraint in developing countries is that most primary animal health programmes aim to address various diseases in different livestock species. Not all diseases result in the same types of production loss, and the simultaneous measurement of different production variables related to many diseases in different species is extremely complicated. Last but not least, some animal diseases cause disease in people and are controlled primarily due to this zoonotic effect (e.g. rabies) rather than due to a negative impact of animal production.

4.1.4 Participatory impact assessment

For practitioners and researchers involved in aid programmes, the three approaches to impact outlined above might be described as 'veterinary-orientated'. They assume that the provision of an animal health service, or the raised production associated with the service, provide benefits to people. Although impact assessment in the context of aid encompasses a wide range of objectives and methods, it increasingly seeks to understand relationships between interventions and impact on people. For livestock work it not only asks the question 'Did the healthy goat produce more milk?' but also, 'Who benefited and why?' These additional questions lead into descriptions of milk consumption by different household members, use of milk to make other foods (e.g. porridge), communal eating practises, milk sales and use of the income received from these sales, the use of milk as gifts and loans, the manufacture and use of yoghurt or cheese, and so on. In addition, relatively simple accounts of the nutritional composition of milk can be compared with daily nutritional requirements for different household members (e.g. Catley, 1999a). Similar types of questions and uses apply to other livestock-derived foods, though a set of different questions are needed to understand benefits such as draught power or the use of livestock for transport. In terms of understanding linkages between livestock programmes and food security, these are very important questions but they are often difficult to answer via absolute measures and conventional research methods.

A fourth approach to impact assessment takes a more people-centric view and 'Participatory Impact Assessment' (PIA) has been used to assess community-based animal health interventions. From a practical perspective, PIA assumes that indigenous livestock knowledge was an important factor during project design and implementation. Not only do livestock keepers such as pastoralists know a lot about animal diseases, they also observe benefits related to disease control and can describe these benefits using participatory methods. Unlike conventional research, local informants define the impact indicators. From a more philosophical perspective, PIA practitioners argue that meaningful impact is impact which is perceived and acknowledged by the people who were intended to benefit from the programme. Participatory impact assessment is useful for understanding local perceptions of trends, linkages between animal health and human welfare, and the attribution of programme inputs versus non-programme factors. To date, PIA has often produced ordinal data and proportions rather than absolute measures of variables and relationships. Despite these limitations, the approach has

¹⁷ Not least, baseline information on livestock populations may be absent and such information is difficult to collect. It is difficult to ensure that the studied intervention is applied consistently in all study locations. Also some treatments may be provided by non-programme workers such as traditional healers or untrained black market operators.

attracted the interest of agencies such as FAO (Catley and Admassu, 2003). Furthermore, standardisation and repetition of methods produces data just like other survey methods, and allows statistical analysis (e.g. see Admassu *et al.*, 2005).

Although the list of four approaches to impact assessment outlined above is by no means exhaustive, it explains why discussion on impact can quickly turn into debate on the pros and cons of different approaches and methods. At one extreme, advocates of 'good science' and 'evidence-based approaches' call for baseline data and case-control studies. At the other extreme, relief practitioners argue that proxy indicators of impact, such as simple indicators of input supply, are sufficient.

4.2 Impact assessment of livestock interventions in southern Sudan

During the last ten years or so the reports generated by the livestock programme in southern Sudan have varying aims, methodologies, style, scope and level of analysis. In an attempt to identify evidence of impact, these reports were categorised into three broad, overlapping groups as follows:

- Reports with rinderpest-specific indicators such as vaccination figures, outbreak reporting and indicators of rinderpest surveillance
- Routine project monitoring and evaluation of the overall community-based delivery system
- Participatory impact assessment and 'Community Participatory Evaluation' (CPE) reports

4.2.1 Impact and rinderpest

a. Vaccination and surveillance

Rinderpest eradication programmes are conducted using targets and indicators which are well-defined by international agencies such as FAO and OIE. The pathway for eradication as it relates to activities in southern Sudan includes two main stages viz. mass vaccination (1989 to June 2002) and surveillance (from June 2002 to present). Mass vaccination is intended to reduce the circulation of rinderpest virus to a minimal, and ideally zero level. Indicators of progress included reduced clinical disease i.e. less disease outbreaks. The vaccination stage is followed by a period of no vaccination, and waiting and watching to see if the disease reappears. This early surveillance period aims to detect any new outbreaks as rapidly as possible and respond with localised vaccination to eliminate the final remnants of virus. Later stages of surveillance involve carefully-designed surveys to detect evidence of rinderpest infection. This work includes blood sampling cattle and testing the blood for rinderpest antibody (sero-surveillance).

As detailed in section 3.2.1 the introduction of CAHWs and heat-stable rinderpest vaccine in 1993 was associated with a 10.6 fold increase in vaccination figures and a steady reduction in rinderpest outbreaks; Sudan is now considered to be provisionally free of the disease. Given the livelihoods impact of rinderpest on southern Sudanese pastoralists and agropastoralists (see section 2.2.3), the absence of rinderpest is a reasonable proxy impact indicator.

The comprehensive rinderpest surveillance system serves to maintain the benefits of disease freedom and respond rapidly to new outbreaks, if any. Detailed surveillance indicators and measures of progress are available (Jones *et al.*, 2003).

b. Cost-benefit analysis

According to the livestock programme minimum standards and guidelines, each CAHW project should be externally-evaluated every three years. The last comprehensive evaluation of the programme took place in 1995 and included a rare attempt at cost-benefit analysis of rinderpest control in southern Sudan (Blakeway, 1995). Some of the basic assumptions and findings from this analysis are summarised in Box 4.1.

Box 4.1

The cost-benefit of rinderpest control in southern Sudan

Short-term benefits through reduced rinderpest mortality

- Rinderpest mortality is highest in younger cattle, less than 3 years of age. Around 60% of this age group will die during an outbreak, and outbreaks occur every 2 to 4 years (average 3 years).
- Using proportional piling to assess herd age structures, around 38% of cattle were less than three years of age.
- Assuming a cattle population in the south of 4 million (1995 estimates), 304,000 cattle would die from rinderpest each year. Market value of young cattle was \$25/head.

Based on these assumptions and a control programme which protected up to 50% of the total cattle population, the immediate saving was \$3.8 million per year.

Long-term benefits through increased production and related to food aid

- In the absence of rinderpest, the cattle population would grow at around 7% per year. Proportional piling indicated that an average herd composition of 40% adult cows. A cow calves every 2 years and produces about 1.3 litres of milk per day for human consumption for most of the year.

Based on these assumptions, rinderpest control would produce 72,800 litres of milk per day.

- 3 litres of milk provides the daily calorific needs of an adult person. Other livestock-derived foods (direct and indirect) contribute another 75% of food needs relative to milk. Rinderpest is controlled in only 50% of the cattle.

Based on these assumptions, cattle-derived foods after rinderpest control would feed 21,000 people.

- WFP provides 400gm of cereal per person per day. Food aid provision in southern Sudan costs \$1,000 per metric tonne.

Based on these assumptions, 21,000 people would require 3001 metric tonnes of cereal costing around \$3 million (the total food aid delivered to southern Sudan in 1994 was 21,844 metric tonnes).

The combined short- and long-term benefits of rinderpest control amount to \$6.8 million.

Cost-benefit ratio of rinderpest control compared with food aid

- The total cost of the UNICEF-OLS Livestock Programme in 1994 was \$500,000, of which \$200,000 was for hard inputs i.e. vaccine and vaccination equipment; assume benefits to 21,000 people as described above. The hard inputs of food aid to provide the same food benefits to 21,000 people costs \$3 million.

The cost-benefit ratio of rinderpest control is $0.5/6.8 = 1:13$.

Ignoring staff and logistical costs, the input cost ratio for rinderpest control versus food aid to achieve the same level of benefit is $0.2/(3.0 + 3.8) = 1:34$.

4.2.2 Routine project monitoring and evaluation

In line with the relief framework in which nearly all the livestock projects were written, indicators of project progress focused on process indicators rather than impact indicators. Donor reporting requirements were based on the measurement of things being done rather than the outcome of things being done, and most NGO reports followed this approach fairly closely. We looked in detail at a random sample of 24 NGO monitoring and evaluation reports from a total of 58 reports collected during the case study. All 24 reports provide vaccination and treatment figures, showing that vaccines and medicines were being delivered at the community level. However, only rarely did the reports relate vaccination or treatments figures to specific, targeted populations or estimates of disease incidence or prevalence. For example, although we might learn that 2,000 doses of CBPP vaccine had been used, we don't know the proportion of cattle vaccinated in the project area – was it around 5% or 85%? Similarly, the delivery of 3,000 doses of trypanocide has limited value unless the figure is related to prevalence estimates for trypanosomiasis - did these 3,000 doses treat 2% or 75% of cattle suffering from the disease?

Some reports also provided qualitative insights into changing disease patterns, levels of recovery following treatment, and changes in production trends (e.g. milk off-take). These accounts tended to be brief and based on *ad hoc* discussions and interviews, or the opinion of the report writer(s). No systematic surveys were reported. A summary of the report analysis is shown in Figure 4.1. We categorised impact indicators in the reports as 'quantitative' or 'qualitative' and then ranked each indicator from 0 (very poor impact indicator) to 5 (very useful impact indicator) in each report. The three main findings were as follows:

- In general, routine monitoring and evaluation reports did not measure useful impact indicators and therefore, provided limited evidence of project impact (most indicators were ranked < 1).
- Qualitative measures were far more commonly reported than quantitative measures.
- Reporting of impact indicators related to impact on people was very limited.

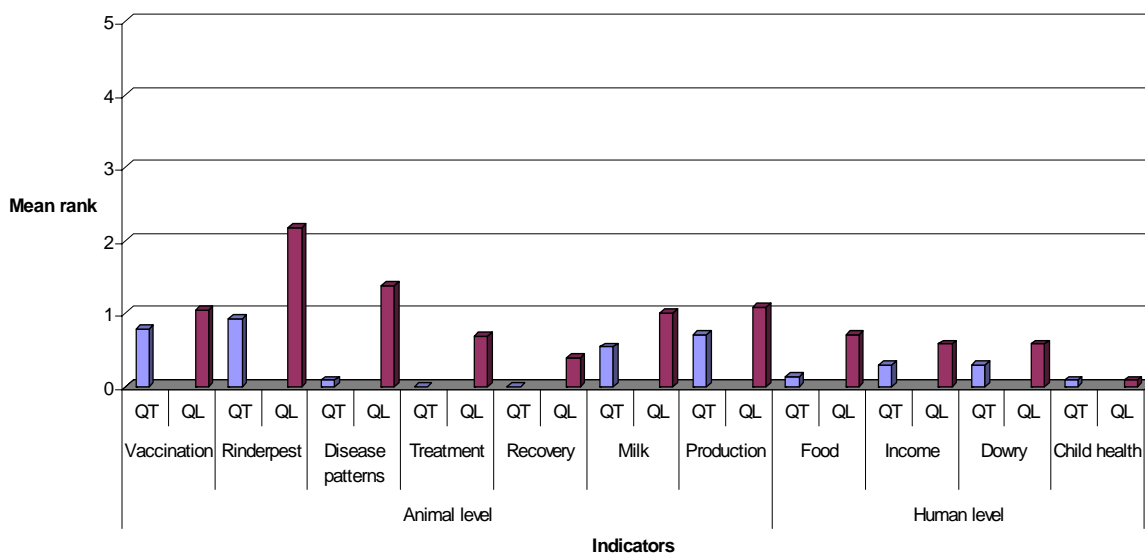
In addition to the impact indicators mentioned above, we also looked at indicators of service provision in routine NGO reports. Again, attention to these indicators was limited and when used, qualitative information was the norm (Figure 4.2).

A common constraint to meaningful impact assessment appears to have been a reliance on conventional approaches, such as attempts at the absolute measurement of production variables mentioned in section 4.1.3. For example, various evaluators of NGO projects suggest that impact assessment was not possible due to lack of baseline data, lack of accurate livestock population figures or difficulties with assessing attribution. Evaluators of ECHO-funded activities from 1999 to 2002 (Ingenieurs-Conseils s.a., 2003) and the VSF-G programme in Bahr-el-Ghazal and Shilluk Kingdom (Fox *et al.*, 2001) were apparently unable to measure impact due to a lack of baseline surveys and impact indicators prior to the onset of these programmes.

It may be tempting to conclude that these experiences simply show how production-related and data-driven approaches to impact assessment are difficult to use in conflict areas such as southern Sudan. However, such approaches are difficult to use in virtually any rural community in Africa; Longitudinal studies and regular data collection activities are difficult to implement for logistical, motivational and funding reasons. In addition, proof of causation is methodologically complex in multi-disease, multi-species and multi-treatment systems.

Qualitative accounts of impact in NGO reports tend to be *ad hoc* and anecdotal, rather than systematic and well-structured. Interviews with project staff, livestock keepers or others are conducted, but rarely do we know how many people were interviewed, how they were selected or how their perceptions were cross-checked (if at all). Survey instruments were rarely reported.

Figure 4.1
Do monitoring and evaluation reports contain useful indicators of impact?



Notes for Figure 4.1

Ranking of impact indicators was 0 (very poor impact indicator) to 5 (very useful impact indicator).

QT = quantitative; QL = qualitative; n= 24 reports

Explanation of indicators:

Animal level indicators

‘Vaccination’ refers to vaccination figures in relation to population at risk or vaccination targets e.g. a report which stated that 60% of livestock at risk of anthrax were vaccinated would receive a rank of 5.

‘Rinderpest’ refers to vaccination figures in relation to population at risk

‘Disease patterns’ refers to evidence of changing disease incidence or prevalence, other than rinderpest.

‘Treatment’ refers to treatment figures in relation to estimates of disease incidence or prevalence.

'Recovery' refers to data on the proportion of animals recovering from a disease after treatment compared with animals recovering from a disease after no treatment.

'Milk' refers to indicators related to milk off-take.

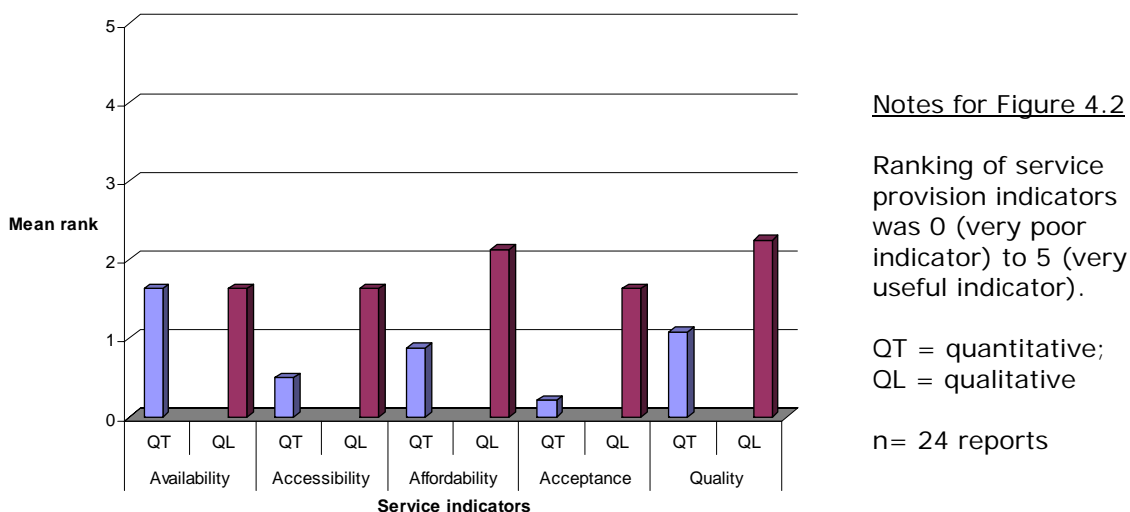
'Production' refers to livestock production indicators other than milk off-take.

Human level indicators

The 'food', 'income', 'dowry' and 'child health' indicators describe benefits for people derived from healthy livestock.

Figure 4.2

Do monitoring and evaluation reports contain useful indicators of service provision?



Although it might be tempting to view NGOs as victims of donor reporting requirements - weighed down by the constant need to count bottles of vaccines or drugs,. It is also true that ,for many years, NGOs made few if any moves to assess impact for their own organisational learning. To some extent this apparent stagnation improved in 1999 when VSF B and VSF CH began to look at participatory approaches to evaluation, as described below.

4.2.3 Community Participatory Evaluation

The ultimate test of humanitarian action is not what was intended by humanitarians, but whether the results are judged positive by the beneficiaries themselves and sustained by them. People are the best safeguard for keeping the "human" in humanitarian.

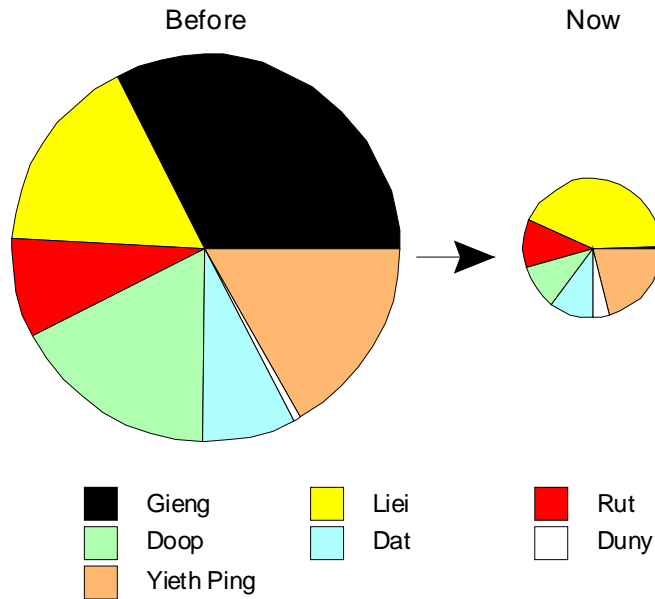
(Minear *et al.*, 1991: 158)

Since 1999 some NGOs have started to use CPE. A handful of reports are available which present methodologies and findings. In 1999 VSF-B and VSF-CH began to look at participatory approaches to impact assessment (Catley, 1999b). Using experiences from the ActionAid-Somaliland programme and the International Institute for Environment and Development in the mid-1990s, the methodology involved four main steps:

- Define the spatial and temporal boundaries of the project using methods such as participatory mapping and time-lines respectively.
- Describe the benefits derived from livestock and their relative importance.
- Describe changes in animal health during the project period.

- Describe project attribution in relation to project benefits and problems. Results were cross-checked against secondary data such as vaccination and treatment figures by disease type. Some results of proportional piling with Nuer communities in Ganyiel are reproduced in Figure 4.3

Figure 4.3
Local perceptions of changing patterns of cattle diseases in Ganyiel, Western Upper Nile during the VSF-CH community-based animal health project (1996-1999)¹⁸



N=6 informant groups (148 people)
 $W = 0.61^{19}$, $p < 0.01$

Diseases (Nuer-English):
 Gieng - rinderpest
 Liei - mixed parasitism
 Rut - haemorrhagic septicaemia
 Doop - CBPP
 Dat - FMD
 Duny - Ephemeral fever
 Yieth piny - Sudden death

The example above indicated a dramatic reduction in the disease called *gieng* (rinderpest) during the three years of the project. To some extent, this result was verified by reference to rinderpest vaccination figures. In contrast, the disease called *liei* had become relatively more important. The impact of disease reduction can be explored further by defining the benefits provided by livestock. Figure 4.4 shows local perceptions

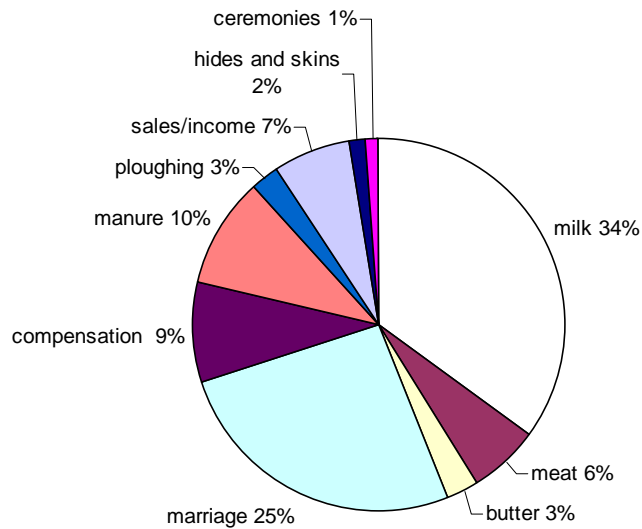
¹⁸ Based on a 'before and after' proportional piling method in which informants divided a pile of 100 seeds to show the relative importance of the main cattle diseases 'before' the project. Informants were then asked to increase, decrease or leave the seeds unaltered to show the relative importance of diseases 'after' the project. The two pie charts are proportional to the numbers of seeds used by the informants.

¹⁹ The Kendal coefficient of concordance W measures the level of agreement between the 6 independent informant groups. High or significant agreement indicates data reliability. In epidemiological terms, reliable data is more likely to be valid (truthful) than unreliable data.

of benefits provided by cattle in Akop payam, Tonj county in 1999.

Figure 4.4
Benefits derived from Dinka Rek cattle in Akop payam, Tonj County, 1999

Method – proportional piling, 5 informant groups (47 people)



Since the original testing and adaptation of participatory impact assessment in 1999, SC UK, VSF-CH, VSF-G and VSF-B have used the approach to complement the routine data collection activities outlined in section 4.2.2. Although methodologies varied, a common approach was the standardisation and repetition of simple ranking and scoring methods with different groups of local people. While statistical analysis of data was not conducted, when the raw data is presented in these reports “eyeballing” the data indicates a general consistency between informant groups (e.g. Hopkins and Short, 2001; 2002).

Working with SC UK in Bahr el Ghazal and Upper Nile, Okoth (2001) reported the following:

- the ratio of milk production in animals treated compared with those not treated was 4:1;
- 75% of milk produced in the project areas was attributed to the efforts of the livestock project;
- the increase in population of sheep and goats attributed to the project was 40%;
- milk was perceived as the sole determinant of good health for children; the factors which reduced the availability of milk for children were livestock diseases (40%), war (28%), poverty (17%) and drought (15%);
- in Bieh State 69% of children enjoyed relative good health and the status of 67% of these children was associated with increased access to milk which in turn, was attributed to project activities;
- the project reduced cattle mortality by 72% in project areas in Bahr el Ghazal and 39% in Upper Nile.

In the same report communities in Upper Nile who had experienced severe flooding during 2001 all reported that livestock deaths would have been far greater were it not for the project services.

Similar methods were used to assess CAHW projects in Ganyiel, Nyal and Nhialdlu in Western Upper Nile (Hopkins and Short 2001), Maluakhon and Turalei in Bahr el Ghazal (Hopkins and Short 2002), Shilluk Kingdom (Hopkins, 2002) and Tonj County in Bahr el Ghazal (2003). The results from these different areas and different NGOs are consistent with regards to the reduced livelihoods impact of livestock diseases attributable to CAHWs and other veterinary workers. Depending on location, impact on livelihoods included more animals, more milk for consumption and sale, improved child nutritional status, increased dowry prices, opportunities for restocking through exchange, and an increase in social status. Hopkins (2003) goes further to present findings according to livelihoods assets (Table 4.1) and placing livestock interventions in a broader context.

Although there seems to be general consensus among NGO workers who use CPE that it is a valuable approach, it has had little influence outside of the projects where it has been applied. Lessons learned feed into the local project and to a lesser extent, its donors. However, it does not influence the OLS Livestock Programme as a whole because the coordinating body appears not to value the approach. FAO TCE seems to have limited interest in CPE as a means to assess impact at the programme level, although its systematic use by all NGOs in the programme would fill important information gaps. Participatory approaches to monitoring have been applied in livestock interventions in Afghanistan under FAO guidance (FAO, 1997). Within the hundreds of project reports produced by the programme since 1993, the six CPE reports reviewed here represent the bulk of the learning about impact. The main weakness of CPE as applied so far has been the limited description of methodology and for some types of information, insufficient repetition of methods with different informants. These weaknesses would be quite easy to rectify.

Table 4.1

Participatory impact assessment of the VSF-B project, Tonj County, 2001-2003: changes in capital assets (source: Hopkins, 2003)

Type of capital	Positive change	Negative
Natural	Low incidence of trypanosomiasis and water borne diseases; population of livestock has increased.	Erratic rainfall resulting in transhumant livestock movements, poor pasture and insufficient water for people and animals.
Physical	Provision of health, education and veterinary services; good road network during the dry season.	Difficult to maintain infrastructure due to cost of flights; poor mobility.
Human	Training of animal health workers and nurses; higher attendance of animal health workers; training in CPE.	Very little on-the-job training and support after CAHW training.
Social	Increase in dowry and marriages; increase in traditional festivals and ceremonies; increase in milk production; during the wet season have milk drinking	Milk competition means that children drink less milk – father drinks a lot to get fat and win the prize. Influx of IDPs; cattle raiding and inter-clan fighting.

	competition to see who is the fattest person.	
Financial	Improvement in trade and circulation in currency.	Restriction of trade into GoS garrison towns; limited number of transport facilities.

4.2.4 Evidence from food security analysis

In common with the livestock programme, food security assessments have often tried to describe the impact of interventions by referring to livestock numbers. Considerable effort has been invested in estimating livestock populations but a common feature of all reports where figures are proposed is the weak validity of the data. Like many other African pastoralists, those in southern Sudan do not like to talk about how many livestock they own for numerous cultural and excise reasons. Also, ownership patterns *per se* do not fully reflect access and use of livestock resources due to the various indigenous systems of loaning animals on either short or long-term arrangements. Since livestock numbers can be affected by events unrelated to the livestock programme (such as conflict or drought) even if valid data were available, it would be difficult to demonstrate association.

These issues are well-known by some food security and livelihoods analysts, and more recent ideas around impact assessment focus on proxy indicators of livestock ownership such as 'number of wives'. It is also realised that trends and relative changes over time, rather than absolute numbers, can be understood using participatory methods. Another approach looks at changing proportions of households in different wealth groups. As livestock holdings are important in local definitions of wealth and poverty, shifts in households from one wealth group to another are an indirect measure of livestock numbers (Sharp, personal communication).

4.3 Information flow

4.3.1 Livestock Co-ordination Meetings and reporting systems

As indicated in section 1, southern Sudan has not been an easy place to work. Distances between project locations and the UN base in Lokichokio are huge, and communication facilities are rudimentary. Flights are delayed or cancelled, and in the wet season planes fail to land (or take off). During the first ten years or so of the OLS Livestock Programme, communication was limited to radio contact, meetings between people and written reports. In the early days there were few laptops in the field. Reports were hand written and data was summarised using pocket calculators. The flow of reports comprised papers hurriedly stuffed into envelopes and handed to colleagues going on leave or to pilots. This was a verbal and paper-based system, before the days of e-mail and mobile phones.

Despite these problems, for many years there was a strong flow of information within the programme. As described in section 3.2.2, the livestock co-ordination meeting were a key event for information flow and learning. For NGO vets who were new to community-based approaches, the co-ordination meetings were a chance to seek advice from others, plan future activities and gain assurance that many other people were experiencing the same logistical and security problems as themselves. A fairly simple reporting system was in operation; Co-ordination meetings were the mechanism for NGO vets to present information on their work and to get feedback from Unicef on how well they were progressing. Much of the information in the reports and presentations was quantitative and included numbers of CAHWs trained, animals treated for different diseases and so on. To some extent, Unicef needed the reports because they were responsible for supplying drugs, vaccines and equipment to NGOs, and needed to account for these supplies. However, as Simon Mwangi recalls:

"It was a system which really worked. We'd send the monitoring forms to Unicef and then get feedback at the meetings. It was a very useful system and everyone could see the sense of it".

The Livestock Co-ordination Meetings were also an important forum for Unicef to engage NGOs and discuss current programme issues. The results of specific studies were often presented at these meetings and discussed (e.g. marketing or privatisation studies). The co-ordination meetings were also important in terms of personal networks, the informal transfer of information and lobbying on programme policy issues. Throughout the life of the programme, certain issues appear repeatedly in the minutes of the co-ordination meetings. These issues include payment for services and vaccination, including standardising prices and the regular increases in prices to bring them to full cost, the role and status of the VCCs and difficulties of access to communities on the ground. Even after many years of discussion, key debates have not been fully resolved but this is not necessarily a problem. The point is that in a complex emergency there was frequent policy dialogue around key issues, some of which were clearly more developmental than relief. The minutes of the co-ordination meetings, dating back to May 1993, represent the institutional memory of the programme and are its key resource in terms of literature (e.g. UNICEF-OLS/SS 1995 to 1999, plus FAO co-ordination reports).

Under TCE the important incentive of supply of medicines and vaccines was less apparent because TCE played a reduced role with regards to input supply. TCE also changed the reporting formats, apparently without much consultation with NGOs, and expected the reporting rates to be maintained. In early 2005, the submission of reports from NGOs to FAO was irregular. As shown in section 4.2.2, the bulk of the written information flowing upwards to donors and the co-ordination bodies consisted of qualitative and quantitative accounts of project implementation, rather than impact information. The most recent evaluation of the entire programme was conducted nearly 10 years ago (Blakeway, 1995). Since 1999 there have been six participatory impact assessment reports which include evidence of impact on livelihoods.

In terms of information flow, there is no main repository for reports and documents which have been written. Nor is there a catalogue which lists and categorises these documents. Not only is most of the literature grey, it is also difficult to find. Each agency tends to have a good collection of its own reports, but limited information from other agencies. This lack of information access is of concern because so far, major assessments such as the Joint Assessment Mission and Sudan Productive Capacity Recovery Programme present a somewhat simplistic and superficial view of the livestock sector. A well-organised, abstracted and accessible set of relevant documents would help to overcome this problem.

4.3.2 Information flows between sectors

During the early years of the programme until 2000 Unicef was responsible for the Household Food Security Programme of OLS, of which livestock interventions were one component. However, there was limited collaboration with sectors for at least two reasons. First, the livestock programme was very much focussed on veterinary care and veterinarians are a fairly insular group of professionals who tend to learn primarily from each other. Second, there was a perception that other sectors were behind the livestock programme particularly in terms of their persistent focus on typical relief work²⁰. In the case of food security, livestock programme workers saw how WFP operated on the ground and may well have felt that there wasn't much to learn from them. In the early 1990s WFP food assessment methods were not highly regarded and there was no clear institutional link between WFP and Unicef. Although useful food economy methodologies were introduced by WFP from 1995, the linkages remained weak and food security information rarely influenced livestock programming or policies.

²⁰ By the late 1990s the CAHW programme was being used as channel by OLS for disseminating information on human health issues, particularly guinea worm and HIV/AIDS. Human health workers had recognized that the CAHWs were an effective way to reach communities in the south.

From 2000 FAO TCE was responsible for the food security sector within OLS and again, livestock interventions were a sub-component of the food security response. In common with Unicef co-ordination, linkages between sub-sectors were weak. The livestock programme rarely drew on information arising from elsewhere and in turn, rarely influenced food security programming. As mentioned in section 3.3.1, livestock issues were poorly understood within TCE and after five years of operations, very little analytical work is available showing the role of livestock and linkages with other livelihoods assets and strategies. In part, the limited analysis contributed to the continuation of the conventional relief inputs and short-term thinking.

Linkages between the livestock programme and WFP were also weak. During the last few years there have been few interactions or sharing of information between the programme and WFP, or at least not to the extent of influencing programming. WFP also seem not to verify field information gathered on livestock with either FAP TCE livestock staff or the VSF Belgium rinderpest project. For example, for Upper Nile the 2003/4 Annual Needs Assessment suggests that, "Livestock diseases are a major cause of livestock deaths. Foot and mouth disease, HS and rinderpest are reported, with moderate infection rates in cattle but severe in goats" (WFP, 2004). In fact rinderpest has not been confirmed in southern Sudan since 1998 and if an outbreak did occur, it would prompt major international attention.

4.3.3 Information gaps and research

Throughout the life of the livestock programme, under both Unicef and TCE co-ordination, consultancy studies were sometimes used to provide information on specific policy issues. Common characteristics of these reports are vague terms of reference, a reliance on qualitative data and limited reference to the literature. Methodologies for data collection and analysis are usually poorly described, and in general, one rarely gets the impression that a consultant's pre-existing opinion was altered following the usual round of interviews or focus group discussions in southern Sudan. Perhaps for these reasons, it is difficult to identify consultancy reports which were pivotal in terms of advancing a policy debate. With hind sight, it is possible that more systematic research could have been used in southern Sudan. Although we discuss constraints to data collection in section 4, in some areas these constraints were not so severe that well-designed research studies were impossible.

Using the policy issue of payment for services as an example, both participatory and conventional methods (and combinations of methods) are available to assess willingness and capacity to pay for services. Yet the policy dialogue in OLS around this issue remained both fixed and polarised for many years²¹. One policy narrative stressed the apparent ability and willingness of livestock keepers to pay for veterinary care, the need to encourage livestock markets and the potential to lay a foundation for fully privatised services in South Sudan. The alternative narrative focussed on an apparent inability of poorer livestock keepers to pay for CAHW services, the need for subsidy or even free services, and the ethics of charging for services in an emergency context. Given these contrasting narratives, it may have been useful to conduct research drawing on methodologies used in other marginalised areas. For example, contingent valuation was used in rural areas of western Tanzania to assess the willingness of poultry owners to pay for Newcastle disease vaccine (Hooton, 2000). A similar approach was used in Orissa, the poorest state in India, to assess willingness to pay for veterinary services (Ahuja and Sen, 2002). Both studies had a clear eye on the needs and capacity of the poorest livestock keepers.

Having suggested that more systematic research might have provided evidence to inform policy debate in the programme. However, such research needs to be part of a process of policy change involving and endorsed by the relevant actors. Even the best research work will not influence policy if it is de-linked from a broader process of stakeholder analysis. Given the nature of TCE co-ordination of the programme since 2000 and a focus on typical relief activities, it seems unlikely that TCE would have initiated research activities. Similarly, for NGOs the difficulties of simply keeping their programmes running and responding to donor funding and reporting arrangements, meant that space for research was limited. In chronic emergencies, questions remain concerning the need for research to contribute to policy formulation, and how such research might be funded and implemented.

4.3.4 Databases

Attempts to create a database of information from the livestock programme date back to 1994 when Unicef attempted to collate all the information on vaccination figures, location of CAHWs, numbers of monthly treatments, disease outbreaks, cost recovery revenue and other data into one simple database. The database was custom-built but probably could have been done just as well using a simple spreadsheet. The information outputs from the database were of limited use. It allowed OLS to say how many animals

²¹ The trade-offs between policies supporting full privatization versus those supporting subsidies for the poor remain misunderstood and under-researched in many developing countries, not only areas like southern Sudan.

it had treated, vaccinated and so on but as discussed in section 4.2.2, information on impact was lacking.

The more recent FAO Dynamic Atlas includes information on livestock, drawn mainly from NGO reports and reviews. It is important to note that the indicators used in the atlas are mostly process indicators not impact indicators (as discussed in section 4.2.2). For service provision, the atlas includes some availability indicators (such as the number of CAHWs per county) but does not describe accessibility or other service indicators. If most of the CAHWs in a particular county are clustered around the main urban centre, accessibility for livestock keepers is probably low. Consequently, the information in the atlas requires very careful interpretation. Very little information is available on spatial or temporal livestock disease patterns, or disease incidence or prevalence.

4.3.5 The rinderpest project

Within the overall programme the VSF-B rinderpest project is unusual due to its narrow surveillance objectives and focus on information collection and use according to the international guidelines on rinderpest eradication. The project uses a variety of surveillance methods but an important principle is the use of field-based workers to report disease outbreaks as quickly and as accurately as possible. Most of these workers are not VSF-B staff, but include CAHWs, AHAs, NGO vets and FAO personnel (see section 3.3.2).

Depending on the information received from the field, specialist teams are then mobilised to investigate further. This simple system is complemented and triangulated using other sources and types of information. The strong flows of information from and to the field are designed to meet the specific needs of the project i.e. surveillance for rinderpest, and are not replicated for other purposes in the livestock programme as a whole. The outbreak information lands in the veterinary laboratory in Lokichokio and is forwarded to FAO. VSF-B handles report related to rinderpest, but also compiles outbreak and laboratory data for all diseases (because this is part of passive surveillance). This information is passed to PACE Sudan in the north, SAAR and SRRC, and is presented in livestock co-ordination meetings.

VSF-B introduced monthly livestock reporting from county co-ordinators to SRRC Regional Co-ordinators and SAAR in 2004. The system is still in its infancy and has many teething problems, but it is moving.

5. Discussion

5.1 Factors for success in complex emergencies

The achievements of the OLS Livestock Programme in southern Sudan since 1993 can be explained by reference to a number of factors.

1. Regardless of the relief environment, an understanding of livelihoods and attention to local knowledge and skills, local institutions (e.g. the cattle camps) and local demand was developed and encouraged.

There is little doubt that when the community-based approach to rinderpest vaccination was first conceived in southern Sudan, cattle owners were crying out for rinderpest control. However, unlike typical relief thinking which viewed local people as passive recipients of aid, rural development approaches were applied which recognised livestock keepers as the starting point for project design and delivery. An understanding of traditional institutions and decision-making enabled the programme to work effectively with communities to prioritise and analyse problems, and agree on a way forward. An understanding of livelihoods helped to reveal livestock as a crucial form of social capital.

2. A belief that some of the basic elements of a sustainable system could be initiated, if not necessarily fully implemented (e.g. payment for services).

Contrary to usual OLS practice, payment for services in the livestock programme was introduced as early as 1994. Again, the thinking was influenced by concepts of sustainability which are usually associated with development rather than relief. Although cost recovery proved difficult to implement in terms of managing the revenue collected, the basic principle of payment for clinical services was established.

3. The interpersonal skills of senior programme staff who were able to negotiate a space for innovative approaches to be tested, and then persuade UN agencies, NGOs and donors to continue to support the new approach; an ability to bring agencies together to agree common policies and guidelines.

The aid environment in OLS was confined to relief efforts. Policy incoherence existed at various levels within and between players, but apparently rigid bureaucracies in UN agencies and donors were stretched to accommodate alternative ways of working. Creating space to use funds in unconventional ways requires donors and managers to take risks, but also to feel confident that there is good chance of success. A combination of technical credibility, political awareness and communication skills in Unicef/Tufts coordinators inspired confidence and encouraged senior management and donors to buy into the community-based livestock programme.

In a complex emergency like southern Sudan, particularly in the early years of OLS, it was difficult to conduct surveys and research, or collect information in a systematic way. In these situations professional judgement drives policies and implementation, and such judgement is most likely to be correct when the people concerned are technically proficient and experienced in complex emergency environments. It also means that policies are less likely to be agreed through an analysis of data, and more likely to be based on a critical mass of opinion among players. In reality of course, this is how most policies arise whether in complex emergencies or in politically-stable and developed countries. The institutionalisation of the Livestock Co-ordination Meeting as a forum for sharing information and agreeing on policies was a key success of the programme. Even when specific policies later proved to be difficult to implement, at least a system for reviewing experiences was in place.

4. The field experience of senior programme staff and a capacity to bring realities on the ground into decision-making forums.

When community-based approaches were first introduced into the livestock programme only Unicef and Oxfam were operational on the ground; initially the Tufts vet seconded to Unicef was the only vet in both programmes. Real knowledge on how-to-do community-based animal healthcare was limited to a very small number of people and as other agencies came on board, they were behind with regards to operational experience. In this situation it was relatively easy for Unicef to lead the programme, particularly as dramatic results were quickly achieved.

5. Delivery of resources to NGOs

In addition to strong technical direction, Unicef delivered vaccines, medicines and equipment to NGOs. While leadership was a pull factor in co-ordination, control of key resources was a push factor. As TCE took over the co-ordination in 2000, both pull and push factors were less apparent.

6. Strong links with global and regional disease eradication programmes run by FAO GREP and AU/IBAR.

The livestock programme received moral and technical support from GREP and AU/IBAR with regards rinderpest eradication. Although neither player was convinced about CAHWs in early 1993, they soon recognised the benefits and threw their technical and political weight behind the approach. This support has been maintained for many years.

7. Since 1999, a realisation among some NGOs that community involvement in the programme need not be restricted to design and implementation, but could also include impact assessment.

Before 1999 impact assessment was regarded in isolation from project design and implementation. Although communities contributed a great deal to identifying problems and operationalising projects, their views were often sidelined during impact assessment. The introduction of CPE by some NGOs has helped to bridge a gap between the need for information and the need to involve local people in assessing change. Participatory approaches to impact assessment can also improve understanding of project attribution, and the fragility of sector-specific benefits in chronic conflicts. In the case of southern Sudan, the creation or protection of material assets such as livestock was constantly threatened and frequently destroyed by conflict.

5.2 Lessons for donors and UN agencies

This case study shows that the existence of coherent developmental relief policies in UN agencies and donors would have greatly assisted the OLS Livestock Programme, and other sectoral programmes, in southern Sudan. Among the UN agencies FAO has a mandate to lead livestock interventions in complex emergencies, but lacks technical guidelines for livestock work based on developmental relief approaches. The existing FAO Technical Handbooks are inadequate with regards livestock programming in complex emergencies and within FAO TCE or AGA there seems to be limited analysis of lessons learned from different livestock relief interventions around the world. Comprehensive reviews on a country or regional basis are needed, such as that conducted for pastoral areas of Kenya following the 1999-2001 drought (Aklilu and Wekesa, 2002).

Within Unicef there appears to be limited interest or organisational memory of the OLS Southern Sector Livestock Programme, despite the dramatic impact on rinderpest and food security in southern Sudan. While Unicef housed the Household Food Security Programme in OLS for many years, the livestock programme was marginal to Unicef

interests and to some extent, this created space for the Tufts team to test alternative approaches. Strong links between a small team of Tufts workers in the northern and southern sectors enabled north-south co-ordination under the umbrella of OLS.

The case study clearly points to important differences between Unicef and FAO TCE in their style of programme co-ordination. Although Unicef had no in-house technical expertise in livestock and no mandate to support a livestock programme, an innovative and developmental approach to primary veterinary care evolved using expertise seconded to OLS. In contrast, FAO TCE had a clear mandate to co-ordinate agricultural programmes but was restricted by a focus on short-term programming and a bureaucracy which hindered alternative approaches. Despite its mandate, technical expertise in the area of livestock interventions in complex emergencies was also limited in FAO TCE (and FAO AGA); as previously mentioned, the organisation seemed to lack best practice guidelines or systematic reviews of experiences in complex emergencies from other African countries. Although the case study is limited to experiences in southern Sudan, these findings have implications for UN interventions in other complex emergencies in Africa and beyond.

For Africa AU/IBAR has initiated the process of formulating livestock development relief guidelines and with FIFC, is proposing a broad collaborative effort with practitioners from NGOs and other agencies based on the Sphere methodology (AU/IBAR, 2004a). It would make sense for FAO to join this initiative if experienced practitioners in relevant FAO divisions could be identified. Among the donors, OFDA already has guidelines for livestock interventions and as noted in section 3.2.8, these guidelines were influenced by experiences in southern Sudan. The AU/IBAR and FIFC process for an international best-practice guide to livestock developmental relief should assist donor co-ordination, though realistic funding periods (greater than one year funding cycles) will also need to be defined to support a more developmental approach.

Within new policies and guidelines, there are also opportunities to review donor reporting requirements - in particular the current fixation on process rather impact. It seems inappropriate for NGOs to spend considerable time and effort collecting and submitting data which fulfils little more than a bureaucratic function. This does not mean that process information is of no value, but that a far more appropriate balance between process, impact and organisational learning needs to evolve in complex emergencies. This organisational learning could have been the driving force to move OLS away from the relief paradigm.

5.3 South Sudan and livestock policies

Following the signing of the peace agreement in January 2005 a door has opened for SAAR to lead livestock policy formulation for the south. Even at this early stage, the concept of consultation seems to be well enshrined in SAAR, partly as a result of the normality of the Livestock Co-ordination Meetings. Similarly, the concept and value of CAHWs and privatisation of clinical services is recognised. In early 2005 AU/IBAR began supporting SAAR to draft a policy framework for the livestock sector and this process involved NGOs, FAO TCE and AU/IBAR together with SAAR personnel. However, a range of policy and capacity issues will require urgent attention.

5.3.1 Capacity to develop policy

In 2003 AU/IBAR consulted senior policy makers in East Africa to gather their views on policy and institutional constraints affecting the livestock sector (AU/IBAR, 2004b). Ministers of Agriculture, Permanent Secretaries and heads of livestock departments were interviewed in Ethiopia, Kenya, Sudan (north), Tanzania and Uganda. The key findings are presented below:

“...the major achievement of the consultative process was that IBAR tapped into a rich core of concern among African legislators and senior policy makers for the need to bring about change. Furthermore, this change must primarily be in policy process.

Senior officials were frank about:

- *the dearth of policy in key areas affecting the livestock sub-sector*
- *their frustration with the current institutional environment*
- *their inability to formulate policy when events are rapidly changing*
- *the low level of awareness that appropriate policy formulation is a complex process that must involve all stakeholders*
- *their understanding that policy change alone will have limited impact – concurrently there must be institutional incentives and associated legislation to implement new policy.”*

In 2004 and 2005 AU/IBAR tested an approach to training policy makers in ‘policy process’. A fundamental aspect of the training was introducing the concept of policy development or change as a non linear process involving trade-offs between contrasting policy options, and negotiations and agreements between policy actors with varying agendas (Scoones and Wolmer, 2004). In addition, the training emphasised the notion of ‘pro-poor’ policy as opposed to policies which might only benefit wealthier livestock owners or producers, and consequently the need to effectively engage poor people. In many African countries the importance of Poverty Reduction Strategy Papers (PRSPs) and the need to improve the profile of livestock in these key documents is also an issue.

Even in countries with relatively stable political environments, capacity to change or develop policies in the livestock sector is limited. There is an opportunity for SAAR to join the regional policy process initiative of AU/IBAR and at the same time, learn from experiences in other countries. As mentioned previously, AU/IBAR is already providing short-term technical assistance to SAAR to draft a livestock policy framework based on consultation with NGOs and TCE technical staff. Fairly soon this process will need to expand to include a far wider range of policy actors, particularly livestock keepers in communities in southern Sudan. Many countries have struggled in this aspect of policy reform. For example, although the language of participation is now ever-present in methodologies for PRSPs, willingness and capacity to consult livestock-rearing communities in more remote areas has been highly variable in the Horn of Africa region. In southern Sudan the existence of the NGO network on the ground, the growing capacity of the NSCSE, and innovative participatory methodologies from some elements of the food security sector all point to an opportunity to improve understanding of livestock and livelihoods, and develop policies accordingly. SAAR will probably need ongoing technical assistance to enable it to lead this process. At some level above SAAR in the South Sudan administration, the crucial issue of cross-sectoral policy coherence will need to be addressed. For example, how will livestock policies complement land tenure policies or macro-level economic policies, and can such coherence be assured?

In terms of human resources, the team of three veterinarians in SAAR will obviously need expansion, and a substantial range of structural and funding issues have to be handled in addition to defining the core functions of SAAR. However, a policy framework, no matter how rudimentary or provisional, will be a basis for handling the multitude of mixed donor interests which are already emerging. Ideally, SAAR should be able to use donor funds to support the policies and strategies of the livestock sector in South Sudan rather than responding in an *ad hoc* fashion to donor priorities.

On a regional level, southern Sudan's outlook is southern rather than northern. To varying degrees its southern and eastern neighbours are implementing national-level development policies of decentralisation, privatisation and agricultural-sector growth. Like southern Sudan these neighbours possess large agropastoral and pastoral populations but despite many years of research, projects and good intentions, pro-pastoralist policies are hard to find. Line ministries at country-level lack coherent pastoral development policies and key issues such as land tenure remain unresolved. In Ethiopia, Kenya and Uganda pastoralists remain marginalised and vulnerable, not least due to chronic insecurity and political marginalisation. Pastoral production systems in 'disequilibrium' environments remain largely misunderstood by policy makers, and negative attitudes towards pastoralists dominant the policy arena. Even in countries without southern Sudan's history of prolonged conflict, pastoralists are a problem to be overcome by sedenterisation and ownership of fewer livestock. A challenge for South Sudan is to learn from the progress made by their neighbours but also from their mistakes.

South Sudan might also learn lessons from other countries in the region which have emerged from long-term conflict. For rebel movements gaining hard-won official recognition and power, the tendency is to re-create old government structures for livestock development based on public sector monopolies. There will be considerable political pressure to be perceived as delivering services and providing for the people. One misguided response can be wide-scale government construction of veterinary offices, clinics and laboratories, staffed by thousands of government employees. Similarly, large numbers of livestock extension officers will join the government pay role. In the initial "rehabilitation" phase some donors will support this approach with tens if not hundreds of millions dollars. So far the policy narratives of the SPLM leadership emphasise the general need to strengthen the private sector. For the South Sudan livestock department this means a clear definition of public, private and mixed functions, and policies which avoid competition between government workers and private practitioners. A strong capacity to contract-out and monitor a wide range of livestock sector activities will also need to evolve. Balancing the political and technical imperatives in the livestock sector will be a challenge for South Sudan, just like it is for any other government in any other country.

5.3.2 Some key policy issues

In recent years a number of developmental issues have become prominent in the livestock programme, particular in relation to poorer clients. In common with countries with very stable political environments, stakeholders in southern Sudan are discussing how best to improve accessibility and availability for the poorest livestock keepers and people whose primary livestock assets are not cattle. The fact that this discussion is taking place so soon in South Sudan is a reflection of the developmental approach of the livestock programme. The balance between privatisation and subsidy is a key policy issue in many countries. Related to this issue in southern Sudan is the need for a clear policy on using NGOs and managing the transition from the private-good clinical services currently delivered by NGOs to the private sector.

A less well understood but equally important policy issue concerns the linkages between epizootic disease eradication policies and safe international trade in livestock or livestock products. Taking a distinctly African perspective on barriers to trade such as international animal health standards set by the OIE, AU/IBAR is questioning whether these standards should continue to be based on concepts of disease eradication and consequently, disease free countries and disease free zones (Thomson *et al.*, 2004). The OIE lists 15 animal diseases of major international importance and 12 of these diseases are found in Africa. The OIE Code assumes that risk-free trade is dependent on the eradication of diseases while overlooking the reality that despite huge donor investments over more than 50 years, Africa has not yet eradicated any of these diseases.

Commodity-based approaches to trade are being proposed as an alternative which should benefit all countries, and this idea has major implications with regards to future policies on epizootic disease control in African countries.

And finally, this case study has repeatedly highlighted the lack of donor or agency policies on developmental relief, and the adverse impact of this policy vacuum on programming. Is it conceivable that South Sudan becomes the first administration in the region to develop specific multi-sectoral policies to handle long or short-term emergencies? In the area of primary veterinary services for example, how will SAAR ensure that in the event of drought, donor-funded emergency relief interventions will be based on local consultation and partnerships with the private sector? How can participatory processes become institutionalised both in SAAR and in developmental relief interventions? These are major policy challenges. Despite variations in the style of co-ordination in the OLS Livestock Programme over the years, relationships are clearly in place between SAAR, NGOs and communities which should enable a participatory approach to policy formulation to evolve. In addition to rinderpest eradication, this is one of the major achievements of the livestock programme.

Novel approaches to the provision of livestock services in southern Sudan started in 1993. Over time aid workers on the ground have been subject to a very difficult working environment, with basic facilities in project locations and the usual challenges of logistics and transport to remote locations with intermittent accessibility. Access to areas on foot was often required, with wading through swamps for hours on end. Many livestock workers were directly exposed to violence, being forced to run through the bush in the face of advancing militia or sitting in bomb shelters as the infamous Antonov circled overhead. In common with other sectors, livestock projects locations have been repeatedly ransacked, with loss of equipment, vehicles and medicines. The process of re-establishing a base became a normal part of working in southern Sudan. Over the years, some individuals stayed in the field and built up considerable experience of working and living in southern Sudan. As this case study shows, there were few incentives for these workers to document what they really knew. Relative peace should provide an opportunity to capture this experience within a new set of policy processes.

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