LEGS

Livestock Emergency Guidelines and Standards

Livestock Emergency Guidelines and Standards (LEGS)

Praise for the book...

'This manual-style book is a very welcome addition to the growing literature on humanitarian work because of its focus on saving lives and livestock-based livelihoods, including the assets (animals) upon which they depend. It presents a convincing set of guidelines, backed by sound concepts and methods, that point to when, where, and for whom different livestock-based interventions should be implemented during emergencies. The manual will be extremely useful to both humanitarian workers on the front lines and policy makers deciding on when and what types of humanitarian assistance are required in an emergency.'

***Peter D. Little**, Professor of Anthropology and Director of Development Studies, Emory University*

'It's been my experience that many agencies respond to livestock emergencies in a variety of ways. A lack of guidelines and standards has resulted in inconsistent and often unaccountable programming both within and between agencies. LEGS should enable agencies such as Oxfam to provide more appropriate, more accountable, more consistent and better quality emergency livestock programming. This can only be of greater benefit to those that the programs target.'

***Lili Mohiddin**, Emergency Food Security & Livelihoods, Humanitarian Department, Oxfam GB*

'This manual manages to convert a wealth of experience and knowledge into logically presented step-by-step guidance for anyone attempting to respond to or avoid humanitarian disasters that involve livestock owners and their animals. It provides a benchmark for good practice that will undoubtedly save lives and livelihoods.'

***Tim Leyland**, Livestock and Agricultural Trade Adviser, DFID*

'The *Livestock Emergency Guidelines and Standards* address a much-neglected area of humanitarian practice. This book is invaluable both because it takes a livelihood perspective to crisis response and because it provides a highly actionable framework for intervention grounded in wider thinking. This is a document for practitioners developed by practitioners and as such is an important resource for those called to respond to the increasing challenges facing livestock-keepers in Africa and beyond.'

***Sara Pantuliano**, Programme Leader, Overseas Development Institute*

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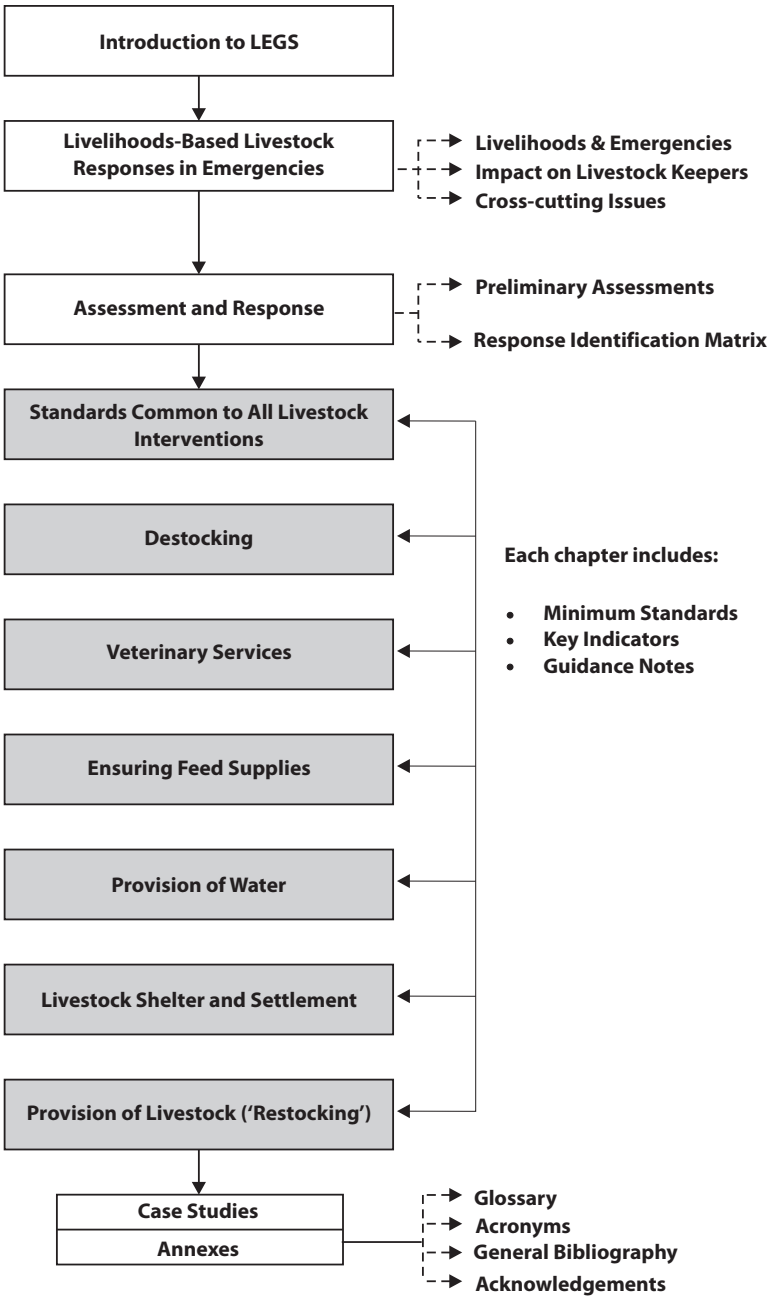

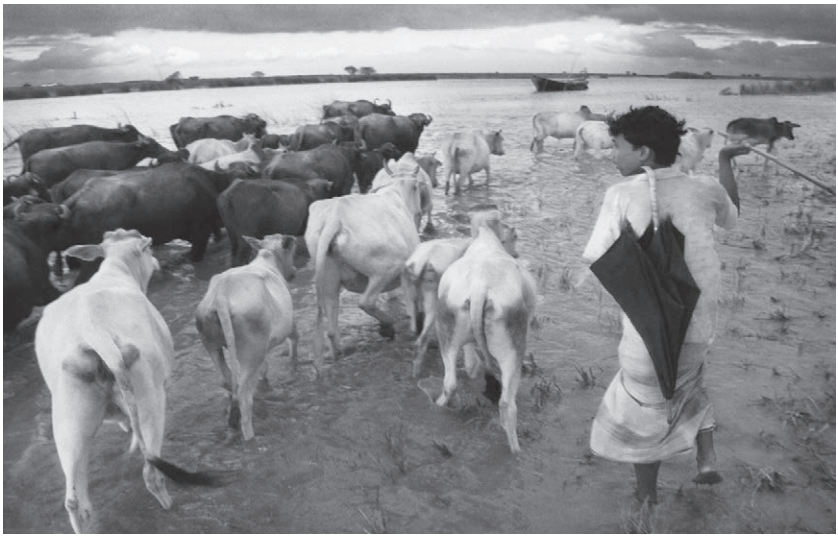

Photo credit: Kelly Lynch/Save the Children, USA

Introduction to LEGS

What is LEGS?

The Livestock Emergency Guidelines and Standards (LEGS) are a set of international guidelines and standards for the design, implementation and assessment of livestock interventions to assist people affected by humanitarian crises. They are based on livelihoods objectives that aim to provide rapid assistance to protect and rebuild the livestock assets of crisis-affected communities.

LEGS therefore aims to support both the saving of lives and the saving of livelihoods, through two key strategies: assisting in the identification of the most appropriate livestock interventions in emergencies, and providing standards, indicators and guidance notes for these interventions based on good practice.

The origins of LEGS

The LEGS process grew out of recognition that, while livestock are a crucial livelihoods asset for people throughout the world and livestock interventions are often a feature of relief responses, to date there are no widely available guidelines to assist donors, programme managers or technical experts in the design or implementation of livestock interventions in disasters. At the same time LEGS recognizes that climatic trends are causing more frequent and varied humanitarian crises, particularly affecting communities who rely heavily on livestock.

LEGS mirrors the process for developing the *Humanitarian Charter and Minimum Standards in Humanitarian Response* – the Sphere Project (2011). The development of LEGS has therefore been based on multi-agency contributions, broad reviews and collation of practitioner experience. The content and layout of LEGS are designed to ensure that LEGS complements the Sphere Handbook.

Who should use LEGS?

LEGS is intended for all who are involved in livestock-based interventions in disasters. In particular, LEGS is aimed at NGOs, bi- and multi-lateral agencies and governments who are implementing emergency interventions in areas where livelihoods are derived in part or in full from livestock. LEGS is also relevant to policy and decision-makers within donor and government agencies whose funding and implementation decisions impact on disaster response. A third audience for LEGS includes educational institutions and community-based organizations.

What LEGS covers

LEGS focuses on the overlap between *emergencies*, *livestock* and *livelihoods*, and aims to bring a livelihoods perspective into livestock-based disaster relief. From a global perspective, one of the most pressing needs is to improve livestock relief

programming with communities who rely heavily on livestock for their social and economic well-being. LEGS covers livestock interventions in these areas, but also addresses livestock support to settled farming communities and livestock kept by people in urban areas.

LEGS has a global reach, although it is recognized that this first edition has an initial leaning towards experience from sub-Saharan Africa, largely because much of the easily available documentation on livestock-based responses draws on lessons learned in that region. It is anticipated that the revision process will generate additional information and case studies to broaden the focus to include other regions more effectively in later editions.

Like Sphere, LEGS is founded on a rights-based approach, in particular the *right to food* and the *right to a standard of living*. In other words, disaster-affected populations have the right to the protection of their livelihood. LEGS' livelihoods perspective also means that the guidelines are concerned not only with immediate emergency response in acute situations, but also with recovery-phase activities and the linkages with long-term development processes (see Box 0.1). Preparedness is consequently a significant aspect of disaster response in LEGS, as is the importance of the preservation of livelihood assets in order to protect and maintain future

Box 0.1 The challenges of livelihoods-based thinking in emergencies

Taking a livelihoods perspective in emergency response highlights the need to develop closer linkages between relief and development, through for example disaster preparedness and post-disaster rehabilitation. The livelihoods perspective tends to blur the boundaries that have traditionally separated relief and development programming, a separation that is still practised at the time of writing by many agencies, in terms of both their organizational structures and their policies. Some donors and NGOs are however moving towards more holistic programming and new approaches are evolving, such as large-scale social protection systems (or safety nets) for pastoralists, and weather-related insurance schemes to protect farmers and livestock owners against drought.

The key focus of LEGS is to improve the quality of humanitarian interventions and it is therefore beyond its scope to address the issues associated with linking relief and development or the many challenges of long-term development among livestock keepers. Many of these issues are complex, still unresolved and the subject of continued debate, including for example the future viability of pastoralists in fragile environments who are suffering from increasing chronic emergencies as a result of climate change.

LEGS acknowledges that there are no clear answers to these questions but endeavours to improve the quality of emergency response by promoting a livelihoods perspective in the context of rapid relief initiatives and acknowledging the linkages with longer-term programming.

livelihoods as well as to save human lives. However, as an emergency response tool, LEGS cannot address all the issues relating to long-term development.[1]

Links to other standards and guidelines

LEGS provides standards and guidelines for best practice and assistance in decision-making. It is not intended to be a detailed practical manual for the implementation of livestock interventions in disasters. This more 'hands-on' guidance is covered by other sources listed in the References at the end of each chapter, and includes the United Nations Food and Agriculture Organization (FAO) series of practical manuals for livestock interventions that have been designed to complement LEGS (FAO, forthcoming).

In some countries, national level guidelines for livestock responses have already been prepared. LEGS aims to complement these guidelines where they exist and to support relevant national forums to develop such guidelines where they do not already exist.

LEGS is based on humanitarian principles and law, and hence its starting point is the welfare of people rather than animals. However, livestock professionals – particularly veterinarians – are obliged to consider the animal welfare implications of their actions. Guidelines for animal welfare, including issues such as the humane slaughter of livestock, are available in documents such as the *Terrestrial Animal Health Code* produced by the World Organisation for Animal Health (OIE) (www.oie.int; see also Oxfam, 2007). It is assumed that livelihoods-based interventions that aim to benefit people through improved animal health, animal shelter and animal feeding have positive impacts on both people and animals.

LEGS has signed a companionship agreement with the Sphere Project (www.sphereproject.org). Companion standards share the same rights-based approach as Sphere and are similarly developed in a broad, consultative and consensus-based manner. Their joint use will help ensure crucial linkages between protecting and rebuilding livestock assets and other areas of humanitarian response. Other companions include standards on education in emergencies (http://toolkit.ineesite.org/toolkit/Toolkit.php?PostID=1002) and on economic recovery (www.seepnetwork.org)

Like Sphere, LEGS focuses on developing regions and as such does not address the needs of companion animals. LEGS also does not address the prevention or control of specific trans-boundary animal diseases that are covered by other internationally accepted guidelines such as those produced by FAO-EMPRES (Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases) and the OIE (see the Emergency Prevention System guidelines produced by FAO for dealing with disease outbreaks, www.fao.org/ag/againfo/programmes/en/empres/home.asp).

How to use LEGS

LEGS is primarily intended as a planning and decision-making tool to support the development of appropriate emergency responses. However, the guidelines and standards it contains may also be useful as benchmarks for reviewing and evaluating emergency responses, either in real-time or post-operation.

Identifying appropriate livestock responses

The first chapter of LEGS – Livelihoods-based livestock reponses in emergencies – gives an overview of key issues to consider when planning livestock-based interventions, particularly in relation to livelihoods, and outlines the stages of rapid and slow onset emergencies. The second chapter – Assessment and response – highlights topics for initial assessment and provides a decision-making tool (the LEGS Participatory Response Identification Matrix – PRIM) to help identify which technical interventions are most appropriate and at which stages of an emergency.

The common standards

The third chapter of LEGS – Minimum standards common to all livestock interventions – provides information and guidance on ways of working that are common to all types of emergency livestock intervention. The chapter consists of standards, key indicators and guidance notes for each of the standards. The format is as follows:

- An introduction that sets out important issues to consider.
- A decision-making tree to facilitate choices between different implementation options, where appropriate.
- Standards, key indicators and guidance notes.
- Appendices containing additional technical information such as checklists for assessment and key references.

The standards, key indicators and guidance notes are arranged as follows:

Standard

The standards are generally qualitative statements which should be applicable in any emergency situation.

Key indicators

- The key indicators attached to each standard are ways to measure, either quantitatively or qualitatively, the achievement of the standard and the progress made.

Guidance notes

1. The guidance notes, which should be read in conjunction with the key indicators, outline particular issues that should be considered when applying the Standards.

Technical chapters for different types of livestock intervention

The technical interventions covered by LEGS are: destocking (Chapter 4); veterinary services (Chapter 5); provision of feed (Chapter 6); provision of water (Chapter 7); livestock shelter and settlement (Chapter 8); and provision of livestock (Chapter 9). These chapters follow the same format as Chapter 3 on common standards, and provide specific guidance and technical information for the intervention in question.

Electronic decision support tool

The electronic tool on the LEGS CD-ROM is designed to support the decision-making process, using key elements of the text together with additional questions and guidance. The CD-ROM also contains a selection of the resources referenced in the LEGS' bibliographies.

Notes

1. The relationship between emergency response and longer-term development objectives has also been the subject of debate for the Sphere Project and the revision of the Sphere Handbook (see Young et al, 2004, p155).

Photo credit: Kelly Lynch/Save the Children, USA

CHAPTER 1

Livelihoods-based livestock responses in emergencies

Livelihoods and emergencies

There is increasing recognition that emergency responses need to take into account the livelihoods of the affected populations – not just 'saving human lives' but also 'protecting and strengthening livelihoods'. This not only helps the immediate recovery of those affected by an emergency, but can increase their long-term resilience and reduce their vulnerability to future shocks and disasters.

Taking a livelihoods approach to emergency response also helps to harmonize relief and development initiatives, which historically have been mutually separate and at times contradictory. It is now acknowledged that some emergency responses have saved lives in the short term but have failed to protect, and at times have even destroyed, local livelihood strategies, undermined existing development initiatives, and had a negative impact on local service provision. Whilst it is recognized that development can also have negative impacts, and that there may be benefit in some cases in maintaining a level of independence between emergency and development responses, it is nonetheless important that relief efforts understand and take into account local development activities, particularly those that aim to strengthen local livelihoods. This is the premise on which LEGS is based, seeking to identify responses to support the lives and the livelihoods of livestock keepers affected by an emergency.

Livestock and livelihoods

Livestock play a significant role in the livelihoods of many people worldwide in different ways. They range from pastoralists, for whom livestock (cattle, camels, yaks, sheep, goats, donkeys) form the mainstay of their livelihood, to agro-pastoralists who depend on a mixture of herds and crops, to small-holder farmers who depend largely on their crops but whose cow, small herd of goats, pigs or poultry provide an important supplementary source of protein or income, to small-scale service providers such as mule or donkey cart owners dependent on livestock as their source of income, to traders, shopkeepers and other merchants in whose businesses livestock play a significant role. Livestock also form a supplementary source of income and/or food for some urban and peri-urban populations.

The Sustainable Livelihoods Framework (see Figure 1.1), now widely recognized and accepted, provides a basis for understanding and analysing livelihoods in emergency situations as well as in longer-term development processes. Livelihoods analysis is centred on a number of '*capital assets*' (see Glossary) that households use as the basis for their livelihood strategies.

For all livestock owners, livestock constitute an important *financial asset* (for many pastoralists their *only* financial asset) providing both food (milk, meat, blood and eggs) and income (through sale, barter, transport, draught power and work hire). Livestock are also significant *social assets* for many livestock owners,

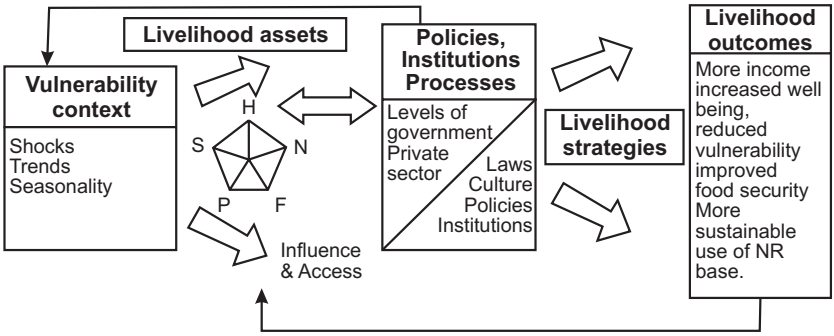

Figure 1.1 Sustainable livelihoods framework
Key: H = human capital; S = social capital; N = natural capital; P = physical capital; F = financial capital
Source: DFID sustainable livelihoods guidance sheets, www.livelihoods.org/info/guidance_sheets_rtfs/Sect2.rtf
Note: Further information on livelihoods analysis is available at www.livelihoods.org

particularly pastoralists and agro-pastoralists. Livestock play a key role in building and consolidating social relationships and networks for most pastoralists, between clan members, in-laws and friends, and are commonly the currency of both gifts and fines.

As highlighted in the Livelihoods Framework, *policies and institutions* influence the ability of livestock owners to use their assets in support of their livelihoods. For example, veterinary service institutions, taxation policies, marketing and export policies all have an impact on livestock-based livelihoods.

Vulnerability relates to people's ability to withstand shocks and trends (see Box 1.1). For households that depend on livestock for their livelihood, this may be directly linked to their livestock assets – the greater the value of livestock assets, the more resilience households have to cope with and recover from shocks. Protecting and rebuilding these assets, therefore, has a significant impact on reducing vulnerability. However, in some cases livestock owners' livelihoods have been so

Box 1.1 Vulnerability

Vulnerability may be defined as the inability of communities or households to cope with contingencies and stresses to which they are exposed. It has three components:

- Exposure to risk and hazards (drought, flood, earthquake)
- Susceptibility to the hazard
- Capacity to resist or recover from the hazard (coping strategies)

Source: Trench et al (2007)

compromised that rebuilding their livestock assets is no longer appropriate and other intervention strategies such as safety nets may be more applicable. Understanding the role of livestock in livelihoods and the impact of the emergency, as outlined in Chapter 2, is of key importance in determining the appropriateness of a livestock-based response. Non-livestock interventions such as food aid, cash grants or cash/food-for-work can also be complementary to livestock-based responses, in that they can remove some of the pressure on livestock assets in the short term, to enable them to recover.

The protection and strengthening of livestock as a key livelihood asset is therefore central to livestock responses in emergency situations. This is highlighted in the Sphere Handbook (2011), which emphasizes the importance of 'supporting, protecting and promoting livelihood strategies' (p112) and in particular 'preserving productive assets or recovering those lost as a result of disaster' (p120).

Livestock and a rights-based approach

Like Sphere, LEGS is founded on a rights-based approach (see Box 1.2), in particular drawing on two key international rights: the *right to food* and the *right to a*

Box 1.2 Rights-based approach

A rights-based approach to development and emergency work includes the achievement of human rights as part of its objectives. In this context human rights generally refers not only to the 1948 Universal Declaration on Human Rights, but also to the various covenants and declarations that have been agreed since, in particular the civil and political (CP) rights and economic, social and cultural (ESC) rights, both agreed in 1966, as well as additional covenants covering racial discrimination, discrimination against women, torture, the rights of the child and so on.

For each set of rights there are 'duty-bearers' who have the responsibility to ensure that rights are protected and maintained. With regard to some rights (such as the right to food) nation states are required to work progressively towards the achievement of the right for all people rather than expected to achieve it immediately.

A rights-based approach to development and emergency work may be interpreted in a number of different ways, but most approaches draw on the range of human rights instruments and declarations to emphasize the responsibilities and duties of key stakeholders as well as to add weight to their desired goals. A rights-based approach therefore emphasizes participation, empowerment, accountability and non-discrimination in the delivery of development or emergency programmes. At the same time, specific rights – such as the right to food may be highlighted.

Source: Aklilu and Wekesa (2002)

standard of living.[1] Livestock keepers therefore have a right to emergency support that protects and rebuilds their livestock as a key asset that contributes significantly to their ability to produce food and maintain a standard of living that supports their families. International humanitarian law also highlights the importance of the protection of livestock as a key asset for survival in the event of conflict and war.[2]

Livelihoods objectives of LEGS

Based on these rights and in recognition of the role of livestock in livelihoods, LEGS is founded on three livelihoods-based objectives:

1. to *provide rapid assistance* to crisis-affected communities through livestock-based interventions;
2. to *protect the key livestock-related assets* of crisis-affected communities;
3. to *rebuild key livestock-related assets* among crisis-affected communities.

In all types of emergency (see below), livelihoods-based approaches aim to design interventions that limit disruption to long-term development.

The impact of emergencies on livestock keepers

Humanitarian emergencies may be categorized as slow onset, rapid onset and complex and/or chronic.

Slow-onset emergencies

Among the emergencies that may require a livestock response, the most common slow-onset emergency in arid and semi-arid environments is drought. The slow onset of drought means that livestock initially deteriorate in condition and later die, primarily due to shortage of feed and water. The impact on livestock keepers is twofold. Initially there is a reduction in the productivity of livestock, both as a source of food and of income, as their poor condition leads to lower prices in the market and poor terms of trade for livestock owners. Livestock can also become more vulnerable to some diseases during drought, which also results in production losses, increased costs or death. Second, as the drought worsens livestock then die, leading to the loss of key livelihood assets for the future as well as for the present (see Box 1.3).

The progression of a typical drought is characterized by four phases: *alert*, *alarm*, *emergency* and *recovery*, before returning to a 'normal' situation (see Glossary). (Not all emergencies follow this linear model – some are cyclical in nature (for example recurrent drought with little or no time for the recovery phase in between), while in other cases the phases may overlap or recur.) The needs of livestock owners vary at different phases of a drought. For example, in the alert and alarm stages, the productivity of livestock is reducing but key assets have not yet been lost. However,

Box 1.3 Impact of a slow-onset emergency

In the 1999–2001 drought in Kenya, it is estimated that over 2 million sheep and goats, 900,000 cattle and 14,000 camels died. This represents losses of 30 per cent of small stock and cattle and 18 per cent of camel holdings among the affected pastoralist populations. There was also a significant social impact: families separated, damaging the social networks that provide a safety net for pastoralists, and many moved to settlements and food distribution centres. Without sufficient livestock to provide for their food needs, many pastoralists became dependent on food aid. Once the drought ended, some could not return to the pastoralist sector because their livestock losses were too great and hence their livelihood had been destroyed.

Source: Aklilu and Wekesa (2002)

livestock owners may be employing coping strategies such as stress sales of animals in order to purchase food, and may include strategies damaging to long-term food security (such as sales of reproductive stock). The priority may therefore be to protect livestock assets while at the same time providing food security support to the family. In the emergency phase, livestock may have died and the immediate need may be for food for the family and the protection of any remaining livestock assets. In the recovery phase livestock assets need to be rebuilt.

Rapid-onset emergencies

Rapid-onset disasters such as earthquakes, floods and extreme weather conditions (tsunamis, cyclones, typhoons, hurricanes – disease epidemics are addressed by FAO's Emergency Prevention System guidelines, www.fao.org/ag/againfo/programmes/en/empres/home.asp) share very different characteristics compared to slow-onset emergencies. While the outcome of both rapid- and slow-onset disasters will be either the death or the survival of livestock, the different timescale means that the impact on livestock of acute disasters is generally sudden, in contrast to the slow decline in livestock condition associated with drought. Affected populations may be displaced rapidly and may have to abandon their animals. The impact on livestock owners is therefore both an immediate loss of food/income and the loss of future productive assets (see Box 1.4).

The phases of a rapid-onset emergency are usually different from those of a slow-onset disaster. The disaster may strike with little or no warning, and most of the initial impact takes place within a few hours or days. Following the *immediate aftermath* (see Glossary), there is an *early recovery* phase and then the main *recovery* phase, which depending on the nature of the disaster could take days (for example receding floods), months or years (for example rebuilding after an earthquake).

Box 1.4 Impact of a rapid-onset emergency

The Indian Ocean tsunami in 2004 had a significant impact on the livestock of the affected people. This included the loss of domestic farm animals (poultry, sheep, goats and also cattle and water buffalo). In Indonesia, for example, over 78,000 cattle and 61,000 buffalo were killed, together with 52,000 goats, 16,000 sheep and nearly 1.5 million chickens. Livelihoods were also affected by the destruction of livestock-related infrastructure such as barns, stores and processing facilities. In addition, the natural resource base on which the livestock depended was also affected, including the destruction of crop residues, straw and inland pasture.

Source: www.fao.org/ag/tsunami/assessment/animal.html

However, in some rapid-onset emergencies there is also an '*alarm*' phase, when warning is given of an impending disaster. This may be very short, or may in some cases allow preparations to be made or responses to be planned.

Complex and chronic emergencies

The UN Office for the Coordination of Humanitarian Affairs defines a complex emergency as 'a humanitarian crisis in a country, region or society where there is total or considerable breakdown of authority resulting from internal or external conflict and which requires an international response that goes beyond the mandate or capacity of any single agency and/or the ongoing United Nations country program' (UN OCHA, 1999).[3] Complex emergencies are often the result of poor governance or prolonged conflict, and may be further complicated by natural phenomena such as drought or flooding. This can impact on livestock owners' livelihoods through:

- displacement, with the possible loss of livestock assets and/or access to natural resources such as grazing grounds and water rights;
- violent theft of livestock assets by armed groups;
- disruption of services such as veterinary services;
- restrictions on livestock management and marketing, such as reduced access to grazing, water and markets;
- communications and infrastructure breakdown, causing limited access to information or markets.

Some regions also experience longer-term chronic or cyclical emergencies, for example recurrent drought, where the recovery phase from one disaster merges with the impact of a new emergency, or long-running conflict where livelihoods are undermined over an extended period of time (see Box 1.5).

Box 1.5 Impact of a complex emergency

The Darfur region of Sudan has suffered from chronic conflict and recurrent drought for several years. Pastoralists and agro-pastoralists in the region derive up to 50 per cent of their food/income from their livestock. However the conflict and drought have together caused significant livestock losses. For example some villagers reported losses of 70–100 per cent due to looting. Overcrowding of livestock and the disruption of veterinary services (both the result of insecurity) have added to livestock mortality rates. The closure of the Sudan–Libya border has also severely affected livestock trade and hence had a significant impact on livelihoods. The natural resource base has been depleted by the drought and conflict has restricted access to traditional migration routes as well as to large tracts of grazing lands. Remaining livestock are sold only as a last resort as prices are very low.

Source: ICRC (2006); Helene Berton, pers. com

Cross-cutting issues

There are four important cross-cutting issues to consider in all types of emergency response: gender, HIV/AIDS, security and protection, and the environment. This section provides an overview of these issues in the context of livestock responses in emergencies. The implications of these issues for each technical response are discussed in the relevant technical chapters that follow.

Gender and social equity

Social equity is a key consideration in disaster response, not least because disasters affect different groups of people in different ways and an equitable response is part of the rights foundation on which LEGS is based. Emergency interventions have the potential to reinforce social inequities or contribute to greater equality between differentiated social groups, such as those based on age (for example the elderly, orphans or other vulnerable children, child-headed households), ethnicity or gender.

Gender is particularly important, since in any disaster women and men have different resources available to them and different coping strategies, which need to be understood and recognized by intervening agencies. In some cases women's coping strategies may increase their vulnerability, for example exposing them to sexual abuse or exploitation. Emergencies often increase women's labour burden and may at the same time reduce their access to key assets.

With regard to livestock-based interventions, issues of ownership and control of livestock as a livelihood asset become paramount. It is important therefore that responses are based on a sound understanding of women's role in livestock produc-

tion, including their daily and seasonal contributions and responsibilities; their access to and control of livestock assets including rights of use and disposal; and the difference between the various livestock species and age categories (for example women may be responsible for young stock but not adult stock). In some pastoralist communities, cultural norms prescribe that women control livestock products (such as milk, butter, hides and skins) as part of their overall control of the food supply, while the men have disposal rights (sale, barter or gift) over the animal itself.

Pre-intervention assessments therefore need to assess gender roles within the affected community with regard to livestock and to disaggregate information on the impact and extent of the emergency. The potential impact of any intervention on gender roles, on women's workload and on women's access to and control of resources (in particular livestock and livestock products) also needs to be thoroughly investigated. It should also be noted that gender roles may also change during an emergency from the previous 'norm' (for example women may take greater responsibility for livestock if the men have migrated to look for work; conversely the women may be left in feeding camps while the men remain with the livestock). Finally, cultural gender norms may need to be taken into account with regard to the gender of intervention staff members and the cultural accessibility of women. Methodologies for assessing this issue are included below (for further information on gender in emergencies see IASC, 2006).

These considerations – the differential impact of the disaster; access and control over resources and assets, and the potential impact of any planned intervention on workloads and roles – similarly need to be taken into account for other socially differentiated groups, such as those based on age, ethnicity or caste.

HIV/AIDS

HIV/AIDS continues to present a global threat to human health, in spite of falling infection levels in some countries and the increasing availability of antiretroviral (ARV) drugs. Sub-Saharan Africa, home to many of the world's livestock keepers, continues to be the most affected region, while women are increasingly disproportionately infected. The pandemic has a significant impact on livestock owners and their ability to meet their basic needs. Constraining factors such as livestock disease, drought, flood, conflict, poor infrastructure and access to credit and markets are all exacerbated by the presence of HIV/AIDS. One of the key impacts is the effect on family labour, which results in lower production and loss of income as labour is insufficient to manage the livestock adequately. In addition, knowledge and skills are lost as parents die before they can pass information on to their children, and extension and support services such as veterinary services lose capacity as staff are affected by the pandemic. People living with HIV and AIDS (PLHIV) may suffer social exclusion and rejection, for example they may be excluded from using communal water sources or sent away from their village, which also has a negative

impact on their livelihood activities. Livestock are commonly sold to cover medical and funeral expenses and thus family herds are depleted to cope with the impact of HIV/AIDS, leading to the depletion of key livelihood assets.

When a disaster or emergency occurs, PLHIV are more vulnerable than those unaffected because their usually fragile coping mechanisms are disrupted. Events such as famine or flooding increase the risk of food shortages and exposure to disease, as well as the potential for conflicts over scarce resources such as grazing and water. Conflict and other emergencies often result in livelihoods being disrupted as people flee to more secure areas. If law and order deteriorate in an emergency, there may be a rise in crime and gender-based violence, which may further increase the spread of HIV/AIDS and exacerbate women's vulnerability.

As HIV/AIDS tends to affect the productive sector of the community, orphans and child- or elderly-headed households have to take responsibility for livelihoods, including the care and management of livestock. Labour constraints may be a significant factor therefore in the uptake of livestock-based interventions such as livestock distribution. At the same time, PLHIV also have particular nutritional needs that livestock products (such as milk, milk products and eggs) can help to fulfil – for example ARVs need good nutrition in order to be effective. The loss of livestock in an emergency can therefore have a negative effect on the diet of PLHIV, while preserving or rebuilding livestock assets can conversely help to improve their well-being.

People with HIV/AIDS are also highly susceptible to other diseases, including a group of diseases that may pass from livestock to people ('zoonoses'). These zoonotic diseases include forms of tuberculosis (TB), toxoplasmosis and other diseases. TB is particularly important, being a major killer of women of reproductive age and the leading cause of death in HIV-positive people (one third of AIDS deaths worldwide). The disease threatens the poorest and most marginalized groups. TB enhances replication of HIV and may accelerate the progress to AIDS. The prevention of zoonoses is therefore important in reducing the vulnerability of PLHIV.

The impact of any emergency on PLHIV should therefore be noted, and their particular needs should be taken into account when planning interventions. Livestock-based interventions should build on current coping strategies being used by HIV/AIDS affected households, and should take into account the 'coping stage' of affected families.

Security and protection

The principle of protection relates to the *safety, dignity and integrity of the individual* (see Slim and Bonwick, 2005) and draws on international humanitarian law and international human rights. In emergencies, particularly those involving conflict, the protection of the affected population may be compromised and communities and individuals may suffer from sexual violence, theft, looting, coercion, exploita-

tion, attack, deprivation, the misappropriation of land and/or the destruction of services. Agencies responding to emergencies therefore have the responsibility to ensure that their interventions at the least do not increase risk to beneficiaries, and where possible aim to reduce risk and increase protection.

LEGS is founded on a rights-based approach and, in keeping with the Sphere Humanitarian Charter, recognizes 'the right to life with dignity' (see www.sphere-project.org). LEGS therefore aims to ensure the protection of people involved in livestock-related emergency responses and to minimize risk. This can be achieved through proper analysis of protection issues prior to intervention. For example the distribution of livestock may increase individual households' vulnerability to theft or looting; activities that require women to travel to remote areas (for example in search of feed or water for livestock) may place them at personal risk; and the establishment of water sources without effective management systems can leave individuals vulnerable to exploitation. In times of natural resource scarcity, the movement of livestock to new areas can increase the potential for conflict between the host and visiting communities.

Protection and security also apply to implementing agency staff. The physical safety of agency staff and their ability to access and operate in affected areas can also be severely threatened by insecurity, which can also lead to high implementation costs due to the need for good communications systems, extra vehicles, armed escorts and so on. Consequent delays in implementation may lead to inappropriate timing of interventions and/or last minute changes that may affect the quality and impact of the response.

Environment

Sustainable environmental management is central to successful livestock-based livelihoods, since livestock depend on environmental resources such as pasture and water for survival. When the availability of these resources and the demand from livestock are balanced, the potential for negative environmental impacts is minimal. In fact, many livestock management systems (for example seasonal migration) incorporate elements to minimize negative environmental impacts and promote sustainable animal production. However, some livestock production systems, particularly where animals are concentrated in one location (for example feedlots, chicken houses) can lead to negative environmental impacts such as soil and water pollution if mitigation measures are not in place. Poor environmental hygiene and sanitary conditions can also contribute to livestock illness and death, lowering animal value and increasing per head management costs.

Conditions before or during an emergency can increase the risk of negative environmental impact from livestock. For example, reduced pasture, fodder and water due to drought cause concentrations of livestock around diminished water resources and lead to localized overgrazing. Similarly, camps for internally displaced

persons (IDPs) may result in unusually high livestock populations in a restricted area. Although the provision of feed and water may sustain livestock in these situations, early recognition of possible environmental impacts can help to limit damage to natural resources. Displacement and restrictions on migration because of conflict or other factors limit the normal movement of animals and concentrate livestock to the extent that overgrazing may occur and animal health deteriorates.

Further environmental considerations in some emergencies are the management of waste from livestock, the disposal of livestock offal following slaughter and the disposal of livestock carcasses. Some disasters, particularly flooding, can result in the death of tens of thousands of livestock, presenting a considerable challenge if negative environmental (and human health) impacts are to be avoided.

Notes

1. International Covenant on Economic, Social and Cultural Rights, Article 11(2), and Universal Declaration of Human Rights, Article 25(1). For more information on human rights, see www.ohchr.org/english/law/index.htm
2. Geneva Conventions of 1949: Additional Protocol on the Protection of Victims of International Armed Conflicts, Protocol I (Art. 54) 1977; Additional Protocol on the Protection of Victims of Non-International Armed Conflicts, Protocol II (Art. 14) 1977. For more information on international humanitarian law, see www.icrc.org/Web/Eng/siteeng0.nsf/htmlall/genevaconventions
3. The UN OCHA Handbook goes on to say that complex emergencies are typically characterized by 'extensive violence and loss of life, massive displacements of people, widespread damage to societies and economies; the need for large-scale, multi-faceted humanitarian assistance; the hindrance or prevention of humanitarian assistance by political and military constraints; and significant security risks for humanitarian relief workers in some areas'.

Photo credit: Stephen Blakeway/Vetwork UK

CHAPTER 2

Assessment and response

Preliminary emergency assessment

Prior to any form of emergency response, an assessment is required to ascertain whether livelihoods-based livestock interventions are appropriate and feasible in the specific context, according to the type, phase and severity of the emergency, or indeed whether a response is necessary at all. As noted in the Sphere Handbook and other assessment guides, this preliminary assessment is not an end in itself, but the first step to enable decisions to be made regarding which technical interventions to explore. The preliminary assessment also generates useful background information as a basis for later, more detailed, assessments into specific technical areas.

The LEGS assessment process is made up of three parts, which may be carried out concurrently, namely:

1. the role of livestock in livelihoods;
2. the nature and impact of the emergency;
3. situation analysis.

Detailed checklists for these assessments are presented in Appendix 2.1, including key questions to be considered and key conclusions/exit points. A summary of possible methodologies for these assessments is presented in Appendix 2.2. For each of the technical interventions more detailed assessments may be needed, and these are discussed in the relevant technical chapters.

Ideally some of the assessment information should have been collected before the onset of the emergency as part of preparedness planning (see Chapter 3, Common standards, Standard 7). Even in rapid-onset emergencies, some form of preparedness information collection should be possible for areas that are known to be disaster-prone. Agencies already working in the area on longer-term development initiatives, if they exist, are therefore often best placed to develop this preparedness capacity both within themselves and together with communities.

Early warning systems (EWSs) have been developed in different regions with the aim of anticipating (particularly natural) disasters and allowing time for preparation and mitigation beforehand. These systems generally focus on food security and human nutrition data, although some incorporate livelihood indicators such as livestock condition. There are also a growing number of classification systems under development to assist in the interpretation of early warning and emergency assessment data. Box 2.1 presents some of these approaches.

Early warning and classification system results can be extremely useful in the analysis of an emergency and help to inform emergency response. However, the need for sound analysis and accurate classification of an emergency should not draw attention from the need to respond quickly and effectively. Early and timely response is particularly important in slow-onset emergencies such as drought, where the benefit to cost ratio of interventions may decrease with time.

Box 2.1 Selected emergency warning and classification systems

- Coping Strategies Index: rapid assessment methodology of household food security designed by CARE; based on four key categories of change: dietary change, increasing short-term food access, decreasing numbers of people to feed, and rationing; weighted scores result in an index giving current and anticipated relative food security status.
- Famine Early Warning Systems Network (FEWS-NET): initiative funded by the United States Agency for International Development (USAID) to provide early warning information on food security threats, create information networks and build local capacity for provision and sharing of information.
- Global Information and Early Warning System (GIEWS): FAO service providing reports on the world food situation and early warning of potential food crises in individual countries; also carries out food-supply assessment missions with the World Food Program (WFP) to provide information to governments and international agencies.
- Household Economy Approach (HEA): developed by Save the Children (UK); uses the sustainable livelihoods framework as a baseline to ascertain livelihood zones and then to analyse the impact of an emergency on the disruption of livelihoods, enabling the quantification of food needs.
- Integrated Food Security and Humanitarian Phase Classification (IPC): designed by the FAO-managed Food Security Analysis Unit for Somalia (FSAU) to respond to the need for consistent and comparable classification of food security situations across locations and emergencies; uses a reference table of human welfare and livelihoods indicators linked to strategic response and early warning; also includes cartographic protocols for communicating visually complex information, analysis templates for documenting evidence, and population tables.
- Standardized Monitoring and Assessment of Relief and Transitions (SMART) Protocol: inter-agency initiative aiming to provide reliable and consistent data on mortality, nutritional status and food security, to facilitate decision-making; developed a survey manual and analytical software programme; also developed a database on complex emergencies (CE-DAT).
- Vulnerability Assessment Committees (VACs): established by the Southern Africa Development Community (SADC) countries to coordinate vulnerability and emergency needs assessment in member countries; combines analysis of existing secondary data with primary livelihoods data collection.

(See References at the end of this chapter.)

Assessment approaches

The assessments described in this chapter are designed to be part of a participatory planning process involving key stakeholders and including representatives of the beneficiary communities (see Chapter 3, Common standards, Standard 1

'participation'). In the context of emergencies, in particular rapid-onset emergencies, the need for speed and an urgent response may be considered to limit the opportunities for participatory approaches. However, the approach taken for the assessments is as important as the methodologies selected, if not more so, as it has the potential to lay a sound footing for a response based on collaboration and participation. Whichever methodologies are used therefore, the approach should be based on consensus.

The assessments are not designed to be carried out in any particular order. In many cases some of the information from the three assessments may be collected at the same time – during community discussions, for example, consulting local officials or from secondary data. Compared to human emergency assessments, livestock-based assessments may be more qualitative, based on the judgement of expert opinion, since quantitative analysis is not always feasible (for example, there is at present no livestock-based equivalent to rapid human nutritional assessment and no standard methodology for measuring livestock mortality) and livestock owners are sometimes reluctant to reveal livestock numbers. Furthermore, the role of livestock in livelihoods is a key aspect of the assessment and will vary from community to community as well as from region to region.

Assessment methodologies

The assessment team should be gender-balanced and include generalists and livestock specialists with local knowledge. While the time available for carrying out the assessment may be limited, particularly in the case of rapid-onset disasters, this should not prevent participation of representatives from the affected communities. The assessment team should therefore include community representatives and involve local institutions as partners. Local participation should also improve the quality of the data collected.

For a rapid preliminary assessment in an emergency, purposive sampling (see Appendix 2.2) may prove to be the most effective sampling method, taking into account key variables such as gender, age, ethnicity and livelihood strategies.

The shortage of time in an emergency context also limits the extent to which detailed quantitative surveys may be carried out. It is therefore recommended that largely qualitative methods are used, based on participatory inquiry and cross-checked with local community representatives, local government and agency workers. A list of possible methods is outlined in Appendix 2.2. Disaggregation of findings according to key factors such as age, gender, HIV status and ethnicity is vital to gain an understanding of the differential impact of the emergency on different vulnerable groups. [1]

Gathering the information necessary to complete the preliminary assessments, including key data relating to the four cross-cutting issues outlined above, is greatly facilitated if the agency is already operational in the affected area, or can work in

partnership with an organization already working there. In these circumstances, knowledge and understanding of livelihood strategies, production systems, social and cultural norms and key actors and institutions are already available and the accuracy of the rapid preliminary assessments is significantly increased.

Identifying livestock-related emergency responses

Relating technical interventions to the LEGS livelihoods objectives

To achieve the LEGS livelihoods objectives, different technical options can be used either alone or in combinations. The relationship between livelihoods objectives and technical options is shown in Table 2.1, together with some key implications to consider for each technical option.

These implications are considered in more detail in each of the technical chapters that follow.

LEGS Participatory Response Identification Matrix

The LEGS Participatory Response Identification Matrix (PRIM) is a tool that uses the findings of the preliminary assessments to facilitate discussions with local stakeholders in order to identify which interventions are most appropriate and feasible, in the context of protecting and rebuilding livelihood assets (see case studies below). PRIM should be completed using the assessment findings by a group of stakeholders including community representatives.

PRIM considers the three livelihoods objectives (providing rapid assistance, protecting assets, rebuilding assets) against the range of technical interventions (destocking, veterinary services, feed, water, shelter and provision of livestock) in the light of the assessment findings. It emphasizes the importance of all three objectives in order to support livelihoods in an emergency context, and addresses how the different interventions can fit in and overlap within the phasing of an emergency. The right-hand side of the matrix can help agencies to plan the timing of their interventions in relation to the phase the emergency has reached and allow sufficient time for preparation and lead-in for later activities. The emergency phases

Box 2.2 Cash-based responses

There is a growing debate about the role of cash in emergency response, as an alternative not only to food aid/food-for-work, but also to livestock-related inputs such as feed, water or the provision of livestock. Providing cash allows beneficiaries to make their own choices and adapt the response to their own needs. Although not yet a proven methodology, there is increasing interest in developing this approach (see for example Mattinen and Ogden, 2006).

Table 2.1 LEGS livelihoods objectives and technical options

Livelihoods objective	Technical options	Implications and issues
1. *Provide rapid assistance to crisis-affected communities through livestock-based interventions*	**Destocking** (accelerated off-take)	• May be appropriate in early stages of slow-onset emergency • Allows longer-term protection of remaining livestock assets • Provides cash support to livestock owners • Potential also in some rapid-onset emergencies to provide cash to households who may lack feed, shelter or labour to care for their livestock • Requires infrastructure, interested traders and conducive policy environment
	Destocking (slaughter destocking)	• May be appropriate when emergency too far advanced for accelerated off-take • Provides cash or food • Requires slaughter infrastructure, skills and distribution mechanisms • May require greater input from external agencies
2. *Protect the key livestock assets of crisis-affected communities*	**Veterinary Services** (primary clinical veterinary services; support to public-sector veterinary functions)	• Potential for positive impact on protecting and rebuilding assets at all stages of an emergency • Can include preparedness measures such as vaccination and preventive treatment • Can be carried out in conjunction with other activities (e.g. feed, water, provision of livestock) to increase asset protection • Requires operational or potential service sector (government, private and/or community-based) and veterinary supplies
	Provision of Feed (relocation of livestock; emergency feeding)	• Important for protecting remaining livestock assets during and after an emergency • Requires available feed, pasture, transport and/or storage facilities • In drought, can be complementary to water provision • Emergency feeding can be very expensive and logistically demanding
	Provision of Water (water point rehabilitation; new water point establishment; water trucking)	• Important for protecting remaining livestock assets • Requires available water sources of sufficient quality and quantity, or potential to establish new ones • Requires effective local water management systems • May be very capital intensive (particularly new water point establishment) or expensive (water trucking)
	Livestock shelter and settlement (settlement; infrastructure; shelter)	• Responds to a range of livestock needs: protection against cold or hot climates; security; prevention of wandering; provision of healthy environment for livestock and humans; and convenience of management

Livelihoods objective	Technical options	Implications and issues
		• Generally (though not exclusively) more appropriate to rapid-onset emergencies in harsh climates rather than slow-onset disasters such as drought • Can involve preventive measures (e.g. earthquake-resistant livestock shelters) as well as those designed to protect livestock assets after an emergency • Addresses wider settlement issues (such as land rights, environmental implications and access to feed and water)
3. Rebuild key livestock assets among crisis-affected communities	**Provision of livestock** (herd reconstitution; other livestock distribution)	• Can include helping livestock owners to rebuild herds after an emergency, or the replacement of smaller numbers of animals (e.g. draught or transport animals, poultry), which contribute to livelihoods • Appropriate in the recovery phase once immediate aftermath is over and asset loss can be assessed • Potentially very expensive and challenging to manage effectively • Requires supply of appropriate livestock either locally or within feasible transporting distance • Requires sufficient natural resources to support distributed livestock • Success is highly dependent on: appropriate targeting of beneficiaries; selection of appropriate livestock; beneficiary capacity for livestock care and management; and availability of livestock support services • Complementary animal health interventions, including training, can increase survival rates • Herd reconstitution may require additional short-term food and non-food support for beneficiaries
	Veterinary services, water, feed, shelter	• See above • Continued intervention in the recovery phase can help to rebuild and strengthen livestock assets and reduce vulnerability to future disasters

vary for rapid-onset and slow-onset disasters. Broad definitions of these phases are given in the Glossary, but PRIM participants should agree on their own definitions specific to the context in which they are working. For complex emergencies that include either a slow- or rapid-onset disaster, the relevant PRIM may be used (see for example Case study C below). For chronic and/or complex emergencies that do not include a slow- or rapid-onset crisis, only the left-hand side of PRIM (i.e. the livelihoods objectives) may be appropriate.

PRIM thus provides a visual summary of which interventions are possible and potentially most effective in protecting livelihoods given the stage of the emergency. Examples of the completed PRIM are given in the case studies below, while blank matrix tables are presented in Appendix 2.3.

It is important to note that none of the interventions described in LEGS are exclusive. In order to protect and strengthen livelihoods, an integrated response involving more than one intervention at a time may be appropriate, as well as different interventions being implemented sequentially over the course of the emergency. The specific technical interventions, including the detailed assessments needed and guidance on selecting sub-options within them, are outlined in the following chapters.

PRIM case studies

The following case studies show how PRIM can be used for different emergency types. In each case study, a PRIM matrix is followed by an explanation of the results. Note, PRIM is a tool that is designed to help in the planning process, based on the findings of assessments and the judgement of the participants; it should not be used to dictate action and these examples are for illustration only. Participants should also be aware of potential biases based on individuals' personal interest or expertise when completing the matrix.

Case study A: An earthquake in Asia (rapid onset)

Table 2.2 PRIM of Case study A

Technical interventions	Livelihoods objectives			Emergency phases		
	Rapid assistance	Protect assets	Rebuild assets	Immediate aftermath	Early recovery	Recovery
Destocking	n/a	n/a	n/a			
Vet services	**	*****	*****	→	→	→
Feed	**	*****	*****	→		
Water	*	*	*	→		
Shelter	***	***	***	→	→	
Provision of livestock	n/a	n/a	*****			→

Key:
Scoring against Livelihoods objectives:
***** significant benefits/highly appropriate
**** benefits/appropriate
*** some benefits
** a few benefits
* very little benefit/not very appropriate
n/a not appropriate
Emergency phases:
→ appropriate timing for the intervention

Notes on Case study A:

- Accelerated off-take cannot provide rapid assistance to crisis-affected households, since in this particular case the normal market system is not operating. Slaughter destocking is most appropriate in cases where the livestock might otherwise die, from lack of water or feed, and is therefore less likely to bring significant benefits to affected households.
- Veterinary interventions could both provide some rapid assistance (by helping to keep alive those animals that have survived the disaster) in the immediate aftermath, and make a significant contribution to protecting and rebuilding livestock assets in the early recovery and recovery phases.
- The provision of feed may also contribute to protecting and rebuilding these livestock assets, although it may not be of much rapid assistance. If there is advance warning of the earthquake, some measures may be taken to stockpile feed (and water).
- The provision of water may provide some small benefit, depending on the effect of the earthquake on existing livestock water supplies.
- Shelter-related interventions may contribute to both rapid assistance and protecting and rebuilding assets, depending on the types of livestock kept and their shelter needs. If sufficient warning is given, shelter provisions for livestock may help to save their lives in an alarm phase (for example by moving them out of buildings that may collapse into open spaces). In the immediate aftermath and early recovery phases, the provision of warm and/or dry shelter for affected animals can make a significant contribution to the protecting and rebuilding of assets.
- In terms of rebuilding assets, provision of livestock ('restocking') may make a significant contribution, helping those who have lost their stock to begin to recover some livestock assets. This can only take place however, in the recovery phase.

This case study is presented in Figure 2.1 in diagrammatic form, setting the interventions against the phases of the emergency.

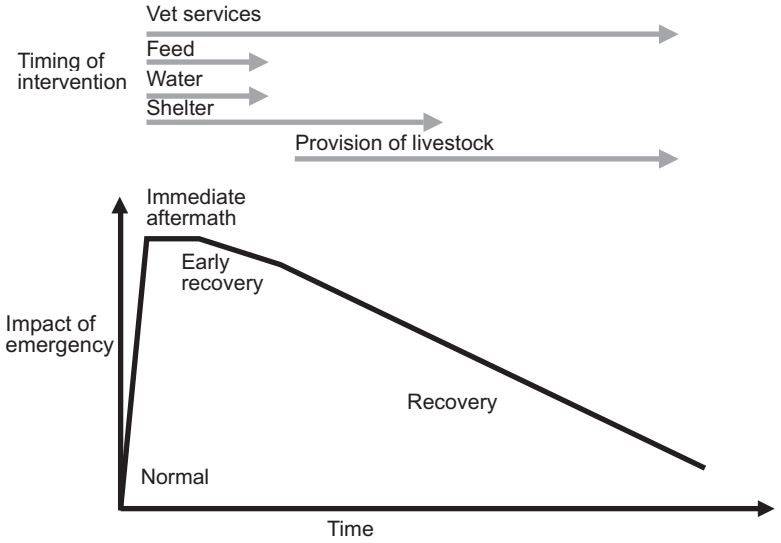

Figure 2.1 Case study A: An earthquake in Asia (rapid onset)

Case study B: A drought in Africa (slow onset)

Table 2.3 PRIM of Case study B

Technical interventions	Livelihoods objectives			Emergency phases			
	Rapid assistance	Protect assets	Rebuild assets	Alert	Alarm	Emergency	Recovery
Destocking	*****	***	**	→	→	⇢	
Vet services	(*)	*****	****	→	→	→	→
Feed	(*)	***	****		→	→	
Water	(*)	***	****		→	→	
Shelter	n/a	n/a	n/a				
Provision of livestock	n/a	n/a	*****				→

Key:
Scoring against Livelihoods objectives:
***** significant benefits/highly appropriate
**** benefits/appropriate
*** some benefits
** a few benefits
* very little benefit/not very appropriate
n/a not appropriate
Emergency phases:
→ appropriate timing for the intervention

Notes on Case study B:

- A slow-onset drought in Africa shows a very different pattern of interventions and timing compared to the Asian earthquake in Case study A. In the alert and alarm phases, accelerated off-take can make a significant contribution to providing rapid assistance to affected families through the provision of cash which can be used to support the family, and to a certain extent to protecting assets (to the extent that the remaining livestock have less competition for scarce resources, and also that some of the cash generated may be used for animal health and feed for these remaining livestock). If the timing of the intervention is left until the emergency phase, then accelerated off-take may no longer be possible because the condition of the animals is too poor. In this case, slaughter destocking (shown by the dotted arrow) can provide rapid assistance to affected households.
- In this example, the drought is in the early stages (alert/alarm) and hence the preference would be for accelerated off-take rather than slaughter destocking, as the former places cash in the hands of the livestock owners and encourages market processes.
- Animal health interventions, which may be carried out during all phases of a drought, can have a significant impact on protecting and rebuilding livestock assets through preventing death and disease in the herd and strengthening livestock resistance to drought.
- The provision of feed and water during the alarm and emergency phases of a drought can help to protect the remaining livestock assets and rebuild the herd for the future.
- In this particular example the provision of shelter is not appropriate.
- In the recovery phase, the provision of livestock ('restocking') can make a significant contribution to rebuilding livestock assets.

This case study is presented in Figure 2.2 in diagrammatic form, setting the interventions against the phases of the emergency.

The final case study shows how the combination of conflict with a slow onset emergency can aff ect the appropriateness and feasibility of some of the options, as highlighted by PRIM.

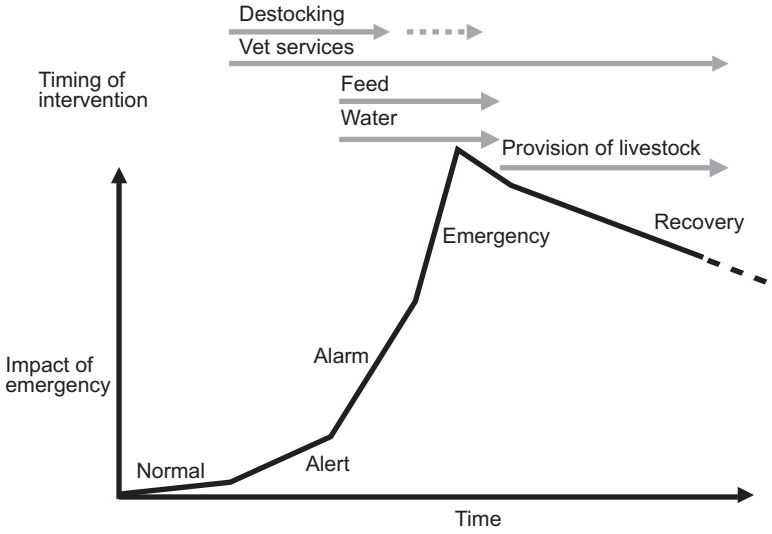

Figure 2.2 Case study B: A drought in Africa (slow onset)

Case study C: A slow onset drought with conflict in Africa (complex emergency)

Table 2.4 PRIM of Case study C

Technical interventions	Livelihoods objectives			Emergency phases			
	Rapid assistance	Protect assets	Rebuild assets	Alert	Alarm	Emergency	Recovery
Destocking	***	*	*			→	
Vet services	(*)	*****	****	→	→	→	→
Feed	(*)	*****	*****		→	→	
Water	(*)	**	**		→	→	
Shelter	***	***	***	→	→	→	→
Provision of livestock	n/a	n/a	*****				→

Key:
Scoring against Livelihoods objectives:
***** significant benefits/highly appropriate
**** benefits/appropriate
*** some benefits
** a few benefits
* very little benefit/not very appropriate
n/a not appropriate
Emergency phases:
→ appropriate timing for the intervention

Notes on Case study C:

- Comparing this matrix with Case study B, most of the interventions remain appropriate and have the potential for significant benefits to the affected communities, such as veterinary services, feed, water and provision of livestock.
- However, accelerated livestock off-take is not appropriate in this conflict situation, since market systems and infrastructure are severely disrupted. Slaughter destocking could be possible, depending on the operational constraints under which agencies are working.
- The provision of feed has the potential to help protect and rebuild livestock assets, particularly for communities who may be confined to camps and not able to take their stock to pasture. Similarly the provision of water for livestock which cannot be taken to the usual water sources because of insecurity may help to protect and rebuild livestock assets.
- Shelter or enclosures for livestock, not relevant in Case study B, may become an important issue because of displacement and insecurity (for example the danger of looting).
- All these interventions depend on the ability of the agencies to operate within the conflict situation.

Identifying livelihoods-based livestock responses in emergencies

The findings of the preliminary assessment and the outcome of participatory planning discussions based on PRIM, together with an analysis of the capacity and mandate of the intervening agency, should enable the selection of technical interventions that are *appropriate*, *feasible* and *timely* to support and protect livestock-based livelihoods in an emergency.

The following appendices contain checklists for the preliminary assessment, a summary of assessment methodologies and references/sources of further information to support this process. The subsequent chapters of LEGS provide standards and guidelines for each of the technical options outlined above, together with decision-making tools to facilitate the choice between different options.

Notes

1. Participatory inquiry may be defined as the systematic (and if necessary rapid) collection and analysis of data in participation with local people. When conducted well, participatory inquiry seeks to understand the perceptions of vulnerable and marginalized groups and therefore automatically disaggregates data by subgroup.

Appendix 2.1 Preliminary assessment checklists

These checklists correspond to the preliminary assessment process outlined above, based on the three assessments: 1) the role of livestock in livelihoods; 2) the nature and impact of the emergency; and 3) situation analysis.

Preliminary assessment 1: Livestock management and the role of livestock in livelihoods

Objective of the assessment: *to ascertain whether livestock play a significant role in the livelihoods of the affected people, and the nature of that role, in order to decide if a livestock-related response is appropriate; and to understand how livestock are managed.*

Key questions:

1.1 What are the main livelihood strategies in the affected area in 'usual' times?
1.2 What are the key uses of livestock (food, income, social, draught, transport)?
1.3 What percentage of food is derived from livestock in 'usual' times?
1.4 What percentage of income is derived from livestock in 'usual' times?
1.5 What roles do different household members play with regard to livestock care and management, including use and disposal rights, (note: different livestock species and ages; seasonal variations) with particular reference to gender?
1.6 What customary institutions and leaders are involved in livestock production and natural resource management and what is their role?
1.7 What are the main coping strategies and indicators for 'difficult times' (for example famine foods; high livestock slaughter or sales; migration; dispersal of household members; sale of other assets etc)? Do these strategies have negative implications for future livelihood security?

Conclusion/exit point: do livestock play a significant role in the livelihoods of the affected people and is a livestock-related response therefore appropriate?

Preliminary assessment 2: The nature and impact of the emergency

Objective of the assessment: *to determine whether an emergency response is necessary; understand the initial impact of the disaster on the affected populations; and identify what further information is needed.*

Key Questions:

2.1 What type of emergency is it: rapid onset, slow onset or complex?
2.2 What is the cause of the emergency (drought, flood, war etc)?
2.3 What is the history of this type of emergency in this context?
2.4 Which stage has the emergency reached (alert/alarm/emergency/immediate aftermath/recovery etc)?
2.5 What is the area affected?
2.6 What has been the impact of the disaster on the affected population:
  2.6.1 What is the nutritional status of the affected population?
  2.6.2 What is the prevalence of disease?
  2.6.3 What is the mortality rate?
  2.6.4 What has been the impact on vulnerable groups (for example women, children, people living with HIV/AIDS, particular ethnic groups)? (see References on vulnerability analysis at end of this chapter)
  2.6.5 Are there signs that the coping strategies/'difficult times' indicators from question 1.7 are being implemented?
  2.6.6 Has there been significant migration or displacement of (parts of) the affected populations? If so, who is affected and have they taken their livestock with them? What is the impact on the host community?
2.7 What has been the impact of the emergency on livestock management strategies:
  2.7.1 What is the impact on access to grazing?
  2.7.2 What is the impact on access to water resources for livestock?
  2.7.3 What is the impact on daily and seasonal movements?
  2.7.4 What is the impact on livestock traders and key livestock markets?
  2.7.5 What is the impact on livestock services?
  2.7.6 What has been the impact on natural resources?
  2.7.7 What has been the impact on the gender division of labour?
  2.7.8 What plans do the affected population have for their livestock in the future?
2.8 What has been the impact of the emergency on livestock (differentiate by species if necessary):
  2.8.1 What is the impact on livestock sales?
  2.8.2 What is the impact on livestock prices?
  2.8.3 Have the terms of trade between livestock and cereal prices changed?
  2.8.4 How has livestock condition deteriorated?
  2.8.5 Has livestock productivity fallen (off-take of milk, blood, eggs etc)?
  2.8.6 Has livestock morbidity increased?

2.8.7 Has livestock slaughter for home consumption increased?
2.8.8 What is the livestock mortality rate?
2.8.9 Has there been any impact on livestock shelter/enclosures?
2.8.10 What is the scale of these impacts?

2.9 What has been the impact of the emergency on the environment? (The environmental impact of the emergency, and of any planned interventions, should be carefully assessed. A number of methodologies have been developed for this purpose. See for example the Rapid Environmental Assessment (REA) tool devised by the Benfield UCL Hazard Research Centre and CARE International; and the FRAME assessment tool (See References at the end of the chapter).

2.10 What are the forecast and trends (where relevant) for the forthcoming season (for example anticipated snow, rains, heat, dry season, increasing insecurity, access to food etc)?

Conclusion/exit point: is an emergency intervention necessary?

Preliminary assessment 3: Situation analysis

Objective of the assessment: *to gain an understanding of the operating environment, potential logistical constraints and overlap or potential complementarity with other stakeholders.*

Key Questions:

3.1 Who are the key actors in the affected area and what are they doing?
3.2 Is any stakeholder playing a coordination role?
3.3 What services and facilities are usually available, and what has been the impact of the emergency on them (including government administration, markets, and animal production and health services)?
3.4 What resources are available, in particular indigenous coping strategies?
3.5 What is the history of disaster response in the affected area, both positive and negative experiences and lessons learned?
3.6 What is the current context (further detailed assessments with regard to these issues may need to be carried out depending on the technical options selected (see technical chapters below). These particular questions become particularly significant (and in some cases 'killer assumptions') in conflict situations)?
  3.6.1 How are communications functioning?
  3.6.2 What is the security situation?
  3.6.3 What are the implications for livestock movement and migration (rights of access, potential conflict)?
  3.6.4 What are the key protection issues facing livestock owners?
  3.6.5 What is the current infrastructure (roads and transport)?
  3.6.6 Are there any cross-border issues?
  3.6.7 What are the policy and/or legal constraints affecting livestock-related interventions (for example livestock movements or export bans; slaughter laws; taxation policy; licensing regulations; coordination of aid agencies; national disaster-management policies; organizational policies of key stakeholders)?

Conclusion/exit point: are any of the above answers 'killer assumptions' that prevent any form of intervention in the area (for example the security situation hinders any kind of movement at present; other actors are already providing sufficient support to affected populations)?

Appendix 2.2 Assessment methodologies

Participatory assessment methodologies may include the following:

- Observation: key indicators such as livestock condition, natural resource deterioration, livestock mortality and the impact of the emergency on infrastructure may be relatively easily observed.
- Key informant interviews with significant stakeholders could include local NGO and government staff, traditional and community leaders, religious leaders and civil society organizations.
- Focus group discussions with affected vulnerable groups, bearing in mind gender, age, HIV-status and other variables.
- Quantitative data: for some indicators quantitative data may be collected, for example livestock and cereal prices in local markets or estimated numbers of livestock deaths, using questionnaires if time permits
- Qualitative data may be gathered from representatives of the affected population using PRA-type (participatory rural appraisal) methods (see Table 2.5), including:
  - o mapping;
  - o time line/time trend;
  - o proportional piling and scoring;
  - o ranking;
  - o gender analysis – access to resources tool;
  - o daily and seasonal calendars;
  - o venn diagrams.

  These techniques rely on the use of **semi-structured interviewing** and can be employed during key informant interviews and/or focus group discussions.
- Sampling: given the shortage of time available for most assessments, simple rapid sampling methods, based on purposive sampling techniques, should be employed. Purposive sampling involves the selection of a 'typically' representative group, based on particular characteristics (for example livestock owners affected by drought, women livestock owners, inhabitants of a flood-affected village).
- Secondary data should be compiled using government reports, health and veterinary statistics, NGO reports and other available documentation. Other agencies operating in the area may also have carried out preliminary or detailed emergency assessments, including vulnerability assessments, which are a useful source of secondary data. EWSs, where they exist, may also provide useful information. Stakeholders themselves may also be useful sources of key information, both quantitative and qualitative.
- Baselines should be established using secondary data where available. If this is not possible, estimates of baselines may be determined through recall with affected populations using the qualitative methods described above

(for example proportional piling or time trends to indicate changes in feed availability from 'usual' to 'emergency' times).

- Spatial data may also be useful, for example satellite photographs/GIS, water point mapping and so on.

Table 2.5 shows how some of the key PRA-type data collection tools listed above might be used in the preliminary emergency assessments described in this chapter.

Table 2.5 Application of participatory methodologies to assessments

Method	Assessment checklist	Topic
Daily/seasonal calendar	1.5	Gender/age roles and seasonality
Gender analysis – access to resources tool (see Pasteur, 2002)	1.5	Gender control and access to resources
Mapping	2.5 2.7 2.7 2.6.4 2.9 2.10	Extent of affected area 'Usual' and emergency services and facilities Natural resource mapping (before and after): grazing, water, movements Vulnerable groups affected Impact on environment Seasonal changes
Time line/time trend	2.4 2.8 2.8 2.8 2.8	Stages of the emergency Livestock sales trends Livestock price trends Livestock productivity trends Livestock disease trends
Proportional piling	1.3, 1.4 2.6 2.6 2.8	Sources of income/food Changes in nutritional status Changes in human disease Livestock sales, price, productivity changes
Ranking/scoring	1.3, 1.4 2.8 3.5	Sources of income/food Livestock condition, morbidity, diseases History and effectiveness of previous response
Wealth ranking	2.6	Affected population (to inform targeting)
Venn diagrams	1.6 3.1, 3.2	Customary institutions roles and relationships Key actors and coordination

Further information on PRA methodologies is listed in the References to this Chapter.

Appendix 2.3 LEGS Participatory Response Identification Matrix

Table 2.6 Rapid-onset emergency PRIM

Technical interventions	Livelihoods objectives			Emergency phases		
	Rapid assistance	Protect assets	Rebuild assets	Immediate aftermath	Early recovery	Recovery
Destocking						
Vet services						
Feed						
Water						
Shelter						
Provision of livestock						

Table 2.7 Slow-onset emergency PRIM

Technical interventions	Livelihoods objectives			Emergency phases			
	Rapid assistance	Protect assets	Rebuild assets	Alert	Alarm	Emergency	Recovery
Destocking							
Vet services							
Feed							
Water							
Shelter							
Provision of livestock							

Notes:

Scoring against Livelihoods objectives:

*****	significant benefits/highly appropriate	****	benefits/appropriate
***	some benefits	**	a few benefits
*	very little benefit/not very appropriate	n/a	not appropriate

Emergency phases:

→ appropriate timing for the intervention

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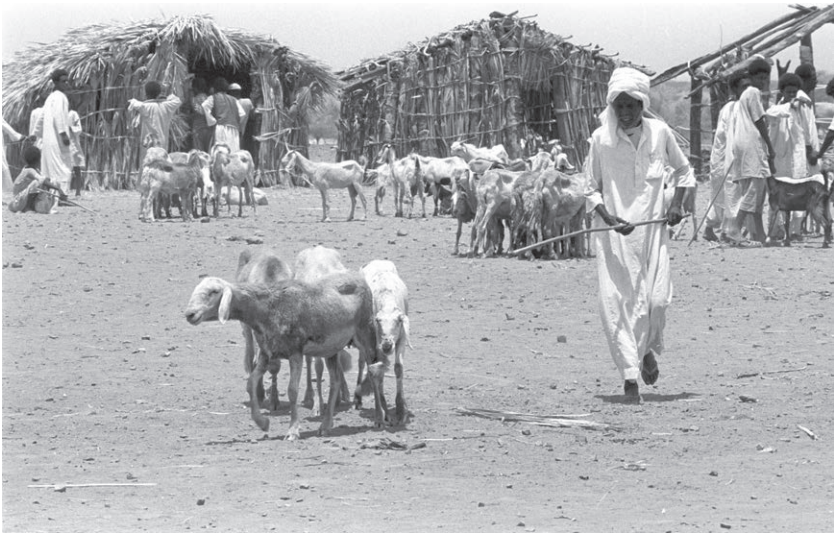

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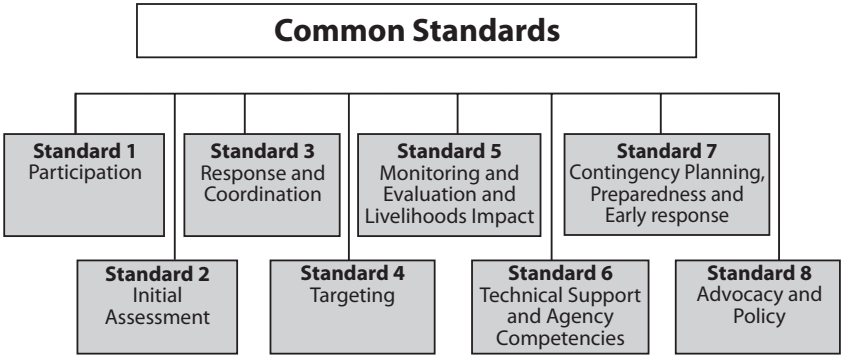
CHAPTER 3

Minimum standards common to all livestock interventions


Common Standards
Standard 1 Participation
Standard 2 Initial Assessment
Standard 3 Response and Coordination
Standard 4 Targeting
Standard 5 Monitoring and Evaluation and Livelihoods Impact
Standard 6 Technical Support and Agency Competencies
Standard 7 Contingency Planning, Preparedness and Early response
Standard 8 Advocacy and Policy

Introduction

The importance of the common standards

This chapter presents eight standards that are common to each of the livestock-related interventions described in later chapters. The standards are: 1) participation; 2) initial assessment; 3) response and coordination; 4) targeting; 5) monitoring and evaluation and livelihoods impact; 6) technical support and agency competencies; 7) contingency planning, preparedness and early response; and 8) advocacy and policy.

These common standards relate to each of the livestock-related interventions described in other chapters, and are integral to all of them. By implementing the standards described here, agencies will support the achievement of the standards described in the other chapters. Readers should also refer to the Sphere Handbook for more general common standards for humanitarian response, and to the Humanitarian Accountability Partnership standards and benchmarks for accountability in humanitarian action (see HAP, 2007).

Links to other chapters

It is important that this chapter is read first, before turning to the technical chapters on specific types of livestock intervention.

Vulnerabilities and capacities of disaster-affected communities

The Sphere Handbook recognizes that certain groups of people can be particularly vulnerable during disasters. These groups include women, children, older people, disabled people, people living with HIV/AIDS, and minority ethnic or religious groups. Livestock can be a useful asset for these groups, for example, livestock-derived foods such as milk and eggs are highly nutritious and an important food for young children and pregnant or lactating women. Pack animals such as donkeys can help women to collect water or fuel, or transport goods to market.

The initial assessment of possible livestock interventions needs to pay special attention to the uses of livestock by vulnerable groups, and their capacity to manage livestock or access livestock products or services. In some communities, livestock ownership varies by wealth and gender, and assessment and programme design need to ensure that vulnerable groups are specifically identified. Different groups may benefit from different types of assistance, thereby increasing the complexity of programmes and the breadth of organizational experience required to deliver the programme.

At the same time, beneficiary communities also have their own capacities that they can use to respond to the emergency situation. These include their indigenous knowledge and skills, particularly relating to livestock production and natural

resource management. Indigenous and local institutions can also play a significant role in responding to disasters, facilitating community involvement and management of interventions.

The use of participatory approaches during assessment can lead to rapid analysis of the needs of vulnerable groups as well as the identification of indigenous capacities and skills on which emergency interventions can build.

The minimum standards

Common Standard 1: Participation

The disaster-affected population actively participates in the assessment, design, implementation, monitoring and evaluation of the livestock programme.

Key indicators

- All specific sub-sets and vulnerable groups in a population are identified, informed that an assessment and possible intervention(s) will take place, and are encouraged to participate in assessment and implementation (see guidance notes 1 and 2), and monitoring and evaluation (see guidance note 3).
- Key indigenous livestock production and health knowledge and practices, coping strategies and pre-existing livestock services are documented and used to ensure the sustainability of inputs (see guidance note 4).
- Interventions are based on an understanding of social and cultural norms (see guidance note 5).
- Planned programme inputs and implementation approaches are discussed with community representatives and/or community groups representing the range of population sub-sets and vulnerable groups (see guidance note 6).

Guidance notes

1. **Representation of groups:** the effective identification, design and implementation of livestock interventions requires the involvement of local people, including more marginalized or vulnerable groups who keep livestock or might benefit from access to livestock or livestock products. The actual or potential uses and ownership of livestock often vary within communities according to wealth, gender or other factors. Initial assessment should therefore cover livestock ownership by wealth and gender, and an understanding of how interventions might be targeted at different groups, with different potential impacts. While wealthier people might own larger animals such as cattle or camels and request assistance for these animals, it is possible that poorer female-headed households would prefer assistance with

sheep and goats, poultry or donkeys. Agencies need to be sensitive to these differences and ensure appropriate representation of different groups. Barriers (such as capacity, skills, security and cultural issues) to the participation of women and other vulnerable groups should be taken into account in both the assessment and implementation stages.

2. **Types of participation:** for LEGS, participation means that affected communities have a right to be involved in the programme and can make intellectual contributions that improve effectiveness and efficiency. Communities are also able to exercise choice in terms of the type and design of emergency interventions in their area. The common standard of participation recognizes that local knowledge and skills are a valuable resource for relief agencies and should be actively sourced. This common standard also recognizes that programmes that are based on active participation are more likely to result in sustained benefits or services. Community participation in targeting also generally provides an effective means to ensure appropriate distribution of benefits (see Standard 4 below). While there are significant challenges in achieving this level of participation especially in rapid-onset disasters, participation remains a key goal of LEGS, reflecting the rights-based approach and the linkages with long-term sustainability of activities.
3. **Accountability and participation:** attention to community participation in the monitoring and evaluation (M&E) of emergency interventions is an important way to improve the local accountability of humanitarian agencies and actors – see below Common Standard 5: M&E and livelihoods impact.
4. **Sustainability:** communities highly dependent on livestock often possess very detailed indigenous knowledge on livestock management and health, which can play a valuable role in livestock projects. Sustained services or inputs are most likely to emerge from disaster responses when these responses promote participation, recognize local knowledge and skills, build on sustainable indigenous coping strategies and use and strengthen pre-existing services and systems. In the case of livestock interventions, agencies need to be especially aware that when relief operations are implemented in isolation of local private service providers, the local systems suffer.
5. **Social and cultural norms:** social, cultural and religious beliefs and practices influence livestock ownership and the use and consumption of livestock products. Uses of certain types of animals or animal-derived feeds may seem appropriate and practical to outsiders, but may be resisted due to local customs. Although people are not always averse to adopting new practices, this process often takes time and requires the support of agency staff with long experience in the communities concerned. When rapid intervention is required, an understanding of social and cultural norms helps to ensure that interventions are appropriate.

6. **Community groups:** customary or indigenous institutions can play a key role in disaster interventions. This can range from the identification of vulnerable beneficiaries, to the design and management of interventions, to involvement in M&E of initiatives. With regard to livestock, customary institutions often play a key role in the management of natural resources, including grazing land and water resources. Participation by these groups in livestock-based interventions is generally a necessary factor in ensuring the sustainability of the activities and a positive contribution to livelihoods.

Common Standard 2: Initial assessment

Assessment provides an understanding of the role of livestock in the livelihoods of different socio-economic groups within a population, an analysis of the nature and extent of the emergency and an appraisal of appropriate interventions in relation to operational and policy context and existing service providers and systems.

Key indicators

- The assessment covers the key topics outlined in Chapter 2, uses systematic, participatory inquiry conducted by trained workers, and triangulates findings with pre-existing technical data when available (see guidance note 1).
- Findings are disaggregated according to the population subsets and vulnerable groups in the disaster-affected community.
- The assessment reviews the capacity of relevant authorities to protect populations in the territory under their control, and includes an analysis of the operational environment and the protection implications of different livestock interventions (see guidance note 2).
- The assessment clearly describes existing local service providers, explains if and how the interventions will work with these actors, and defines an exit strategy intended to maximize the sustained use of local services and markets (see guidance note 3).
- The assessment includes a rapid analysis of policies and regulations that affect livelihoods or that may prevent certain interventions, and reviews the capacity of local regulatory bodies to enforce official rules and regulations (see guidance note 4).

Guidance notes

1. **Assessment topics and methods:** Chapter 2, Assessment and response outlines the key topics for assessment, covering the *role of livestock in livelihoods*, the *nature and extent of the emergency* and a *situational analysis*. Checklists for the assessment and sources of further information are available in Appendix 2.1 and in the References to Chapter 2.

2. **Protection:** livestock assets are valuable and the ownership or management of livestock may place people at greater risk of violence, abduction or abuse. Analysis of the local security environment in relation to livestock ownership patterns, recent history of livestock looting or raiding, husbandry practices and the need to access livestock services or markets should indicate high-risk practices and activities. These include moving livestock to insecure grazing areas or water points, using grazing areas that are mined or that have unexploded ordinance, containing livestock at night in unprotected areas, or keeping types of livestock that may be targeted by armed groups. The assessment should analyse the trade-offs between the potential livelihoods benefits of greater livestock ownership or access to livestock products and the protection risks. In some cases, traditional livestock management practice may be modified to enhance protection. Particularly vulnerable groups should be targeted in this assessment process in order to ensure that their protection needs are identified.
3. **Local services and markets:** livestock interventions that support local services and markets are an important aspect of livelihoods-based programming. Local service providers include livestock feed suppliers, water suppliers, veterinary and para-veterinary workers, livestock traders and livestock transporters. As part of the situation analysis (see Appendix 2.1), the assessment should describe these actors and their current and potential capacity. In some countries and following incomplete privatisation of livestock services, there is competition between public-sector and private-sector workers, which may lead government partners to downplay the role of the private sector.
4. **Policy and regulations:** national policies or regulations may hinder or support certain types of livestock intervention. In some countries community-based animal health workers are not officially recognized, or can only handle a very limited range of veterinary medicines. In other situations local taxation, customs duties or bureaucracy may hinder rapid market-based responses. The situation analysis needs to assess policy and regulations, but also needs to determine the likely enforcement of such regulations in an emergency setting, since to some extent the testing of new approaches in an emergency context can provide evidence to inform policy change. In some emergencies, particularly those that are conflict-related, formal or informal policies are instigated by government or other actors expressly to impact negatively on the livelihoods of civilians. Examples relevant to livestock include cross-border movement restrictions, closure of markets or deliberate asset stripping of communities. An initial analysis of these policies can help agencies to identify policy activities (see also Common standard 8: Advocacy and policy).

Common Standard 3: Response and coordination

Different livestock interventions are harmonized and are complementary to other humanitarian interventions intended to save people's lives and livelihoods, and do not interfere with immediate activities designed to save human lives.

Key indicators

- Where people's lives are at risk, livestock interventions do not hinder life-saving humanitarian responses (see guidance note 1).
- Livestock interventions are coordinated to ensure harmonized approaches between agencies, and according to agreed implementation strategies (see guidance note 2).
- When an agency cannot conduct a livestock assessment or respond to livestock needs, it makes these deficits known to other agencies that may have the capacity for livestock responses (see guidance note 3).
- Where possible, livestock interventions are integrated with other types of humanitarian assistance to maximize impact and ensure efficient use of shared resources (see guidance note 4).
- Coordination is prioritized by all stakeholders, including the harmonization of donor and government approaches, for both emergency response and longer-term development initiatives (see guidance note 5).

Guidance notes

1. **Humanitarian priorities:** in a disaster, the most urgent need may be to provide life-saving assistance to affected human populations. Such assistance should not be compromised or adversely affected by the provision of livestock assistance. In practice, this means that when emergency transportation, communication or other resources are limited, livestock teams and inputs should follow the food, shelter, water and health inputs required to assist people in need. For example, water delivery programmes should either cater simultaneously for the needs of people and their livestock, or make use of different quality water for the two groups, reserving the better quality sources for human consumption and distributing poorer quality sources for livestock.
2. **Coordination:** given the range of emergency livestock interventions that are possible and the need to tailor interventions to specific sub-populations or vulnerable groups, coordination of responses is important. If different agencies are providing different types of support, this needs to be coordinated to avoid duplication and to ensure that an important type of support is not overlooked. This is crucial if a combined livestock feed-water-health response is needed because failure to provide one type of support risks the

effectiveness of the other types of support. For example, animals may be fed and watered but then die due to disease. When different agencies provide similar support in different areas, coordination should ensure harmonized approaches and consistent programming. For example, if agencies covering adjacent areas set different buying prices for destocked livestock, livestock will tend to be moved towards the area with the highest buying price. In slow-onset emergencies such as drought, one aspect of the coordination effort should be to promote appropriate sequencing of interventions according to the stage of the drought. Livestock interventions also need to be coordinated with other types of assistance. Such coordination can lead to effective joint programming and sharing of resources and facilities with other sectors (see Case Studies 3.1 and 3.2 in the Case Studies Chapter).

3. **Capacity and expertise:** livelihoods-based livestock assessment and response is a specialized area and not all agencies will possess the necessary in-house expertise. Agencies without sufficient expertise working in situations where livestock responses may be warranted should seek assistance from other agencies.
4. **Integrated responses and resource-sharing:** in most humanitarian crises a range of different interventions will be taking place simultaneously. Where possible, livestock interventions should be integrated with other sectors to maximize use of resources. For example, trucks delivering aid supplies might be back-loaded with livestock as part of a destocking programme; refrigerators might store both human and animal medicines; discarded or damaged items for human shelter might be used for animal shelter.
5. **Prioritization of coordination:** experience has shown that coordination between implementing agencies, donors and governments is vital for effective humanitarian response, but that this coordination requires a commitment of time and staff from all partners. Donors and governments have a responsibility to understand the implications of the emergency responses they support and the linkages with livelihoods. The creation of working groups for particular regions or disasters may help to harmonize approaches, agree roles and responsibilities, and create linkages with livelihoods and on-going development initiatives. For example, the establishment of a coordination forum for destocking (ideally at the national level and replicated at district and other levels) can facilitate the harmonization of implementation strategies, the identification of lead agencies by geography or specialization, and consistent communication with beneficiaries. Harmonization of approaches may also be particularly important in veterinary service provision, where differing policies on cost recovery can undermine interventions and cause confusion among beneficiaries. Donors may also be well placed to encourage or even demand harmonization of approaches by implementing agencies, to the benefit of the affected communities.

Common Standard 4: Targeting

Livestock assistance is provided fairly and impartially, based on the uses and needs of different livestock users by socio-economic group.

Key indicators

- Targeting criteria are based on an understanding of the actual or potential uses of livestock by vulnerable groups, and the criteria are clearly defined and widely disseminated (see guidance note 1).
- Targeting mechanisms and the actual selection of beneficiaries is agreed with communities, including representatives of vulnerable groups (see guidance note 2).

Guidance notes

1. **Targeting criteria:** targeting criteria should be developed with community representatives and should be informed by prior knowledge of vulnerable groups by agency staff, as obtained during the initial assessment. In communities that are highly reliant on livestock, indigenous social support systems often exist to support vulnerable individuals or groups according to local criteria of wealth, gender or social relationship. Where appropriate and feasible, local community groups can help to develop a targeting system based on these indigenous approaches.
2. **Targeting mechanisms:** to ensure transparency and impartiality during the selection of beneficiaries, a targeting mechanism should be agreed with representatives of the wider community and/or specific vulnerable groups. Mechanisms will vary from place to place, but may include public meetings in which the targeting criteria are explained and the actual selection takes place. In other communities, such public selection may be inappropriate for social or cultural reasons. Whichever mechanisms are used, the targeting process should be clearly explained and as much in the control of beneficiary communities as possible to avoid concerns about inequitable distribution of benefits and to help ensure accountability and transparency.

Common Standard 5: Monitoring and evaluation, and livelihoods impact

Monitoring, evaluation and livelihoods impact analysis are carried out to check and refine implementation as necessary and draw lessons for future programming.

Key indicators

- An M&E system is established as soon as possible during implementation (see guidance note 1).
- M&E systems are based on participation by the beneficiary communities as much as is feasible and appropriate (see guidance note 2).
- Monitoring is conducted with sufficient frequency to enable rapid detection of required changes and modification of implementation (see guidance note 3).
- The monitoring system combines both technical progress indicators and impact indicators identified by beneficiaries; impact indicators are measured by beneficiaries working with agency staff (see guidance note 4).
- An evaluation is conducted with reference to the stated objectives of the project, and combines measurement of technical indicators and community-defined indicators (see guidance note 4).
- Impact is assessed according to changes in the livelihoods of the affected communities (see guidance note 5)
- When multiple agencies are involved in livestock interventions, M&E systems are standardized to allow programme-wide progress and impact to be measured; M&E reports are shared with all relevant actors, including community groups and coordination bodies (see guidance note 6).
- M&E systems facilitate learning by all stakeholders (see guidance note 7)

Guidance notes

1. **Monitoring and evaluation** as a priority: to date relatively little is known about the impact on people's livelihoods of the many livestock interventions that have been carried out as part of humanitarian response over the last few decades. One reason for this is that the M&E of livestock relief projects is often not fully considered during project design, poorly implemented or not properly funded. Although rapid-onset emergencies may hinder attention to M&E during the design stage of an intervention, many livestock interventions are associated with slow-onset crises or complex emergencies. In these situations, there is usually enough time to conduct proper M&E of interventions. Baselines for M&E may be available from existing documentation (such as vulnerability assessments) or may otherwise be created through retrospective analysis using participatory inquiry tools.

M&E checklists are included in the appendices to each technical chapter below.

2. **Participatory monitoring and evaluation:** following the common standard of participation, the M&E of livestock interventions should be as participatory as possible. While fully participatory monitoring systems may not be feasible in an emergency context, participation in evaluation and impact assessment is vital to promote accountability and ensure the collection of quality data, since livestock users are well-placed to observe the impact of the interventions over time.
3. **Monitoring:** monitoring is an important management tool during emergency livestock interventions, although it is often one of the weakest aspects. It allows agencies to track their implementation and expenditure against objectives and work plans, while also ensuring the timely identification of changes in needs or operating context in order to improve practice. For example, in destocking operations (whether accelerated off-take or slaughter destocking) livestock prices should be monitored to ensure that destocking does not increase vulnerability. In monitoring veterinary service provision, the commonly accepted human health indices may be usefully applied, namely: *accessibility*, *availability*, *affordability*, *acceptance* and *quality*. Such monitoring systems should also include information on livestock disease incidents and hence contribute to disease surveillance. Interventions involving the provision of livestock require detailed baselines and monitoring systems to assess livestock growth and herd development, in order to analyse impact. Compiled monitoring data are necessary both for upwards (to donors, governments) and downwards (to beneficiary communities and institutions) accountability. They are also useful for evaluation.
4. **Local monitoring and evaluation indicators:** participatory approaches to M&E can use local people's own indicators of the benefits derived from livestock. When combined with monitoring data on project activities, an accurate picture of project impact can be developed.
5. **Livelihoods impact:** when evaluations of emergency livestock interventions are conducted, they tend to measure only the implementation of activities and progress towards objectives, and ignore the impact on livestock assets and consequently on livelihoods. If stated project objectives do not include changes to people's livelihoods, evaluations may overlook the impact of the project on livelihoods. Such impacts can include consumption of livestock-derived foods by vulnerable groups, uses of income derived from the sale of livestock or livestock products, benefits derived from access to pack animals, or social benefits such as livestock gifts or loans. Impact assessments should aim to understand the role of projects in increasing or decreasing these benefits. Participatory methodologies for impact assessment can help ensure

quality results as well as increase beneficiary knowledge and involvement in future project design.

6. **Coordinated approaches:** for programmes involving multiple agencies, standardized and coordinated approaches to M&E allow programme-wide lessons to be generated. Standardized approaches can be based on a set of core objectives, issues or questions common to all agencies, while also allowing for the flexible use of community-defined indicators in different locations.
7. **Learning:** experience has shown that there is frequently the repetition of mistakes and a lack of learning by implementing agencies in emergencies (see for example ProVention, 2007). A commitment of time and effort by all stakeholders to effective M&E of emergency interventions, and the sharing of lessons learned should help to address this issue. M&E systems should be designed to facilitate this learning process, through the sharing of documentation as well as methodologies that support learning and response (for example real-time evaluation). M&E information may also be a useful source of data in support of advocacy initiatives to address policy issues constraining effective livelihoods-based emergency responses (see Standard 8 below).

Common Standard 6: Technical support and agency competencies

Livestock aid workers possess appropriate qualifications, attitudes and experience to effectively plan, implement and assess livelihoods-based programmes in emergency contexts.

Key indicators

- Livestock workers possess relevant technical qualifications and the knowledge and skills to conduct rapid participatory assessments and joint planning of interventions with all relevant population subsets and vulnerable groups (see guidance note 1).
- Livestock workers are familiar with human rights and humanitarian principles, and their relevance to livestock interventions (see guidance note 2).
- Livestock workers are familiar with the principles of livelihoods-based programming (see guidance note 2).

Guidance notes

1. **Technical skills and qualifications:** the professionalism and effectiveness of livestock workers depends on an appropriate combination of technical knowledge, experience, attitude and communication skills. In general, programme managers or country directors may know a great deal about disaster response but relatively little about livestock. This contrasts with

livestock professionals such as veterinarians or animal scientists who possess technical knowledge of livestock, but may not necessarily be equipped with skills such as participatory assessment and project design, or livelihoods-based programming. Practical field experience with vulnerable communities is a key determinant of a person's ability to work with communities and design relevant interventions. For professional livestock aid workers, training in participatory approaches for programme design, implementation and M&E should be a standard form of professional development.

2. **Rights-based and livelihoods approaches:** the relevance of livestock interventions needs to be understood in the context of human rights and protection, hence livestock aid workers need to be fully aware of rights-based approaches to humanitarian intervention, and humanitarian principles. In addition, workers also need to be familiar with livelihoods-based programming. All of these knowledge requirements can be addressed in short training courses before disasters occur.

Common Standard 7: Preparedness

Emergency responses are based on the principles of disaster risk reduction, including preparedness, contingency planning and early response.

Key indicators

- Disaster risk reduction (DRR) informs and forms part of agencies' emergency planning and implementation (see guidance note 1).
- Agencies with long-term development programmes conduct regular reviews of past disasters in their operational area with regard to the type of disaster, frequency, severity and lessons learnt from disaster response, if any (see guidance note 2).
- Based on this information, agencies develop contingency disaster plans with clearly-defined triggers for action and the subsequent release of funds and other resources (see guidance note 2).
- Contingency plans take into account the agency's procurement and administrative procedures and any obstacles to potential future emergency responses are addressed (see guidance note 3).
- Contingency plans for drought are based on the principles of drought-cycle management and early response, with appropriate sequencing of interventions (see guidance note 4).
- Communities are encouraged to prepare for future emergencies (both rapid and slow onset) (see guidance note 5).
- All emergency intervention plans are accompanied by an exit strategy that links with post-disaster recovery and long-term support to livelihoods (see guidance note 6).

Guidance notes

1. **Disaster risk reduction:** there is increasing recognition of the need to mainstream disaster risk reduction into long-term development planning and implementation. This may take the form of contingency planning by agencies and/or communities (setting aside funds and plans for scaling up emergency activities in case of a disaster), or preparedness activities to reduce the impact of future disasters.
2. **Contingency planning and action:** in areas affected by repeated crises such as drought or flood, contingency plans enable early and rapid response. Experience indicates that early response to drought is one of the key determinants of livelihoods impact. Even in rapid-onset emergencies, some little warning may be given (for example earthquake or flood warnings) that can allow already prepared plans to be activated. Many of the most effective emergency livestock responses have been implemented by aid agencies with long-term development experience in a particular area, based on disaster response plans incorporated into development programmes. Such plans are informed by knowledge of past crises and the types of response that can be implemented within a given operational and funding context. It is important that contingency plans are developed with local partners and include specific, clearly defined and pre-agreed triggers for prompting action and the release of contingency funds (see Case study 3.3 in the Case studies folder Chapter). Linkages with EWSs are vital to support this process.
3. **Procurement and administrative arrangements:** despite the development of contingency plans, during implementation some agencies are faced with unexpected financial or administrative barriers within their own organizations (such as procurement or contractual limitations). Livelihoods-based emergency livestock responses may require the rapid procurement of novel items such as large quantities of animal feed, or contracts with private sector operators such as transport companies, feed suppliers or veterinary workers. Agencies need to review their administrative procedures in the light of the need for flexibility and rapid decision-making during emergency response, to ensure that potential responses are administratively possible.
4. **Drought-cycle management:** although drought is usually described as an emergency, livelihoods thinking suggests that drought may also be viewed as an expected and normal event in many dryland areas. Drought-cycle management uses specific indicators to trigger different responses and enable combinations of interventions as appropriate for the different stages of a drought (see Glossary for definitions of the drought-cycle management phases). The approach encourages early and timely response to drought, which is increasingly recognized to procure better cost–benefit ratios for livestock

owners than later interventions (for example destocking compared to later feed or livestock provision).

5. **Community preparedness:** agencies working long term with communities should encourage community preparedness planning in preparation for future emergencies, whether slow or rapid onset. This may include for example shelter (for example earthquake resistant livestock shelters – see Chapter 8), livestock feed banks (see Chapter 6), preventive animal vaccination campaigns (see Chapter 5) or developing livestock market opportunities (see Chapter 4).
6. **Exit strategies:** too often emergency responses are planned and implemented without a clear strategy for either phasing out or linking with longer-term development initiatives. The sudden cessation of activities because emergency funding has ended (for example if a crisis is considered to be over) can have significant negative consequences for beneficiary communities. From a livelihoods perspective, emergency responses in the recovery phase should be planned to converge with sustainable long-term livelihood support activities implemented by the agency itself or by other stakeholders.

Common Standard 8: Advocacy and policy

Where possible, policy obstacles to the effective implementation of emergency response and support to the livelihoods of disaster-affected communities are identified and addressed.

Key indicators

- Policy constraints affecting the protection, use or rebuilding of livestock assets are identified (see guidance note 1).
- In coordination with other stakeholders, and as appropriate in the context, policy constraints are addressed through advocacy or other activities at the relevant (local, national, regional, international) level (see guidance note 2).
- Policy analysis and action considers the underlying causes of vulnerability to disaster (see guidance note 3).
- M&E systems provide evidence that contributes directly to policy dialogue and advocacy (see guidance note 4).

Guidance notes

1. **Analysis of policy constraints:** the situation analysis checklist (see Chapter 2, Appendix 2.1) includes questions on the policy context that could affect implementation of livestock-based emergency response, for example restrictions on livestock movements or export bans, slaughter laws, licensing regulations, taxation policy, poor coordination of aid agencies, cross-border movements of people or stock, national disaster management policies and

organizational policies of key stakeholders. Policy constraints have the potential to impede the implementation of livelihoods-based emergency responses or restrict their effectiveness and impact. For example, restrictions on livestock exports from the Horn of Africa to the Middle East have severely limited the potential for market-based initiatives with pastoralists in Ethiopia and Somalia. It is important that these policy constraints are assessed in the initial stages of emergency response, first to ensure that the interventions planned are realistic and feasible, and second to identify issues that have the potential to be addressed by relevant agencies and stakeholders.

2. **Advocacy on policy issues:** there is increasing interest in advocacy as an appropriate emergency response, in particular as a growing number of agencies adopt a rights-based approach to emergency and development work. However, their ability to address these issues, on behalf of or in partnership with disaster-affected communities, depends on the context in which they are operating. In some conflict-based emergencies, policy constraints may be the result of a deliberate strategy by governments or governing bodies to put pressure on communities, rebel groups or those they see as opposition. In such cases, advocacy with governments may be ineffective and even dangerous for its proponents. In cases where advocacy is undertaken, coordination among different stakeholders (donors, national and international implementing agencies, civil society) is vital.
3. **Underlying causes:** advocacy to support the livelihoods of livestock owners is not solely an emergency activity but needs to address the longer-term political and institutional factors that cause or increase vulnerability to disaster. This creates the linkages between emergency response and long-term development and policy initiatives that are necessary for effective disaster management and livelihoods support.
4. **M&E evidence:** one of the uses of M&E information can be to inform advocacy and policy activities in support of livelihoods-based emergency responses. M&E systems should therefore be designed with this potential use in mind.

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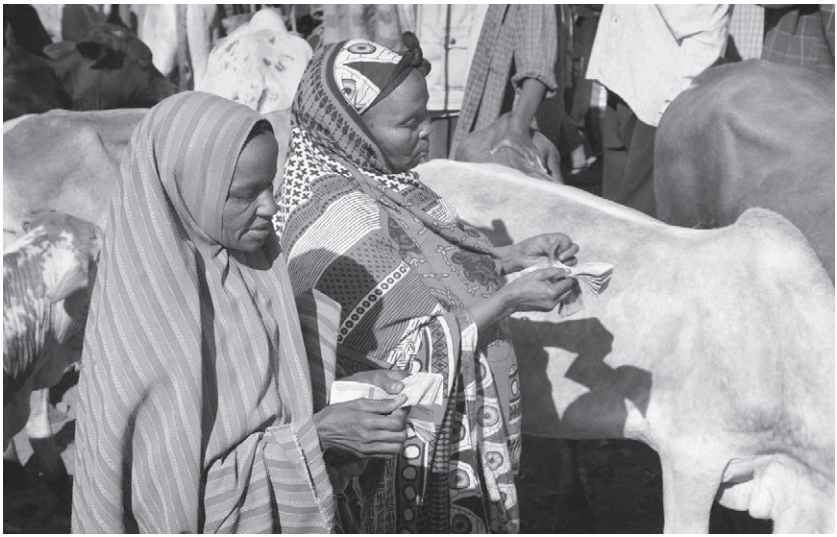

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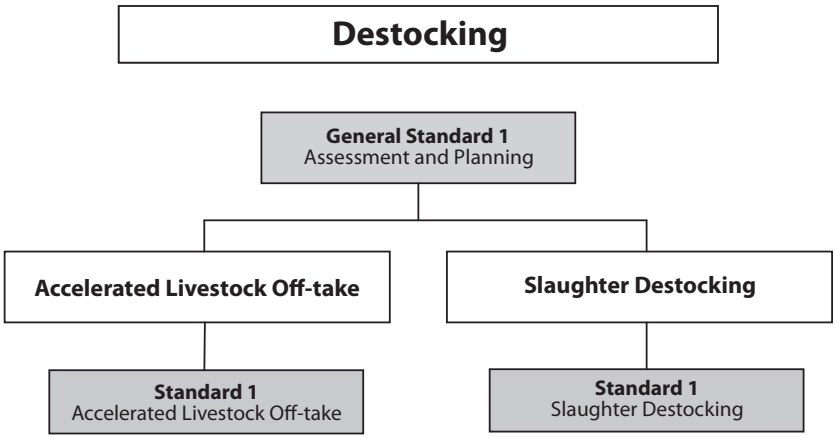
CHAPTER 4

Minimum standards for destocking


Destocking
General Standard 1
Assessment and Planning
Accelerated Livestock Off-take
Slaughter Destocking
Standard 1
Accelerated Livestock Off-take
Standard 1
Slaughter Destocking

Introduction

Links to the LEGS livelihoods objectives

Destocking activities relate directly to the first LEGS livelihood objective of providing rapid assistance to crisis-affected communities through livestock-based interventions. Destocking can also contribute to the second LEGS objective, namely to protect key livestock assets of crisis-affected communities, to the extent that remaining livestock have a better chance of survival and cash received from destocking is often partly reinvested in animal health care, water and grazing provision to support the remaining stock.

The importance of destocking in disaster response

In times of disaster, livestock that are likely to perish remain a potential asset for their owners if timely action is taken, in that they can be converted into cash or meat through some form of destocking. Destocking helps to relieve pressure on natural resources to the benefit of the remaining stock and provides a direct or indirect source of food for crisis-affected families. In all cases, however, a destocking project involves operationally complex elements, of which the timing of the intervention in relation to the phasing of the emergency is one of the most critical, as discussed below.

Destocking is most commonly used in response to slow-onset emergencies and is usually considered inappropriate for rapid-onset disasters, since livestock usually are either killed or survive (rather than suffer deteriorating condition) and once the disaster has taken place, it is generally too late to carry out any type of destocking. However, in slow-onset emergencies such as drought, it can be a successful way of providing immediate assistance to affected families and also helping them to protect their remaining livestock assets.

Options for destocking

This chapter focuses largely on two types of destocking operations: accelerated off-take (commercial destocking) and slaughter destocking.

Accelerated livestock off-take

Accelerated off-take involves support to livestock traders and exporters to buy up livestock before they die. This provides cash for the affected communities (which can be used both for short-term needs such as food, and also for reinvestment into the remaining herds) and helps to promote livestock marketing linkages between traders and livestock owners that have potential longer-term benefits. It also has

the advantage of facilitating large numbers of off-take in relation to the money invested, compared to other options.

Support to livestock traders can take a number of forms: promoting linkages, contacts and communications; facilitating credit; providing short-term loans; and occasionally transport subsidies to traders. The first option – promoting linkages – is the simplest form of intervention, and hence the most sustainable in the longer term. Facilitating credit and providing short-term loans can be undertaken at the same time, to smooth the off-take process, particularly in the early stages. The provision of transport subsidies is somewhat controversial because of concerns about monitoring and accountability and the potential contradiction with the desire to promote sustainable market processes that can outlast the particular emergency and provide ongoing support to livestock owners' livelihoods. Although accelerated off-take is generally carried out by private traders, some aid agencies such as NGOs have also engaged in this activity, in particular when they fear that there may be a significant decrease in market prices, in order to maintain viable prices that can provide support to needy households. In the past, some governments have also carried out livestock off-take by subsidizing the purchase of livestock to be slaughtered in government abattoirs; however, this is becoming less common.

Slaughter destocking

In contrast to accelerated off-take, slaughter destocking is carried out by external agencies or government rather than private traders and involves the purchase and slaughter of drought-threatened stock for fresh or dry meat distribution to affected communities. This option relieves local pressure on grazing and water for remaining livestock, helps livestock owners convert some of their stock assets with little market value into cash, and provides a direct source of food for crisis-affected families in the form of fresh or dry meat. Slaughter destocking involves the purchase of poor condition stock by an external agency. The stock are then slaughtered and the meat either distributed fresh, or prepared (by salting, boiling or drying) and stored for phased distribution as a supplementary relief food. Careful planning needs to go into targeting beneficiaries – both those eligible to sell livestock and those eligible for meat distribution – and into ensuring that slaughtering adheres to local cultural and religious norms and agreed standards.

Slaughter for disposal

A third, less common, destocking option involves the cash purchase of stock on the brink of death (and thus with no onward sale or food value) for slaughter and disposal. Like accelerated off-take, this intervention allows livestock owners to gain some cash in exchange for their assets; in contrast to accelerated off-take, however, it has no long-term potential and is generally considered a last resort when other

options have been exhausted. It may also be a potential response in rapid-onset emergencies when stock are injured and unlikely to survive.

The advantages, disadvantages and key requirements of the different options are summarized in Table 4.1.

Timing of interventions

The choice of the most appropriate type of destocking activity is closely linked to the phase of the emergency. In the alert and early alarm phases, before livestock condition has deteriorated significantly, there is still the potential for market-based off-take. However, once the late alarm or emergency phase has been reached, the condition of the livestock may be so poor that livestock traders may no longer be interested in purchasing the affected stock, and slaughter destocking may be the only option (see Table 4.2).

Links to other chapters

Destocking provides struggling households with the opportunity to convert some of their perishable livelihood assets into cash. Part of the objective of this activity, in addition to providing rapid assistance to affected families, is also to help protect the remaining livestock, in particular the core breeding herd, and hence to increase the chances that sufficient animals will survive the emergency to enable families to rebuild their herds. Consequently, there are a number of other interventions that should be considered to complement destocking operations as part of an integrated approach, in particular the provision of water and feed, and animal health inputs (see Chapters 7, 6 and 5). These activities all support the remaining livestock after destocking has taken place and indeed can be facilitated by the process of destocking: for example, livestock owners in Ethiopia who benefited from an accelerated off-take initiative spent over 36 per cent of the income derived from the sale of their livestock on their remaining herds, including trucking animals to areas with better grazing (see Case study 4.1 in the Case studies chapter). For very poor households who may have only a few remaining animals, destocking has the potential to deplete their assets to the extent that they may not be able to rebuild them. However, if the stock would otherwise die, for example in a drought, destocking can provide the household with some immediate relief through cash or meat.

In cases where livestock form the mainstay of livelihood strategies, such as in pastoralist and agro-pastoralist communities, livestock-related support will probably need to be augmented by other types of non-livestock assistance (such as food aid), given the number of years required for herds to regenerate and reach pre-emergency levels again following a drought or similar disaster. The Sphere Handbook contains detailed guidelines on this type of assistance.

Table 4.1 Advantages, disadvantages and key requirements of destocking options

Option	Advantages	Disadvantages	Key requirements
Accelerated off-take	• provides cash for immediate needs and/or reinvestment in livestock • builds on existing coping strategies • large volume of off-take • relatively low cost (majority of costs borne by traders) • low administration • promotes longer-term market linkages for potential future livelihood benefits	• has to be carried out before stock lose too much condition • pro-active targeting of vulnerable groups is difficult	• interested traders • terminal or export markets • infrastructure: roads, holding grounds; feed and water; security • conducive policy context on livestock trade and credit • conducive internal policy context within agencies to engage with private sector
Slaughter destocking: fresh or dry meat	• provides cash for immediate needs and/or reinvestment, as well as supplementary relief food • fresh meat considered more satisfying than dry meat by many communities; dry meat contains higher protein levels compared to fresh meat • employment opportunities within local community • dry meat enables storage of meat for later distribution	• higher administration and intervention than accelerated off-take, higher costs • less long-term sustainability* • more difficult to manage if large quantities of stock to be slaughtered	• local institutions able to organize, manage and help target beneficiaries • coordination forum between implementing agencies to agree methodologies, in particular pricing strategies • implementing agency with organizational capacity to manage • slaughter infrastructure available or potential to construct • conducive public health policy • agency-managed slaughter and distribution can fit within cultural norms
Slaughter for disposal	• provides cash for immediate needs and/or reinvestment	• livestock owners receive low price for stock • high administration and intervention • high cost • no relief food or longer-term benefits	• livestock in terminally poor condition without market or food value • local institutions able to organize, manage and help target beneficiaries • slaughter infrastructure available or potential to construct • conducive public health policy

Note: * Involvement in the preparation of dried and fresh meat, hides and skins does however have the potential not only to provide short-term employment but also to help develop skills. For example women's groups in Kenya involved in a destocking operation gained business and marketing skills as well as contacts, and were encouraged to continue trading after the programme had finished.

Table 4.2 Possible timing of destocking interventions

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Accelerated off-take	generally not applicable[1]			→			
Slaughter destocking	generally not applicable				→		
Slaughter for disposal	→					→	

Vulnerabilities and capacities of disaster-affected communities

Targeting the most vulnerable in destocking operations presents particular challenges, especially with regard to accelerated livestock off-take, since private traders aim to maximize profit and may therefore avoid targeting vulnerable communities with poor access to roads, poor security or limited feed and water for holding grounds. The negative effects of this may be mitigated by external agencies to a certain extent, through: attaching conditions to credit or subsidies; promoting and facilitating contact with more vulnerable communities; monitoring and evaluating access to the service by vulnerable groups; investing in marketing in 'normal' years; and within communities themselves, through encouraging indigenous institutions to promote and facilitate access to the temporary market sites by vulnerable subgroups and individuals.

Community participation is vital in the identification of vulnerable households and individuals to make up the target groups. For slaughter destocking the potential target groups may be characterized as listed below:

- The first target group comprises those *eligible to sell animals for slaughter*. Destocking operations can target vulnerable households (those with few livestock assets), in particular female-headed households, and also vulnerable or marginalized communities. Coverage can be expanded by rotating temporary market days between different communities, making a particular effort to include isolated groups living far from roads and market infrastructure.
- The second target group involves identifying those *eligible to receive meat*. This group should focus on vulnerable families in the community (those with many children, breastfeeding women, widows and the elderly). However, in pastoral and agro-pastoral settings it is likely that targeted households may share the meat with non-targeted households. In such cases and if there is sufficient quantity of meat to cover the entire community, it may be simplest to distribute the meat to all community members equally and thus avoid

potential resentment. This may include underserved institutions such as schools, hospitals and prisons.

- The third target group consists of those *eligible for employment* in the case of dry meat preparation. Vulnerable female-headed households should be given priority as employment provides them with the opportunity to supplement their income and in some cases builds on their knowledge and skills in meat preparation and processing. Men with no or low income could be employed for slaughtering, flaying and guarding the meat, while women may be involved in meat preparation (according to gender-based norms for the division of labour). Tanning of hides and skins may also provide a valuable employment opportunity.
- The fourth target group may consist of those *contracted to purchase the animals* (in cases where agencies opt to contract out the purchasing process – see Case study 4.3 in the Case studies chapter). This entails the agency making contractual agreements to buy a certain number (and species) of animals from each contractor at a fixed cost. The agreement should specify the physical condition of the animal to be purchased and limit the number and type to be purchased from each contractor to provide equal opportunity to community members. This arrangement enables vulnerable households to make some profit by purchasing animals from inaccessible areas and selling them to the programme (since the fixed price at which the agency buys is known). This may provide the opportunity for vulnerable households to purchase foundation stock or set up small businesses.

This process should be based on community criteria for vulnerability and may also build on previous vulnerability assessments and/or the findings of the preliminary assessments described in Chapter 2. Community leadership can also play a significant role in other aspects of the management and organization of destocking operations, including the identification of appropriate sites for temporary markets, price setting, which types of animals should be presented for purchase and slaughter, and location of emergency slaughter sites.

Gender roles and norms should also be taken into account when planning destocking operations. In many livestock-based societies, for example, cash is controlled by men while food is the responsibility of women. In such cases meat distribution may help to support women's role in securing the food supply of the family, including the children, while cash purchase of livestock may increase male heads of household's spending power, over which the women may have little control. In some cases therefore it may be appropriate to ensure that women-headed households are among the beneficiaries of livestock purchasing activities. Women may also be involved in meat preparation tasks, according to local gender norms.

People living with **HIV/AIDS** have particular nutritional needs (particularly those taking ARVs), some of which can be supplied by livestock products. It is important therefore that where possible destocking activities do not prevent access

by PLHIV to these products through too high off-take of productive animals, and that PLHIV are targeted in wet or dry meat distribution. However, it should be recognized that continued access to ARVs for PLHIV may not be possible during or immediately following an emergency, when basic infrastructure such as transport or health services may have been severely affected.

Security and protection considerations may also affect the decision whether to engage in destocking activities and how to implement them. In insecure environments livestock can be an additional source of insecurity as they are easily mobile, disposable for cash and/or used for wealth accumulation. Private traders may also be unwilling to venture into insecure areas. Destocking operations (whether commercial or slaughter) could exacerbate a conflict situation as they involve large cash transactions, making communities more vulnerable to risks; while in contrast the distribution of fresh or dry meat, if it can be managed securely, represents a less risky input to individual households. Agencies working in conflict areas may need to ensure that animals for sale have not been stolen. The security of agency staff may also be at risk where large amounts of cash are transported.

With regard to the **environment**, the implications of destocking operations are still open to debate and further work is required to provide concrete evidence of impact, either negative or positive. On the one hand, slaughter destocking generates waste that needs to be disposed of safely, requires water that may be in short supply, and can contribute to soil, air and water pollution. On the other hand, it may be that destocking on a very large scale can have a beneficial effect in that it may relieve the pressure on natural resources during a time of scarcity (such as a drought). Where the biodiversity of livestock species is under threat, care should be taken to ensure that destocking activities do not exacerbate the loss of local livestock biodiversity through the preservation of core breeding herds and species. If tanning forms part of a slaughter destocking activity, it may have significant the environmental implications, depending on the volume treated.

Disaster-affected communities have their own **capacities** that they draw on in response to emergencies. With regard to destocking these may include indigenous or local organizations that can take a lead in beneficiary identification, organizing sale sites, agreeing pricing policies and overseeing slaughter operations. Livestock-owning communities also generally have considerable indigenous knowledge about slaughtering as well as meat preparation and preservation methods. In addition they draw on their indigenous livestock management expertise in the selection of which stock types and which individual animals should be destocked (whether by accelerated off-take or for slaughter) and which should be protected to form a core breeding herd for the future.

The minimum standards

Section 1: Destocking general standards

Destocking enables livestock owners to salvage some value from stocks that without intervention may have had little or no value at all. Figure 4.1 below presents a decision-making tree highlighting the key questions in planning a destocking initiative. As the figure shows, the effectiveness of destocking is critically linked to the timing of the intervention, before massive livestock deaths occur and/or markets are flooded with excess supplies leading to a sharp drop in livestock prices. Initial analysis at an early stage in the disaster is therefore vital in assessing the feasibility and appropriateness of destocking and in planning suitable responses.

Destocking general Standard 1: Assessment and planning

The type of destocking selected is appropriate to the stage of the emergency and other relevant indicators.

Key indicators

- The phase of the emergency is carefully assessed (see guidance note 1).
- Livestock condition and terms of trade are monitored (see guidance note 2).
- Accelerated off-take is only considered during the alert and early alarm phases of an emergency, when private traders are willing to purchase livestock and stock condition is suitable for commercial sale (see guidance notes 1 and 2).
- Destocking interventions are based on the selection of appropriate livestock species, age and types according to indigenous knowledge and practice (see guidance note 3).
- The assessment takes into account the policy context, both external and internal (see guidance note 4).
- The security situation does not present risks for transaction of business, animal owners and programme implementers (see guidance note 5).

Guidance notes

1. **Emergency phase:** as outlined in Table 4.2, destocking is recommended in the alert and early alarm phases of a slow-onset emergency. In order for destocking activities to be feasible and successful therefore, close monitoring of the situation is needed.
2. **Monitoring livestock** condition and terms of trade: increased livestock supplies to the market without a corresponding increase in demand, leading to a fall in livestock prices, indicate that livestock owners are using distress disposal as a way of salvaging some value from stocks through the normal market channels. Deteriorating livestock condition may also be an indicator

of impending crisis. A 25 per cent drop in livestock prices (under such situations) is commonly regarded as a trigger point for initiating destocking. From the alert phase onwards, cereal–livestock terms of trade tend to shift so that cereal prices increase disproportionately compared to livestock prices. A 25 per cent increase in cereal–livestock terms of trade could be regarded as the threshold for planning a destocking operation.

3. **Selection of stock:** most livestock owners have considerable knowledge about which animal types should be destocked (whether by accelerated off-take or for slaughter) and this knowledge should form the basis of destocking strategies. In all cases, young reproductive female stock should be excluded, as they are vital for rebuilding livestock assets after the emergency. Further details are given under the relevant standards below.
4. **Policy context:** external and internal (organizational) policy should be included in the initial assessment to identify potential obstacles to implementation and also to identify potential advocacy activities (see Common standard 8). External constraints may include restrictions on cross-border or internal livestock trade and movement; licensing, tax regimes and money transfer systems; or provision of credit to traders. Internal constraints may limit an agency's ability to engage with the private sector (through the provision of loans for example). These issues should be clearly identified in the assessment and planning stage and mitigating actions taken where possible. Slaughter destocking activities also require a favourable policy environment, notably with regard to public health issues related to livestock slaughter. Agencies may similarly find their procurement policies limit their ability to purchase livestock from community members.
5. **Security issues:** in potential conflict areas, destocking may exacerbate the security situation since the transaction involves the movement of large sums of money. The feasibility of moving cash in the areas should be assessed, as well as the extent to which destocking may aggravate existing insecurity, before destocking activities are determined upon.

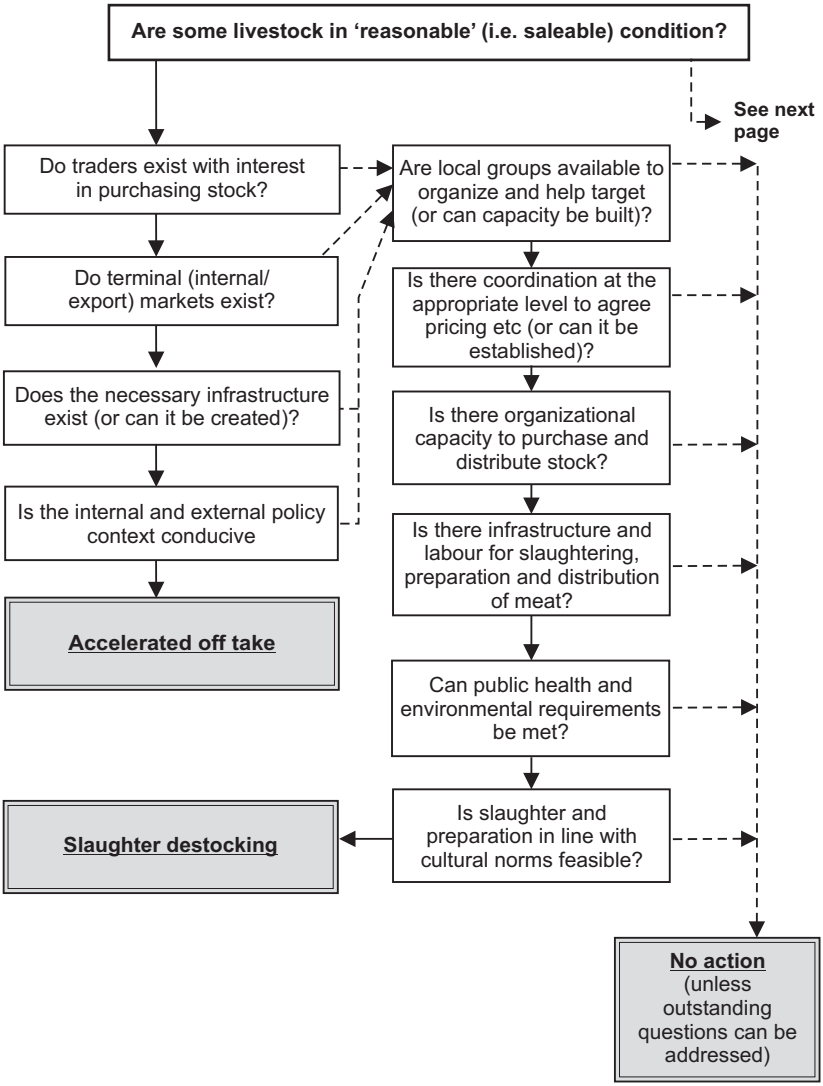
Section 2: Accelerated livestock off-take

Accelerated livestock off-take Standard 1: Accelerated livestock off-take

Support is provided for accelerated off-take of marketable animals.

Key indicators

- Livestock market potential is assessed and key local/national livestock traders/exporters/ranchers/feedlot operators are identified (see guidance notes 1 and 2).



Key: ⟶ = 'yes' ⇢ = 'no'

Note: The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no intervention should take place.

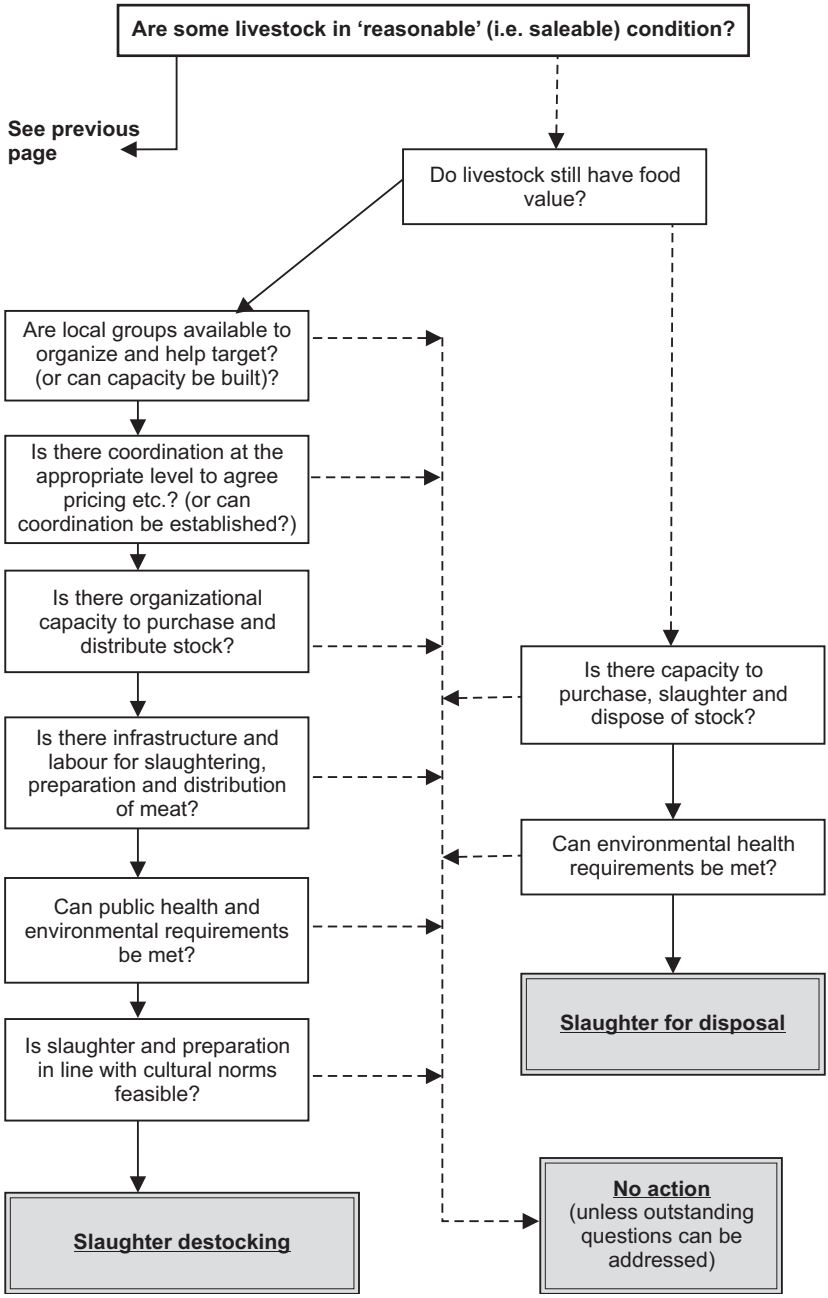


Figure 4.1 Decision-making tree for destocking options

- Consultations and negotiations are held through a coordination forum (see guidance note 3).
- Areas for intervention are selected with regard to availability of infrastructure and security (see guidance note 4).
- Livestock selection and pricing policy is agreed with local communities and traders (see guidance note 5).
- Taxation and bureaucratic requirements are assessed (see guidance note 6).
- Key support to be provided is assessed (see guidance note 7).
- Ongoing support and monitoring is provided (see guidance note 8).

Guidance notes

1. **Livestock market potential assessed:** the national, and where appropriate, export demand to absorb temporary excess supplies of livestock needs to be assessed for accelerated livestock off-take initiatives. Whereas drought-affected animals may not sell well directly in terminal or export markets, ranchers and feed-lot operators can make use of this opportunity to buy weakened animals and recondition them. In some countries, ranches are available for rent and livestock traders may be able to make use of such facilities until they can market the animals. Some of the information on facilities, trade networks and demand and supply patterns may be available at national level. Coordination forum members can also provide critical information regarding their respective operational areas that could facilitate traders' involvement in destocking operations.
2. **Key traders identified:** since traders play a lead role in accelerated livestock off-take, it is important to identify potential livestock traders/exporters, ranchers and feedlot operators as soon as possible, through direct enquiry where membership lists are not available from the respective associations' trade directories. It should be anticipated however that some operators may be reluctant to engage in accelerated livestock off-take because of lack of financial or other capacity. If possible, a small number of committed traders should be identified with the interest and capacity to take forward the initiative (see Case study 4.1 in the Case studies chapter).
3. **Consultations and negotiations through a coordination forum:** a coordination forum should be established and made up of key stakeholders, to oversee the process at national and local levels. The forum should call a meeting of interested livestock traders, exporters, feedlot operators and ranchers to assess and discuss the situation and the roles that each might play in accelerated off-take. Where possible and appropriate, local community representatives should also participate in this meeting. This will enable more detailed discussion on the specific areas the traders would like to operate in and the kind of support they might require from government, local

authorities, NGOs and civic groups. The meeting can also help to assess the kind of support that can be provided by the relevant agencies.

4. **Intervention areas:** selection of intervention areas should be based on an assessment of the security situation (as noted in Standard 1 above, traders will be unwilling to enter insecure regions) and of the availability of suitable infrastructure, such as roads and holding grounds.
5. **Livestock selection and pricing:** since accelerated off-take operations aim to establish and promote longer-term market linkages between livestock owners and private traders that can continue in non-emergency times to help sustain livestock owners' livelihoods, stock types for sale should be as much as possible in line with 'usual' times' marketing – generally surplus males. In most cases livestock owners have their own marketing strategies and will have extensive knowledge of the most suitable types of stock for sale. Livestock pricing policy should also be discussed with traders and communities to promote fair pricing.
6. **Taxation and bureaucratic requirements:** the taxation and bureaucratic requirements for the purchase and movement of livestock either internally or for export vary from country to country and may in some cases limit private traders' ability to engage in accelerated livestock off-take. These requirements should be assessed in the planning stage and where appropriate efforts made to facilitate livestock movements and trade.
7. **Key support assessed:** it is important to clarify at the outset the type of support that can be provided by outside agencies (whether government or aid agencies) to traders to avoid unrealistic expectations on the part of the latter. In order to promote sustainable, long-term market off-take of livestock, the support provided should be the minimal required to facilitate the process, particularly at the outset. This support may take a number of forms. The first, and simplest, is the facilitation of communication between interested traders and livestock owners, including providing contacts with key local leaders who can organize temporary market sites and dates, temporary holding grounds, security arrangements, feed and/or water provision etc. This may also include facilitating business linkages for the establishment of temporary offices, local agents etc. The facilitation role is best played by operational agencies with a field presence and experience and knowledge of the area. Second is the provision of credit (or facilitating the provision of credit by others) to interested traders. As noted above, the policy environment (both external, and internal to the agency) is a crucial factor influencing the feasibility of this type of support. Third is logistical support in the form of securing temporary holding grounds, provision of water or feed, or animal health inputs pending the transport of the animals. Finally, some agencies may provide transport subsidies to traders, although some critics are concerned that this undermines

the sustainability and independence of livestock marketing linkages that accelerated off-take hopes to promote in support of long-term livelihoods.

8. **Ongoing support and monitoring:** the need for ongoing support should be assessed at the beginning to ensure that agencies have the capacity to provide this assistance during the operation. This may take the form of settling local disputes or ensuring payment is effected on time, as well as price monitoring to check against exploitation of livestock owners. It is important that qualitative and quantitative records of the operation are kept for evaluation, impact assessment and documentation of best practice.

Section 3: Slaughter destocking

Slaughter destocking Standard 1: Slaughter destocking

Value is salvaged from disaster-affected livestock to provide relief meat and/or cash to affected communities.

Key indicators

- Purchase sites and dates are determined through community participation (see guidance note 1).
- Purchase price is determined for each species and payment methods are agreed upon (see guidance notes 2 and 3).
- Beneficiary households are identified and in-kind contributions are agreed with communities (see guidance note 4).
- Possibilities for establishing and working with 'meat relief committees' are examined (see guidance note 5).
- Selection of stock is based on the most appropriate animal types using indigenous knowledge (see guidance note 6).
- Procurement methods are identified (see guidance note 7).
- Decisions are reached on whether to distribute fresh or dry meat (see guidance note 8).
- Slaughter, preparation and preservation methods are based on locally acceptable norms and address international standards (see guidance note 9).
- There are no major epizootic and public health risks associated with slaughtering animals (see guidance note 10).
- The process for disposal of hides and skins is assessed (see guidance note 11).
- Where other options are not possible, severely emaciated stock may be considered for slaughter disposal (see guidance note 12).

Guidance notes

1. **Purchase sites and dates determined:** community participation in the determination of purchase sites and dates is vital to ensure effective coverage and selection of appropriate sites. The creation of purchase sites close to existing villages can help communities avoid trekking weakened animals to established market centres. Market days should be fixed in advance to provide adequate warning time for livestock owners and enabling staff to rotate between different sites on different dates. The number of sites and dates will depend on agency and local capacity to organize the temporary markets (see Case study 4.5 in the Case studies chapter).
2. **Purchase price determined for each species:** the purchase prices for the different species should be agreed in advance through the coordination forum and in negotiation with local communities. Agreement between different implementing agencies is vital to avoid 'competition' between geographically adjacent areas and the coordination forum has an important role to play in this harmonization process. Once agreement has been reached, the fixed price per species should be communicated to all community members in open meetings to ensure transparency. The price may not necessarily reflect the prevailing market price as this may be too low to bring any benefit to prospective sellers. Alternatively, the price should not be set so high that local markets are destabilized or that coverage is very limited.
3. **Payment methods agreed:** travelling with large amounts of cash and effecting payments in isolated areas can be a cause for concern, particularly in insecure regions. Payment methods should be negotiated with communities in advance of the operation, including whether to use a coupon system that can be redeemed for cash later in a safe environment (see Case study 4.4 in the Case studies chapter).
4. **Beneficiary households identified:** beneficiaries should be identified through community-led processes, based on key vulnerability criteria and addressing the key target groups listed above, namely: those eligible to sell animals; those who should receive meat; those who could be employed (where appropriate) in slaughtering and meat-preparation tasks; and those who may be contracted to purchase animals on behalf of the programme. Negotiations should be conducted with communities about the in-kind contributions they are willing to make to the programme. This could range from taking responsibility for security arrangements, to contributing labour or administration, to coordination of activities.
5. **Establishing and working with 'meat relief committees'**: the possibility of establishing 'meat relief committees' may be explored. Such committees can take responsibility for identifying beneficiaries, overseeing the operation and ensuring that distributions take place accordingly. As well as locating

responsibility for implementation within the beneficiary community, the committees may also act as a counterbalance to other 'food relief committees' that may have been formed to distribute food aid (see Case study 4.6 in the Case studies chapter). Other roles may be defined according to cultural norms and indigenous skills, for example women are often skilled in meat preparation and preservation, while young men may be useful in restraining stock, and cutting and/or guarding the meat.

6. **Selection of stock:** slaughter destocking should focus on non-reproductive stock, namely surplus males in too poor condition for sale, old males and cull females. In times of severe emergency, other factors such as susceptibility to drought and disease may be taken into account. Severely emaciated livestock with little meat value may in some cases be considered for slaughter for disposal (see guidance note 12 below).
7. **Procurement method identified:** destocking programmes may purchase livestock directly from owners or contract out the procurement process to community-based groups (such as women's groups or cooperatives – see Case study 4.3 in the Case studies chapter). This lessens the agency's involvement in the purchasing process while providing some financial benefits to community-based groups. It also enables the initiative to reach isolated communities as contractors may source their supplies from remote areas. The fixed price at which the agency buys each species from the contractors and the price at which the contractors buy from producers should be clearly communicated to community members as part of the transparent pricing agreement.
8. **Decision made on distributing fresh or dry meat:** in close consultation with the community a decision has to be made whether to distribute fresh or dry meat. Fresh meat is generally considered more satisfying by many communities although dry meat contains higher protein levels than fresh meat. Dried meat also has the advantage of allowing larger numbers of stock to be slaughtered at any one time and permits staggered and more widespread distribution, compared to fresh meat that must be distributed immediately and can therefore only cover a relatively limited geographical area. Alternatively, dried meat requires additional preparation, a good supply of water and the availability of at least short-term storage facilities. Fresh meat distribution may need to be carried out on a regular basis in order to provide both cash in return for failing livestock and meat to crisis-affected communities throughout the emergency, as each distribution can only include the quantity of meat that can be consumed within a matter of days.
9. **Slaughter methods:** slaughter methods, butchering and – where dry meat is involved – preservation methods, should be based on local norms according to religious requirements, cultural traditions and/or taste. Basic infrastructure will be required, such as temporary or permanent slaughter slabs, as well as sufficient labour to carry out the work. In some communities

meat is boiled before drying while in others it may be salted then dried. The World Organisation for Animal Health (OIE) has developed guidelines for the slaughter of animals as part of its Terrestrial Animal Health Code that provide international standards for slaughter procedures (www.oid.int/eng/normes/mcode/en_chapitre_1.7.5.htm). See also the guidelines on ante- and post-mortem meat inspection (www.oie.int/eng/normes/mcode/en_chapitre_1.6.2.htm).

10. **Health risks:** highly contagious diseases such as anthrax and Rift Valley Fever are easily transmittable to humans, particularly people whose health status has deteriorated because of an emergency such as drought. Slaughtering large numbers of animals in the same place can potentially contribute to the spread of these and other diseases. Inspection by qualified personnel pre- and post-mortem and the rotation of slaughter sites should be used to minimize risks. A thorough assessment of the potential risks to public health should be carried out before destocking interventions are selected (see also Chapter 5 on veterinary services).
11. **Decision made on the disposal of hides and skins:** the disposal of hides and skins (through sales) provides an opportunity to benefit the larger community or specific vulnerable community members who would be entitled to collect and sell the hides and skins, whether from fresh or dry meat distribution. In some cases, payment may be effected in hides and skins in return for labour etc. (see Case studies 4.3 and 4.5 in the Case studies chapter).
12. **Slaughter disposal:** where other destocking options have been eliminated and communities remain in need of the direct assistance that cash purchase of failing animals can provide, slaughter disposal may be considered. Given the high administrative input, high costs and unsustainability of such activities, slaughter for disposal should be a last resort in the emergency phase only. It is vital that communities are involved in the selection of beneficiaries and as much as possible in the management and coordination of the activity, through local institutions or committees established for the purpose. As above, slaughtering should take place according to local religious and/or cultural norms and in hygienic conditions to minimize the risk of disease and infection. See the OIE guidelines noted above under guidance note 9, and also those referring to animal slaughter for disease control (www.oie.int/eng/normes/mcode/en_chapitre_1.7.6.htm).

Notes

1. In many rapid onset emergencies accelerated off-take may not be applicable since there is little time to prepare for the emergency and afterwards the surviving stock may no longer be at risk. However, there are instances where this is not the case. For example a significant number of animals were killed in the Pakistan

earthquake. Of those that survived, some were sold in the subsequent months for a number of reasons: injuries, lack of feed and shelter, cash shortage, lack of labour. In these situations accelerated off-take could provide significant benefits for affected households (Roger Lough, pers. com.).

Appendix 4.1 Assessment checklist for destocking

- What phase has the emergency reached?
- What is the condition of the livestock being brought to market?
- Is the number of livestock being brought to market increasing?
- What is happening to the price of livestock?
- What stakeholders are operating in the area?
- Can a coordination forum be established?
- Is the area secure for the movement of stock and cash?
- What indigenous and local institutions exist that can facilitate destocking? What roles do they play?

For accelerated off-take:

- Are traders already operating in the area?
- Is the infrastructure in place to enable livestock off-take?
- Do (temporary) holding grounds exist?
- Is there access for trucks?
- Are feed and water available?
- Are there any key policy constraints to livestock movement and trade?
- What constraints would hamper access to markets by the most vulnerable?

For slaughter destocking:

- What slaughter facilities exist?
- What are local religious and cultural requirements with regard to livestock slaughter?
- What are local gender roles with regard to slaughter, meat preparation, tanning etc.?
- Which are the most vulnerable communities, households and individuals affected by the emergency who could benefit from destocking?
- Should temporary market sites be established to reach remote villages?
- Which vulnerable groups should be targeted to receive the meat from destocking operations?
- Which individuals could benefit from the employment opportunities that destocking could provide?
- Can a system be established to dispose of hides and skins?

Appendix 4.2 Monitoring and evaluation checklist for a destocking project

The following checklist is an outline that may be adapted by agencies for use at community or household level (see also Common standard 5 on impact assessment) and applied using various methodologies.

Accelerated off-take

Process:

- phase of the emergency (alert, alarm, emergency);
- market mapping, opportunities and risks;
- national, export demand projections;
- number of participating livestock traders;
- number of operational areas (existing and temporary market sites);
- provisions (watering points, holding grounds, vet services etc.) for livestock traders (quality and quantity);
- transport provisions;
- number and species of animals purchased;
- total value of salvaged animals;
- average price per species;
- actual number of beneficiaries vs. perceived;
- types of beneficiaries.

Post operation:

Traders:

- mortality numbers per species after purchase;
- total mortality costs;
- mortality cost per trader;
- estimated profit level per trader;
- traders perceived strengths/weaknesses of the project.

Communities:

- average value salvaged per beneficiary;
- proportion of income used (compared to baseline or recollection against pre-emergency times) for:
  - o food
  - o school fees
  - o medicine

  - o animal feeds
  - o veterinary services
  - o clothing;
  - o transporting animals to other sites;
  - o investing in business/small stock;
  - o other.
- beneficiaries' ranking of benefits;
- communities perception of benefits/drawback of the project with regard to:
  - o timing of the operation;
  - o price;
  - o on-time payments and payment methods;
  - o other relevant issues;
- beneficiaries' perception of their capacity to restart livelihood activities (viability of remaining stock etc.).

Slaughter destocking

Process:

- phase of the emergency (alert, alarm, emergency);
- available operational budget;
- estimated purchase price by species;
- projected volume of purchases for slaughter (by species);
- targeting criteria and projected number and types of beneficiaries (sellers, meat recipients, contactors, employment, etc.);
- operational methods (direct or through 'meat relief committees');
- coverage (fixed or rotational centres);
- slaughter frequency (once in every centre or on regular basis for the duration of the project);
- purchase arrangements (direct, contract).

During and post-operation:

- recipients' fit with targeting criteria;
- actual beneficiary numbers (sellers, meat recipients, contractors, employees etc.);
- total number of animals purchased and slaughtered by species;
- total tonnage of meat produced (estimated as fresh or dry) and distributed;
- amount of meat (fresh or dry) received per beneficiary (household);
- actual purchase price by species;
- total cost of livestock purchased;

- number of livestock sellers and average income received per family;
- number of contractors and average amount of income earned by contractors (if any);
- number of employees and average amount received by each temporary employee;
- role of meat relief committees in attaining project objectives (quantitative);
- perceived benefits of the project by communities (ranking);
- perceived drawbacks of the project by communities (timing, targeting, purchase price etc.);
- proportion of income (for all cash beneficiaries) used on:
  - o food
  - o school fees
  - o medicine
  - o animal feeds
  - o veterinary services
  - o clothing
  - o transporting animals to other sites
  - o investing in business/small stock
  - o other.

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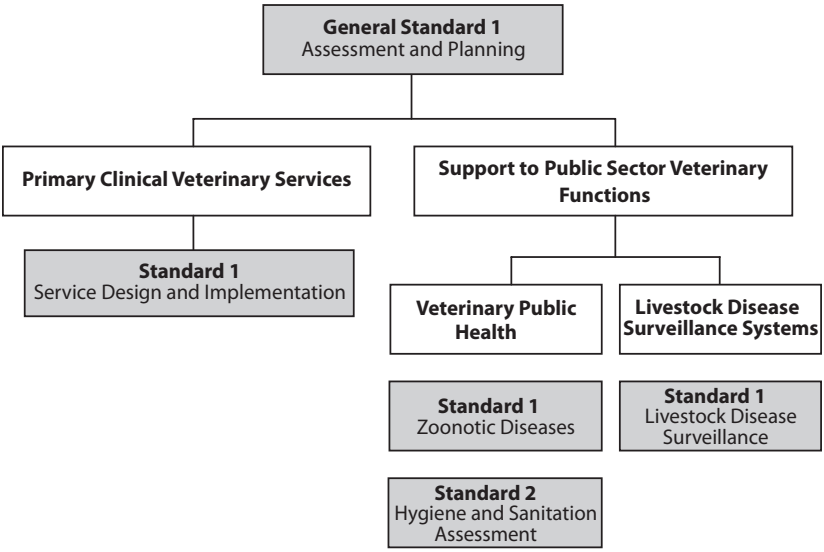
CHAPTER 5

Minimum standards for veterinary services

Veterinary Services



Introduction

Links to the LEGS livelihoods objectives

The provision of veterinary services in an emergency relates largely to the second and third LEGS livelihoods objectives, namely:

- to protect the key livestock assets of crisis-affected communities
- to rebuild key livestock assets among crisis-affected communities

Veterinary services help to protect and strengthen livestock and in many cases help to keep them alive. Such support can also increase the supply of livestock products during an emergency (through improved health of the animals) and hence have an impact on the first LEGS livelihoods objective – to provide rapid assistance to crisis-affected communities through livestock-based interventions – by means of improved contribution to the household food supply.

The importance of veterinary services in disaster response

The provision of veterinary services in disasters is an important strategy for assisting people to protect their livestock and maintain the benefits of livestock ownership or access. Many emergencies exacerbate animal health risks and increase livestock vulnerability to disease. Veterinary care can help to prevent sudden loss of livestock due to acute diseases that cause high mortality. For example drought or flood can weaken livestock condition and increase the risk of disease outbreaks, while flooding may remove topsoil, creating favourable conditions for the spread of anthrax. Other disasters such as earthquakes can leave livestock wounded or injured. In situations where high livestock mortality occurs, it can take many years for communities to rebuild their livestock assets, whether these are pastoralists' large herds, or a single donkey, pair of draught oxen or a few chickens that make a significant contribution to livelihoods. Veterinary care can also limit the impact of chronic diseases that may affect benefits such as milk production, fertility or the use of livestock as pack animals. In general, veterinary vaccines and medicines are inexpensive items relative to the economic (and other) value of livestock.

Historically, epidemics of livestock disease such as rinderpest have caused humanitarian crises. However, rinderpest has now been eradicated from most of the world and there are few other diseases that cause such high livestock mortality over wide areas. Livestock epidemics can still occur during humanitarian crises, but tend not to be a cause of such crises. The Livestock Emergency Guidelines and Standards do not cover the prevention or control of major internationally-recognized epidemic livestock diseases, as guidelines are already available from the OIE and FAO (see www.oie.int; www.fao.org/ag/againfo/programmes/en/empres/home.asp).

Options for veterinary response

This chapter covers two key types of veterinary response. The first, *primary clinical veterinary services*, is the priority response in an emergency. However, the second response, *support to public sector veterinary functions*, may also be appropriate, particularly in protracted emergencies or in the recovery phase of a rapid- or slow-onset disaster.

Primary clinical veterinary services

In many developing countries, veterinary services are in a state of transition from government to private-sector delivery of clinical veterinary care. In post-disaster situations, the growing private veterinary sector may comprise the main source of quality veterinary care. In general in a given country, most veterinarians are located in major cities and towns. In more remote, rural or marginalized areas, veterinary care is provided by para-veterinary workers who can be sub-contracted during crises to deliver veterinary services, or can provide services through mechanisms such as voucher schemes.

Preventive and curative veterinary interventions in humanitarian crises fall into two broad categories, which can be implemented simultaneously.

Examination and treatment of individual animals or herds

Through stationary or mobile services, emergency veterinary interventions can aim to supply a clinical service to livestock keepers, involving treatment of sick livestock or vaccination. Such services can provide immediate benefits to those users who can access the service, assuming that disease diagnosis and treatment is of sufficient quality.

Services may be delivered free-of-charge, in which case coverage will depend on the availability of funding by external agencies and in many cases, only a small proportion of the disaster-affected population will be reached. Furthermore, unless closely supervised there is a risk that free services are not actually delivered and users are charged at the point of delivery. The decisions about which types of livestock and diseases to treat, and the method of treatment, are based on the objectives of specific agencies and the clinical judgements of veterinary workers on the ground. If clinical services are delivered by aid agency staff in isolation of local veterinary services providers, there is a strong likelihood of undermining local services and longer-term development processes. Coordination is vital if agency responses are not to contradict and undermine each other and existing service providers.

Alternative systems of clinical veterinary service delivery aim to use existing veterinary workers where present, or conduct rapid selection and training of para-veterinarians. These approaches help to strengthen local capacity and support

systems that can be improved over time and as the emergency wanes. They can also help to improve accessibility and availability, although the issue of affordability becomes important. A third approach involves the gradual introduction of payment for services, with free provision during the acute stage of an emergency and payment for services in later stages and as livestock markets begin to function.

Agencies considering the provision of clinical veterinary care have to consider the trade-offs between these different approaches. There appears to be very limited evidence to show that the free provision of clinical veterinary care to individual animals provides significant livelihood benefits to disaster-affected populations, or is cost-effective or equitable. Relatively more evidence of livelihood benefits is available for para-veterinary systems based on some level of payment for services, particularly in protracted crises, where studies show reduced livestock mortality and improvements in service accessibility, availability and acceptance. When designed using participatory approaches, these systems also provide an element of choice to livestock keepers in terms of the priority livestock health problems to be addressed.

These experiences indicate that the provision of primary clinical veterinary services in humanitarian crises should be based on approaches such as:

- support to, or rapid establishment of para-veterinary systems with overall supervision by veterinarians;
- immediate attention to payment for services, with use of voucher schemes for the most vulnerable livestock keepers and rapid resumption to full payment for services for others;
- the principle of choice, in which livestock keepers are able to select the type of preventive or curative service they require for all diseases other than those covered by official disease control policies.

Mass treatment or vaccination programmes

Sometimes coinciding with clinical care for individual animals or herds are mass treatment or vaccination programmes that aim to cover a livestock population within a disaster-affected area. Treatment programmes often focus on the use of anti-parasitic medicines, especially for gastrointestinal helminth infections and ectoparasite infestations, whereas vaccination programmes often cover diseases such as anthrax, clostridial diseases, pasteurellosis and Newcastle disease. Most commonly, treatment or vaccination programmes are one-off events and are implemented at no cost to livestock keepers.

One-off mass treatment programmes have been widely used and involve large quantities of veterinary medicines. Although there is some clinical evidence to indicate that treatment programmes can improve livestock survival and production during emergencies or in the recovery phase, there are few quantitative studies on the epidemiological or economic rationale for these programmes. The limited

evidence available suggests positive impact but does not disaggregate benefits according to specific types of treatment.

With regard to one-off mass vaccination programmes in emergencies, some humanitarian crises may occur at times that are not high-risk periods for those livestock diseases preventable by vaccination, in which case vaccination will have little impact. In other situations vaccination, if properly performed, may help to prevent livestock deaths due to diseases associated with the crisis such as anthrax outbreaks following flooding. In common with mass treatment programmes, there is limited quantitative evidence available on the impact of livestock vaccination during humanitarian crises. Within a given country or area, it is advisable to conduct vaccination according to official disease control policies and using recognized vaccination protocols, including appropriate timing of vaccination and completion of a full vaccination course. The availability of a reliable cold chain is also important for the effective implementation of vaccination programmes, unless the vaccines involved can be stored at ambient temperature. As a general rule, government and aid agencies should support vaccination programmes as a standard development activity, rather than vaccinating during an emergency. When conducted as part a well-designed disease prevention programme, vaccination can be a very cost effective means to safeguard livestock. Although often considered as a 'public good' by governments, the prevention of diseases such as clostridial diseases or pasteurellosis is a private good and ideally should be delivered by the private sector (a 'public good' may be defined as accessible by all, to the extent that one person's consumption of it does not reduce the potential for others to use it. The owner of a 'private good', in contrast, can prevent others from using it, and once it is consumed, it cannot be used again.).

Support to public sector veterinary functions during emergencies

A consideration during more long-term crises is the need to support core public sector veterinary functions. Such support may be needed to assist a weakened government capacity, or in cases where no officially-recognized government authority is present.

Veterinary public health

Veterinary public health covers the prevention or control of animal diseases that are transmissible to humans either through food or by contact between animals and people, and is a key public-sector function. These zoonotic diseases include anthrax, salmonellosis, tuberculosis, brucellosis, rabies, mange, Rift Valley Fever and Highly Pathogenic Avian Influenza. As stated in the Introduction, specific guidelines for prevention and control of many of these diseases are available from FAO and OIE.

Disasters can result in abnormal livestock movements or use of grazing areas, high livestock mortality followed by scavenging of carcasses by wild or domestic carnivores, crowding of livestock, or close contact between livestock and people. These conditions can increase the risk of zoonotic diseases in livestock and humans. The disease control method depends on the disease in question and in most cases, collaboration between veterinary and human health services is warranted.

Examples of veterinary public health activities during humanitarian crises include:

- public awareness campaigns for rabies and rabies vaccination programmes;
- public education campaigns to control tuberculosis or brucellosis, for example through improved hygiene and consumption of boiled milk;
- control of stray dogs and wild predators such as hyenas or jackals.

Disease surveillance

In some regions, international trade in livestock or livestock products is important to the livelihoods of livestock keepers. To some extent this trade is influenced by international animal health standards that are applied to disease information to determine the risk of a particular country exporting livestock diseases. One major source of disease information is government surveillance systems and therefore any disease surveillance activities need to be designed in collaboration with government authorities where they exist.

Examples of disease surveillance activities during humanitarian crises include:

- use of para-veterinarians to report outbreaks of disease;
- public awareness campaigns for major epidemic diseases;
- activities to support local or national government disease surveillance systems, such as linking para-veterinarian disease reporting systems to official disease reporting structures;
- facilitating timely investigation of and response to disease outbreaks

Links to other chapters

Veterinary care alone will not guarantee the survival and productivity of livestock in disaster situations. Livestock also require feed and water, and in some areas, housing. Therefore, veterinary care should be integrated with other types of livestock assistance as described in the other chapters of LEGS (see for example Chapter 6: Ensuring feed supplies, and Chapter 7: Provision of water). In other activities such as destocking, veterinary services can complement the initiative thus helping to ensure the survival of the remaining stock (see Chapter 4) as well as providing support such as pre-slaughter and post-mortem examinations. During the provision of livestock during post-disaster recovery, additional veterinary support will be required, including the examination of livestock before purchase as well as the

Table 5.1 Advantages and disadvantages of veterinary services options

Option		Advantages	Disadvantages
Primary clinical veterinary services	Examination and treatment of individual animals/herds	• Allows flexibility and veterinary care on a case-by-case basis • Can support existing private sector service providers e.g. through voucher schemes • Greater scope for livestock keepers to seek the services they want • Wide coverage is possible, particularly when well-trained and supervised para-veterinary workers are used • Allows targeted or strategic prophylactic treatment or vaccination of individuals or herds at risk • In complex emergencies, can be used to establish a primary-level service in hitherto underserved areas	• If provided free, will limit coverage and duration of service according to budget • If provided free, risks undermining existing service providers
	Mass treatment or vaccination programmes	• Relatively easy to design and implement	• Limited quantitative evidence of impact on livestock mortality or production • Weak diagnostic facilities in many areas • Large-scale vaccination programmes difficult to design without basic epidemiological information • Coverage often determined by budget rather than technical design criteria • Free treatment and vaccination can undermine the private sector • For many vaccines, the need to establish or support cold chains

Option		Advantages	Disadvantages
			• Risk of poor immune response to vaccination in animals already weakened e.g. due to lack of feed
Support to public sector veterinary functions	Veterinary public health	• Public awareness-raising is often inexpensive • Can foster collaboration between veterinary and human health sectors	• May require specialized communication expertise to design and test educational materials in local languages • If not carefully managed and timed, can divert resources away from more direct livelihoods-based assistance
	Livestock disease surveillance systems	• Can complement all other veterinary interventions and assist impact assessment of these interventions • Fosters linkages between central veterinary authority and disaster-affected area • Can help to promote international livestock trade in some countries and regions	• Needs to be based on clearly-defined surveillance objectives • Can easily become a data-driven rather than action-orientated process • If not carefully managed and timed, can divert resources away from more direct livelihoods-based assistance

provision of primary-level clinical services after the distribution of livestock (see Chapter 9: Provision of livestock).

Timing of interventions

Support to primary clinical veterinary services can be appropriate throughout an emergency – as for non-emergency situations. Support to public-sector veterinary functions, however, may be most appropriate in the recovery phase, when the immediate threats to livestock mortality and morbidity are past (see Table 5.2).

Vulnerabilities and capacities of disaster-affected communities

The design of equitable and effective primary veterinary service delivery requires an understanding of livestock ownership and use by different socio-economic groups

Table 5.2 Possible timing of veterinary service interventions

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Primary clinical veterinary services	→	→		→	→	→	
Support to public sector veterinary functions		→				→	

within a disaster-affected population. Vulnerable groups such as female-headed households may own specific types of livestock such as poultry, small ruminants or donkeys, and it is therefore important to consider the main health problems affecting these animals.

In common with primary medical services, veterinary services should be accessible, available, affordable, acceptable and of sufficient quality. In disaster situations two of these characteristics of service provision are particularly important, and sometimes controversial.

Accessibility

In remote areas with poor infrastructure and communications, veterinary service delivery is a challenge even in normal periods. Access to communities may only be achieved on foot or by boat, and in general the more remote a community, the more vulnerable it is during disaster. Para-veterinary workers are usually the most appropriate service provider in these situations because they are able to travel and function in these environments, particularly during disasters. Despite the appropriateness and impact of para-veterinary workers, community-based animal health workers (CAHWs) are sometimes resisted by the veterinary establishment and may not be legalized due to misconceptions about their capacity and/or perceived threats to the veterinary profession's monopoly of service provision. However, CAHWs are a named type of para-veterinary professional in the international standards set by the OIE, and therefore supervised and well-trained CAHWs should always be considered a potential veterinary service provider during disasters.

Affordability

Trends in the privatization of clinical veterinary services in developing regions have been accompanied by debate on the willingness and capacity of poorer livestock keepers to pay for private veterinary care. Even though livestock have a clear eco-

nomic value, one side of the debate proposes that some livestock keepers cannot afford private veterinary services and therefore they are excluded from using these services. The alternative view is that when private clinical services are based on simple community-based approaches with low transaction costs, even the poorest livestock keepers will use these services. In disasters, the issue of affordability is a particular challenge for agencies aiming to provide rapid, equitable and effective clinical veterinary care, while also trying to support local private service providers who require an income. Approaches such as subcontracting local private veterinary workers or the use of voucher schemes have been promising and warrant wider use and assessment. These schemes can reach poorer and more vulnerable livestock users, while also helping to maintain private facilities during disasters. In contrast, there is little evidence to show that the provision of free veterinary care on a large scale and delivered directly by aid agencies or government during disasters overcomes equity problems or provides significant livelihoods impact.

In many societies, livestock care and management tasks are divided along gender lines, and hence it is important that emergency interventions are based on a thorough understanding of **gender** roles and responsibilities, and the implications of planned activities. For example, women (and girls) may be responsible for small and/or young stock, including the diagnosis and treatment of livestock diseases, and hence may have significant ethno-veterinary knowledge that should be taken into account in planning. Women are also commonly more vulnerable in emergencies to food insecurity and other threats and should therefore be involved in animal health interventions, including specific targeting of particular activities and the recruitment of women CAHWs where possible and appropriate.

For **PLHIV**, the prevention of zoonotic disease is especially important and hence animal health interventions can be of particular benefit in reducing their vulnerability. In addition, livestock products (as noted above) can provide significant nutritional benefit to PLHIV. Increasing the productivity of livestock through animal health interventions can therefore also have a positive impact on these groups in particular. Where animals and human populations live together closely, such as in urban and peri-urban environments or refugee or displacement camps, the risk of zoonoses increases. To reduce these risks, proper handling and preparation of food is required, hence integration of livestock responses with human health information and services is needed in these circumstances (the Sphere handbook contains minimum standards on hygiene and human health services).

The **security and protection** implications of any animal health intervention should be taken into account. For example, CAHWs carrying cash and/or medicines may be at increased personal risk of robbery or attack, since veterinary drugs can be high in value while low in volume and thus easy to steal. Insecurity can also have animal health implications: animals stolen from a neighbouring group or area can bring disease into the herds.

Initiatives that help to preserve livestock assets (such as the provision of feed, water or veterinary services) need to take into account the potential impact on the **environment**, particularly in an emergency that has severely affected natural resources, such as drought. However, it is also important to recognize that in spite of the common misconception, veterinary service provision is unlikely to affect herd size to the extent that unsustainably large populations of livestock are maintained. At the household level, improved environmental hygiene and sanitation may help to reduce animal health problems, particularly where livestock are kept in restricted spaces.

Community-based approaches to primary animal health care recognize that local people have significant **capacities** and can make important intellectual contributions to service design and assessment. People who are highly reliant on livestock often possess very detailed indigenous knowledge on animal health problems, including disease signs, modes of disease transmission, and ways of preventing or controlling diseases. This knowledge is particularly well-documented for pastoralist and agro-pastoralist communities. The training and support of local people as CAHWs can build on this knowledge as well as providing an effective and locally acceptable way to reach remote rural communities with veterinary services. Such workers can also play a useful role in veterinary public health and disease surveillance. In communities that are not highly dependent on livestock for their livelihoods, the involvement of local people as CAHWs (even if they require more detailed training than those in for example pastoral areas) helps to gain community confidence, facilitate participation and thereby increase effectiveness.

The minimum standards

Section 1: Veterinary services general standards

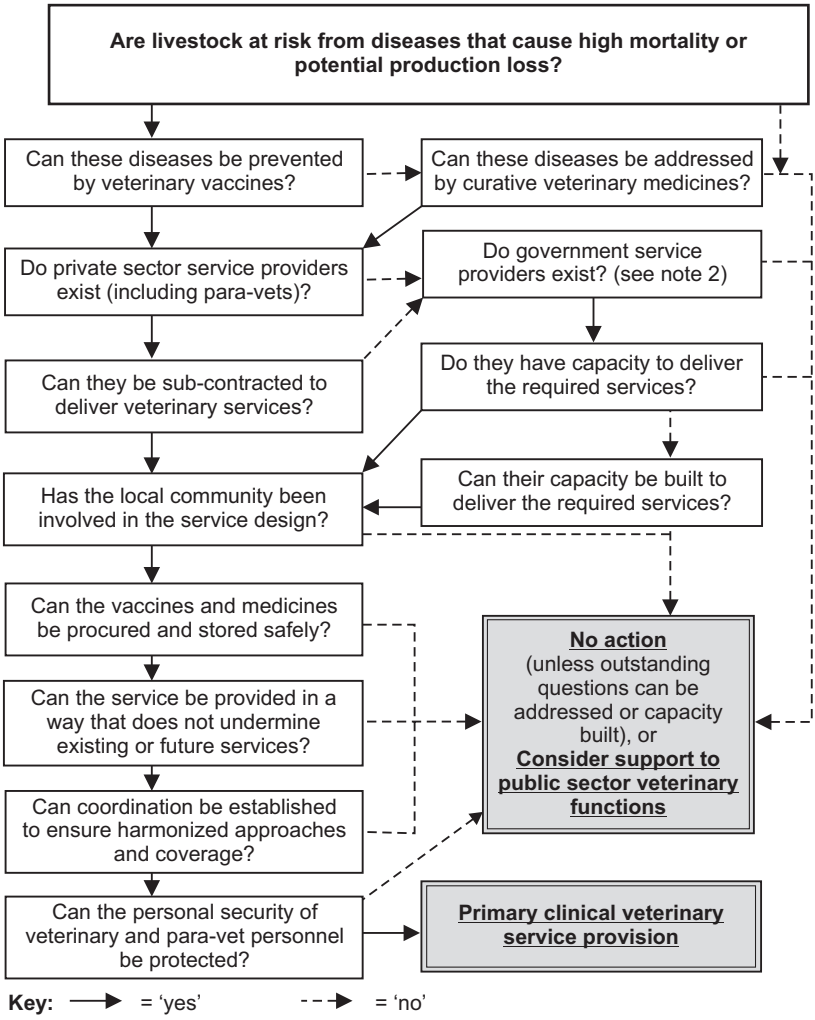
Before engaging in support to veterinary services, the needs of the affected populations and the availability and capacity of existing service providers should be carefully considered, as highlighted in Figure 5.1.

Veterinary services general Standard 1: Assessment and planning

The disaster-affected population, including vulnerable groups, actively participates in the assessment and prioritisation of veterinary needs.

Key indicators

- Rapid participatory assessment and prioritization of veterinary needs is conducted involving all relevant subgroups within a disaster-affected population, and in partnership with local veterinary authorities and service providers, if present (see guidance note 1).



Notes:

1. The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no intervention should take place.
2. Where neither government nor private sector veterinary services exist (e.g. In conflict), an operational response by external agencies may be feasible for a limited period of time.

Figure 5.1: Decision-making tree for primary clinical veterinary services

- All existing veterinary service providers are mapped within the disaster-affected area and analysed in terms of current capacity, and potential capacity if assisted by aid agencies (see guidance note 2).
- The assessment includes analysis of service providers before the disaster with regard to payment for services (see guidance note 2).
- The assessment includes a rapid analysis of policy or legal factors that may hinder or enable specific implementation strategies (see guidance note 3).

Guidance notes

1. **Rapid participatory assessment:** the assessment should be conducted using experienced veterinary workers who have been trained in participatory inquiry. The assessment should include specific attention to the priorities of vulnerable groups, and should involve consultation with local government and private-sector veterinary personnel. It should aim to identify and prioritize livestock health and welfare problems warranting immediate attention, by livestock type and vulnerable group. Information derived from participatory methods should be cross-checked against secondary data when available (for example government disease surveillance reports, disease studies from local research institutes and published data). Formal livestock disease surveys involving questionnaires and laboratory diagnosis are rarely feasible in disaster contexts, and the modest added value of the disease information obtained is rarely justified in relation to the additional time and cost required and the need for rapid action. A checklist and methods for assessment is given in Appendix 5.1 (see also Appendix 2.2: Assessment and response for general participatory inquiry methods). When more systematic livestock disease surveys or studies become necessary during protracted crises as a means to refine disease control strategies, participatory epidemiological approaches should also be applied (see Catley, 2005).
2. **Analysis of veterinary service providers:** mapping of existing service providers – veterinarians and all types of para-veterinary workers – and understanding their activities and coverage will assist agencies to define a strategy for service delivery during the disaster, including ways to fills gaps in terms of geographical coverage or access to vulnerable groups. Categories of para-veterinary workers vary between countries but include veterinary assistants, animal health auxiliaries, animal health technicians and CAHWs, as defined in national and international veterinary legislation and codes. Informal veterinary service providers can also include traditional healers and 'drug sellers'. One component of this analysis should be a review of the pricing arrangements used by different service providers. In some (usually conflict-based) emergencies, it may be the case that neither the government nor the private sector has the capacity to provide veterinary services. In these

situations it may be appropriate for external agencies to support the provision of a service (for example through training CAHWs and/or livestock owners themselves), based on a clear exit strategy and plans for building government and/or private-sector capacity as this becomes possible.

3. **Policy and legal factors:** the assessment should include a rapid review of government and agency policies, rules or procedures that relate to implementation options. In some countries, certain types of para-veterinary worker are not legalized or are restricted to a limited range of veterinary activities. Some countries may also have livestock disease control policies that may need to be followed or if not, alternative control methods will need to be justified. There may also be restrictions on the use of certain types of veterinary products, as defined by national drug registration bodies. The use of funds from some donors to buy veterinary drugs is sometimes hindered by bureaucratic requirements from donors that prevent rapid and appropriate procurement in emergency contexts. An understanding of the policy context is vital both to recognize potential constraints and as appropriate to form the basis for associated advocacy or policy action (see Chapter 3, Common standard 8: Advocacy and policy).

Section 2: Primary clinical veterinary services

Provision of primary clinical veterinary services Standard 1: Service design and implementation

Veterinary services are designed appropriately for the local social, technical, security and policy context and implemented with the active participation of disaster-affected communities.

Key indicators

- The service design process follows on directly from the initial assessment, uses the information and analyses of the assessment, and is based on the active participation of the disaster-affected population, including vulnerable groups (see guidance note 1).
- The design of the service includes specific elements to reach vulnerable groups and in particular addresses challenges of accessibility and affordability (see guidance note 2).
- Service design considers the need for rapid procurement and availability of relevant veterinary vaccines and medicines, and the need for appropriate quality of products and proper storage at field level (see guidance note 3).
- Service design includes provision of rapid training to local service providers as necessary (see guidance note 4).

- Service design is based on local social and cultural norms, particularly in relation to gender roles (see guidance note 5).
- Service design maximizes the security of local people, veterinary service providers and aid agency staff (see guidance note 6).
- The roles and responsibilities of all actors are clearly documented and where appropriate and necessary, form the basis of written agreements (see guidance note 7).

Guidance notes

1. **Design based on assessment findings:** service design should aim to address the prioritized livestock health problems that are identified during the initial assessment. It is rarely feasible or appropriate for an emergency, primary-level veterinary service to address all livestock health problems and in most cases, a limited range of veterinary vaccines and medicines can be used to prevent or treat the most important diseases in a given area. The focus of the service on prioritized livestock diseases needs to be understood and agreed by all actors, including livestock keepers, and in cases where the priority cannot be addressed (for example in the absence of necessary technical support such as a cold chain), this should be agreed with all stakeholders including the beneficiary communities. Similarly the appropriate timing for interventions (particularly vaccination) should be discussed and agreed with all stakeholders. The disaster-affected population should be as actively involved in the design of the service as is possible under the circumstances.
2. **Reaching vulnerable groups:** service design should take account of the types of livestock owned or used by vulnerable groups, and should aim to address the main health problems in these livestock. Vulnerability in terms of primary veterinary service delivery also requires special attention to accessibility and affordability issues in order to promote equitable access. Accessibility to more remote areas with limited infrastructure requires either considerable cost (for example air transport) and therefore limited coverage, or the use of para-veterinary workers who are able to travel on foot, mules, bicycles, boats or other local means of transport. In some cases, programmes may need to provide or support local modes of transportation for veterinary workers. In rapid-onset disasters transport might be provided free of charge whereas in more protracted crises, cost-share arrangements are often feasible. The strategy for payment for services needs to take account of the need for rapid and equitable delivery, while also supporting private-sector veterinary workers where possible. For more vulnerable groups, private veterinary workers can be subcontracted by agencies to deliver a service for a specified short time period. Voucher schemes are a variation of this approach, in which selected livestock users are provided with a voucher that allows them to access private veterinary

care up to specified value. The private veterinary workers then exchange the vouchers for cash from the aid agency. In areas where the private veterinary sector is active or where government charges for clinical veterinary care, the continuation of normal pricing policies should be followed, other than for targeted vulnerable groups. To avoid confusion, community participation and agreement with community representatives on these issues is needed, as well as clear communication with all stakeholders.

3. **Procurement and storage:** there is considerable variation in the quality of veterinary vaccines and medicines sourced from different suppliers, either locally or internationally. Suppliers also vary in their capacity to supply large volumes of drugs with appropriate expiry dates and according to agreed delivery times. Procurement can be further complicated by the range of diseases in different livestock species and the wide range of products available to prevent or treat a particular disease. Some veterinary vaccines require the isolation of local field strains of disease pathogens to ensure adequate protection and therefore the exact composition of these vaccines needs to be verified and agencies with limited experience of veterinary drug procurement should seek expert advice. Local importers, often located in capital cities, can be a source of readily available drugs in reasonable quantities. However, the quality, expiry date and prior storage of these drugs need to be checked. At field level, most veterinary vaccines and some drugs require cold storage. They should not be purchased or used unless adequate cold storage facilities are in place and a cold chain for transporting them can be ensured. Cold storage facilities of human health services can sometimes be shared (there is often considerable resistance from human health professionals to storing veterinary medicines in human health cold chains. In order to take full advantage of expensive cold chain facilities, agreement needs to be reached at high level beforehand).
4. **Training:** in situations where some veterinary workers are already present and where rapid delivery of services is required, training should be limited to short refresher courses focusing on the clinical diagnosis of the prioritized diseases and the correct use of veterinary vaccines or drugs; such refresher training is not always needed depending on the existing capacity of local personnel. Where para-veterinary workers such as CAHWs need to be selected and trained from scratch, guidelines are available for CAHW systems (see References) although these guidelines refer to development rather than emergency programmes. In emergency situations where rapid delivery of services is required, it may be necessary to streamline and shorten some of the best-practice principles related to CAHW selection and training. However, as emergencies become protracted or come to an end, further training to enhance CAHW knowledge and skills is recommended. In some countries, there are national minimum standards and guidelines for CAHW systems

supported by manuals for trainers to run practical short CAHW training courses based on participatory training techniques.

5. **Social and cultural norms:** the design of veterinary services needs to take account of local social and cultural norms, particularly related to the roles of men and women as service providers. In some communities it is difficult for women to move freely or travel alone to more remote areas where livestock might be present. However, even in very conservative cultures, it is often possible to select and train female CAHWs to provide a service to women, who are often among the most vulnerable groups.
6. **Protection:** service design should take account of the possible exposure of veterinary personnel to violence, abduction or theft. Livestock are often grazed away from more secure settlements and sometimes have to be moved long distances to grazing areas and water points. In conflict situations, veterinary workers travelling to such areas may be at risk. In part, the use of local para-veterinary workers can be appropriate in these situations because they know the local area and the relevant armed groups or security forces, and are able to negotiate access. In areas where livestock are very important to local economies and livelihoods, veterinary drugs are highly prized and as small-volume and high-value items, easy to loot and re-sell.
7. **Roles and responsibilities:** many of the problems that arise during emergency veterinary service provision are associated with misunderstandings about the roles and responsibilities of different actors, false expectations regarding the aims and coverage of the service, or confusion over pricing arrangements or selection of beneficiaries. Many of these problems can be avoided by a commitment to community participation and where possible, close collaboration with local authorities and private-sector actors. Roles and responsibilities should be documented and used in Memoranda of Understanding or similar agreements, which can act as a useful point of reference in the event of disputes.

Section 3a: Support to public sector veterinary functions – veterinary public health

Veterinary public health Standard 1: Zoonotic diseases

People have access to information and services that are designed to control zoonotic diseases.

Key indicators

- An assessment of zoonotic diseases and their prioritization is included in the initial assessment of animal health problems (see guidance note 1).

- Zoonotic disease control measures are designed and implemented either in conjunction with the provision of clinical services or as stand-alone activities (see guidance note 2).

Guidance notes

1. **Assessment:** the rapid participatory assessment conducted under Provision of primary-level clinical veterinary services standard 1 should include a rapid assessment of zoonotic diseases, in terms of actual cases or potential risk of disease occurrence. In emergencies, anthrax may be associated with abnormal movement of livestock to grazing areas that are normally avoided; rabies may be associated with local populations of wild or domestic predators, possibly attracted to carcasses or garbage; other zoonotic diseases may be associated with close contact between animals and people, unhygienic conditions arising from the crowding of people and animals in camps, or the breakdown of water supplies.
2. **Zoonotic disease control:** the disease control method will vary according to the zoonotic disease(s) in question. For some diseases, information to livestock keepers might be transferred verbally or using leaflets delivered by para-veterinary workers as an addition to their routine clinical work. Such workers might also assist in the organization of vaccination campaigns (for example rabies) or the control of stray dog populations. Where private workers are used on a short-term basis, payment for their services by an aid agency will usually be required. Zoonotic disease control efforts between agencies and between areas should be harmonized as part of the coordination effort. Collaboration with human health agencies and programmes is also beneficial to harmonize approaches and for sharing of resources such as cold storage (see guidance note 3, Primary clinical veterinary services standard 1, above).

Veterinary public health Standard 2: Sanitation and food hygiene

Sanitary and food hygiene measures related to the disposal of livestock and consumption of livestock products are established.

Key indicators

- Sick or injured animals requiring euthanasia are euthanized humanely and safely, and disposed of to ensure good hygiene (see guidance note 1).
- In protracted crises, slaughter slabs are constructed (see guidance note 2).
- Meat inspection procedures are established at slaughter slabs and abattoirs used by the disaster-affected population (see guidance note 2).

Guidance notes

1. **Euthanasia and disposal:** disasters may result in large numbers of injured animals, which require euthanasia and disposal. Animals dying as a direct result of disaster injuries also require disposal. Animal carcasses may spread disease, are unsightly, produce noxious odours and attract predators and scavengers such as packs of dogs, hyenas or jackals and hence environmental and health considerations should be taken into account in their disposal. Animal euthanasia should follow humane standards and practices (see OIE guidelines on the slaughter of animals: Terrestrial Animal Health Standards Code, Chapters 7.5 and 7.6, www.oie.int). Depending on the sickness/injury and method of slaughter, some livestock carcasses may be fit for human consumption.
2. **Slaughter facilities and meat inspection:** in camps for displaced people or in situations in which slaughter facilities have been damaged, it may be appropriate to construct slaughter slabs to encourage the humane slaughter of animals by trained workers, the hygienic handling of meat, and meat inspection. Similarly if emergency destocking is carried out, animal welfare, health and hygiene standards will need to be met and fixed or mobile slaughter slabs may need to be constructed (see Chapter 4). In all these cases, consultation with local livestock workers or butchers will help to determine the correct locations for slaughter slabs and their design. Meat inspection procedures are generally well known. Safe disposal of offal from slaughtered livestock should be ensured.

Section 3b: Support to public sector veterinary functions – livestock disease surveillance systems

Livestock disease information systems Standard 1: Livestock disease surveillance

In protracted emergencies a livestock disease surveillance system is supported to cover the disaster-affected population.

Key indicators

- Routine monitoring of primary clinical veterinary services includes the collection of data on important livestock diseases (see guidance note 1).
- Livestock disease investigation is conducted in response to disease outbreaks in order to confirm diagnosis and instigate or modify control measures as necessary (see guidance note 2).
- In protracted crises and for livestock diseases covered by national disease surveillance policies or eradication strategies, information is collected in line with these policies and strategies (guidance note 3).

- The coordination body compiles livestock disease data and submits the compiled report to the relevant veterinary authority, if present (see guidance note 4).

Guidance notes

1. **Routine monitoring:** the monitoring of clinical activities of veterinary workers can contribute to a livestock disease surveillance system through the recording of livestock disease events, in addition to treatment or control measures if used. Such data is most useful if livestock morbidity and mortality by species and disease is recorded in relation to the population at risk. Monitoring tasks should be designed in collaboration with government authorities, where they exist.
2. **Veterinary investigation:** veterinary programmes and agencies should have capacity to conduct investigations of disease outbreaks. Within a multi-agency programme, this task may be designated to a team or individual with specialist training in disease investigation, including post-mortem examination and laboratory diagnosis. In the absence of such specialist assistance on the ground, agencies should be prepared to collect relevant samples and submit them to a laboratory either in-country or abroad. All activities need to complement government veterinary investigation systems, where they exist, with official reporting of diagnoses by government actors. During protracted crises, agencies should consider establishing a small, local diagnostic laboratory to support the diagnostic capacity of clinical veterinary workers and disease investigations. Sharing of facilities with medical laboratories may be feasible.
3. **Epizootic disease surveillance:** in many countries, selected epizootic diseases are subject to national or international control or eradication programmes, which use standardized surveillance procedures set by international organizations such as the OIE and FAO. Where possible, livestock disease surveillance systems in protracted crises should follow the standardized procedures. Where operational constraints prevent the implementation of these procedures, liaison with national authorities (if any) and either OIE or FAO should lead to modifications in surveillance methods to suit the conditions on the ground.
4. **Reporting:** in protracted crises, all agencies should submit regular surveillance reports to the coordination body, which in turn, should compile the information and submit it to the relevant government authority. Reporting is usually conducted monthly.

Appendix 5.1 Assessment methods and checklist for veterinary service provision

A rapid assessment of veterinary service provision can be based on five key indicators: accessibility, availability, affordability, acceptance and quality.

Indicator	Useful method
Accessibility The physical distance between livestock keepers and the nearest trained veterinary workers.	Participatory mapping: simple sketch maps can show the locations of livestock and their owners, and the nearest veterinary service providers by type of provider. Distances can be measured in kilometres, miles or hours of travel time. A single map can show all of the veterinary service providers in a given area.
Availability A measure of the physical presence of a service in an area. An area may have many veterinarians but if they are all concentrated in a main town, the service is available but not accessible.	Participatory mapping: as above. Direct observation of veterinary workers and facilities, and interviews: to assess existing stocks of veterinary products, and the quality of medicines and equipment.
Affordability The ability of people to pay for services	Semi-structured interviews and observation of veterinary facilities and livestock markets: observation of veterinary facilities and price lists will determine normal service costs. Interviews will determine livestock values, thereby allowing a comparison of service costs against livestock worth.If livestock markets are still functioning, or if a destocking programme is taking place, it is more likely that people can pay for veterinary services.
Acceptance Relates to cultural and political acceptance of veterinary workers, and is affected by socio-cultural norms, gender issues, language capabilities and other issues.	Interviews with livestock keepers.
Quality The level of training of veterinary workers, their technical knowledge and skills, their communication skills, the quality and range of veterinary medicines, vaccines or equipment at their disposal.	Interviews with veterinary workers; direct observation of veterinary facilities; observation of education certificates, licences to practice or equivalent.
All indicators	Matrix scoring: if different types of veterinary worker are operational in the area, a matrix scoring of the different workers against the five indicators will show the relative strengths and weaknesses of each type.

Appendix 5.2 Examples of monitoring and evaluation indicators for veterinary service provision

	Process indicators *(measure things happening)*	**Impact indicators** *(measure the 'result of things happening')*
Designing the system	• Completion of participatory survey and analysis • Number of meetings with community/community representatives	• Identification of the 10 most important animal health problems in the community according to different wealth and gender groups • Analysis of options for improving animal health • Agreement on action to be taken
Links to drug outlets	• Number of meetings between private veterinary workers and agency	• Agreement between parties • Number of para-veterinarians linked to private veterinary drug supplier or agency
Rapid veterinary training	• Number of workers trained. • Number and type of animal health problems covered in training course • Geographical location of workers • Cost of training	• Improved veterinary knowledge and skills among trainees
Veterinary worker activities	• Number of starter kits supplied to veterinary workers • Cost of starter kits supplied • Quantities and types of medicines supplied to veterinary workers • Cost of medicines supplied to veterinary workers • Number of treatments per disease per livestock type per worker per month • Number of vaccinations per disease per livestock type per worker per month • Income received by veterinary workers • Number of monitoring forms submitted by veterinary workers • Number of disease outbreaks reported by veterinary workers	• Livestock mortality over time • Geographical coverage of veterinary workers • Proportion of livestock-rearing households serviced by veterinary workers • Proportion or number of workers functioning after training • Drugs and vaccines resupplied to CAHWs based on revenue collection • Action taken according to disease outbreak reports • Food consumption in community related to improved animal health and according to wealth and gender groups • Income in community related to improved animal health and according to wealth and gender groups • Influence on policy

Source: Catley et al (2002)

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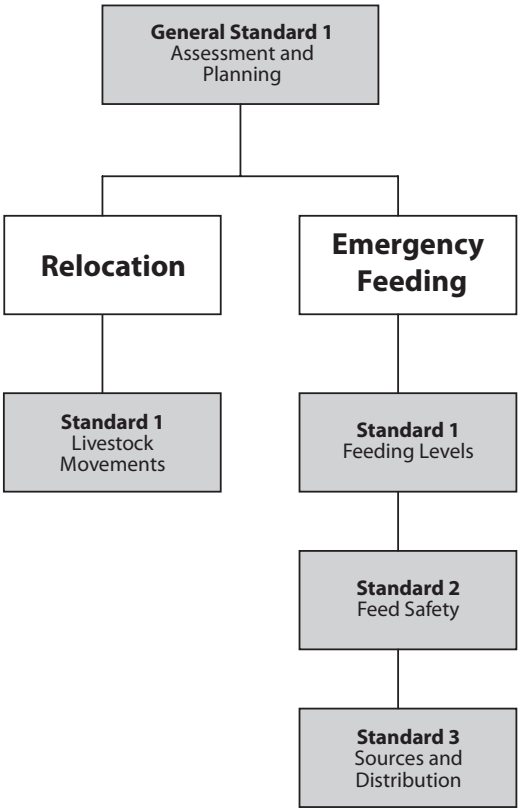
CHAPTER 6

Minimum standards for ensuring supplies of feed resources

Ensuring Feed Supplies



Introduction

Links to the LEGS livelihoods objectives

A range of emergency types can affect livestock's access to feed, for example in a drought, feed is in short supply due to lack of rainfall; in a conflict crisis normal feed sources may not be accessible; following severe flooding natural resources may have been lost. Ensuring feed supplies in these emergency situations relates largely to the second and third LEGS livelihoods objectives, namely:

- to protect the key livestock assets of crisis-affected communities
- to rebuild key livestock assets among crisis-affected communities

In this way livestock vital to livelihoods are protected, i.e. kept alive, by the provision of feed, and after time animal stocks can be rebuilt. The provision of feed can also have an impact on the first LEGS livelihoods objective – to provide immediate assistance to crisis-affected communities through livestock-based interventions – to the extent that keeping stock alive contributes to the household food supply.

The importance of ensuring supplies of feed resources in disaster response

Livestock are particularly vulnerable to short-term disruption of the resources on which they depend for their survival. In particular they need to be supplied with adequate feed and water if they are to survive times of difficulty. Any emergency response that aims to maintain livestock populations in an affected area must therefore make adequate provision for the continuing supply of feed resources. This may be particularly important in cases of drought, when stock generally die of starvation before they are killed by disease; in floods, where failure to take feed to stranded animals may result in their death; and in conflict situations where access to pasture is restricted because of insecurity or corruption. For example Kuchi nomads in Afghanistan have been unable to access their summer pastures because of insecurity but cannot afford to purchase feed. In Niger during the 2004–05 crisis, herders were forced to pay bribes and 'fines' to access grazing on state ranches. Where feed stores have been destroyed by an emergency (such as a hurricane, earthquake or flood), there may be an urgent need to replenish feed reserves and to rebuild the necessary storage facilities in order to enable livestock to survive in the short to medium term.

The provision of feed for livestock in emergencies is often prioritized by livestock owners themselves. For example, Ethiopian pastoralists who were involved in an accelerated livestock off-take initiative in the 2006 drought spent some of the cash they received on trucking their remaining animals to better pastures (see Case study 4.1 in the Case studies chapter). In other cases, livestock owners have fed to their animals a proportion of the food aid they received for themselves, or swapped it for animal feed (see Case study 6.3 in the Case studies chapter). While external agency support for animal feed provision may prove contentious if it is

considered to be taking resources (for example means of transport) that could be used to support the provision of human food, animal feed may be a top priority in emergencies for livestock-owning communities.

The relative costs of helping to keep livestock alive during an emergency (particularly a drought) need to be set against the alternatives, such as the provision of livestock for herd reconstitution after the emergency is over. One study in pastoralist areas of in northern Kenya and eastern Ethiopia found that it was between three and six times more expensive to restock a core herd of livestock following a drought than to keep the animals alive through feeding (see Pastoralist Livelihoods Initiative, 2007).

Options for feed provision

The standards presented in this chapter are essentially concerned with interventions that aim to ensure that an 'adequate' level of nutrition can be maintained in livestock populations throughout the period of an emergency. In the broadest sense, this will mean that the productive functions of affected animals can be re-established with the minimum of external inputs and delay during the post-emergency recovery phase. The chapter covers two different ways of ensuring supplies of feed in an emergency: relocation of livestock and emergency feeding. There is also growing interest in using cash-based responses in emergencies, including as an alternative to the provision of livestock feed (see Box 2.2 in Chapter 2). The decision to engage in one or both of these initiatives depends on a number of factors.

Relocation of livestock

In many pastoral societies, bringing together groups of livestock belonging to different owners and moving them to areas where resources are more abundant has long been practised in times of stress. In an emergency situation, this strategy may have other benefits such as protecting animals from infection, predation or theft although there are also risks associated with forming larger groups of animals. For large herds brought together in this way, it may prove difficult to find adequate feed and water to support them, exacerbating rather than alleviating problems, and some infectious diseases may ultimately spread more widely through the population as a result of closer contact.

Unfortunately, in many emergency situations it can prove difficult for these relocation strategies to be implemented due to erosion of the resource base or competition with sedentary populations along traditional movement routes. Furthermore, where conflict is a major factor in an emergency, movement through an area may put livestock keepers themselves at considerable risk.

Emergency feeding

Emergency feeding aims to substitute for feed resources that are no longer available in adequate quantities as a result of an emergency situation. This may be initiated by livestock keepers themselves who resort to the use of non-traditional, collected or purchased feeds, or to traditional fodder banks that have been preserved in anticipation of scarcity. Sometimes these options may not be open to livestock keepers who are not able to support the current needs of their animals. In such cases, externally-managed emergency feeding programmes may be able to assist through the provision of forage, concentrates or multi-nutrient blocks.

Emergency feeding strategies vary depending on the role of livestock in livelihoods. In pastoralist areas, feeding focuses only on maintaining a core breeding herd, rather than feeding all animals. In other areas, where households may own a small number of animals (for example a few goats, a milking cow or some chickens), feeding programmes may target all the livestock in the community. Where significant feed reserves have been destroyed in the emergency, feeding programmes may also consider replenishment of these stores (and the rebuilding of storage facilities – see Chapter 8).

Where livestock are likely to continue to make a significant contribution to household livelihoods in an affected area, the benefits of emergency feeding programmes simply for keeping animals alive are obvious. In addition, the infrastructure that they require can also be used to support other important activities such as the distribution of veterinary products and the collection and dissemination of information.

However, such programmes are generally highly input intensive and therefore require clear exit strategies before they are begun to ensure that they can be adequately maintained for the duration of the emergency and phased out appropriately. Livestock, particularly large ruminants, can require large quantities of feed over an extended period of time and this will often have to be transported over considerable distances. Where large herds are involved, it may be important to consider implementation of parallel destocking programmes in order to maintain the ecological balance of the affected region or to address resource constraints by supporting the targeting of the most valuable affected livestock.

Emergency feed is preferably distributed 'in situ', i.e. the feed is transported to the livestock. Where this is not possible or secure, feed camps may be established, to which owners may bring their endangered livestock. For example, in conflict situations feed camps may be established in resource-poor but safe areas as feed can be transported with less risk than can the animals themselves. Feed camps may also provide the opportunity to link with food- or cash-for-work programmes for the guarding and supervision of the camp.

For both of these options – relocation and emergency feeding – there are a number of factors that need to be taken into account, in particular: management

capacities, indigenous coping strategies, introduction of pests and diseases, and disruption of local markets, as discussed below.

Management capacities

Even in communities with long traditions of livestock keeping, management capacities may have been eroded as a result of an emergency situation. Family members may have been killed or migrated or may no longer be healthy enough to provide labour inputs or managerial expertise. This situation may be compounded by the introduction of unfamiliar management options such as the feeding of concentrates or multi-nutrient blocks. Intervention programmes need to consider whether these factors are likely to impede their success and whether it is realistic to provide adequate support for building managerial and other manpower capacity (training programmes and encouraging external labour forces).

Indigenous coping strategies

In many parts of the world, people have had to face the consequences of emergency situations long before the advent of external assistance. While there is clearly a role for external support, agencies should not ignore the strategies that communities have developed for themselves as these will usually be well focussed on the key objectives that affected people have for recovery. For example, pastoralists have commonly reserved areas of rangeland for use in leaner times. Further specific examples of indigenous coping strategies are highlighted in the key indicators and guidance notes below.

Introduction of pests, diseases and vectors

When feedstuffs are transported from outside an affected area there is a risk that crop or animal diseases, pests and disease vectors may be imported with them. Proper phytosanitary management is of great importance in ensuring that the risks of this happening are minimized.

Disruption of local markets

Occasionally, transporting feed resources into an affected area may be perceived as an 'easy' option, at least logistically. In fact, it should not be considered until the possibility of local sourcing has been ruled out. In addition to the disease risks discussed above, resources brought from elsewhere may replace feeds that could have been provided by local farmers and traders, thereby spreading the benefits of the intervention more widely in the affected area. In purchasing from local markets,

it may also be helpful to stagger the purchase of feed in order to limit the impact on market systems (and avoid possible opportunistic price hiking).

Table 6.1 Advantages and disadvantages of feed provision options

Option	Advantages	Disadvantages
Relocation of livestock	• Can build on indigenous practices, for example using drought reserves • May also avoid risks such as infection, predation or theft • Can simplify the logistics of providing supplementary feed and water when required	• Requires sufficient resources within suitable distance for livestock to reach • Livestock need to be healthy enough to travel • Potential competition with sedentary populations along migration routes • In conflict situations, moving stock may increase risk to livestock owners • Large numbers of animals brought together may increase risk of disease • May reduce access to livestock products for vulnerable groups such as children and the elderly • May affect other livelihood activities if labour is withdrawn in order to supervise stock in a distant place
Emergency feeding: distribution 'in situ'	• Rapid response to keep animals at risk alive • Can exploit fodder banks established previously as part of emergency preparedness • May generate knock-on benefits in the local economy where opportunities for local sourcing exist • Can target core breeding stock • Potential also to replenish feed stocks lost in the emergency	• Input intensive and expensive • Needs to be able to continue for the duration of the emergency • Not sustainable in the longer term • Requires safe facilities for storage and transport • Risk of importing diseases, pests and vectors from outside • Sourcing from outside the area may disrupt local markets • Requires supervision and management
Emergency feeding: feed camps	• Increased security for stock and owners • If resources are limited in the area, feed can be transported to the camp from elsewhere • Cash- or food-for-work opportunities for caretakers/ guards	• Requires a suitable site with shelter/ enclosure; water and feed • Requires more organization and management than simple relocation; as well as resources for salaries, feed etc. • Requires organized labour to supervise and guard the stock • Livestock need to be healthy enough to travel to the camp

Timing of interventions

Relocation of livestock can take place as early as the alert phase of a slow-onset emergency, as a form of preparedness. Once the emergency/immediate aftermath phase is reached, relocation of livestock and/or feed camps may be appropriate. Emergency feeding is generally a short-term measure, implemented in the immediate aftermath or emergency phases of a rapid- or slow-onset disaster to maintain livestock assets until longer-term measures such as relocation can be effected, or natural resources recover sufficiently to maintain the livestock. In this respect seasonality needs to be taken into account in planning an emergency response, including an estimate of when feed resources may become available again post-emergency (see Table 6.2 below).

Links to other chapters

The provision of feed may be complementary to other livestock-based emergency responses, in particular destocking (see Chapter 4; also see Case study 4.9 in the Case studies chapter), whereby some animals are taken out of the production system and efforts such as the provision of feed (and water) are made to ensure the survival, and ideally improvement, of the remaining stock. Coordination between initiatives and between agencies is therefore paramount to avoid one activity undermining another (see also Chapter 3, Common standard 3 – Coordination). Feed initiatives may also supply useful additional support to livestock provision to disaster-affected households (see Chapter 9).

Vulnerabilities and capacities of disaster-affected communities

As for all emergency interventions, there are challenges in ensuring that initiatives are targeted at the most needy. As feed resources are a saleable commodity (the

Table 6.2 Possible timing of feed interventions

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Relocation of livestock	→	→		→	→	→	→
Emergency feeding: distribution 'in situ'		→				→	
Emergency feeding: feed camp	→	→				→	

more so when they are in short supply), logistical arrangements need to be capable of ensuring that they arrive at their intended destinations. Where such controls are not adequate:

- wealthier and more powerful individuals in a community may consume a disproportionate quantity of resources for feeding their own livestock that are at lesser risk;
- shipments of feed may be diverted and sold for profit by non-livestock keepers.

Households that have been affected by emergencies all have different prognoses in the longer term. Families that have survived for generations as livestock keepers may have been affected to such an extent that, post-recovery, livestock are no longer a viable option for them. All intervention programmes need to consider carefully the livelihood enterprises that families are likely to be able to pursue in future. This applies particularly to those interventions, such as provision of feed resources, that aim to preserve livestock assets over a crisis period. There is little benefit to be gained by feeding animals during an emergency if the only option open to the household after it has passed is the dispersal of their holding.

As for all livestock-based initiatives in emergencies, the specific **gender** roles in relation to livestock care and production should be taken into account when designing interventions. In some societies, many of the activities relating to livestock management are carried out by women who are not always able to reap an equitable share of the benefits derived from those activities. Milking of dairy/dual-purpose animals and cleaning of animal housing are often tasks that fall disproportionately upon female members of the household. In addition, the collection and management of feeds can confer particularly onerous duties on women and girls. For this reason, emergency programmes with components directed at ensuring supplies of feed resources should take particular care that the extra management activities that interventions may require do not compromise the interests of women or adversely affect the daily workload of women or any other vulnerable group in affected communities.

In families affected by **HIV/AIDS**, labour availability may have been severely reduced. In these cases the introduction of some supplementary feed activities may require labour inputs that affected families cannot provide. Alternatively, as for other livestock-based interventions discussed in this publication, ensuring the survival of family stock can help to maintain a nutritious diet for those affected through the provision of livestock products. Where this is the case, relocation of livestock may limit access to these products and hence have a negative effect on the diet of PLHIV, and indeed other vulnerable groups such as children and pregnant/breastfeeding mothers.

Issues of **security and protection** should also be considered. Emergency situations may be plagued by lawlessness and civil strife, even when they have not arisen directly as a result of conflict. Successful livestock feeding programmes

should result in livestock that regain or increase their original value and that may therefore be more attractive for looting. Feed camps involving the concentration of large numbers of livestock may attract thieves, particularly in insecure areas. The poorest livestock keepers may not be equipped to deal with theft of their stock, so programmes should consider carefully how continuing protection of the animals involved can be ensured. Where such protection cannot be reasonably guaranteed, other options for interventions such as destocking may be more appropriate. Where large numbers of people have been displaced and moved with their livestock into camps, grazing may be available outside the camp but at the risk of violence or personal insecurity, in which case the provision of feed to the camp or nearby area may be appropriate.

The impact of planned feed initiatives on the **environment** should also be taken into account. Livestock, to a greater or lesser degree, place a burden on the ecosystem in which they live through the consumption of feed resources and, in the case of more intensive systems, through the generation of waste products. Where these ecosystems have been severely affected by an emergency, the impacts of this burden may well be exacerbated, both in the short term and during recovery. In such a situation, it may be questionable whether people's livelihoods are best served by programmes such as those involving improvements in livestock feeding that encourage the rapid re-establishment of livestock populations. At the same time, relocation of livestock away from severely degraded areas may help to protect them from further damage. The environmental costs of transporting stock or feed should also be taken into account when considering the environmental impact of potential activities – in some cases the environmental cost of transporting feed to the stock may be greater than the impact of relocating the livestock, in others it may be less. Initiatives to provide feed should also take into account the availability of water necessary to support the livestock (see Chapter 7).

Livestock-owning communities affected by disaster can also draw on their indigenous knowledge and **capacities** to respond to the emergency, and at times to anticipate it (using indigenous early warning mechanisms). Their knowledge and skills in livestock management means that they can select the appropriate animals to benefit from feeding programmes in order to preserve a core breeding herd. They may have extensive knowledge of feed availability and the most suitable types of feed for purchase and/or storage. They may also be able to negotiate access to neighbouring grazing lands through social networks.

The minimum standards

Section 1: General feed standards

Before engaging in emergency feed initiatives, the feasibility of the different options should be carefully considered as highlighted in Figure 6.1, together with consideration of the most appropriate stock to be targeted.

Ensuring feed supplies general feed Standard 1: Assessment and planning

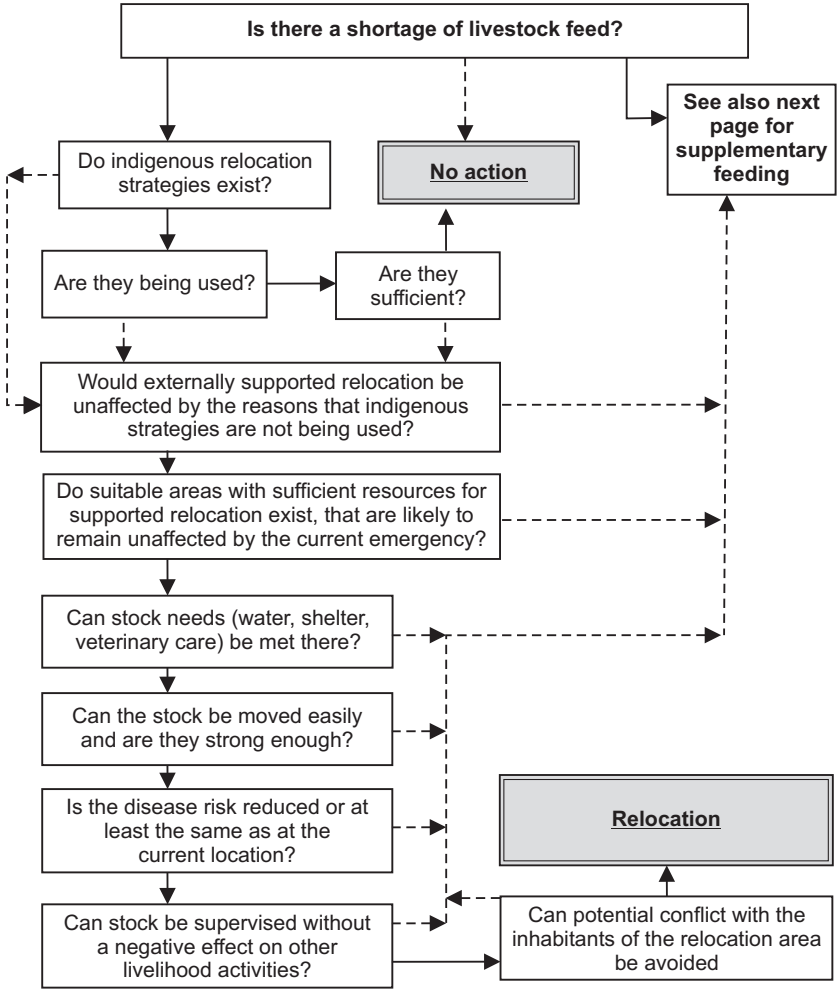
The options for ensuring supplies of feed resources are assessed based on local needs, practices and opportunities.

Key indicators

- Feed provision activities are only initiated where there is a significant chance that the beneficiaries will continue to be able to keep and manage livestock after the emergency has ended (see guidance note 1).
- Plans based on the options outlined in this chapter are produced with full stakeholder participation and taking into account indigenous coping strategies, local sourcing and potential disruption to local markets (see guidance note 2).
- Targeting of stock for feed provision is based on an analysis of the status of the animals, their chances of surviving the emergency and their usefulness in rebuilding livestock assets in the future (see guidance note 3).
- Assessment and planning takes into account the policy context and potential policy constraints affecting access to feed and pasture (see guidance note 4).

Guidance notes

1. **Beneficiaries can keep and manage livestock in the future:** some households may be at long-term risk of losing their livestock assets following an emergency – either they have lost too many livestock or their family labour capacity may have been affected through death, migration or ill health to the extent that they are no longer able to keep livestock. Before engaging in interventions that help to keep livestock alive in the short term, agencies should be reasonably confident that beneficiary families will be able to keep and manage the livestock in the longer term, using community decision-making processes to target the most appropriate beneficiaries.
2. **Participatory plans based on indigenous coping strategies and local markets:** as noted above, many livestock-owning communities have indigenous mechanisms for coping with feed shortages. These should be taken into account and strengthened/built on where possible. Where coping mechanisms exist but are not being used, the reasons for this should be carefully analysed before interventions are taken forward. Local markets should also be supported and not undermined by any purchase or transporting of feed. Local fodder production sources should be assessed (ideally as part of preparedness before the emergency begins – see Chapter 3, Common standard 7). In some cases community feed banks are established as part of disaster preparedness initiatives and can provide a valuable local source of



Key: ⟶ = 'yes' ⇢ = 'no'

Note: The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no intervention should take place.

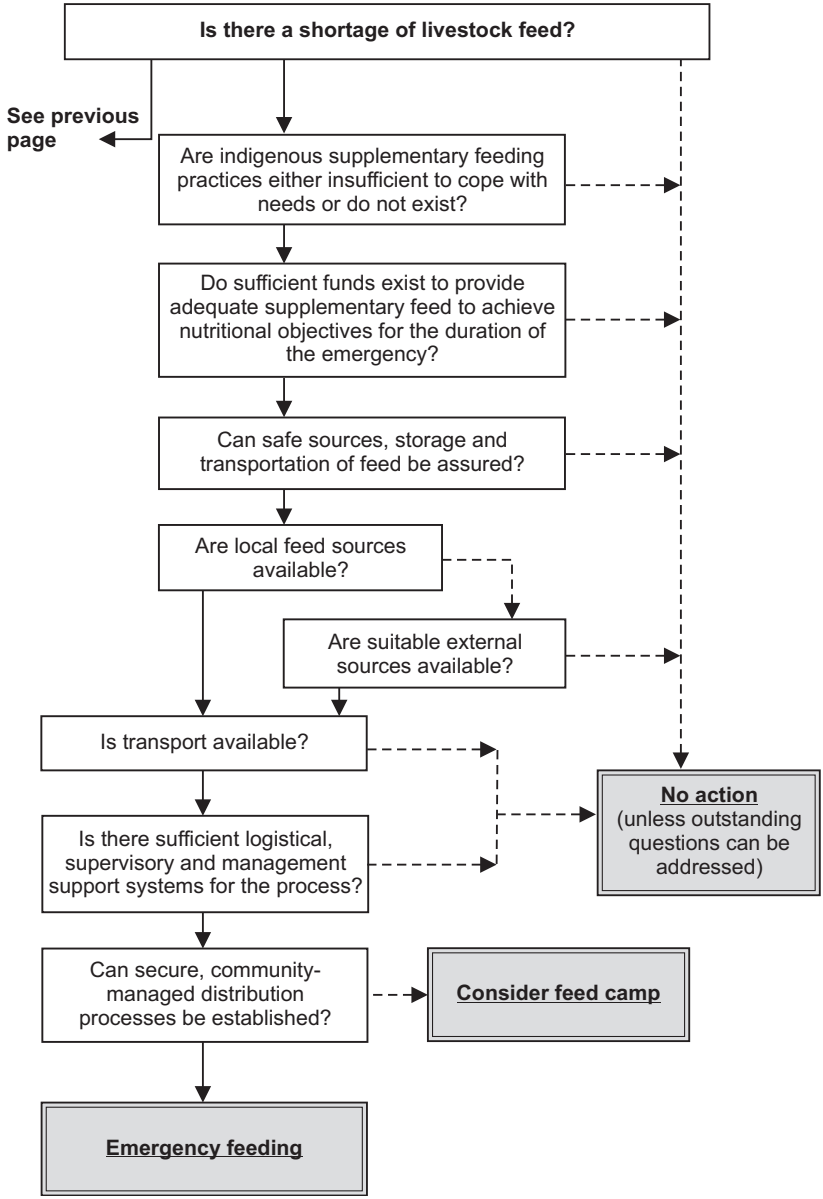


Figure 6.1 Decision-making tree for feed options

feed in emergencies (see Case study 6.5 in Case studies chapter). Appendix 6.1 contains a checklist to guide the assessment and planning process.

3. **Targeting livestock:** some types of animal are better adapted to coping with and recovering from feed or water shortages than others. Some may, depending on the situation, be in less critical need of assistance as it is judged that they may be capable of surviving an emergency without the provision of extra feed. Others may be regarded as a better bet for assistance when other, more vulnerable animals are considered unlikely to survive with the resources available to feed them. Resources for implementing feed related interventions in emergency situations will almost always be very limited. As a result, it will rarely be possible to address the needs of all animals in the herd and only the most valuable animals should be targeted. In practice, this means quality breeding stock and possibly working animals or animals that could attain a reasonable market value with minimal inputs of feed. This targeting should be based on participatory planning with beneficiary communities to ensure that the species of animals selected reflects the needs of vulnerable groups and ethnicities, which may be differently affected by a shortage of feed.
4. **Policy context:** the initial assessment should analyse the policy context with regard to access to feed. This may include restrictions on access to pasture land or movement of stock to new areas, as well as any obstacles to the movement or purchase of feed (for example internal procedures on commercial purchase). This analysis should inform implementation plans and as appropriate form the basis for any relevant advocacy activities (see Chapter 3, Common standard 8).

Section 2: Relocation of livestock

Relocation of livestock Standard 1: Support for the initiation of livestock movements

Arrangements for the movement of livestock are based on a sound assessment of the benefits that will accrue, and build upon indigenous coping strategies.

Key indicators

- Effective mechanisms and processes for ensuring the participation of local experts and end-users are built into programme design from the earliest stages (see guidance note 1).
- Attention is given to identifying the groups of people and classes of livestock that would be both capable of participating in livestock movements and benefiting from them (see guidance note 2).

- The peripheral consequences (family dispersal, conflict with other recovery activities) of proposed stock movements are addressed during programme design (see guidance note 2).
- Proposed destination areas are properly assessed for their capacities to meet the shortcomings of the disaster area in supporting its livestock (see guidance notes 3, 4 and 5).
- Exit strategies (opportunities for disposal or return) are integrated into the programme (see guidance note 6).

The assessment checklist in Appendix 6.1 identifies a number of key issues to be addressed when considering support for relocation initiatives. These may also influence individual decisions on participation and so can be used to assist families to determine whether relocation is a viable option for their own livestock.

Guidance notes

1. **Assimilation of local expertise:** relocation of livestock is a long-established and proven traditional coping strategy. Any external attempts to support these initiatives need to recognize that experts in implementing them are likely to be present in the local community and skilled in assessing the potential of the destination pasture and the environmental and social considerations involved. It is important to ensure that these individuals are identified – by community consensus and key informant opinion – and included in discussion and planning. If relocation is being considered during the more acute phase of an emergency, there may be good reasons why the strategy has not already been adopted by local people. Examining these from the perspectives of local experts may provide valuable indicators to assist with the establishment of other, more appropriate, interventions.
2. **Assisting individual decision-making on participation:** targeting is essentially the process of ensuring that the potential benefits of an intervention actually meet the needs of those (human and animal) who participate in it. Various types of owner might benefit from livestock relocation initiatives in an emergency situation but the following prerequisites should be borne in mind:
   - Families need to be supported in making realistic evaluations of their likely capacity to re-establish a livestock enterprise, post-emergency. Families who have been so badly affected by the emergency that they are unlikely to be able to continue livestock activities afterwards should not be involved in relocation initiatives. This will allow them to concentrate on alternative options for recovery. This support should be led by community institutions that have the relevant knowledge of the skills and assets of the families involved.

- The role of livestock as only one component of a household's livelihood strategy needs to be considered. Participation in livestock relocation initiatives may overstretch an affected family's meagre resources with knock-on consequences for maintaining or re-establishing other affected livelihood activities. In general, livestock relocation is more likely to be appropriate for families with a high degree of livestock dependence.
- Participation should reflect the ultimate value of the animal. It will normally be more cost-effective to sell, slaughter or otherwise dispose of low-value animals, not least because of the competition for scarce resources that they offer to higher-value animals.
- Whatever their perceived value, sick or injured animals are unlikely to benefit from relocation.
- Relocation of livestock may lead to conflict with the original users of the pasture resource. Negotiation with all stakeholders is therefore vital.

3. **Provision of intelligence:** one specific area in which external agencies (including local government) can substantially assist in the establishment of participation in 'indigenous-type' livestock relocations is in the gathering and provision of logistical intelligence. For example, local people may be reluctant to move their livestock to traditional relocation sites because, due to the nature of the emergency or otherwise, they have been unable to determine whether resources are available to support them there. If they can be assured that their livestock can be adequately protected and catered for both *en route* and on arrival, the perceived risks of adopting the strategy of relocation will be greatly reduced.
4. **Advocacy:** organized inputs to relocation programmes may also need to extend to providing advocacy on behalf of displaced households and their animals. This may include:
   - canvassing local government agencies and NGOs to provide supplementary support;
   - liaison with authorities in receiving areas to maximize the inputs that they are able to supply;
   - negotiation with other stakeholders in the receiving areas (particularly other users of livestock-related resources) to minimize the possibility of conflicts arising.
5. **Supplementary inputs:** external agencies may also be able to promote relocation initiatives, where appropriate, by providing a range of supplementary inputs that local participants could not otherwise access. These might include:
   - provision of water and feed *en route*;
   - negotiation of access rights during the journey and on arrival;
   - provision of veterinary services *en route* and at the destination;
   - establishment or refurbishment of marketing channels.

The need for these kinds of supplementary input will be readily apparent in many situations and providing them can make a substantial impact on the overall feasibility and acceptability of relocation as a response to an emergency. However, implementation may present substantial logistical difficulties and incur high costs. It is important therefore that a proper evaluation of costs and benefits is made before embarking upon relocation.

6. **Exit strategies:** there is a danger that relocation initiatives can focus on the immediate need to protect livestock during the acute phase of an emergency. However, there will always be a subsequent need for livestock keepers to re-establish sustainable management strategies for their animals and this is unlikely to include remaining at a relocation site indefinitely. Potential alternative strategies for participants in these programmes that can be implemented during the recovery phase need to be identified during planning and adequate resources set aside to ensure that they are completed. These may include:
   - arrangements for returning livestock and their owners to their original locations or other locations that are more suitable for long-term settlement;
   - in the case of pastoralists, support for re-establishing a transhumant lifestyle;
   - in situations where livestock keeping is no longer deemed an effective component of a sustainable livelihood, assistance with the disposal of stock, taking maximum advantage of post-emergency recoveries in markets for livestock products.

Section 3: Emergency feeding

Emergency feeding Standard 1: Feeding levels

Levels of feeding supported by the programme should enable appropriate production outcomes and be sustainable over the life of the programme.

Key indicators

- Feeding levels for the programme are determined with reference to a clearly defined set of production objectives (see guidance notes 1 and 2).
- Levels of feeding implemented by the programme are both attainable and sustainable (see guidance note 2).
- Where the loss of feed reserves represents an immediate threat to livestock, reserves are replenished as part of the feed programme (see guidance note 3).

Guidance notes

1. **The concept of nutritional adequacy:** it is important to realize that the concept of nutritional adequacy does not imply any absolute standards of feeding. A diet that is nutritionally adequate for keeping an animal alive during a two-month drought will not be adequate for a cow producing 25 litres of milk every day on a peri-urban dairy farm. Therefore, it is important to establish early on what constitutes an adequate nutritional outcome *for the current situation* (for example, minimum 'survival rations', stabilize body weight, re-establish body weight gain, re-establish reproductive performance etc.). This should then be used to inform the selection of options and the development of the technical and logistical details of the intervention programme.
2. **Feed budgeting:** planning the quantities of feeds that will be needed by the programme requires balancing the consumption by participating animals and the feeds that can feasibly be delivered to the point of use. Broadly this requires estimates of:
   - the daily feed requirements of the different types of participating animals that will allow the programme to meet the desired objective as described under guidance note 1;
   - the quantities of available feeds that can be sourced within the programme's budget;
   - the distance from the source of feed;
   - the duration of the proposed programme;
   - the number of animals that can realistically participate;
   - if the number of participating animals is inadequate then the programme may need to re-evaluate its overall objective (for example accept that it can only stabilize live weight in most animals rather than re-establishing gain) or seek additional funding.
3. **Feed stores replenishment:** in many rapid-onset disasters, feed stores may be destroyed. If the loss of these reserves threatens the immediate survival of livestock, emergency feeding programmes should include replenishment of these supplies (together with the reconstruction of the necessary storage facilities) to ensure protection of livestock assets.

Emergency feeding Standard 2: Feed safety

Where feeds are imported into the affected area, proper attention is given to sanitary, phytosanitary and other aspects of feed safety.

Key indicators

- The vulnerability of local livestock populations and feed sources to imported pests, diseases and vectors is adequately assessed (see guidance note 1).

- Feed materials being brought into the affected area are screened for significant sources of contamination (see guidance note 2).
- Satisfactory measures are implemented to ensure that vehicles and storage facilities are clean and sanitary (see guidance note 3).

Guidance notes

1. **Risk assessments:** in an emergency situation, detailed risk assessments may be difficult to carry out. However, it is important that the most significant risks that may compromise the recovery phase are identified before the feed imports are finalized. Past problems experienced in an affected area may provide a useful indicator of where future risks may lie. Where risks are deemed to be high, the importation of a particular feedstuff into an area may still be considered if there is an acceptable level of confidence in the measures that are in place for screening and management of the feedstuffs involved (see below).
2. **Quality control of feeds to be imported:** feed materials that will be imported into an affected area must always be subjected to adequate quality control before they are delivered. This can include visual inspections for pest and disease contamination, either by naked eye or microscope. For certain types of feed it may also be appropriate to include further laboratory analysis to detect the presence of toxins. For example, maize grains or meals can be at significant risk of contamination with fungal aflatoxins, particularly when they may have been subject to the long periods of transport and storage that are typical of feedstuffs used in emergency feeding programmes.
3. **Cleanliness and sanitary procedures:** it is generally neither possible nor desirable for exhaustive quality-control procedures to be implemented at the point of delivery. As a result, it is particularly important that any staff who handle or transport feeds into an affected area after quality controls have been undertaken should use procedures that minimize the risk of further contamination or deterioration. These should include:
   - proper washing and cleaning of storage bins and trucks between loads (ideally this should be carried out by steam cleaning although in many cases this may not be possible);
   - proper drying of storage bins and lorries after cleaning;
   - proper record-keeping of materials carried to allow risks of cross-contamination to be avoided. Feedstuffs should never be transported in trucks that have previously been used to transport hazardous materials such as agrochemicals, glass or scrap metals;
   - staff minimizing contact with the material that they are storing or transporting. For example, drivers should never walk on top of open loads of feed;

- open loads of feed being covered with tarpaulins;
- transport and storage times being kept to a minimum.

Emergency feeding Standard 3: Sources and distribution of feed resources

Where possible, feed resources are procured locally, distributed safely, and in a manner that causes minimal disruption to local and national markets.

Key indicators

- Administrative systems and procurement processes exist or can be adapted within the supporting agencies to allow them to purchase feed quickly (see guidance note 1).
- Assessments of the local availability of suitable feed resources for inclusion in an emergency feeding programme are made (see guidance note 2).
- Where feeds must be brought in from outside the affected area, these are obtained from reliable and sustainable sources (see guidance note 3).
- Proper security assessments are undertaken for the proposed feed-distribution network (see guidance note 4).
- Distribution mechanisms build on indigenous community structures where possible (see guidance note 5).
- Where distribution 'in situ' is not possible and feed camps are established, security of stock and people is assured, logistics and resources are sufficient to support the camp for the duration of the emergency, and management of the camp promotes rapid re-establishment of sustainable practices (see guidance note 6).

Guidance notes

1. **Administrative systems:** some organizations do not have the appropriate systems – or their internal policies forbid them – to purchase feed (for example from private traders). Systems should be put in place before the onset of an emergency to enable such transactions to take place. This may include a list of potential suppliers of feed, as part of agencies' disaster preparedness planning (see Chapter 3, Common standard 7).
2. **Locally available feeds:** the use of locally available feeds offers a number of very significant advantages in emergency feeding programmes:
   - Transport costs are considerably lower although purchase costs may be higher in the affected area.
   - Shorter transport distances makes losses to pilfering less likely.
   - Disruptions that may result from the percolation of imported feeds into the local market may be avoided ('imported' in this context refers to

goods from outside the affected area, not necessarily from outside the country).
- Cash may be injected into the local economy through feed purchases.
- There may be significant opportunities for the use of local labour in the transportation, handling and distribution of feeds.

Alternatively, local procurement can lead to implementing agencies effectively competing with other local livestock owners for resources, thus increasing their vulnerability, and may inflate market prices.

3. **Sourcing feeds externally:** some emergency feeding programmes may require the use of feeds that cannot be provided from local sources. These may include concentrate feeds with specific nutritional formulations or multi-nutrient blocks. In some cases, these may even have to be sourced from outside the affected country or countries. In any of these cases, adequate transport systems and infrastructure must be in place. In general, the greater the separation between the points of supply and consumption, the greater the risk of interruptions to supplies. In order to minimize these risks programmes should consider:
   - arranging adequate in-country storage facilities allowing stockpiling to cover for interruptions to deliveries. It should be noted that this is not without risks due to pilfering or degradation of feeds in store;
   - identifying and using more than one supply chain so that the failure of one does not completely halt the programme;
   - availability of local alternatives that may be used as short-term 'stopgaps'. For example, high-protein straight feeds such as cottonseed or other oilseed cakes might substitute for specially formulated concentrates for a limited period;
   - the possibility of 'back loading' for the transportation of feed into an affected area – for example when carried out in conjunction with accelerated off-take of livestock initiative, stock may be taken out of the area in the same trucks that bring in feed;
   - adopting more modest objectives for an emergency feeding programme that might be satisfied by the use of locally available feed.
4. **Establishing a safe distribution network:** the risks to the personal safety of staff employed in transporting feeds for use in emergency programmes should always be of paramount importance. The disruption caused by emergencies is very often associated with a degree of lawlessness and the cargo and trucks used by distribution networks can offer a tempting target for robbery. Most international relief agencies have well-established security guidelines that account for this and are generally able to implement these effectively, often in collaboration with local or other security agencies. However, it may be difficult for small-scale local initiatives with limited resources to achieve a similar level of protection.

5. **Indigenous distribution structures:** where possible and appropriate, distribution should be managed and coordinated by existing (or created) local structures. Such mechanisms (for example community distribution committees established specifically for this purpose, or existing village elders or leadership structures) facilitate the equitable distribution of resources and where appropriate and previously agreed upon, the targeting of vulnerable households.
6. **Feed camps:** feed camps should be planned and established with potential beneficiaries, taking into account key issues such as accessibility, security and cost implications for both beneficiaries and supporting agencies. Given the considerable investment involved (movement of animals, provision of feed and water, provision of animal health services, infrastructure and staffing costs), feed camps should only be established if resources are sufficient for the anticipated duration of the emergency. Feed camps should target livestock keepers at greatest risk and the most valuable types of livestock. Management and staffing should be planned in advance and the possibility of local community/local institutional control of the camp should be explored.

Appendix 6.1 Assessment checklist for feed provision

This brief checklist is intended as an aid to rapid assessment for ensuring supplies of feed resources. It provides a framework for targeting expert opinion from both the local community and those involved in delivering emergency assistance. In addition to the topics considered in this checklist, more detailed evaluation of key issues such as local acceptability, resource availability and logistics may also be required.

Relocation of livestock

Objectives of relocation

- What types of livestock in the affected area might be expected to benefit from relocation and how?
- What is the main nutritional objective of initiating the relocation (minimal survival ration, stabilizing live weight, re-establishing body weight gain, re-establishing reproductive performance, achieving saleable weight and condition)?
- Are there other potential benefits of relocating (for example reduced risk of animal disease, better access to markets for livestock products, reduced conflict with other livelihood strategies in the affected area)?
- What is the scale (numbers of each class of animal) of the proposed relocation?
- What is the anticipated fate of relocated livestock in the longer term (disposal at destination, return to affected area)?

Identifying possible destinations

- Are feed resources in the proposed destination adequate for meeting the objectives of the relocation (quality, quantity and acceptability)?
- If not, can supporting programmes (for example delivery of concentrate feeds to a rail-head) be realistically and effectively implemented in the area?
- What other resources (for example water, shelter, veterinary care) that might be required to support relocated livestock are available at the destination?
- Is the proposed destination likely to be overtaken by the future spread or consequences of the current emergency?
- What are the potential conflicts with those who currently depend on the destination area and can these be adequately resolved by the programme?
- If necessary, can the animals be disposed of at the destination without disruption of existing markets?

Implementation logistics

- Will relocated livestock be accompanied by owners or their representatives?
- Can targeted households adapt to the disruption of moving their livestock without major compromise of other livelihood activities?
- How will relocation be achieved (trekking, road, rail; large or small groups of stock)?
- Are resources (financial/physical) available to support the proposed relocation method?
- Are the herders and livestock physically capable of relocating to the proposed destination?
- Is it feasible to support the livestock en route (for example provision of water/feed at key points on the journey)?
- Can the security of herders and livestock be assured during relocation?
- How will relocated stock be managed on arrival at the destination?
- Is it feasible for the programme to provide any necessary resources (for example water, shelter, veterinary care) that may currently be lacking at the destination?
- If necessary, can effective arrangements be put in place to return relocated animals to their place of origin?

Emergency feeding: distribution 'in situ'

Feed allowances and nutritional quality

- Have feeding regimes and allowances been developed that are appropriate to the specific objectives of the feeding programme?
- Do these feeding regimes take realistic account of the logistical difficulties that may be encountered when attempting to deliver them to target beneficiaries?
- Do these feeding regimes take realistic account of available budgets?

Feed safety

- Have risk assessments been carried out for possible feed contaminants that may put livestock in danger?
- Are quality control measures for screening feeds used in the programme adequate?
- Are storage times for feeds consistent with maintaining feed safety and quality?
- Are proper procedures in place for ensuring adequate standards of cleanliness in vehicles used for transporting feeds and for storage facilities?

Sourcing and distribution of feeds

- Are the agencies' administrative systems flexible enough to meet the needs of a continuing feed supply programme?
- Where possible has feed been sourced locally to minimize transport costs and support local traders and other businesses?
- Where feeds are sourced locally have steps been taken to ensure that other stakeholder groups are not put at risk as a result?
- Has provision been made for the replenishment of depleted feed stores during the recovery phase?
- Can opportunities for 'back loading' (ensuring trucks carry loads both in and out of affected areas) to increase the efficiency of the distribution system be identified?
- Are distribution networks adequately protected from security risks?

Emergency feeding: feed camps

Acceptability of feed camp and identification of beneficiaries

- Can a proper assessment be made of the capacity of the feed camp to meet the immediate and longer-terms needs of the various groups of target beneficiaries?
- Have proper procedures been put in place for informing beneficiary groups of what the feed camp can – and cannot – offer and the terms under which they would participate in it?
- Have potential beneficiaries been properly informed of the risks that they might be exposed to as a result of participating in the initiative?
- Are potential beneficiaries likely to be able to meet the demands of participating in the feed camp (for example labour for overseeing animals etc.)?
- Are proper procedures in place for identifying the beneficiary groups and animals types that would be most appropriate for targeting by the establishment of a feed camp?

Logistics and management

- Can construction and other materials necessary for establishing the feed camp be sourced locally or transported to the site at an acceptable cost and risk?
- Are adequate supplies of feed and water available or deliverable for the level of occupancy that is envisaged for the camp?
- Can appropriate support services such as animal health be provided?
- Are managers with appropriate levels of skills available to run the camp?

- Are management structures in place that can address the needs and concerns of all local stakeholders?
- Can adequate levels of staffing be put in place for the camp (where possible labour inputs should include participating beneficiaries)?

Appendix 6.2 Checklist for monitoring and evaluation of livestock feed interventions

Management

- Has management support been maintained throughout the period of the intervention?
- Has the programme's management achieved its objectives in relation to livestock relocation:
  - o to time deadlines;
  - o without placing participants or their livestock at risk to their personal security;
  - o without creating conflict among stakeholders in the process?
- Has a continuous supply of feeds been maintained to feed camps or individual recipients of supplementary feeding?
- Has it been possible to avoid problems related to the contamination of feeds?
- Have any vulnerable groups been denied access to support?
- Has the management team been able to resolve disputes among beneficiaries and other stakeholders in a timely and equitable manner?

Livestock viability

- As a result of the intervention, has there been an observable reduction in:
  - o culling of viable livestock;
  - o livestock mortality rates due to other causes;
  - o abnormal patterns of livestock transfer and sales?
- If baseline information exists, does a direct assessment of livestock viability indicate:
  - o improved body-condition scores;
  - o increases in short-term liveweight gains;
  - o reduction in disease incidence?

Social consequences

- Is there any evidence that:
  - o vulnerability of affected livestock keepers has been reduced without them having to dispose of their animals;
  - o livestock keepers are returning to pre-intervention livelihoods strategies that involve a contribution from their livestock?

Environmental impacts

- Is there any evidence that implementation of feed related programmes has led to environmental damage due to:
  - the physical passage of livestock during relocation (roads, paths, crops etc.);
  - the arrival of livestock in relocation areas;
  - the accumulation of the waste products of livestock or their associated keepers in relocation areas;
  - the use of local or other resources in the implementation of supplementary feeding programmes?

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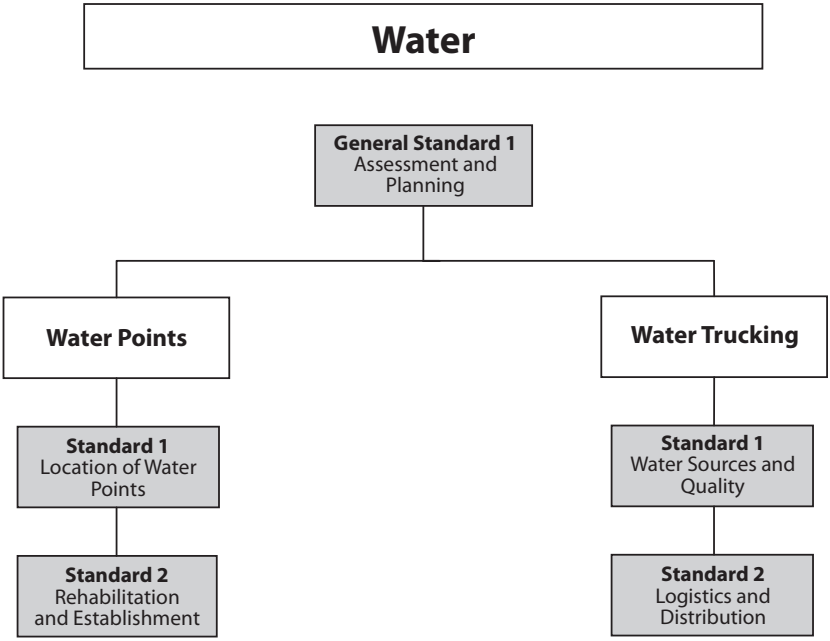
CHAPTER 7

Minimum standards for the provision of water


Water
General Standard 1
Assessment and Planning
Water Points
Water Trucking
Standard 1
Location of Water Points
Standard 2
Rehabilitation and Establishment
Standard 1
Water Sources and Quality
Standard 2
Logistics and Distribution

Introduction

Links to the LEGS livelihoods objectives

The provision of water for livestock in an emergency focuses on the survival of livestock assets through and beyond the disaster, and as such relates largely to the second and third LEGS livelihoods objectives, namely:

- to protect the key livestock assets of crisis-affected communities
- to rebuild key livestock assets among crisis-affected communities

In this way (similar to the provision of feed – see Chapter 6) livestock vital to livelihoods are kept alive by the provision of water, and after time animal stocks can be rebuilt. The provision of water also impacts on the first LEGS livelihoods objective – to provide rapid assistance to crisis-affected communities through livestock-based interventions – to the extent that keeping stock alive contributes to the immediate household food supply.

The importance of the provision of water for livestock in disaster response

Alongside the provision of veterinary care for traumatized or acutely diseased animals, the provision of water in an emergency is probably the intervention that has the most immediate and indispensable impacts for livestock owners. In the absence of any water, animals (with the exception of some camelids) do not survive for more than a few days. Therefore, in emergency situations where water sources have been seriously compromised, the provision of alternatives is of the highest priority. Even where water is currently available, relief programmes need to assess and, if necessary, implement appropriate responses to potential and future threats to water sources to ensure that other relief efforts are not undermined by water shortages. While water for livestock must meet some basic quality requirements (discussed below), the quality standard is not as high as that for human consumption and therefore livestock can make use of water sources unfit for humans.

Options for water provision

Water is a homogenous commodity but it may be available from a range of sources and deliverable by a number of methods. This can complicate the selection of appropriate interventions that will be capable of matching supply with demand. As a rule, the most cost-effective and sustainable options need to be selected. (There is growing interest in using cash-based responses in emergencies, including as an alternative to the provision of water for livestock, whereby cash is given to individuals or communities to support their livestock according to their own priorities and using private sector services and/or community-organized joint initiatives. See Box 2.2 in Chapter 2) However the need to deliver water is often acute and expensive

and unsustainable methods such as water trucking may need to be considered, in the short term at least.

Water points

Providing water points will almost invariably offer the most viable, longer-term solution to the problem of water shortages compared to the other main option (water trucking, see below), provided that it is feasible to implement a sustainable management plan for their use. Water distribution points may take a number of different forms including wells, boreholes and surface water harvesting systems (for example check dams and storage tanks). However, the principles underlying their establishment and the issues that must be addressed in managing them effectively are broadly the same.

In an emergency situation, access to water points may be provided for livestock owners in one of three ways:

- improving the management of existing water points to provide broader access to affected populations;
- rehabilitation of existing but degraded water points;
- establishment of new water points.

The first of these approaches could normally be implemented at the lowest cost but may not be feasible due to the lack of adequate water or because of the complexities of meeting the needs of both existing and new users.

Conflicts between the demands of human populations and their associated livestock for water may also be an issue. However, this is likely to represent a less significant problem than when trucking operations are the only water source. With proper planning and management it should be possible to create a network of distribution points that can meet the needs of both.

Water trucking

Water trucking should generally be regarded as a last resort intervention for the first stages of an emergency only. It is expensive, resource inefficient and labour intensive. However, due to the critical nature of the impact of dehydration on livestock, it is sometimes the only option that can be implemented rapidly in order to keep animals alive in the short term. As a rule, therefore, trucking should be regarded as a temporary intervention that will be replaced, as soon as possible, by other means of providing water. Such follow up interventions might include herd relocation (short/medium term) (see Chapter 6) and water-point rehabilitation or establishment (medium/longer term), as described above.

Water trucking is an intervention that requires major logistical inputs. Accordingly, great care and attention needs to be given to the planning and ongoing management of trucking operations. This includes the need to monitor the

evolving situation, whether routes can remain open, drivers and other crew can be protected from changes in the security situation, and how tankers can continue to be maintained effectively.

The advantages and disadvantages of the different options for the provision of water are summarized in Table 7.1.

Table 7.1 Advantages and disadvantages of water provision options

Option	Advantages	Disadvantages
Improved management of existing water sources	• Relatively cheap option making maximum use of existing opportunities and resources • Can normally be implemented rapidly in response to an emergency situation	• Often limited opportunities on the ground to achieve this • Can introduce potential for conflict among groups of existing and new users
Rehabilitation of existing water sources	• Potentially cheaper than other water provision options • Management structures and systems for the water source may already exist • Long-term solution that can outlast the emergency • Potential to provide water for both livestock and human needs	• Reasons for original degradation may still apply or recur
Establishment of new water sources	• Potential to provide sustainable new water source for emergency and post-emergency populations in immediate locality of need • Potential to provide water for both livestock and human needs	• More costly than rehabilitation, requires very high capital investment • Appropriate siting may be difficult in short (emergency) timeframe • Locally-based and agreed management systems need to be established to prevent conflict and ensure equitable access, and to ensure sustainable use of the water resource and the surrounding environment
Water trucking	• Can respond rapidly to immediate water needs • May make use of water of insufficient quality for human consumption	• Expensive and resource inefficient – relocating livestock to water sources may be more appropriate • Labour intensive and logistically complex • Not sustainable – temporary solution only • Greatest potential for conflict between human and livestock water needs • Requires locally-based management structure to ensure equitable access to water • Potential conflict with existing users of water source

Timing of interventions

As noted above, water trucking is a short-term measure that may be appropriate in the immediate aftermath (rapid onset) or emergency (slow onset) phases of a disaster, but should not be continued beyond these stages, as it is a costly and unsustainable intervention. The rehabilitation or establishment of water sources, in contrast, may also be carried out in the subsequent stages, and indeed should ideally link with longer-term water development programmes in the area, as should the improved management of water points. The establishment of new water sources should only be considered when existing degraded water sources are insufficient or unsuitable for rehabilitation (see Table 7.2 below).

Links to other chapters

The provision of water may be complementary to other livestock-based emergency responses, in particular supplementary feeding (see Chapter 6) and destocking (see Chapter 4), whereby some animals are taken out of the production system and efforts such as the provision of water and feed are made to ensure the survival of the remaining stock. Coordination between initiatives and between agencies is therefore paramount to avoid one activity undermining another (see Chapter 3 Standard 3). The provision of water for livestock may also be complementary to human water provision, particularly where the rehabilitation or establishment of water sources provides water of a suitable quality for both animals and humans. Water trucking for livestock, in contrast, may compete with human water supplies unless carefully managed.

Vulnerabilities and capacities of disaster-affected communities

Like the provision of feed (see Chapter 6), ensuring that the water provided for livestock during an emergency reaches the most vulnerable presents a number of

Table 7.2 Possible timing of water interventions

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Improved management of water points	→	→	→	→	→	→	→
Rehabilitation of water points	→	→	→		- - →	→	→
Establishment of water points	→	→	→			→	→
Water trucking	→				→		

challenges. For example wealthier livestock owners may be able to secure private means to provide water for their animals, which are not open to poorer households. Land rights, ethnicity and local politics may all affect the access of certain groups to water. Interventions should therefore take into account the constraints facing vulnerable groups within the community to ensure that access is as equitable as possible. **Gender** roles and implications should be assessed, particularly for poorer women and girls who may be at risk of violent assault if they have to travel some distance to bring water for stock, or who may suffer exploitation or inequitable access to water.

The **security and protection** of water users should be taken into account. For example people watering animals at water points may be vulnerable to livestock rustling, robbery or attack, in particular women. Water point management must be addressed prior to rehabilitation or establishment in order to avoid potential ownership conflicts as well as to ensure equitable access and sustainable systems for the future. Issues of water management are particularly important to ensure the protection of water users around IDP camps – for example when the camp residents need access to water points outside the camp for their livestock and may come into conflict with the host populations. Negotiation with all stakeholders beforehand can help to minimize potential conflicts.

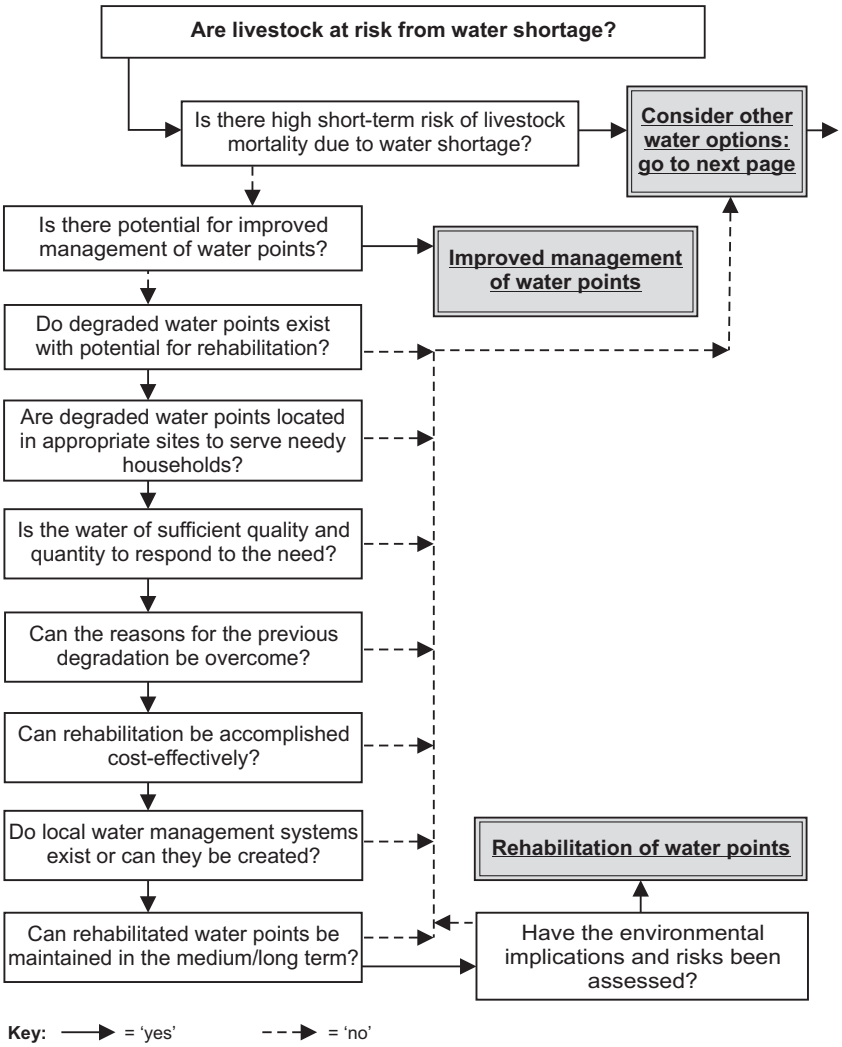
Environmental considerations in the provision of water for livestock in emergencies include the importance of avoiding excessive extraction (either through density of water sources or high extraction rates) that affect the water table, and high concentration of livestock around water points that can lead to environmental degradation. Alternatively, water provision – when provided in accordance with natural resource management strategies – may have a positive impact on the environment through encouraging more effective natural resource utilization. It is also important to ensure that human water supplies are not contaminated by livestock and that contaminated water supplies do not lead to disease transmission to wild species, which can endanger wildlife and also lead to further contamination of livestock.

Disaster-affected communities also draw on their own **capacities** to respond to emergencies, for example in their indigenous knowledge of natural resources, in particular the relationship between water sources and natural resource management. Local water management systems and indigenous institutions may also play a significant role in the management of water points and the avoidance of conflict.

The minimum standards

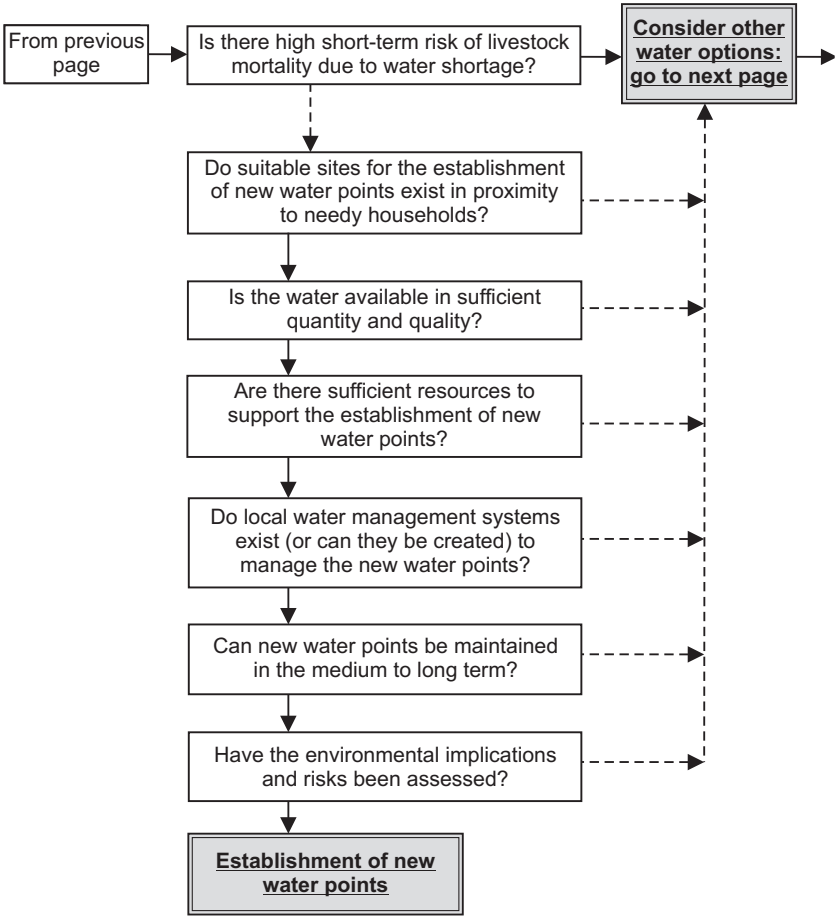
Section 1: General water standards

Before engaging in water provision initiatives, the feasibility and costs of the different options should be carefully considered, as highlighted in Figure 7.1.



Note: The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no interventions should take place.

Figure 7.1: Decision-making tree for water options


From previous page
Is there high short-term risk of livestock mortality due to water shortage?
Consider other water options: go to next page
Do suitable sites for the establishment of new water points exist in proximity to needy households?
Is the water available in sufficient quantity and quality?
Are there sufficient resources to support the establishment of new water points?
Do local water management systems exist (or can they be created) to manage the new water points?
Can new water points be maintained in the medium to long term?
Have the environmental implications and risks been assessed?
Establishment of new water points

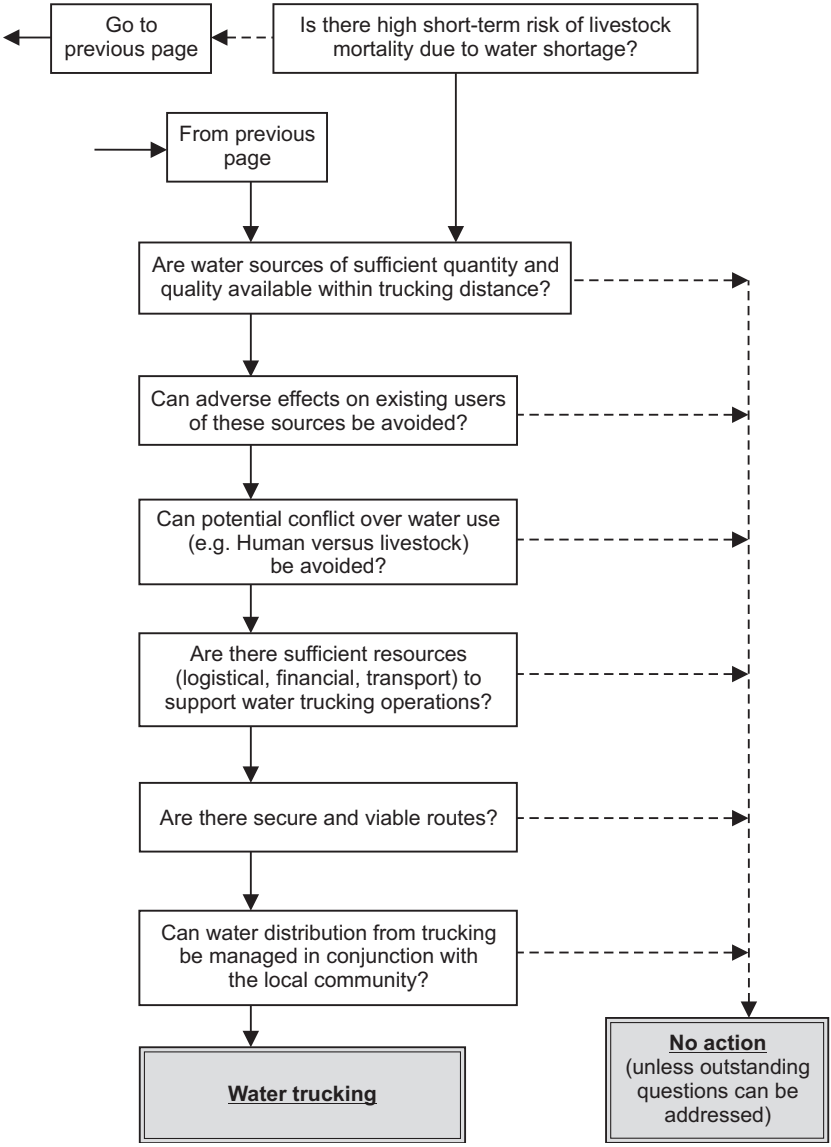


Figure 7.1: Decision-making tree for water options

Water general Standard 1: Assessment and planning

Water provision for livestock is based on an analysis of needs, opportunities and local water management systems.

Key indicators

- Cost–benefit analysis of different water provision options is carried out (see guidance note 1).
- Existing water source management systems are analysed and form the basis of water provision activities (see guidance note 2).
- Existing and degraded water sources are assessed for water quantity and quality (see guidance notes 3 and 4).
- Effective management systems can be identified that will ensure continued provision of water of acceptable quality without conflict to address the needs of the different user groups (see guidance note 5).
- Any policy constraints to water access are analysed and inform implementation plans (see guidance note 6).

Guidance notes

1. **Cost–benefit analysis:** the costs and benefits of the different water provision options should be assessed, including the impact on the environment of the location and capacity of any potential water source. As noted above, the siting of water sources can have a negative environmental impact; conversely, when water points are planned in conjunction with natural resource management strategies there can be a beneficial impact on the environment and on the natural resources available for livestock. The cost of water trucking is very high, hence other options should be explored first, including the relocation of livestock to existing water sources (see also Chapter 6). The needs for human water supply should also form part of this analysis (see Standard 2 below).
2. **Assessment of existing water sources:** the planning of water provision activities should begin with an assessment of existing water sources to review quantity and quality of water available, including water sources that have fallen into disrepair and are no longer used (organizations already working on the ground may already have this information – see Chapter 3, Common standard 7, Contingency planning and preparedness). This helps to ensure that water interventions build on existing infrastructure and hence contributes to low cost and sustainability. See Appendix 7.1 for a checklist for assisting with rapid water point assessment.
3. **Water quality:** livestock can also be affected by water-borne diseases such as salmonella, anthrax and coli bacillosis, and hence there is a need to assess

the quality of the water provided. However, unlike the tests available for human water quality standards, there is no recognized field test to assess the bacterial content of water for livestock water quality. Although water quality for livestock is generally much less of a critical issue than for human consumption, agencies involved in the provision of water need to be aware of the potential risks to livestock.

4. **Contamination of water sources:** where livestock and humans share water sources, the water may easily become contaminated by the stock and affect human health and well-being. Simple management measures can be put in place to ensure that this does not happen, including the use of troughs or pans for livestock watering. Protection of water sources may also be necessary to prevent the water becoming contaminated by acaricides and other chemicals that can affect the health of the stock.
5. **Analysis of existing water management systems:** boreholes as well as shallow and deep wells are usually managed by local (often customary) institutional arrangements. The rehabilitation of existing water sources or the establishment of new sources should take into account these management systems and fit into them in order to promote sustainable and equitable water use. The management of water distribution in water trucking activities can also build on local water management systems to help ensure equitable distribution and access within communities. Where IDP camp residents need access to water for their livestock and must share resources with the host community, negotiations beforehand can help to avoid potential conflict. Establishing clear and equitable management systems for water sources is also important for the longer term – into the recovery phase and beyond. Experience has shown that unless these issues are considered at the beginning of the intervention, water sources may fall into disrepair a short time after the end of the emergency.
6. **Policy constraints:** water sources may exist but access may be limited or restricted because of formal or informal policy constraints. These should be analysed during the assessment and as appropriate, action planned to address them (see Chapter 3, Common standard 8).

Section 2: Provision and management of water points

Water points Standard 1: Location of water points

Water source rehabilitation and establishment programmes are carefully located to ensure equitable access to water for the livestock of the most vulnerable households in the affected area.

Key indicators

- Location of water points included in programmes is based on a sound assessment of current and future demands of both local human and livestock populations (see guidance note 1).
- On the supply side, the capacities of the water sources used can reasonably be expected to meet needs throughout the period of the emergency and beyond (see guidance note 2).
- Arrangements for access to water points and distribution of water to users take into account the need to prioritize water supplies for vulnerable humans and for equity among all vulnerable groups (see guidance note 3).
- Proper arrangements are made to protect the personal safety of users and their livestock while they are making use of the water point (see guidance note 4).
- Siting and management of water points is organized in conjunction with community leaders, preferably building on existing indigenous water management systems (see guidance note 5).

Guidance notes

1. **Assessment of demand for water:** demand assessments should be based on best estimates derived from livestock population censuses (if reliable sources are available), local authority records and consultation with local affected populations. In addition, livestock traders and middlemen may be able to offer useful information in some areas. Ease of collection and accessibility to animals need to be considered: if stock are to consume at the water point then demand assessments should take into consideration reasonable walking distances to determine the area that will be covered by the water point. Where water will be carried or carted away to where the animals are located, similar assessments should be made.
2. **Adequacy of the water supply:** supplies from a water point may be inadequate for meeting demand, in which case supplementary arrangements may have to be made (for example establishment of further water points close by or trucking of extra supplies). In addition to satisfying current demands, assessment of the adequacy of water supplies should take into account the future utility of the water points both generally and in the event of other emergencies. Ideally, water points should have the potential to reduce threats posed by future emergencies. When degraded water points are being considered for rehabilitation, it is important to pay attention to the reasons why these have fallen into disuse (for example social conflict, contamination, inadequacy of supply, lack of maintenance). If these problems cannot be adequately addressed by a revised management programme, the water point may not be suitable for rehabilitation.

3. **Appropriate and equitable use:** the needs of human populations for water are paramount in emergency situations. However, water may be available that is not suitable for human consumption but can be used for livestock. This may offer opportunities for satisfying the needs of all users. In some societies, social constraints may make it difficult for different ethnic, tribal or caste groups to access the same water point. Such issues need to be handled with considerable sensitivity to ensure equitable access for all.
4. **Security arrangements:** people taking animals to water and aggregating at water points may be vulnerable to livestock rustling, general robbery and other forms of personal attack as their movements are easily predicted. The security needs of women in these situations are particularly important. Liaison with the agencies responsible for managing security in affected areas is needed at the planning stages to ensure that these dangers can be reduced as much as possible.
5. **Community leadership:** as highlighted in General Water Standard 1, local water management systems should be taken into account when siting and organizing the management of water points, whether for the rehabilitation of previous sources or the establishment of new sources. This is vital to ensure the future management and maintenance of the water source beyond the emergency and to contribute to sustainable and equitable access to water for all community members. This may be particularly important with regard to IDP camps and the potential competition for the resource between camp residents and the local population. In these situations negotiation and agreement with community leaders is paramount to avoid conflict.

Water points Standard 2: Water point rehabilitation and establishment

Rehabilitated or newly established water points represent a cost-effective and sustainable means of providing clean water in adequate quantities for the livestock that will use them.

Key indicators

- Rehabilitation of water points is considered as an intervention only when demand in the affected area cannot be adequately met by extending the use of existing water points (see guidance note 1).
- A full survey of degraded water points and the reasons for the degradation is undertaken for all locations in the affected area where demand exists or is likely to develop (see guidance note 2).
- Establishment of new water points is considered as an intervention only when extending the use of existing water points or rehabilitating degraded water points will not adequately meet demand in the affected area (see guidance note 3).

- The technical inputs and materials required to implement the rehabilitation or establishment programme can be delivered effectively to the selected locations (see guidance note 4).
- Adequate staffing can be provided for the routine management and maintenance of water points (see guidance note 5).

Guidance notes

1. **The need to rehabilitate water points:** extending the use of existing water points is a cheaper option than water point rehabilitation but the potential for introducing conflict between existing and new users should be carefully evaluated at the planning stage. In practice, it may be possible to offer some coverage of affected populations by using existing sources but this may need to be augmented by rehabilitation as part of an integrated programme.
2. **Identification of water points suitable for rehabilitation:** a properly conducted survey is very important if a cost-effective programme of water point provision is to be established. This should include, for each water point:
   - water quality;
   - resources required to operate a rehabilitation programme;
   - likely capacity (quantity and persistence);
   - extent of damage and ease/cost of repairs;
   - demand from users;
   - knowledge of why the point has become degraded and any implications for its successful rehabilitation (issues such as conflict, water quality and confusion over ownership may all contribute to lack of use, as well as technical and maintenance causes).
3. **The need to establish new water points:** rehabilitation is normally a cheaper option than establishing new water points. However, it can only be considered for servicing the populations based near existing degraded water points. Where this approach does not offer adequate coverage of affected populations there will be a need to augment the programme with the establishment of new water points.
4. **Technical feasibility:** as well as assisting with the planning of rehabilitation schemes, an appreciation of the reasons why water points have fallen into disuse may be of relevance when considering the technical feasibility of completing the rehabilitation. Basic requirements in this area include:
   - availability of qualified water engineers and labourers to implement programmes;
   - capacity to deliver materials required to the site and adequate access roads to achieve this;
   - continued availability of spare parts for well and borehole hardware.

These requirements apply to both rehabilitation and establishment programmes although it should be noted that the equipment required for establishment is likely to be considerably heavier (for example drilling rigs/ excavation equipment for digging wells) and may therefore require higher capacity transport and better roads to allow access.

5. **Staff responsibilities:** staff managing programmes that are providing water points also need to undertake a number of duties that will ensure that these points continue to operate effectively. These should include:
   - routine checking to ensure that water quality and supplies are being maintained;
   - monitoring to ensure that access is maintained equitably for all users and resolution of disputes among different user groups;
   - routine maintenance and ordering and replacement of damaged parts. It should be noted in this respect that manual wells are generally less damage prone than boreholes.

Section 3: Water trucking

Water trucking Standard 1: Water sources and quality

Water for trucking is obtained from sources that can maintain an adequate supply of assured quality during the period over which the intervention will operate.

Key indicators

- Water trucking is only implemented as a short-term measure and when other options are not possible (see guidance note 1).
- Supplies of water from the sources used can be maintained throughout the lifespan of the proposed trucking operations (see guidance note 2).
- Use of water sources by trucking operations does not compromise the needs of their existing users and has the approval of any relevant statutory authorities (see guidance notes 2 and 3).
- Use of water sources does not reduce the availability of water for human populations (see guidance notes 3 and 4).
- Water used for trucking is of a quality suitable for livestock (see guidance note 5).
- Tankers and other water containers are properly cleaned before use (see guidance note 6).

Guidance notes

1. **Short-term measure:** as noted above, water trucking should be considered as a last resort in order to save livestock lives, as it is expensive and administratively

complicated and even for human water supplies is generally discouraged. Other options, including relocation of livestock closer to existing sources of water, should be thoroughly explored before trucking commences (see also Chapter 6).

2. **Continuity of supply:** although water trucking operations should aim to operate only in the short term, this is not always possible. Whatever the term of the operation, a realistic assessment of the continuity of water supplies needs to be made at the planning stage. This includes:
   - assessment of the physical capacity of water sources to continue to supply during the operation. The risks of selected sources being affected by the spread of the emergency should be considered as part of this issue;
   - the likelihood that permission to access the source from existing users or – where water use is subject to statutory control – from the relevant authorities will be maintained;
   - whether accessibility of the sources can be maintained. For example repeated passage of trucks may degrade access routes;
   - budgetary considerations – as stated in the introduction, water trucking is generally a high-cost operation. Operational budgets need to be adequate with contingency provisions as water trucking operations may have to be extended if alternative interventions are delayed. Costs can be significantly reduced if water sources can be located close to the ultimate distribution points. However, this can increase the risk of conflict with existing users or threats to the continuity of supply.
3. **Considering the needs of existing users:** it is unlikely that water sources used for trucking operations will have no existing users. Conflict with their needs can, at best, seriously undermine the viability of the operation and at worst, create a new tier of adversely affected households! Although locating water sources close to where the water will be consumed may be financially desirable this should not extend to areas that are, or may be, marginally affected by the emergency or where removal of water might compromise the viability of existing users. During the planning stages of a trucking operation, managers need to engage with local leaders and other stakeholder representatives and, where possible, use local mediation procedures to ensure that existing users' needs are properly accounted for.
4. **Conflict with the demands of human populations:** in situations where water is scarce or resources for implementation of trucking operations are limited, the immediate needs of human populations must always be prioritized. However, meeting the demands of human and livestock populations does not have to be exclusive:
   - In the case of a widespread emergency situation, the trucking infrastructure may be inadequate to service both people and animals. However, small-

scale localized operations may actually be able to deliver an integrated service that supplies water to people and their livestock.
- Provided that the availability of trucks and staff is adequate, water for livestock may be derived from sources that are not of sufficient quality for consumption by humans.

5. **Water quality:** in many cases, water trucking will be for both humans and livestock, and so the Sphere standards for water quality will apply. However, if high quality water sources are limited, the lower requirements for livestock may offer opportunities for reducing conflict with human demands (see guidance note 4 above) to the extent that poorer quality water from rivers or standing lake water that cannot feasibly or economically be purified for human consumption may be reserved for use by livestock.
6. **Cleanliness of tankers:** tankers or bowsers may have been used for transporting other types of liquid including potentially toxic pesticides, herbicides, solvents, fuels and sewage. Unless their previous history is reliably known, all vessels and distribution equipment should be thoroughly cleaned and disinfected before being released for use in a water trucking operation.

Water trucking Standard 2: Logistics and distribution

Proper arrangements are implemented for secure transport of water and its equitable distribution on arrival in the affected area.

Key indicators

- The inputs of managers and staff can be sustained throughout the lifetime of the operation (see guidance note 1).
- Adequate resources are available to meet the recurrent costs of fuelling and servicing the tanker fleet and associated equipment (see guidance note 2).
- Where possible, routes are selected that will not be degraded by the frequent passage of heavily laden water trucks (see guidance note 3).
- Distribution points are set up in appropriate locations and are planned and managed to accommodate any livestock movements that may occur during the course of the operation (see guidance notes 4 and 5).

Guidance notes

1. **Staffing:** successful trucking operations require consistent and sustained staff inputs. This includes the need for competent and experienced management and supervision. It is also important to ensure that drivers and assistants are kept motivated through proper reimbursement and careful attention to other needs including subsistence allowances and personal security considerations.

2. **Maintenance and fuel supplies:** qualified mechanics and reliable supplies of uncontaminated fuel need to be available throughout the duration of the trucking operation. This includes any material needed to operate and maintain pumps and containers/delivery equipment. Major issues to consider are:
   - Cost and availability of fuel – ideally, it should be possible for drivers to refuel without making major detours away from the trucking route. This may require fuel to be brought in separately, adding to the logistical complications of the operation. It may also be a consideration in the original selection of water sources.
   - Spare parts should be readily obtainable. In general, simple locally made equipment that is easily repairable is to be preferred to hi-tech or imported solutions.

   These issues (particularly those relating to maintenance) may affect the decision regarding the type of transport that will be used by the trucking operation (for example trucks or tractors and trailers with bowsers/bladder tanks).
3. **Ensuring the integrity of supply routes:** ideally, these should be adequate for the passage of laden water tankers. Otherwise provision will need to be made for their maintenance and repair.
4. **Managing distribution points:** distribution points may involve livestock keepers collecting water to take to their livestock or bringing their animals to receive water directly from a tank or pond. In either case, a system needs to be established to ensure that the needs of all attendees are met equitably and sustainably, based where possible and appropriate on existing local water management systems (see General water standard 1, guidance note 3). Where it is possible to establish storage facilities, trucking can be more efficient as tankers can decant the water quickly and return to the source to collect more, thus reducing the waiting time.
5. **Water trucking to mobile livestock:** relocation of livestock is often implemented as part of the response to an emergency situation (either as part of the indigenous response or coordinated by external agencies – see Chapter 6). Where this is occurring, trucking of water may be required to support the migration. This situation will add considerably to the already complex logistics of water trucking.

Appendix 7.1 Checklist for rapid water point assessment

This checklist summarizes the issues that need to be considered when assessing potential water points for use by livestock keepers under an emergency situation. Sources of information for answering the questions in this checklist may vary from rapid field assessments to (in principle at least) laboratory analyses for water quality parameters. They should, however, always include some canvassing of opinion from the different stakeholder groups in the local area.

Supply of water

- Is the water point currently producing water?
- If yes:
  - o Is the water point at risk of drying up over the course of the emergency response?
  - o What is the capacity of the water point to support the local livestock population?
- If no:
  - o Is it technically feasible (both in terms of cost and timescale) to rehabilitate the water point to meet the needs of the local livestock population?
  - o Are personnel available to manage and implement rehabilitation of the water point?

Accessibility

- Is the water point within easy reach of a significant population of affected livestock?
- Are there any social, cultural or political constraints to the use of the water point by livestock?
- Can water from the source be made available to affected livestock keepers in an equitable manner (regardless of age, gender or ethnicity)?
- Can affected livestock make use of the water point without:
  - o compromising the needs of existing users (human or animal);
  - o risk to the personal safety of the owners/keepers;
  - o interfering with other aspects of the relief effort?

Water quality

- Are testing facilities (either field or laboratory) available to assess the adequacy of water quality for the source?
- If yes:
  - o Is there access to laboratories that are able to undertake analyses for the major chemical contaminants?

- Are water testing kits available that can be applied to the water points/sources under consideration?
- Are suitably qualified technicians available locally to undertake assessments of microbiological contamination of water sources?

- If no, the following questions may help in making a rapid on-the-spot assessment:
  - Does water from the source appear to be clear or cloudy?
  - Is there any evidence of salinity problems in the area (for example formation of salt pans/organoleptic properties of water from the source)?
  - Are there any local indicators of chemical contamination risk (for example fertilizer and pesticide use patterns; existence of local small-scale industries such as tanneries, light industries etc.)?
  - Have there been any reports locally of the incidence of water-borne diseases?

Appendix 7.2 Checklist of impact indicators for water supply provision

Management

- Has effective management (including technical inputs) been maintained throughout the period of the intervention?
- Has a continuous supply of water been maintained to the supplies' intended users?
- Have any vulnerable groups been denied access to the water supply for other reasons?
- Has the management team been able to resolve disputes among users in a timely and equitable manner?

Livestock viability

- As a result of the intervention, has there been an observable reduction in:
  - culling of viable livestock;
  - livestock mortality rates due to other causes;
  - abnormal patterns of livestock transfer and sales?
- If baseline information exists, does a direct assessment of livestock viability indicate:
  - improved body condition scores;
  - increases in short-term liveweight gains;
  - reduction in disease incidence?

Social consequences

- Is there any evidence that:
  - vulnerability of affected livestock keepers has been reduced without them having to dispose of their animals;
  - livestock keepers are returning to pre-intervention livelihoods strategies that fully involve a contribution from their livestock?

Environmental impacts

- Is there any evidence that use of the water source has led to environmental damage due to:
  - the physical passage of livestock (roads, paths, crops etc.);
  - the removal of significant quantities of water;
  - the accumulation of the waste products of livestock or their associated keepers?

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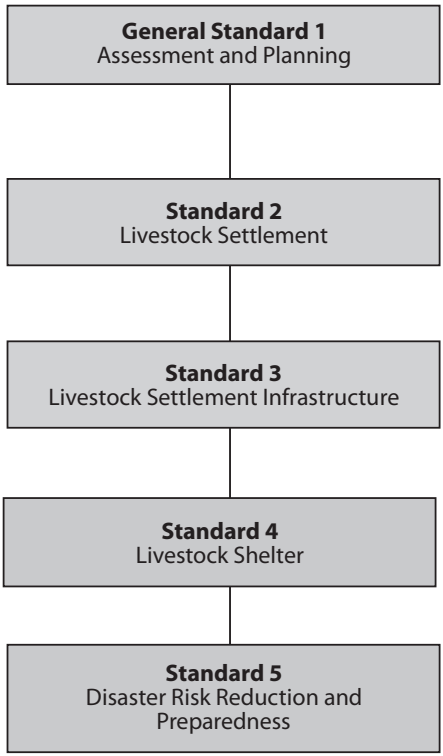
CHAPTER 8

Minimum standards for livestock shelter and settlement

Livestock Shelter and Settlement



Introduction

Links to the LEGS livelihoods objectives

Livestock shelter and settlement provision can be vital to ensure that livestock survive an emergency. Livestock shelter and settlement therefore relate closely to two of the LEGS livelihoods objectives for disaster-affected communities in the emergency phase, namely:

- to protect the key livestock assets of crisis-affected communities.
- to rebuild the key livestock assets of crisis-affected communities.

The importance of livestock shelter and settlement in disaster response

Livestock shelter can be defined as *the protective physical infrastructure which animals require to survive*. This chapter includes three components: *settlement*, which concerns the wider environment that supports livestock, for example site selection, issues of land rights and environmental management; *settlement infrastructure*, which encompasses the planning of buildings, roads and facilities; and *shelter*, which is the physical accommodation and buildings in which livestock take shelter.

Following a natural disaster or a crisis due to conflict, the safety, security and well-being of livestock is often a primary, if not the main, concern of affected owners. Patterns of movement for livestock-owning human populations following a disaster can be heavily influenced by the needs of their animals. Furthermore, livestock shelter and settlement infrastructure can play a key role in influencing the human shelter and settlement decisions taken by affected communities. In some emergencies, livestock that were not previously sheltered may develop the need for protection and shelter – for example in severe weather conditions or extreme insecurity.

Options for livestock shelter and settlement

Livestock shelter and settlement needs vary according to settlement type and whether or not a livestock-owning population is displaced away from their original homesteads. Needs are also likely to vary according to the emergency phase at the time of response, ranging from the initial emergency to the immediate aftermath and recovery, to full reconstruction and other durable solutions that become available. Relief interventions in the initial phases, however, should always consider recovery phase objectives from the outset, including sustainable land use, land rights and ownership as well as measures to mitigate the impact of future disasters.

Livestock shelter and settlement infrastructure for repair or reconstruction should be provided, where possible, to individual households and discrete communities in their original homesteads. When the support of livestock in dispersed settlements is not possible, livestock shelter and settlement infrastructure should be provided

collectively and in suitable large sites or enclosures within reasonable distance from grouped settlement for human populations, such as temporary planned or self-settled camps.

Livestock shelter and settlement interventions may take a range of forms, depending on the needs and nature of the emergency. These may include:

- direct construction (by contractors or direct through beneficiaries) of shelters, for example secure compounds, shade, roofs and/or walls;
- provision of materials to livestock owners for shelter construction;
- training in shelter construction;
- monitored cash distribution for animal shelter needs;
- support to negotiations on land rights or access to grazing and/or shelter;
- public awareness raising.

This chapter of LEGS is closely linked to the provision of shelter and settlement for humans as well as animals, and underlines the importance of coordinated and integrated action with other sectors of humanitarian response. This chapter should therefore be read together with the chapter on Shelter, Settlement and Non-Food Items in the Sphere Handbook (see also Standard 1 below and Common standard 3 in Chapter 3). While the shelter and settlement needs of humans take precedence over those of livestock following a disaster, this chapter discusses the survival needs of livestock that are entirely independent from those of their owners.

Post-disaster responses may also consider reconstruction of veterinary and commercial infrastructure, such as livestock markets, veterinary clinics and slaughter houses. However, any work in this area should be linked with the longer-term development perspective and bear in mind the potential for the development of a private service sector. This may be the case particularly in post-conflict reconstruction, where the private sector may be best placed to provide such services. As such, construction or reconstruction of commercial infrastructure may be the responsibility of private service providers rather than that of governments or external agencies.

Timing of interventions

Livestock shelter and settlement interventions may be carried out at all stages of disaster response, from emergency phase through to recovery and reconstruction and other long-term solutions. Livestock shelter and settlement needs should also contribute to disaster preparedness and contingency planning as discussed below in Standard 5.

The stage as well as the nature of the emergency will affect the type of shelter and settlement infrastructure needed for livestock. Sudden-onset emergencies resulting from a natural disaster are likely to require a different approach compared to the response to an ongoing crisis such as conflict or sustained environmental degradation. After a sudden-onset disaster, there may be an urgent need to provide shelter for livestock exposed to the weather or at risk from theft or predators. Livestock

may also need to be temporarily relocated to safer ground for their protection, for example following a flood. These may be temporary measures that can be made permanent at a later stage. In the later stages of a rapid-onset emergency, longer-term shelter and settlement needs may then be addressed. In a slow-onset emergency, there is more time to prepare and plan for any livestock shelter and settlement needs, although temporary measures may need to be put in place during the emergency itself (see Table 8.1 below).

Links to other chapters

The provision of shelter may be complementary to the livestock interventions described in other chapters including the provision of livestock (Chapter 9), provision of water (Chapter 7) and ensuring feed supplies (Chapter 6). For example, in emergencies where livestock feed stores have been destroyed, there may be a need to construct new storage facilities before additional feed supplies are provided. If livestock are distributed in situations where animal shelter is vital for the survival and well-being of animals, such as in cold climates, shelter needs should be addressed before distribution. When disaster-response interventions include the introduction of species to communities who are not familiar with keeping them, basic advice on the housing (and other management) needs of the animals must be provided.

Vulnerabilities and capacities of disaster-affected communities

The provision of livestock shelter and settlement following a disaster should take into account the existing roles and responsibilities for animal care among the community, including **gender** and age divisions of labour, as well as cultural norms for animal housing. Gender roles in construction should also be taken into account and where appropriate form the basis for any intervention.

The location of livestock shelters may have an impact on vulnerable groups, particularly women and children. Accessibility is an important factor affected by

Table 8.1 Possible timing of livestock shelter and settlement interventions

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Temporary shelter interventions	→					→	
Durable shelter interventions	- - - →			→			
Settlement interventions	- - - →			→			

distance from human dwellings, insecurity or continuing danger from natural phenomena such as floods. This may limit access to animal products such as milk or eggs that are particularly important for some vulnerable groups including children, older people, the sick and those living with **HIV/AIDS**.

The location of livestock shelters can also affect the **security and protection** of livestock owners. For example shelters built at some distance from human habitation may expose people to risk, in particular women or children, especially in conflict areas. The process of shelter construction may also have security implications if women are required to look for construction materials in remote areas.

Environmental considerations should also be taken into account in the construction of animal shelters and in planning settlement infrastructure. If the construction of shelters encourages the dense concentration of animals, this may impact on grazing availability and contribute to environmental damage. Animal waste, in particular where animals are concentrated or in close proximity to humans, can affect the health and hygiene of the human population (LEGS does not address issues of bio-security, which relate mainly to commercial large-scale enterprises). The excessive use of local materials for construction may also have a detrimental effect on the environment. These issues are discussed further below under Standard 2.

Disaster-affected communities also draw on their own **capacities** in response to emergencies. With regard to shelter, these may include indigenous knowledge about the most appropriate building materials and design for livestock shelters, as well as construction skills.

The minimum standards

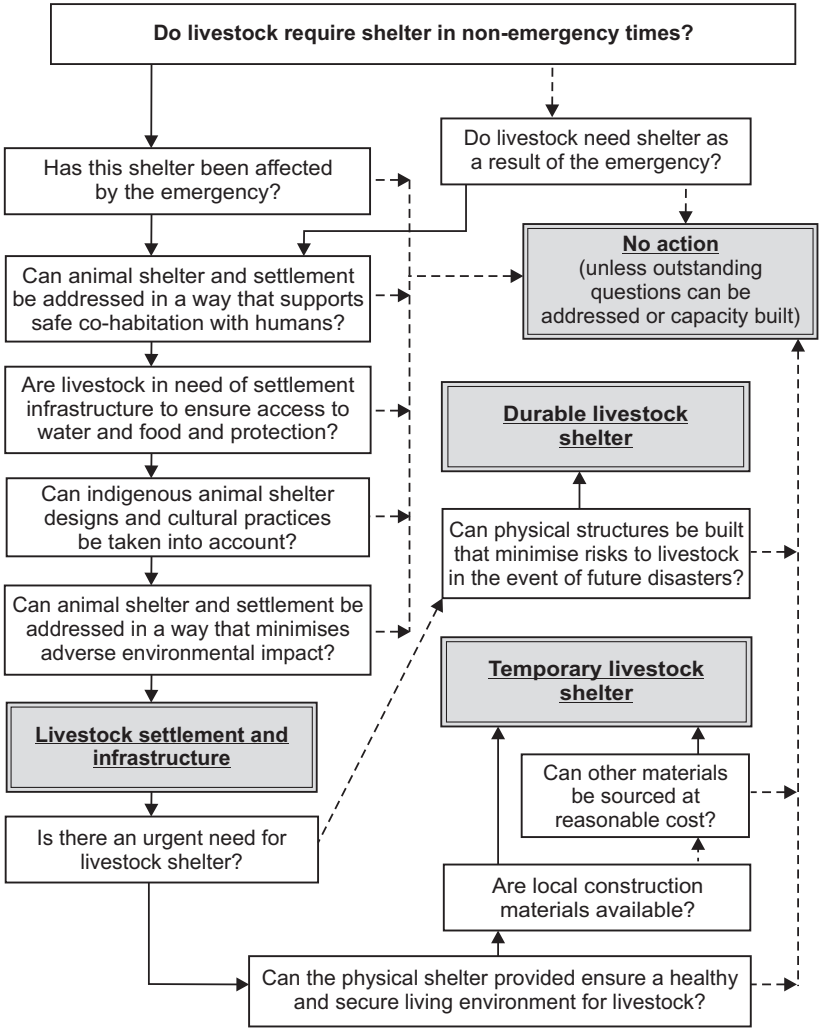
Before engaging in the provision of livestock shelter and settlement, the feasibility and appropriateness of the possible interventions should be carefully considered, as highlighted in Figure 8.1 below.

Livestock shelter and settlement Standard 1: Assessment and planning

Assessment and planning for livestock shelter and settlement infrastructure is based on community consultation, indigenous knowledge, consideration of environmental impact and the potential for sustainable livelihoods.

Key indicators

- The community, including both women and men, is consulted concerning indigenous animal housing and settlement practices. These consultations should build upon the initial assessments outlined in Chapter 2 (see guidance note 1).



Note: The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no intervention should take place.

Figure 8.1: Decision-making tree for livestock shelter and settlement

- Livestock shelter and settlement infrastructure interventions are designed based on indigenous animal housing designs (see guidance note 2).
- The livestock shelter needs of the most vulnerable in the community are met (see guidance note 3).
- The environmental impact of livestock shelter interventions is assessed and any adverse impact is minimized (see guidance note 4).
- The sustainable livelihoods needs of the community form part of the assessment and inform the emergency response (see guidance note 5).
- Livestock shelter and settlement interventions are negotiated with all relevant stakeholders (see guidance note 6).

Guidance notes

1. **Community consultation:** an experienced livestock-owning community will know which types of animal shelter are typical for the species they keep and which shelter design options will meet these needs. This may include knowledge of suitable construction materials, site selection, site access considerations, hygiene and livestock management, and how and by whom construction can be implemented. Every effort must be made to ensure communities are directly involved in the assessment, design, implementation and evaluation of livelihood shelter and settlement interventions. Assessment must consider the existing roles and responsibilities for animal care among the community, including age-based divisions of labour. Gender roles in construction for any shelter intervention must be taken into account, particularly the needs of women to support and maintain livestock. Livestock shelter interventions should use community knowledge as the starting point for the design of an intervention, whether temporary or permanent structures are planned. The assessment may also identify policy issues for advocacy at the local or wider level as appropriate (see Chapter 3, Common standard 8).
2. **Indigenous design:** the cultural norms for animal housing and settlement should be assessed. These include developing an understanding of indigenous building materials and local designs for livestock shelters and settlement infrastructure, as well as appropriate construction methods. Local livestock housing technology should be used or adapted and local materials used as appropriate. Only in very rare instances will the use of 'shelter systems' or imported prefabricated shelter solutions be appropriate or even feasible.
3. **Vulnerability:** assessment and planning should examine the specific needs of potentially vulnerable groups and ascertain whether there is a need for priority assistance, for example, to the elderly, the sick or the mobility impaired, who may not have the labour resources to reconstruct their own livestock shelters. Those without access to construction materials, for example due to local insecurity, may also need additional assistance (see Appendix 8.1,

Checklist for assessment of livestock shelter needs). As for any intervention, assistance provided to vulnerable groups should not undermine the ability of a community to provide and care for these groups using its own coping strategies.

4. **Environmental impact:** the impact of livestock shelters and settlement interventions upon the local environment must be assessed, including the unsustainable use of local materials and the unsustainable concentration of livestock in restricted areas. These issues are discussed further in Standard 2.
5. **Sustainable livelihoods:** while temporary measures to support livestock during an emergency may be required, every effort should be made to ensure that shelter and settlement interventions consider the livelihood needs of an affected population in order that resources available in an emergency are useful in the long term. This includes careful consideration of the likely impact of anticipated changes to land use, permanent changes to community livelihoods and livestock-management practices as a community recovers from disaster.
6. **Stakeholder negotiations:** livestock shelter interventions should be negotiated with other stakeholders beyond the affected community. Where interventions are likely to have a large impact upon human settlement, this may include the local authorities that deal with agriculture, water supply, sanitation, land use and housing. There is also significant potential to draw upon experience from humanitarian actors in other sectors such as human shelter and housing, water and sanitation, and camp management as appropriate. In large emergencies where the 'cluster approach' (see Glossary) has been implemented, these activities will be coordinated through the emergency shelter, early recovery and camp coordination and camp management (CCCM) clusters. Agencies providing shelter for livestock should actively participate in these clusters to promote the needs of livestock for shelter and settlement, and to ensure that their own programmes are in line with agreed cluster strategies and priorities.

   It is also important where an affected population is displaced to consult with the 'host' community in order to ensure that the location of the livestock shelter and settlement infrastructure does not cause conflict, environmental pressures or competition for employment or natural resources.

Livestock shelter and settlement Standard 2: Livestock settlement

Livestock settlement supports safe cohabitation with humans, minimizes negative environmental impact, and supports recovery and sustainable livelihoods.

Key indicators

- Livestock settlement supports human safety and the safe cohabitation of livestock with humans (see guidance note 1).

- The environmental impact of livestock settlement is minimized (see guidance note 2).
- Livestock settlement supports recovery and sustainable settlement objectives (see guidance note 3).

Guidance notes

1. **Human safety and cohabitation:** the location of livestock shelters can affect the safety and protection of livestock owners. For example, shelters built at some distance from human habitation may expose people, in particular women or children, to risk, especially in conflict areas. Conversely, livestock shelter and infrastructure too close to human settlement can cause environmental degradation and increase the risk of spreading disease. Livestock settlement should also provide for safe cohabitation of livestock and human communities. This is particularly important to reduce the risk of disease transmission from animals to humans, such as avian influenza, and to prevent vector-borne disease transmission from animal faeces.
2. **Environmental impact:** the impact of livestock shelters and settlement interventions upon the local environment should be minimized. This is particularly important if livestock shelter construction requires or encourages the harvesting of locally available material that can risk permanent environmental degradation. The cutting of trees to provide construction timber for shelter and enclosure or for fuel to burn bricks for houses is a particular risk. Construction material should be procured from sustainable sources or harvested in a sustainable manner. The planting of 'living fences' may also be a viable alternative to harvesting local material for enclosures. Dense concentrations of livestock should also be avoided to reduce the risk of overgrazing and environmental degradation.

   The inclusion of livestock in refugee or IDP camps adds particular pressure to the local environment and resources. Provision for livestock in these settlement conditions must therefore be weighed against environmental consequences. Competition for resources with local livestock populations may also be a potential source of conflict and therefore access to pasture and grazing must be negotiated with the local population.
3. **Sustainable settlement of humans and livestock:** the settlement needs of human communities will always take precedence over those for livestock and it is paramount that settlement interventions for livestock do not negatively affect the provision of human settlement. In many cases, however, settlement needs for humans and livestock are interdependent. This highlights the need for coordination and joint planning and action with other stakeholders in these settlement patterns (see Standard 1, guidance note 6 above).

The preferred settlement option in all responses should be to support livestock-owning communities in dispersed settlement in their original homesteads. Livestock support may be needed, however, where families and communities are displaced. Displaced settlement can be dispersed, for example people staying with hosts or self-settled on land belonging to others, or grouped settlement such as families living in collective centres and IDP or refugee camps.

Displaced and grouped settlement is invariably complex and expensive with inherent barriers to reaching durable and sustainable solutions. Other guidelines, such as UNHCR (2006), Corsellis and Vitale (2005) and the Sphere Handbook (2011) should be the primary reference guides to provide humanitarian support in these situations. Dense displacement camps rarely allow for co-location of livestock because of the risk of environmental degradation and disease spread. While direct support to displaced livestock-owning communities in displaced settlement patterns in an emergency phase is often unavoidable, every effort should be made to support a return home.

Livestock settlement needs to account for local grazing rights and management structures, accessibility and land rights and ownership. This is particularly important where disasters such as flooding have altered the local environment, and where livestock-owning communities are displaced, in which case the needs of a host population should also be considered. Resolution of these issues is likely to require extensive consultation with stakeholders and advice from local authorities and specialists in other sectors in order to identify sustainable solutions.

Livestock shelter and settlement Standard 3: Livestock settlement infrastructure

Livestock settlement infrastructure provides a secure, healthy and sustainable environment for livestock.

Key indicators

- Settlement infrastructure enables healthy, secure and sustainable livestock management (see guidance note 1).
- Settlement infrastructure minimizes negative environmental health impacts (see guidance note 2).

Guidance notes

1. **Secure, sustainable livestock management:** in addition to physical shelter for housing livestock (see Standard 4 below), there may be need for settlement infrastructure to enable safe, sustainable livestock management. This may include advising on or providing access to water and food sources, and protection from theft and predators using site enclosures. Site enclosures may

have implications such as the need to bring feed to livestock (see Chapter 6) and there may be additional animal health issues such as parasite problems and the need for veterinary drugs storage or animal slaughter points (see Chapter 5). As for livestock shelter, all settlement infrastructure should be designed using indigenous knowledge and building practices (see Standard 1 above).

2. **Environmental health impact:** livestock settlement should be designed to allow for the hygienic management and disposal of animal excreta, especially where livestock-owning communities are living in displaced and grouped settlement such as camps. This may include enclosures built outside the perimeter of human settlements to prevent livestock access and ensuring adequate distance between human dwellings and animal shelters. The density of livestock settlement should also remain at a safe level (see UNHCR, 2005, p30ff for more details on the spatial requirements of different species).

Livestock shelter and settlement Standard 4: Livestock shelter

Livestock are provided a healthy, secure living environment that is appropriate to the context and for its intended use.

Key indicators

- Livestock shelter provides adequate protection from prevailing climatic conditions and the extremes of daily and seasonal weather (see guidance note 1).
- Livestock shelter is designed to meet the specific needs of the animal species concerned and according to the intended use (see guidance note 2).
- Livestock are afforded adequate physical protection from theft and predators (see guidance note 3).
- Measures are in place to ensure confined livestock are temporarily freed to avoid the risk of starvation before other assistance is forthcoming (see guidance note 4).

Guidance notes

1. **Healthy, secure living environment:** in hot climates, shelter should provide well-ventilated shaded space. In cold climates, shelter should provide a suitably well-sealed enclosure that is free from drafts and provides a minimum of insulation from the ground. Where there are extreme weather conditions shelter needs should be addressed before livestock are distributed.
2. **Appropriate design:** shelter for livestock should wherever possible be based upon local building technologies and use local building materials. After a natural disaster, livestock shelter may be built using salvage material from

damaged infrastructure and buildings, and efforts to maximize the potential for salvage should be encouraged, including the distribution of toolkits. Some emergencies may require urgent provision of livestock shelter in order to ensure the survival of the animals. However, these shelters may not be suitable for the long term and communities may also need support to reconstruct more durable shelter. The potential to integrate emergency livestock shelter into transitional or permanent structures with later assistance is particularly important. For example, designs for livestock shelter for emergency use might include a (durable) roof and structure anticipating a later upgrade to permanent shelter with walls, doors and fencing. This approach is useful to consider, whether subsequent upgrading is supported by an agency or undertaken independently by the community.

3. **Theft and attack:** livestock shelter and settlement should ensure that animals are protected in accordance with local norms from theft and from predators. This may include provision of suitable doors with closing mechanisms for shelter or secure enclosures around livestock accommodation. There may also be implications for site planning in order to ensure livestock shelter is located in proximity to human settlement to provide security.
4. **Freeing confined animals:** experience has shown that animals such as dairy buffaloes and cows have died where they have been tethered when the families they belong to have been killed or seriously injured by earthquake or other disaster. A simple intervention is to untie or release these animals so that they have a chance to find feed and water. These animals should be marked, for example with paint, so that they can be subsequently be reunited with any surviving owners.

Livestock shelter and settlement Standard 5: Disaster risk reduction and preparedness

Livestock shelter and settlement infrastructure reduces the impact of future disasters.

Key indicators

- The risk of future disasters is assessed (see guidance note 1).
- Livestock shelter and settlement infrastructure interventions minimize risks to livestock and their owners in the event of future disasters (see guidance note 2).

Guidance notes

1. **Assessment of future risks:** susceptibility to future disasters should be assessed as part of the planning process for livestock shelter and settlement initiatives.

2. **Minimizing future livestock losses:** the construction of shelter and settlement infrastructure for livestock can provide an opportunity to mitigate the impact of future disasters. An assessment of future risks should therefore influence the site selection, design and construction of livestock shelter and settlement infrastructure in order to reduce the risk of livestock losses in future disasters. This may include:
   - *Earthquake*: sites for livestock shelter and settlement infrastructure should be on stable ground and away from areas at risk of future landslides and other damage due to aftershocks. Structures for livestock shelter should also be carefully considered and measures taken to either increase structural strength to resist the force of an earthquake or to use suitably lightweight construction material to minimize the risk that building failure causes fatal injury to livestock. Indigenous materials and technology should be used although it may be necessary to advocate for changes to local building practices to provide for increased earthquake resistance.
   - *Floods*: where possible livestock shelter should be sited away from flood plains to avoid future flood damage. Where this is not possible, sites may need improved drainage or livestock shelter may be raised above previous flood levels. Reinforced construction may be considered for foundations and lower brick courses as well as the main structure in order to reduce the risk of building failure during floods.
   - *Typhoon and hurricanes*: livestock shelter construction should ensure that roofs are adequately tied and secured to the structure.
   - *Tsunamis*: animal shelters may be located away from the immediate coastline if possible.

   In all these cases, technical expertise from construction specialists should be sought (see References) to ensure that the construction builds on best practice in disaster mitigation.

Appendix 8.1 Checklist for assessment for livestock shelter and settlement provision

Shelter

- Are there any practical, immediate interventions that can reduce immediate livestock mortality (such as freeing tethered animals post-earthquake)?
- Is there an immediate need for temporary livestock shelter?
- What is the population size (estimated) of the different species of animals that may require shelter?
- What specific housing requirements do the different species have in the particular climatic and environmental conditions in the area affected by emergency?
- What are the key social groups?
  - o What are the roles of men and women in particular components of livestock care?
  - o Who in the community is normally responsible for shelter construction?
  - o Are there groups with special needs or vulnerabilities, such as those with HIV/AIDS or displaced women?
- What are the local animal housing designs, construction techniques and raw materials?
- Do these building practices adequately reduce the risk of loss in future disasters?
- Are sufficient local materials available?
  - o How are local construction materials harvested?
  - o Will construction of shelters cause significant environmental destruction?
  - o Should building materials be transported in?

Settlement

- What are settlement patterns of livestock-owning communities? Dispersed or grouped? In original homesteads or displaced? Nomadic or sedentary?
- Is there potential for conflict between different livestock owning communities, for example the affected population and the host community?
- Is there adequate grazing resource locally? Is pasture degradation a potential consequence of displaced people and their livestock after the emergency?
- What are the existing land rights and management systems for communal or shared livestock shelters and settlement infrastructure and will these be appropriate for any newly constructed shelters?
- What other settlement needs do livestock owners have?

Shelter for newly introduced species (for example poultry and rabbits)

- Are the most vulnerable people, including those with HIV/AIDS, going to benefit from the construction of shelters for species that are new to them?
- Do the beneficiaries require special training in shelter construction and management?

Appendix 8.2 Checklist for monitoring and evaluation of livestock shelter and settlement provision

Outputs and processes

- What are the key conditions that require livestock protection initiatives (for example adverse climate, insecurity, livestock health risks) and for which species of livestock?
- What measures have been taken to protect livestock against these conditions?
- Do these responses meet the livestock shelter needs (for protection, access, security, management) of the beneficiary communities?
- How have settlement infrastructure needs been addressed?
- What are the outputs (numbers of shelters and beneficiaries) and inputs (cost of materials, transport, construction, community contributions)?
- What has been the uptake rate of the initiative and what are the reasons for any lack of uptake?

Participation

- How has the beneficiary community participated in the initiative?
  - o Has local knowledge on design and construction been used?
  - o Have local materials been sourced?
  - o What management structures have been established (where necessary) to maintain communal shelters?
  - o Are beneficiaries involved in monitoring and evaluating the initiative?

Impact

- What has been the impact on livestock mortality and morbidity of sheltered livestock compared to those that have not received shelter support?
- Has access to livestock and livestock products been maintained (in particular for vulnerable groups)?
- What are the participants' views of the benefits of the initiative?
- What has been the environmental impact of the initiative, in particular the impact on natural resources?

Future planning

- If temporary shelters have been constructed, what are the plans for long-term shelter provision?
- Have newly constructed livestock shelters and settlement infrastructure taken future disaster mitigation into account in siting, design and construction?

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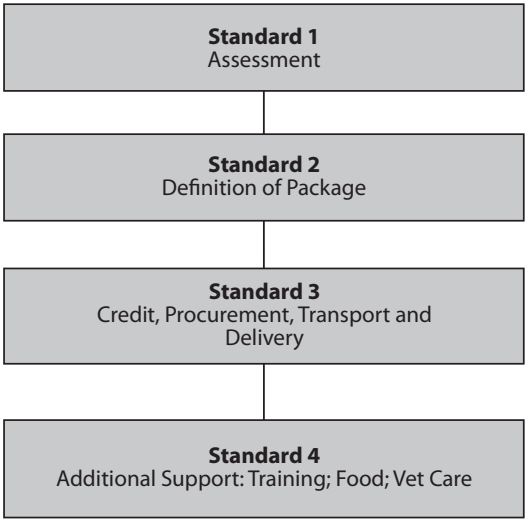
CHAPTER 9

Minimum standards for the provision of livestock

Provision of Livestock ('restocking')



Introduction

Links to the LEGS livelihoods objectives

The provision of livestock relates to the third LEGS livelihoods objective of rebuilding the key livestock assets of disaster-affected communities, and falls within the immediate post-disaster and recovery phases of an emergency.

The importance of livestock provision in disaster response

When disasters result in substantial loss of livestock, the restoration of livestock assets in the post-disaster phase can be a valuable approach to rebuilding people's economic assets and providing high-quality livestock-derived foods, such as milk or eggs.

Based on the livelihood strategies and opportunities of the beneficiary populations, livestock provision may take the form of replacing livestock assets in some quantity in order to reconstitute a herd, or the distribution of livestock in smaller quantities to replace lost stock that provide food and/or income, or as a new initiative to generate income or provide food as a supplement to other livelihood activities.

Options for the provision of livestock

This chapter outlines two key types of livestock provision, namely *herd reconstitution* (sometimes called 'restocking' or 'redistribution') and *other livestock distribution approaches*. The chapter contains four standards that apply equally to both interventions.

Herd reconstitution

Herd reconstitution is a form of livestock provision that aims to replace livestock assets where whole herds have been lost or decimated. It is most appropriate for pastoralist and agro-pastoralist communities who rely heavily on livestock as a source of food, income and social well-being. Pastoralists are particularly reliant on livestock and include herding communities from the semi-arid lowlands of Africa to the high mountainous areas of Tibet. Some groups keep mixed herds of sheep, goats, cattle and camels while others rely more on single species, such as yaks or reindeer.

Given the diversity of these livelihoods, local livelihoods analyses rather than broad prescriptive approaches are important for the design and implementation of herd reconstitution. In these situations, a specific number and type of animal is required as a 'minimum herd size', which can best be defined by communities themselves. Indigenous livestock knowledge is usually very strong in these

communities, and indigenous systems for redistribution of livestock may be well established, although weak and/or not functioning. This indigenous knowledge means that working with local people to design and implement herd reconstitution projects is crucial, and external interventions should build on existing mechanisms and practices as much as possible (see Case study 9.4 in the Case study chapter). In these communities, training support to assist people to care for animals is not usually required. The cost of these initiatives per household may be high because sufficient numbers of animals are needed to attain a minimum herd size within a defined time period.

In the post-disaster recovery phase, herd reconstitution can play a significant role in rebuilding the livelihoods of affected people. However, it may need to form part of a broader (and more long-term) approach that strengthens the capacity of livestock-dependent communities such as pastoralists to face future disasters and challenges, some of which may relate to their changing economic and policy environment, as well as their natural resource base. In pastoral areas in particular, herd reconstitution may need to link closely with longer-term pastoral development initiatives, for example increasing the potential for market-orientated production, including the development of market opportunities and capacity building.

Other livestock distribution approaches

Livestock distribution is a potential intervention for people for whom the acquisition of livestock would be a useful form of livelihoods support. Although these people may keep relatively small numbers of animals (and may rely primarily on non-livestock derived food and income sources) food or income from livestock may be an important supplement. In addition, there are other households who may be highly dependent on a single or small number of animals for their livelihoods, for example a mule or donkey that forms the mainstay of a transport business. Livestock distribution may therefore be appropriate either to replace lost livestock or as a new venture. In the latter case, recipients may have limited experience of livestock rearing and thus may require training in animal husbandry.

Animal husbandry, even at a small scale, presents a significant livelihood opportunity for poor or marginalized populations in a variety of contexts: when conflict reduces access to cultivated fields and pasture (see for example Appendix 9.3 on IDP camps); when access to arable land is the privilege of a specific social class or clan; as a source of income generation; as a form of 'drought contingency fund' (see Case study 9.2 in the Case studies chapter); or when other livelihood opportunities are scarce but natural resources abundant. Livestock may also facilitate daily chores through transport and/or draught power and they are a useful complement to agricultural activities (ploughing, threshing, fertilization etc.). For all these reasons, the provision of a small number of livestock may significantly contribute to supporting livelihoods in post-war and post-disaster situations, if

carefully planned to complement other livelihood activities in terms of labour, investment, maintenance and care.

Despite the many benefits derived from livestock, the provision of livestock as a post-disaster or recovery response is technically and operationally complex, as well as expensive. The provision of livestock is not neutral as it can have positive or negative social, environmental and economic impacts. Many aspects of the provision of animals remain controversial and the sustainability of the interventions is often brought into question due to the recurrence of disasters, the capacity of the beneficiaries, and inappropriate planning. In addition to the different species and types of livestock that people keep, there is considerable variation in the systems used to rear animals, the ownership or use of animals according to people's gender or wealth, the suitability of species to the environment, and the support services or facilities required to keep animals healthy or for marketing animals or animal products. Livestock also consume feed and water, and in some environments, require shelter. All of these factors need to be understood during the design of livestock provision projects, making the assessment and design phases for the projects technically demanding and often requiring inputs from both livestock experts and social advisers.

Among the issues being debated about livestock provision is the relatively high cost of these projects per household, particularly if support inputs such as veterinary care and training are included. Cash distributions are also being proposed as an alternative to in-kind livestock provision and would appear to be an appropriate response when local markets are functioning and able to supply the items, including livestock, which people may require (see Case study 9.1 in the Case studies chapter for an example of cash vouchers used for herd reconstitution). Further impact assessment and cost–benefit analysis of both livestock provision and cash distribution responses are needed to compare the relative strengths and weaknesses of each approach.

Given the complexity of designing and implementing effective livestock provision, agencies on the ground need to consider carefully their capacity to engage in such work. For many agencies, there will be a need to source expertise from outside, and this process itself takes time and effort. To date, it seems that agencies with long-term development experience in a particular area are often best-placed to support livestock provision because they are familiar with local uses of livestock and social systems.

The advantages, disadvantages and implications of these options are summarized in Table 9.1.

Timing of interventions

The provision of livestock – whether for herd reconstitution or other livestock distribution – generally takes place in the recovery phase of both rapid-onset and

Table 9.1 Advantages and disadvantages of livestock provision options

Option	Advantages	Disadvantages	Implications
Herd reconstitution	• Replaces significant loss of livestock assets • Long-term response with the potential to increase livelihood assets for the future and thus strengthen livelihoods • Potential to build on indigenous herd reconstitution systems	• Cost per household high to reach minimum viable herd size • Requires considerable logistical management for purchase and distribution of appropriate species and breeds	• Appropriate only where beneficiary communities are chiefly dependent on livestock • Beneficiaries need sufficient assets (social relationships, access to pasture and water, technical knowledge etc.) to maintain livestock • Other complementary livestock services (veterinary services, feed, shelter etc.) may be needed • Other livelihood support (such as food aid) may be needed in the interim • Sources of suitable livestock need to be identified within practical distance
Other livestock distribution approaches	• Replaces lost livestock assets or provides new assets for o food supplement o income generation (sale of livestock products, transport business) o draught or transport needs • Potential to provide livelihood opportunity when access to other livelihood options is limited through conflict, vulnerability or other constraints	• Introduction of new livestock or species requires support and training for beneficiaries • Costs of intervention may be high compared to other livelihood support activities	• Other complementary livestock services (veterinary services, feed, shelter etc.) may be needed • Training in livestock management is vital for new livestock owners • Sources of suitable livestock need to be identified within practical distance

slow-onset emergencies, as it requires significant planning and administration that may not be possible or appropriate in the middle of an emergency. It also requires the availability of the means to support the livestock (feed, water, shelter) that may have been destroyed during the emergency. In addition, human populations may not have the immediate capacity to care for additional or replacement animals. However, for livestock distribution in rapid-onset emergencies in which the majority of the natural resources required by livestock have not been destroyed and the numbers of animals involved are relatively small, provision may begin during the early recovery phase (see Table 9.2 below).

The provision of livestock should as much as possible be integrated into longer-term development planning to support the livelihoods of the beneficiary population.

Links to other chapters

The provision of livestock as a post-disaster response requires integration with various other livestock inputs. To varying degrees, livestock may require feed, water, shelter and veterinary care. Therefore, the standards for these other interventions in this volume should also be consulted (see Chapters 5, 6, 7 and 8). Regarding veterinary care, attention needs to be paid to the potential cost of this care to recipients of livestock, particularly if the approach is to encourage private delivery.

When livestock is provided, it is likely that the recipient households will require other types of assistance in order to meet their basic needs. When pastoralists' or agro-pastoralists' herds are reconstituted, it may take many months or even years for these families to expand their herds sufficiently to survive independently of external assistance (see Standard 4 below). Therefore, livestock provision must also be integrated with non-livestock assistance. The Minimum Standards on Food Security, Nutrition and Food Aid, and Shelter and Non-Food Items in the Sphere Handbook (2011) should be consulted.

Table 9.2 Possible timing of livestock provision

Options	Rapid onset			Slow onset			
	Immediate aftermath	Early recovery	Recovery	Alert	Alarm	Emergency	Recovery
Herd reconstitution	→	→	→	→	→	→	→
Other livestock distribution	→	→	→	→	→	→	→

Vulnerabilities and capacities of disaster-affected communities

The provision of livestock poses special challenges in terms of the vulnerabilities and capacities of communities. The roles and needs of vulnerable individuals and households should be taken into account, in particular **gender** roles in livestock care and management. While in some communities women do not have formal ownership of livestock, they are often primary carers of animals, in particular small stock, and hence livestock provision initiatives should build on these roles and indigenous knowledge, while taking into account any potential additional labour burden that the provision of stock may involve. Attention should also be paid to existing norms with regard to the benefits of livestock, namely the products, meat and cash from sales, to ensure that the vulnerable continue to access these benefits as much as possible. For example, children are often involved in herding animals or trekking them to water points and ad hoc milking in the bush can be an important source of food for them. However, this work can also prevent children from attending school. Liaison with education programmes is needed to ensure that if necessary, children can both herd animals and attend school.

Specific targeting issues related to herd reconstitution: in the case of pastoralist and agro-pastoralist communities, the provision of livestock aims to encourage a timely return to a livestock-based livelihood. In these situations, it is not necessarily the most vulnerable or destitute households who should be targeted to receive livestock, but those households who already possess some animals, who express a wish to return to a livestock-based way of life, and who possess the relevant livestock rearing skills and knowledge. This aspect of targeting raises at least two questions. First, within a humanitarian response is it justifiable to target livestock assistance to households who are not the most vulnerable? Second, what kinds of assistance might be appropriate for the most vulnerable households? These issues remain open to debate, however, in practical terms the answers remain dependent on dialogue with communities on the ground.

Specific targeting issues related to supplementary livestock provision: for people who normally rely far less on livestock, one aim of an initial livelihoods assessment should be to identify possible livestock ownership patterns by wealth and gender, and design assistance accordingly. As a general rule, men and more wealthy people tend to own or control larger types of livestock such as cattle or camels, whereas women and poorer people are more likely to keep poultry, goats or sheep. In these situations, provision of the smaller types of livestock is more likely to assist the poor or vulnerable.

Livestock can transmit various diseases to people, and the risk of zoonoses increases where animals and human populations live closely, such as in urban and peri-urban contexts or IDP/refugee camps (see Appendix 9.3). People living with **HIV/AIDS** are at high risk of contracting diseases transmitted by livestock. HIV-affected families may also not have sufficient labour to care for livestock. At

the same time, livestock products, as noted elsewhere in this volume, can play a significant role in providing good nutrition for PLHIV.

Security and protection issues may affect livestock provision interventions. In insecure environments, livestock can easily be regarded as a valuable and desirable item by armed militia, police, security forces or criminals. Armed groups and governments will sometimes use livestock raiding as a specific strategic tactic for terrorizing communities and asset stripping. Consequently, in some situations the provision of livestock can place vulnerable communities at increased risk of violence. The provision of large numbers of livestock where resources are scarce may also be a potential source of conflict between farmers and livestock owners, or between livestock-owning groups. Agencies working in conflict areas may also need to ensure that animals for sale have not been stolen.

The **environmental** implications of livestock provision should also be taken into account. The provision of large numbers of additional animals in areas that hitherto have not supported livestock may contribute to degradation. However, in many cases herd reconstitution will take place in non-equilibrium environments with pastoralist and agro-pastoralist communities who have developed mechanisms to manage livestock in fragile and marginal areas. At the same time, herd reconstitution activities should ensure that livestock are provided in numbers appropriate both for the survival of the family and in balance with the local environmental conditions, and should also ensure that sufficient water resources exist to support them.

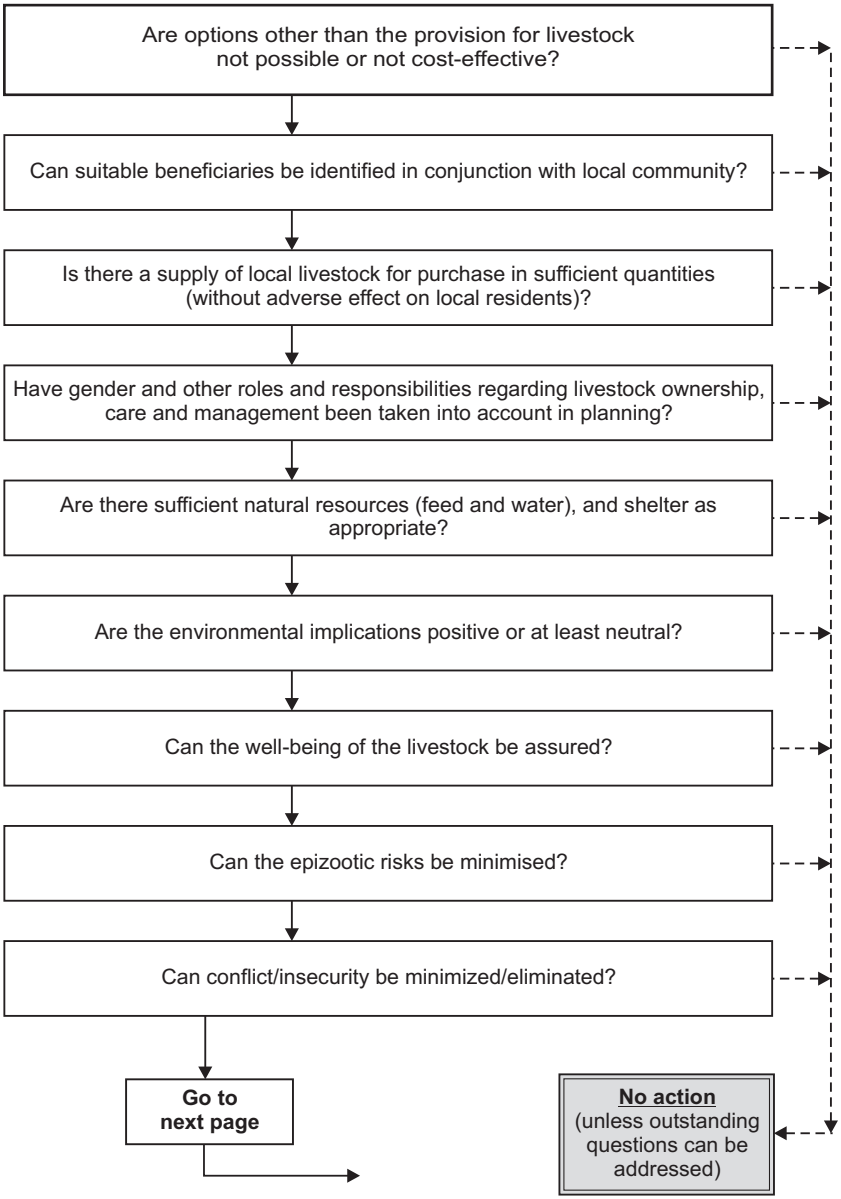
Disaster-affected communities also have their own **capacities** on which they draw in emergencies. With regard to the provision of livestock, many livestock-owning communities have some form of indigenous 'restocking' system, whereby vulnerable or poor households receive stock as a gift or a loan, often passing on the original gift or the offspring to another needy recipient. Such mechanisms can form the basis of livestock provision, building on these indigenous systems and knowledge and thereby increasing the sustainability of the initiative (see Case study 9.2 in the Case studies chapter).

The minimum standards

Before engaging in the provision of livestock, the feasibility and appropriateness of the intervention should be carefully considered, as highlighted in the decision-making tree in Figure 9.1 below, together with the potential impact of the activity.

Provision of livestock Standard 1: Assessment

An analysis is carried out to assess the current and potential role of livestock in livelihoods and the potential social, economic and environmental impact of the provision of livestock.



Key: → = 'yes' - - → = 'no'

Note: The result 'No action (unless outstanding questions can be addressed)' may simply mean that further training or capacity building is required in order to be able to answer 'yes' to the key questions, rather than that no intervention should take place.

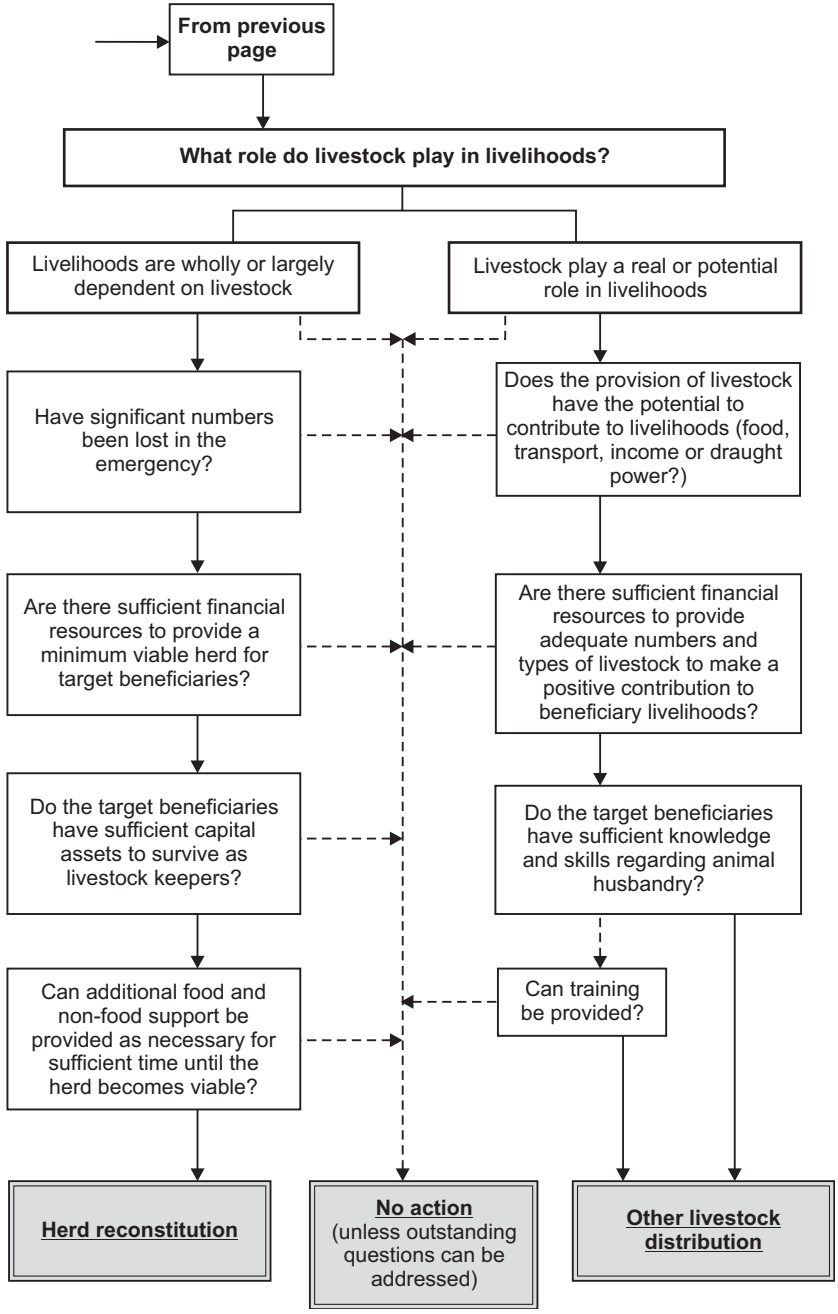


Figure 9.1: Decision-making tree for provision of livestock

Key indicators

- The role that livestock plays in pre-disaster livelihoods is analysed (see guidance note 1).
- Indigenous mechanisms for community-based redistribution of livestock are assessed (see guidance note 2).
- The social, physical and natural capital assets of target beneficiaries are considered to assess their suitability as recipients (see guidance note 3).
- The cost-effectiveness of livestock provision activities is assessed in comparison with other possible interventions, as well as any (external or internal) policy constraints (see guidance note 4).
- The probable impact of the purchase of quantities of animals on (local) livestock markets is assessed (see guidance note 5).
- Local norms for minimum viable herd size are assessed (see guidance note 6).
- The environmental impact of the provision of livestock is assessed (see guidance note 7).
- The potential risks to the welfare of livestock provided are assessed (see guidance note 8).
- The risk of epizootic disease outbreak is assessed (see guidance note 9).
- The security implications of the provision of livestock are assessed and livestock provision only takes place when the security of the stock and the beneficiary populations can be assured (see guidance note 10).

Guidance notes

1. **Livelihoods analysis:** the provision of livestock should be based on a thorough understanding of the role that livestock currently play in the livelihoods of the intended beneficiaries. If livestock keeping does not already form part of their livelihood strategy, the implications of introducing livestock must be very carefully considered before such an intervention is carried out (see guidance notes 3–9 below).
2. **Indigenous livestock redistribution:** in many livestock-owning communities, indigenous mechanisms exist for the redistribution of livestock, for example social support systems based on loans or gifts of livestock to specific types of poorer or more vulnerable households. Where appropriate, livestock provision interventions should be based on these mechanisms in order to increase community management and ownership of the process and ultimately to improve sustainability.
3. **Capital assets:** it is vital that the beneficiary households have sufficient livelihood assets to manage and care for any livestock that they receive. These assets may include labour, skills, social networks (particularly significant

for pastoral communities where social relationships are vital for successful livestock keeping) and access to natural resources such as pasture and/or feed and water (see Case study 9.6 in the Case studies chapter). It is increasingly recognized that herd reconstitution for ex-pastoralists and agro-pastoralists can only succeed when the recipients have retained sufficient of these assets in spite of the loss of their stock and it is now acknowledged that the rehabilitation of long-term destitutes is unlikely to succeed through the provision of livestock. The analysis of the most appropriate beneficiaries should be carried out by community structures that can assess potential recipients' assets and prospects most accurately.

4. **Cost-effectiveness:** given the high costs of providing livestock (both financial and administrative), such an intervention should only be considered when other preventative measures to avoid the loss of livestock assets have failed (for example supplementary feed, provision of water, animal health activities – see Chapters 6, 7 and 5). The cost-effectiveness of livestock provision following a disaster should also be set against other rehabilitation measures, particularly for communities where livestock are not the key livelihood asset. For example, other types of support in the form of food, cash or seed may be a more cost-effective means of supporting livelihoods in a sustainable way following an emergency. Any potential policy constraints, either external (with regard to the purchase or movement of livestock) or internal (for example agency purchasing protocols) should be assessed and inform implementation plans including, where appropriate, advocacy activities.
5. **Impact on local markets:** the purchase of large numbers of animals at local markets can have a significant impact on price, particularly following a disaster when the availability of reproductive animals may be low. This may have a negative impact on less wealthy livestock owners who are trying to rebuild their assets following the emergency.
6. **Viable herd size:** in communities where livestock are the main livelihood asset, local communities will be able to suggest optimum viable herd sizes for herd reconstitution, based on their knowledge of suitable livestock types, productivity in relation to family size and the availability of natural resources such as pasture/feed and water. Even in communities where livestock are less widespread, local assessment of appropriate species and numbers should be taken into account, as should the availability of feed (see Appendix 9.4).
7. **Environmental impact:** based on the viable herd size (see guidance note 6 above), an assessment of the environmental impact of livestock provision should be carried out (see discussion of environmental cross-cutting issues in Chapter 1). In this context it should be noted that local purchase of livestock does not increase pressure on the range, since it is based on local circulation of stock.

8. **Livestock well-being:** livestock should not be provided unless their welfare and well-being can be assured – for example in some emergencies there may be insufficient feed to support livestock in an arid area; alternatively, following a disaster in a cold climate, if adequate livestock shelter cannot be provided, the animals may suffer or die.
9. **Epizootic risk:** some livestock diseases are highly contagious and may have disastrous social and economic consequences, with risks of livestock losses. The potential risk of epizootic disease outbreak should be assessed. Where cross-border purchase of animals is being considered, it may not be possible to ensure disease control measures have been taken, and hence it may be advisable not to engage in livestock provision.
10. **Security assessment:** a detailed assessment should be carried out of the security implications of the provision of livestock before such an intervention is carried out. This should take into account whether beneficiary households will become a target of theft or violence, as well as the potential for conflict over natural resources between farming and livestock-keeping communities or within livestock-keeping communities. The intervention should not take place if it is likely to increase the vulnerability of beneficiary households and communities to violence or insecurity.

Provision of livestock Standard 2: Definition of the package

Appropriate livestock types are distributed in adequate numbers and through appropriate mechanisms to provide viable and sustainable benefits to the target communities.

Key indicators

- The design of livestock provision interventions takes account of indigenous systems of stock distribution (see guidance note 1).
- Selection of beneficiaries is based on local participation and practice (see guidance note 2).
- The type and quantity of livestock provided are appropriate to support livelihoods and are productive, healthy and adapted to local conditions (see guidance note 3).
- Animals are distributed at appropriate times (see guidance note 4).

Guidance notes

1. **Indigenous redistribution systems:** these systems are often well-developed and logical. They include provision of specific types of animals to specific types of recipient, and are based on local experience, gained over decades, of rebuilding herds in difficult environments. Livestock provision interventions

should therefore be designed to complement existing indigenous livestock redistribution systems where these exist and are appropriate for meeting the needs of the target beneficiaries.

2. **Beneficiary selection:** the identification of beneficiaries should build on indigenous methods for identifying suitable recipients, linked to a wealth ranking exercise that takes into account the minimum capital assets required for successful livestock keeping in that particular context (see Standard 1, guidance note 3 above). As noted above, the very poorest community members, although potentially the most deserving, may not be the most appropriate beneficiaries of livestock if they lack the means to maintain and manage the animals in the future. Even in communities where livestock ownership is not widespread, community participation in the identification of beneficiary criteria and of suitable recipients will help to ensure appropriate targeting and also facilitate an open process of selection to avoid resentment.
3. **Type of livestock to be provided:** selection of the type of animal includes the choice of species, breed, age, use and sex. Livestock provision interventions should use fairly young, productive animals from local breeds as these are well adapted to local conditions, including environmental conditions and disease. In addition, target communities already have knowledge and experience in the care and management of local breeds, and such breeds are also generally cheaper and more readily available for purchase than improved or exotic types. For herd reconstruction, using the analysis of the minimum viable herd size and composition (outlined in Standard 1, guidance note 6 above) a package should be defined that takes into account family size, maintenance costs and the livestock needs of the target beneficiaries (for example productive livestock such as milking goats or cattle; draught or pack animals such as donkeys or camels). This minimum number will be dependent on the role of livestock in livelihoods and the anticipated contribution of livestock to the household economy. As much as possible, recipients should be permitted to select individual animals themselves, based on an open and transparent process. Although the provision of the minimum viable herd size may be costly (particularly in livestock-dependent communities), if less than the minimum is provided households will require additional food security support until the herd reaches sufficient size, which may take a number of years.
4. **Timing of distribution:** local knowledge can be used to plan the provision of livestock to coincide with optimal availability of feed (pasture, fodder, crop residues) and water, thereby maximizing productivity and growth and minimizing negative environmental impact. This should also include consideration of climatic conditions, livestock breeding cycles and the disease calendar.

Provision of livestock Standard 3: Credit, procurement, transport and delivery systems

Credit, procurement, transport and delivery systems are efficient, cost-effective and support quality provision of livestock.

Key indicators

- Procurement is based on local purchase where possible (see guidance note 1).
- Procurement takes place according to agreed criteria, and in accordance with legal procurement procedures (see guidance note 2).
- Veterinary inspection takes place at the time of livestock purchase (see guidance note 3).
- Livestock are provided under a credit system only when this increases beneficiary commitment and at the same time does not jeopardize the productivity of the livestock provided or the capacity of the household to meet their basic needs; in all other cases livestock are provided as a gift (see guidance note 4).
- Transport is planned in advance to minimize risk of losses in transit and based on conditions that ensure the well-being of the stock (see guidance note 5).

Guidance notes

1. **Local purchase:** local purchase supports local markets and avoids the logistical, health-related, environmental and financial problems associated with the movement of animals from distant areas. In particular, purchase involving cross-border movement of animals should be avoided. The actual purchase of livestock should involve either the recipients themselves or their representatives, since local people usually know which types of animal best suit their situation. In a given community, recipients may appoint local experts, traders or elders to select animals on their behalf. A livestock fair is another mechanism for enabling beneficiaries to select stock themselves (see Appendix 9.5). However, after a disaster, it is not always possible to find sufficient young female stock locally, especially for large-scale projects requiring significant numbers of animals.
2. **Procurement procedures:** regulations concerning livestock purchase need to be identified (taxes, quarantine, cross-border issues etc.). Quarantine requirements can have a significant impact on implementation, as they can involve considerable extra time, resources, logistics and management of animals before the distribution to recipients can take place. The origin, species, sex and age of the animals need to be determined before suppliers are contracted to ensure that agreed criteria are met and the quality of the

stock should be checked by experts and community representatives before distribution. In conflict situations or areas of insecurity where looting is common, agencies should beware of purchasing looted stock.

3. **Veterinary inspection:** at the time of purchase, animals should be inspected by a veterinarian or veterinary paraprofessional for signs of ill health or poor performance. The inspector can be a local private practitioner (contracted by the project) or a government official.
4. **Credit systems do not jeopardize productivity:** the decision whether the project will be based on credit or gift distribution, and if credit, what form repayment should take, should be made during the design stage in close consultation with the beneficiaries and based on full understanding and commitment from all participating households. Where livestock are provided under a credit system, the loan is repaid in the form of the animal's offspring or cash. Cash repayment requires a degree of community integration into a market economy, and in many cases repayment in the form of stock will be most appropriate, preferably building on indigenous loan and repayment systems. However, care must be taken to ensure that the repayment arrangement (type and condition of animal, timing of repayment etc.) will not negatively affect the quality of livelihood support provided to the household by the initial provision of livestock. Selection of secondary beneficiaries should take place at the same time as identification of primary beneficiaries and repayment should be carefully monitored.
5. **Transport planning:** itinerary, duration, likely weather conditions, distances, opening hours of customs, staging points and stops need to be planned in advance, as well as the equipment and supplies needed to feed, water and milk the stock as necessary. The conditions and length of the journey should ensure the well-being of the livestock, avoiding overloading and the risk of suffocation. The stock need enough space to stand and lie in their normal position, while at the same time they have to be packed closely enough to avoid falling during the trip. The vehicle has to be disinfected before and after loading and be properly ventilated. The delivery site also needs to be properly prepared with sufficient water, feed, fencing and shelter as necessary.

Provision of livestock Standard 4: Additional support

Additional support (veterinary care, training, food) is provided to beneficiaries to help ensure a positive and sustainable impact on livelihoods.

Key indicators

- Preventative veterinary care is provided for the livestock prior to distribution (see guidance note 1).
- A system for the ongoing provision of veterinary care is established for all members of the community (see guidance note 2).

- Training and capacity-building support is provided to beneficiaries based on an analysis of skills and knowledge of animal husbandry (see guidance note 3).
- Training and capacity building includes preparedness for future shocks and disasters (see guidance note 4).
- Food security needs are identified and met according to the Minimum Standards in Food Security and Nutrition (Sphere Handbook), in order to prevent early off-take of livestock (see guidance note 5).
- Shelter and non-food needs are similarly identified and met according to the Minimum Standards on Shelter, Settlement and Non-food Items (Sphere Handbook) (see guidance note 6).
- Food security support is withdrawn only when herd size and/or the emergence of other economic activities enable independence from such support (see guidance note 7).

Guidance notes

1. **Preventative veterinary care:** prior to distribution, animals should be vaccinated, de-wormed and/or receive other preventative animal health care depending on the local disease situation. In most cases this service is provided as a single input, free of charge. However, attention should be paid to the issues of cost recovery outlined in Chapter 5.
2. **Long-term veterinary care:** beneficiary communities should have continued access to animal health care services, both preventative and curative, according to the standards and guidelines set out in Chapter 5.
3. **Training and capacity building:** training in animal husbandry may not be necessary for herd reconstitution activities, as the beneficiary communities (usually pastoralists and agro-pastoralists) may have considerable knowledge and experience in livestock management. However, some supplementary livestock distribution interventions may take place in communities or among particular vulnerable households where livestock husbandry knowledge is limited or, if the emergency has been of long duration, where such knowledge is lost. In such cases, the provision of livestock should be accompanied by adequate capacity building in the care and management of the animals in order to ensure that the stock survive, are well cared for, and can provide a useful contribution to post-disaster livelihoods.
4. **Preparedness for future disasters:** particularly in the case of supplementary livestock distribution in communities without significant livestock management experience, it is important to develop preparedness skills among recipients to minimize the risk of losing animals in future disasters. This could include activities such as: storage of feed, protection of pasture, optimal livestock marketing, early destocking, shelter construction, animal

health care and maintenance of water sources (all covered in other chapters of this volume).

5. **Food-security support:** early sale and consumption of animals is common immediately following livestock provision, reflecting the urgent food security needs of beneficiary households and/or a shortage of labour and resources that must be diverted from other livelihood activities in order to manage the stock. Additional support requirements should be assessed, based on the food-security needs of beneficiary households, and provided until the livestock become fully productive. The Sphere Handbook provides Minimum Standards for Food Security and Nutrition.
6. **Shelter and non-food support:** families in receipt of livestock may require shelter, basic household utensils, bedding, water containers and other items. In the absence of this support, they may be forced to sell livestock to acquire these items. In some situations, agencies may need to provide beneficiaries with livestock-related equipment such as carts, harnesses, ploughs and so on.
7. **Withdrawal of food security support:** a well-designed participatory monitoring system can include measures of herd growth and other livelihood-based indicators to ensure that food security support is not withdrawn before the livestock and/or other livelihood activities are able to support the recipient families, and hence avoid early and non-sustainable off-take of the livestock.

Appendix 9.1 Assessment checklist for provision of livestock

Options and implications

- What role did livestock play in livelihoods pre-emergency?
  - Main livelihood asset
  - Provision of supplementary food
  - Income generation
  - Transport or draught power
- Which species and breeds were kept and for what purposes?
- Which species and breeds have been lost and need replacement?
- If livestock did not already form part of livelihood strategies:
  - Is there potential for the introduction of livestock to meet supplementary food or income generation needs?
  - Which species and breeds would be most appropriate for distribution?
- Have alternative, more cost-effective options than livestock provision been considered?
- What indigenous mechanisms exist for redistributing livestock?
- What numbers of livestock would constitute the minimum viable herd per household in the local context?
- What are the implications of distributing these minimum numbers of livestock in the area?
  - Is there sufficient pasture or feed?
  - Is there sufficient water?
  - Is there adequate shelter or can this be constructed?
  - Will the livestock be secure or will the activity increase the risk to livestock owners and/or the animals themselves?

Beneficiaries

- What social, physical and natural capital assets do potential beneficiaries have to enable them to manage livestock successfully in the future?
- Can training in livestock management be provided if necessary?
- What roles do women and men play in livestock management and care and what are the labour implications of livestock provision?
- What are the particular needs of vulnerable groups in relation to livestock management and access to livestock products?
- Are there sufficient resources to provide livestock-related support to beneficiaries (for example veterinary care, feed, shelter) as required?
- Are there sufficient resources to provide non-livestock support to beneficiaries as required (for example food or other livelihood support while herds rebuild)?

Procurement

- What are the implications of the purchase of significant numbers of livestock on local markets?
- Are livestock available for purchase in sufficient numbers within transporting distance of beneficiary communities?
- Is transport available and can stock be transported safely without risk to their health or welfare?
- What are the risks of epizootic disease from importing stock from another area?

Appendix 9.2 Monitoring and evaluation checklist for provision of livestock

Provision of livestock

- Recipients fit with targeting criteria
- Theoretical versus actual beneficiary numbers
- Quantity of animals provided
- Quality of animals provided
- Equity in quality of animals provided between beneficiaries
- Timing of provision
- Access to distribution point
- Completion of distribution documents
- Transportation conditions
- Veterinary check and vet inputs on animals

Herd growth and productivity monitoring

- Total number of animals
- Number of adult females/males
- Number of immature females/males
- Number of females/males offspring
- Fertility rate
- Mortality rate (total, neonatal)
- Morbidity rate
- Average and seasonal production and value of by-products (milk, eggs, skins, horn, meat, etc.)

Livelihood monitoring and impact analysis

- Changes in availability and access to resources
- Changes in livelihoods activities
- Changes in revenue and capital
- Changes in level of indebtedness and ability to give or loan animals
- Changes in capacity of investment and market
- Changes in market prices
- Changes in food status (quality, quantity)
- Changes in human health status
- Changes in number of children in school
- Changes in social status within the community (for example ability to participate in ceremonies)
- Changes in animal husbandry practices
- Changes in animal health status

- Changes in availability of labour force
- Changes in household well-being
- Displacement of population, return of IDPs/refugees
- Level of reconstruction

Appendix 9.3 Provision of livestock in IDP/refugee camps

The provision of livestock in IDP/refugee camps involves particular challenges with regard to sanitation and security because of the close proximity of humans and animals. In camps facing major over-population, management challenges, precarious health conditions, conflict or shortage of key resources such as water, the provision of livestock may further exacerbate the difficulties and present additional risks to the inhabitants of the camp.

In camps where these conditions do not exist and livestock provision is therefore possible, health and hygiene precautions should be taken to minimize the spreading of zoonoses and epizootic diseases. This can include measures such as limiting the ability of livestock to roam within the camp; siting breeding units as far as possible from human habitations, preferably at the periphery of the camp; careful consideration of the type of animals to be provided, as some produce more waste than others; encouraging rapid sale of off-spring; and maintaining just enough reproductive animals to preserve stocks without massive proliferation.

Access to the resources necessary for the livestock should be regulated with both camp representatives and resident populations to minimize the risk of conflicts and shortage. Small stock that require less space and feed resources may therefore be more appropriate than large stock for livestock provision to camps. Water availability is also a key constraint, particularly in areas where human water supplies are in short supply and livestock should not be provided to camps where watering the animals puts stress on the camp's or local resident population's water sources.

The shelter and security needs of the livestock need to be taken into account (see also Chapter 8) to minimize the risk of theft and as appropriate to protect the stock from bad weather.

Finally, the choice of livestock types and breeds should take into account the temporary situation of the beneficiary population; stock with a rapid reproductive cycle that are easy to market may be most appropriate.

Appendix 9.4 Discussion on minimum viable herd size

In restocking projects in pastoralist areas the concept of 'minimum viable herd size' is often used to determine the minimum number and types of animals required to allow pastoralists to maintain a pastoralism-based livelihood. Although it may be convenient for standards and guidelines such as LEGS to provide a specific number and type of animals to be provided, in reality this differs significantly between pastoralist groups and there is no standard quantity of livestock that should be provided. Similarly, in mixed farming communities, it is difficult to determine a global figure for livestock provision.

Field experience suggests that the best way to determine how many and which types of livestock to provide is through participatory analysis and discussion with the communities concerned. This process may include a description of the benefits and problems of different livestock species and breeds for the different wealth groups within the community, and an analysis of any indigenous restocking systems.

A further consideration is that although a 'minimum herd size' may be defined with communities in this way, at the same time many agencies are faced with limited budgets for the provision of livestock, and the more animals provided per household, the fewer the total number of households that will benefit from the initiative.

For example, Save the Children UK implemented a restocking project between 2002 and 2003 for 500 internally displaced families in eastern Ethiopia as a post-drought response, providing each pastoral household with 30 breeding sheep or goats. The project was implemented with the Ethiopian government's Disaster Preparedness and Prevention Committee and the Somali Region Livestock Bureau. The total budget was around US$244,500, equivalent to $489 per household. This budget excluded the cost of food aid and household items, which were provided by other agencies such as the Christian Relief and Development Agency and UNICEF. An evaluation concluded that although the project had provided substantial benefits through the restocking process, the package should have included at least 50 sheep and goats per household in order for the families to have a viable source of livelihood. This would have increased the project budget by 41 per cent if 500 households were still to be targeted. Alternatively, the original budget could have covered 300 households with 50 animals each. The evaluation indicated that a budget of around $690 per household was needed in order to restock the target communities in a viable way (Wekesa, 2005).

This example illustrates the challenge faced by aid agencies when deciding how many households to restock and how many animals to provide, and the importance of determining what exactly a 'minimum viable herd' is in the specific beneficiary context.

Appendix 9.5 Livestock fairs

Livestock fairs are a way of providing livestock that gives recipients the opportunity to choose animals from a range of species, sex and age. Compared to classical distributions, livestock fairs contribute to a higher feeling of ownership and empowerment and help to stimulate the local economy. The money invested in the project goes directly into the economy of the targeted area and the active participation of professional or occasional traders favours initiative and entrepreneurship.

Livestock fairs are specific markets dedicated to livestock where local traders and livestock owners are invited to bring animals for sale. The pre-selected beneficiaries of the project receive vouchers of a monetary value they can exchange for the animals of their choice in the fair. At the end of the transactions, vouchers are repaid in local currency to the traders. Livestock fairs are also a good opportunity to bring together people involved in animal husbandry to encourage sharing of information and knowledge.

Livestock fairs can be suitable for either herd reconstitution or other livestock provision.

The Case studies chapter includes a case study on livestock fairs in Niger (see Case study 9.3)

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Case studies

Chapter 1: Livelihoods-based livestock responses

Case study 1.1: Impact of rapid onset emergency following a drought

The earthquake that struck Gujarat State in western India in 2001 affected 21 out of its 25 districts. In the three worst-hit districts nearly 9,000 livestock (cattle, buffalo, sheep and goats) were killed, injured or died due to exposure. At the time, Kachchh District, which suffered the most damage, was still recovering from the effects of a cyclone that struck the coastal area in May 1998 and that killed an estimated 50,000 livestock. The earthquake occurred at 08:47am. Had it occurred in the very early morning or late at night the loss in human lives and numbers of livestock killed would have been much greater. As it was, most livestock had already been taken out of the villages for grazing when the earthquake struck. However, those farmers who got a late start that morning or did not have available labour lost more animals. In some instances, cows and buffalo that were killed had been recently milked and were standing next to a wall of the house or shed when it collapsed.

Livestock received little attention the first two weeks after the earthquake since people were still recovering from the shock of the disaster and relief efforts were focused on the human population. Most livestock were just left to wander around the towns and villages in search of feed and water. Some animals died due to injuries received from collapsing buildings or wounds from debris. Other animals, which normally were kept at night in some form of shelter, died from exposure, as it was the colder period of the year. By the time farmers were able to give attention to their animals and provide them with some form of feedstuff the condition of many of the animals was already poor. Those cows and buffalo that had not been milked during this period stopped lactating.

The impact of the earthquake on the agriculture and livestock sector was magnified due to a two-year drought. The drought had already wiped out most of the forage grass and natural pastures were damaged or destroyed. The lack of fodder was compounded by a shortage of drinking water for livestock. Many water holding tanks cracked or collapsed due to the earthquake, hence regular watering points were no longer available and animals had to be walked longer distances, resulting in less frequent watering and degradation of cropland and natural pastures as animals passed through new areas. Following the earthquake, many of the government veterinary services were not able to function as normal. Veterinary office buildings, laboratories, dispensaries and staff quarters were totally destroyed or severely damaged.

A technical cooperation project proposal was developed with the goal of providing small and marginal livestock-owning farmers in the hardest hit communities in Kachchh with immediate benefits in the form of simple animal shelters and concentrate feed. The project also aimed to assist the government in restoring the operational capacity of village veterinary first-aid centres so that necessary animal health activities and disease prevention measures could be carried out. Addition-

ally, the project would support the government in its medium-term and long-term efforts to restore smallholder animal husbandry activities to their pre-earthquake levels and to address the secondary effects of the on-going two-year drought.

Source: Goe, M. R. (2001) *Assessment of the Scope of Earthquake Damages to the Livestock Sector in Gujarat State, India*, Consultancy Mission Report. FAO, Bangkok/Rome.

Chapter 3: Common standards

Case study 3.1: Promoting livestock marketing and improving nutrition

In Turkana, Kenya in early 2005, VSF-Belgium implemented a destocking project with the aim of creating markets for livestock sales and improving the nutritional status of particular target groups. Goats were purchased from Turkana pastoralists by private traders at an agreed price and distributed to schools and health centres in the district, where they were reimbursed by project funds with an additional 20 per cent of the purchase price as their profit. The project succeeded in destocking over 6,000 goats from 2,500–3,000 pastoralists through over 300 traders, and distributing them to nearly 100 health centres and schools.

Challenges faced by the project included: fixing an appropriate price and ensuring that all traders adhered to the agreement; concerns from the traders about low profit margins, high bank charges and feeding costs; accessibility to the markets for more vulnerable or more remote pastoralists; the capacity of the institutions to handle the influx of goats (which were supposed to be slaughtered on the day of arrival); and in some cases the tendency of the institutions to use the meat to substitute for other protein, rather than to supplement the existing diet.

The project was designed and implemented by VSF-Belgium in collaboration with a number of stakeholders, in particular the District Steering Group and the Livestock Service Providers Forum. These bodies provided an effective coordination forum for the operation. While challenges remain with regard to involving the pastoralists more in this process, it is clear that the success of the project is largely due to the positive collaboration and coordination between implementing agencies.

Source: D. J. Watson and J. van Binsbergen (2006) 'Review of VSF-Belgium's "Turkana Emergency Livestock Off-take" Intervention', ILRI, Nairobi.

Case study 3.2: Coordinating responses to flooding in Southern Ethiopia

In August 2006, the Omo River in southern Ethiopia burst its banks and flooded 14 villages in the Dassenetch and Nyangatom districts. The flood took communities and local government by surprise and resulted in the loss of 363 people and 3,200 cattle. Over 21,000 people lost their homes, while many lost their crops and stored grain.

Cordaid has been working with three local partner organizations (FARM-Africa, Ethiopian Pastoralist Research and Development Association (EPaRDA) and Gamo Gofa Catholic Church) to implement the South Omo Risk Management Programme. Together with other humanitarian organizations, they mounted a relief operation in response to the crisis. Cordaid and two of its partners (EPaRDA and FARM-Africa) began livestock interventions alongside a human food and shelter response, focusing on veterinary inputs and logistical support. The district administration established a range of emergency committees (including veterinary, human health, logistics, relief distribution) reporting to a general steering committee chaired by the district administrator. Cordaid and their partners' work was coordinated by the veterinary emergency committee, which reported daily to the general committee and that enabled the coordination of all livestock emergency responses including the mobilization of veterinary professionals and community animal health workers, as well as the organization of mass treatment and vaccination. This coordination process brought together all relevant stakeholders and helped to avoid duplication of effort. As a result, unprecedented numbers of livestock were reached by the programme in a short (six week) period, including the vaccination of over 150,000 livestock and the treatment of a further 145,000, largely for gastrointestinal worms and external parasites.

Source: Cordaid (2006) 'Cordaid Ethiopian partners emergency report', Cordaid, Addis Ababa.

Case study 3.3: Contingency planning allows for rapid response

Cordaid has been supporting the emergency and disaster risk reduction programmes of local partner organizations in southern Ethiopia (SNNPR and Oromiya Regional State). This support includes a built-in contingency planning and budgeting system to allow for effective and timely response to a sudden or slow-onset emergency. As part of this programme Cordaid has been supporting its partner EPaRDA to implement the South Omo Risk Management Project in four pastoral districts. The project aims to reduce vulnerability and increase capacity to cope with disaster risks, using the drought cycle management model, based on the premise that emergencies will occur during the life of the project and monitoring and contingency planning are thus incorporated.

The sudden onset of flooding described in Case study 3.2 above left many people homeless and without their livestock. Because of the contingency plan and budget already in place, EPaRDA was able to intervene almost immediately following the disaster to provide food, non-food items, emergency livestock interventions and human health services. The budget provision had been established with full control in the hands of the local partner, which facilitated the rapid response.

Source: Cordaid, (2006) 'Cordaid South Omo Risk Management Project', Cordaid, Addis Ababa.

Chapter 4: Destocking

Case study 4.1: Accelerated off-take in Ethiopia

This case study presents the results of an impact assessment of an accelerated off-take intervention in Moyale Woreda led by the Department of Fisheries and Livestock Marketing and Save the Children US during the Horn of Africa drought in 2006. Two private livestock traders were linked with pastoralists to facilitate the off-take of cattle. As the intervention progressed, the two traders were provided with loans from Save the Children US of $25,000 each. The intervention led to the purchase of an estimated 20,000 cattle valued at $1.01 million. Approximately 5,405 households were involved, each of which received on average $186 from the sale of cattle in the programme. In terms of aid investment, the approximate benefit–cost ratio was 41:1. During the drought, income from destocking accounted for 54.2 per cent of household income (n=114 households), and was used to buy food, care for livestock, meet various domestic expenses, support relatives and either pay off debts or add to savings. In terms of supporting local markets and services, 79 per cent of the income derived from destocking was used to buy local commodities or services. Expenditure on livestock care amounted to 36.5 per cent of the local expenditure, and included the private trucking of livestock to better grazing areas. The buoyant export trade in live cattle and chilled meat was considered to be an important driver of the accelerated off-take, demonstrating a positive linkage between livestock and meat exports, and pastoral vulnerability during drought.

Source: Abebe, D., Cullis, A., Catley, A., Aklilu, Y., Mekonnen, G. and Ghebrechirstos, Y. (2008) 'Livelihoods impact and benefit-cost estimation of a commercial de-stocking relief intervention in Moyale district, southern Ethiopia', *Disasters*, 32 (2): 167–86 .

Case study 4.2: Transport subsidy for accelerated off-take in Kenya

The goal of VSF-Belgium's transport subsidy intervention in 2001 was to increase off-take rates by encouraging pastoralists to trade their livestock. The project allowed for two kinds of subsidies: one for itinerant traders who were buying livestock from the Turkana people and reselling either to markets within the district or to large-scale traders; and another for large-scale traders who were exporting to terminal markets outside Turkana. A 40 per cent subsidy was agreed between the implementing agency and the traders.

The implementing agency set up a series of procedures for paying the transport subsidy. These included a verification form, completed and signed by the control officer at the district's terminal point in Kainuk, including photographs of the vehicles used to transport the animals, receipts to the county council or other authorities where the livestock were off-loaded, transport receipts and letters from the local chief and the veterinary officer detailing the origin, type and number of

livestock, the date of departure from the point of purchase and any other relevant information.

In total, 1,175 cattle and 3,584 sheep and goats were transported to markets in Nairobi, and a further 20,688 sheep and goats were transported from one area of the district to another, either for fattening or for slaughter. In all, the subsidies came to $52,790, which was $3,340 over budget. The animals moved to Nairobi were valued at $117,070. One of the strengths of the intervention was its accounting and administration, both of which were good. Nevertheless, fraud proved very difficult to control and the budget was rapidly exhausted. Although collaboration with chiefs, marketing associations and local government officials was vital to the project's success, this left it vulnerable to corruption.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.3: Contract purchase for slaughter destocking

Kenya

When implementing a destocking operation in Northern Kenya in 2000, a local NGO – Arid Lands Development Focus (ALDEF) – requested community members to identify trustworthy contractors from among themselves to supply livestock to the programme. These included members of the 200-plus women's groups in peri-urban areas, which were already supported by ALDEF with a micro-credit programme. These groups supplied the bulk of the sheep/goats, although men were contracted in the few rural areas that the scheme targeted. Individual women contractors also supplied cattle and camels to schools and hospitals. The purchasing price was fixed at $15/sheep or goat, and at $66 for each head of cattle or a camel. During the second phase of the operation, this was raised to $17.50/sheep/goat, $73/camel and $80/cattle. Contractors were instructed on the type of animals to buy, i.e. those that were too weak to survive the drought: generally male animals, females with udder defects, old or barren stock, and animals with a history of abortion. Agreement was reached between ALDEF and the contractors on the number and types of animals each had to supply. The contractors sold the livestock to ALDEF at the fixed price, retaining the profit for themselves. Purchased animals were handed over to community committees and delivery notes issued to effect payment. A total of 950 cattle/camels and 7,500 sheep/goats were supplied to the programme by the contractors. The project covered seven peri-urban and seven sparsely populated rural areas. Fresh meat was distributed regularly to beneficiaries: two sheep/goats between eight families per week for the duration of the operation. Livestock was distributed at the rate of two bulls/camels per week per school, for three and later four high schools; six goats/week to a hospital; three per week to a TB centre;

and goats and one bull per week for six orphanages. A high level of community involvement meant that project activities were completed in time in both phases. Slaughtering took place twice a week in all operational sites.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Ethiopia

CARE Ethiopia implemented a destocking operation in the Borana area of Southern Ethiopia in early 2006. The purpose of the programme was to promote off-take of animals that would otherwise die due to drought, and to provide protein-rich food to drought-affected people. Purchased animals were slaughtered and the meat was dried and distributed. After dialogue with the communities, destocking centres were established at four villages near permanent water wells. The work began in March 2006 but the supply of livestock decreased after the onset of the *furmata* rains in mid-April.

A total of 2,411 animals of different species were slaughtered in the four centres and a total of 2,814kg of dried meat was packed and distributed along with supplementary food. The weight of each pack of dried meat varied from 0.5kg to 0.75kg, and on average each household received 2.16kg of dried meat. A fixed value was set for each species of livestock – cattle $33, camels $66, and sheep and goats $7.50. Purchasing was organized through the Dillo Kayo Multi-Purpose Cooperative with an agreed profit margin. In addition to receiving a small profit from the purchase of livestock, the cooperative received the hides and skins from the slaughtered animals. In total, 1,121 households sold livestock for destocking and these households received a total of $25,590, hence the average income per household from livestock sales was $23.

Source: Demeke, F. (2007) 'Impact assessment of the PLI/ENABLE emergency livestock interventions in Dire Woreda, Borana Zone', CARE International, Addis Ababa.

Case study 4.4: Voucher payment system for slaughter destocking, Kenya

In 2000 CARE implemented a destocking operation in the Garissa District of Kenya, in parts of the district difficult to access that required military escorts due to security problems. Payment to beneficiaries was through vouchers, which were put into the name of a trusted community member for cashing at CARE's Garissa office. Other vouchers were given collectively to one person to collect the cash, or were exchanged for cash with traders, who then brought the vouchers to the CARE Garissa office to be redeemed. The voucher system was introduced because

of security problems associated with travel to operational sites with cash. Under the voucher system, 850 head of cattle and 250 sheep and goats were purchased.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.5: Expanding coverage through temporary markets, Kenya

Northern Relief Development Agency (NORDA), a local NGO in Northern Kenya, implemented a destocking operation in some 20 centres during the 2000 drought. Market dates were fixed during initial meetings in each village. Sheep and goats were purchased in most areas, and cattle in those few villages in highland areas where there were no goats. Purchases were carried out in the presence of relief committees, and those receiving meat chose or rejected the animals on offer against a fixed price set by NORDA. The operation took place only once in each centre but a total of 13 tonnes of fresh meat was distributed to 6,000 beneficiaries.

In 2000, CARE Kenya planned to support its food distribution centres with the provision of meat through destocking operations. Each food beneficiary centre was allocated either 25 head of cattle or 50 sheep/goats. CARE staff witnessed the slaughtering of the animals, but distribution of the fresh meat to beneficiaries was left to the relief committees. This minimal supervision was partly because CARE covered more centres than it had staff or vehicles for. The committees were also entrusted with giving the hides and skins to women's groups. The destocking operation covered a total of 39 centres.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.6: Meat relief committees

Community oversight of destocking: Kenya

In 2000, ALDEF involved communities in identifying the criteria for the selection of slaughter destocking beneficiaries, using a selection committee. Vulnerable households were targeted and the list of beneficiaries was read out in public. People unhappy with the list were given the right to appeal to the meat relief committee. The dispute was then referred back to the selection committee for a final decision. The meat relief committees also oversaw the destocking operation (as well as curbing the power of the other food relief committees). In addition to selecting beneficiaries, they were entrusted with receiving livestock from contractors and distributing it to eligible families; signing delivery documents; witnessing the slaughtering process;

collecting skins and hides; managing any disputes; and liaising with ALDEF. In addition, committee members and ALDEF monitors witnessed the distribution of the meat.

Community slaughter and distribution: Kenya

In 2000, NORDA identified the number of sheep and goats it planned to slaughter in Elwak sub-district and Takaba division, in Northern Kenya. However, meat relief committees in Elwak and Takaba made further allocations to locations and sub-locations (15 in Elwak and 5 in Takaba). The criteria for selecting beneficiaries (those eligible to sell livestock and those who would receive meat) were explained to the relief committees, who then made their selections during community meetings. In Worgedud, for example, beneficiaries were selected mainly on an inability to pay borehole fees for their animals. In Takaba, those selected had the most pressing cash problems, for example families with members needing medication, families whose children were threatened with expulsion from school for non-payment of fees, or families unable to afford basic commodities such as sugar and tea. Beneficiary families were asked to organize themselves into groups – four families per sheep/goat or 30 families per cow – and each group slaughtered, flayed and distributed the fresh meat among themselves. Meat was distributed only once in any of the operational areas. In most cases, bound by traditional norms, beneficiary families shared the meat with others.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.7: Employment opportunities from destocking

In 2001, VSF Belgium undertook a dry-meat distribution operation in Turkana District, Kenya, and employed community members for processing dry meat as part of an employment scheme. It paid women members $4 for each kg of processed dry meat. In addition, it paid $0.15 for slaughtering and a total of $1.15 per kg of dried meat for watchmen, storage and meat inspection services.

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.8: Cost of processing dried meat

The following table illustrates the cost of processing 1kg of dried meat from a case study in Turkana District in Northern Kenya. Compare the final cost against the purchase price of one sheep/goat:

Cost item	Price (US$)	Price (KSh)
Purchase price of 1 sheep/goat	8.75	600
Cost of slaughtering	0.15	10
Wages for watchmen (when drying)	0.04	3
Storage cost	0.73	50
Salt	0.15	10
Meat inspection	0.37	25
Water	0.03	2
Labour	3.65	250
Sub-total	13.87	950
Profit margin	3.63	250
Total cost of 1kg of dried meat	17.5	KSh1,200

Note: 6.5kg carcass = 4kg boneless meat = 1kg dried meat

Source: Aklilu, Y. and M. Wekesa (2002) *Drought, Livestock and Livelihoods: Lessons from the 1999–2001 Emergency Response in the Pastoral Sector in Kenya*, Humanitarian Practice Network Paper 40, Overseas Development Institute, London.

Case study 4.9: Complementary feed provision and destocking activities, Niger

Jeunesse En Mission Entraide et Developpement (JEMED) has been working with nomadic pastoralists in the Abalak area of Niger since 1990. In late 2004 pasture growth was poor, rainfall low and a crisis appeared imminent. JEMED therefore facilitated an assessment of pasture throughout central Niger by community teams who reported back and helped to form plans for relocation.

JEMED also established a scheme to destock livestock from interested families: JEMED provided transport and beneficiary representatives took the stock (one or two large stock or several small stock per family) to the border with Nigeria for sale, where a reasonable price could be obtained.

The destocking scheme was linked to a supplementary feeding initiative, whereby beneficiary families agreed to purchase grain or fodder to support their remaining livestock. After destocking was complete at 14 sites, a total of 4,849 small stock and 462 large ruminants had been sold, while 317,199 kg of grain had been purchased as well as wheat bran and sorghum stalks.

During the subsequent Harmattan winds, which were the worst in living memory in the area, many livestock were lost and remaining pasture buried in the dust storms. Stock prices fell in the markets and food relief was provided by JEMED and other agencies. JEMED's evaluation after the emergency had passed concluded that those families who had participated in the destocking and supplementary feed

experienced significantly lower stock losses (77 per cent lower losses for cattle and 32 per cent for small stock) than non-participating families.

Source: Jeff Woodke, pers.com., JEMED, Niger.

Chapter 5: Veterinary services

Case study 5.1: Veterinary interventions in Afghanistan

Over a five year period in Afghanistan, 60–80 per cent of livestock were lost because of the conflict. In 2002–3, the International Committee of the Red Cross (ICRC) carried out a veterinary intervention in two districts in the Central Highlands that aimed to rebuild herds through improved animal health. The project planned to treat 100 per cent of the animals in order to significantly reduce parasite numbers. The project team comprised two Afghan veterinarians and a team of CAHWs.

Each animal was treated free with anthelminthic and acaracide in the autumn of 2002, in spring 2003, and again in the autumn of 2003. Every livestock owner was also given an acaracidal powder to treat the stables or sheds where the animals overwintered. The first treatment involved 57,000 animals, the second 154,000 and the third 248,000. The livestock belonged to a total of 5,300 families. Of the animals treated, 80 per cent were sheep or goats, 14 per cent cattle and 6 per cent equines.

Monitoring was carried out during the treatments and extension services were provided after the intervention. The intervention had the following impacts: herd sizes doubled; average live weight increased; herd fertility and survival of young stock improved; and the impact was so great that after the project stopped, the two veterinarians were able to earn a living treating the livestock and being paid in full by the livestock owners.

Source: Oxfam (2005) 'Livestock Programming in Emergencies Guidelines', unpublished draft, Oxfam, Oxford.

Case study 5.2: Alternative approaches to emergency veterinary care – voucher schemes

In order to overcome some of the common problems associated with free distribution of veterinary drugs and also to involve the private sector in emergency programmes, ICRC has piloted a voucher scheme in northwest Kenya. Vouchers were given to selected families who could exchange them for specific types of treatments provided by private CAHWs and veterinary assistants. The vouchers covered drugs valued at KSh1,000 ($14) and were limited to the use of four types of drug. The CAHWs and veterinary assistants then exchanged the vouchers for payment plus their service charge, provided by a private veterinarian. In turn, the private veterinarian was reimbursed by ICRC and added his own service charge. The scheme covered 500 households, equivalent to around 30,000 people.

This proved a promising approach for involving the private sector in emergency veterinary programs and may be worth testing in other countries. The advantages included targeting of more vulnerable households (requiring a strong community-based process), plus delivery of the service by a relatively efficient and pre-existing private network of veterinary-supervised CAHWs. The CAHWs had been previously trained using the guidelines of the Kenya Veterinary Board.

The disadvantages include a fairly lengthy time investment at the design stage, including the need to set up detailed procedures and formats for administering and monitoring the scheme. Given the potential need to address a variety of health problems in different species of livestock, the range of drugs needs to be expanded beyond four products. In turn, this further complicates the design and administration of the scheme.

Source: Mutungi, P. (2005) 'External evaluation of the ICRC veterinary vouchers system for emergency intervention in Turkana and West Pokot Districts', ICRC, Nairobi.

Case study 5.3: Emergency animal health response to drought in Kenya

FARM-Africa's Northern Kenya Pastoralist Capacity Building Project works in Marsabit and Moyale Districts of northern Kenya. In the 2005–06 drought government veterinary officers reported livestock losses of between 65 and 85 per cent. Pasture and water were in scare supply and livestock were therefore exposed to starvation and also were more susceptible to disease.

In collaboration with government veterinary services, FARM-Africa requested funds from FAO to carry out an emergency animal health initiative. The objective was to improve the health status of core breeding livestock in the project area to withstand stress-induced outbreaks of livestock diseases and to reduce the parasitic load to sustain productivity. The project targeted 20 per cent of the livestock in the two districts, with mass treatment and de-worming.

Teams comprising FARM-Africa staff, local government veterinary officers and animal health assistants, partner organization staff, and CAHWs carried out the treatment. The basic package consisted of a de-wormer and a trypanoside; an additional optional package targeting sick or weak animals was also available, comprising multivitamins, an anti-parasitic and antibiotics. Payment for the treatment was made in cash or kind, as follows:

Cost item	Payment in kind	Payment in cash
Cattle/donkeys	1 goat per 20	KSh50 ($0.70)]
Sheep/goats	1 goat per 100	KSh5 ($0.07)
Camels	1 goat per 10	KSh50 ($0.70)]

The direct beneficiaries of the project were 2,107 households in Marsabit District and 1,560 households in Moyale district, reaching a total of approximately 27,600 people.

The anticipated impact of the project was improved livestock health over time, which in turn would contribute to higher milk and meat production; increased immunity to disease; and improved condition of draught oxen in preparation for the next planting season. In the longer term it is anticipated that livestock reproduction rates will increase and ultimately food security improved.

In the interim, beneficiaries were positive about the intervention and felt that their livestock were stronger, more capable of withstanding the effects of drought and likely to increase their milk production for immediate consumption.

Source: FARM-Africa (2006) 'Immediate support to agro-pastoral communities as a drought mitigation response: Marsabit and Moyale Districts', Final Report to Food and Agriculture Organization of the United Nations, OSRO/RAF/608/NET (CERF2), FARM-Africa, Nairobi.

Chapter 6: Ensuring feed supplies

Case study 6.1: Supplementary feeding in Rajasthan, India

The arid and semi-arid areas of Rajasthan in northern India are subject to periodic droughts that can pose serious threats to livelihoods. Most families in the area practise sedentary or semi-sedentary agriculture, which means that their capacity for relocating to find feed for their livestock in times of shortage is limited. Oxfam has been operating a programme of fodder and supplement provision in the area during dry periods. The programme was able to target 3,500 livestock and was very successful in preventing mortality and even in increasing milk production by up to half a litre per day.

Source: www.reliefweb.int/rw/rwb.nsf/AllDocsByUNID/dd5cd2005c499eebc1256c84004c0f11

Case study 6.2: Livestock relocation during flooding, Bangladesh

Relocation of livestock can be used to counter the impacts of feed shortages brought on by drought. However, in Bangladesh, a similar response may be required to protect livestock from the impacts of excess water. Water levels can rise to a height that can seriously threaten the well-being of people and livestock during the floods that periodically occur in Bangladesh. A common intervention, implemented by agencies such as Oxfam, has been to relocate endangered livestock to central locations where they can be fed and cared for. Where animals are not physically threatened by flood waters, boats may also be used to deliver feed and other essential supplies that will keep the livestock alive until flood waters have receded.

Source: www.odi.org.uk/alnap/publications/pdfs/ALNAP-ProVention_flood_lessons.pdf

Case study 6.3: Livestock owners share their rations with their animals, Chad

Some of the refugees from Darfur who managed to reach camps in eastern Chad brought their livestock with them but found little water and pasture available. In interviews, some refugees explained that they were using some of the food ration they received in order to keep their animals alive, as a vital source of milk and cash.

Source: SPANA (2007) Press release, Society for the Protection of Animals Abroad, London.

Case study 6.4: Funding is not always the problem

In any emergency situation, logistical problems can often make or break the success of proposed interventions. Supplementary feeding programmes may be particularly vulnerable to failure as a result of practical difficulties during implementation. VSF-Belgium describes the failure of an experimental supplementary feeding programme for poultry in the Turkana region of Kenya that was unable to meet its objectives despite adequate funding. A number of contributing problems were identified, including: purchasing feed from outside the country without fully exploring the potential for obtaining it from a local source; spoilage of the feed that was not made up to an appropriate formulation; and a lack of contingency planning to ensure that the project's objectives could still be met despite the problems experienced. Experiences such as these can have unfortunate knock-on effects as potential participants are likely to develop a degree of scepticism about interventions that have not been properly evaluated for their benefits.

Source: www.reliefweb.int/library/documents/2002/odi-ken-23dec.pdf

Case study 6.5: Women help manage a nucleus herd feeding programme in Moyale, Ethiopia

One of Save the Children USA's interventions during the Ethiopian drought in early 2006 was a feeding project to assist the most vulnerable members of pastoralist communities to protect an essential component of their livelihoods by preserving a nucleus breeding herd. Feed lots were established in three sites in Moyale district for feeding, treating and vaccinating a selected group of productive livestock. In total, about 1,000 sheep/goats and 400 cattle were kept in the feed lot for the worst month of the drought and then returned to their owners.

Efforts were made to ensure that women-headed households were able to participate fully and benefit from the project. At the same time, women were also

involved in the management of the feed lot, including employment as caretakers to feed and look after the stock during the day. The involvement of women in these tasks was first discussed and agreed with community leaders, building on Somali women's roles as the prime carers of sheep and goats.

Source: Nejat Abdi Mohammed, Education and Gender Officer, Moyale Site, Save the Children USA, Ethiopia, pers. com.

Case study 6.6: Feed banks in Niger as part of a drought preparedness initiative

The Pastoralist Survival and Recovery Project in Dakoro region, Niger, is run by Lutheran World Relief, with partner organization CEB (Contribution à l'Education de Base). The project was initiated following LWR's emergency food relief intervention during the Niger famine in 2005 in order to increase the preparedness of affected communities to cope with future droughts and famine. In discussion with communities in Dakoro region, four key interventions were identified: provision of livestock ('restocking'); feed banks; water point development; and community forums to facilitate community participation in all aspects of the project as well as to address issues such as conflict between farming and herding communities, and awareness raising on rights.

Through the participatory planning forum, the different components of the project were designed and planned. The community-run feed banks aimed to ensure year-round access to reasonably priced animal feed. The six banks are a combination of a storage facility, a cooperative and a financial institution, and are each supported by a warehouse and a bank account. The banks are owned by herder associations, which buy feed in bulk when prices are low (during and after the harvest) and then sell the feed back to members during the year at cost plus a management fee. This improves the pastoralists' terms of trade between feed costs and animal sales, because it both decreases the cost of inputs and (with better feed stock) increases the sale price of animals, thus increasing their income and their ability to purchase food for their families.

The feed banks were established in sites selected by the local herders for accessibility, security and visibility, generally a herders' meeting point in a village or a temporary settlement along migratory paths. For the more settled populations, the banks were constructed at the chief's headquarters on land donated by the chief or a community member. Community members contributed labour and locally available building materials such as sand and gravel under the management of a committee elected by the herder association.

Two key indicators were identified in order to monitor the impact of the feed banks, namely sales of feed and the replacement of the feed. Thus far, all the feed banks have sold all their stock and replaced it.

The beneficiary communities anticipate a number of short- to medium-term livelihood benefits in addition to drought protection, namely improved animal health and an increase in milk production (which may impact on nutrition and/or income). If there is a drought, the community anticipate lower livestock mortality rates compared to the previous drought due to the availability of animal feed, as well as a reduction in stress sales of livestock. If destocking does take place, they anticipate a better return on their animals, which will be healthier and fatter. Migrations in search of pasture or work should be less.

There is a high demand for animal feed from transhumant pastoralists, who are charged a higher rate than association members to help recover costs. The committees face the challenge of managing the stocks so that sufficient feed remains to cover the local community's needs.

One local chief explained that the key benefit from the feed banks is that they help the community to 'survive and recover from drought' – during a drought feed is not available or affordable and so without the support of the feed banks, they would be forced to sell or slaughter most if not all of their livestock, knowing they would die anyway. The combination of the feed banks together with the provision of livestock based on a traditional restocking system (see Case study 9.2) have had a positive effect on the terms of trade for livestock keepers in the Dakoro region.

Source: Lutheran World Relief Pastoralist Survival and Recovery Program (ARVIP) Proposal (2005); ARVIP Baseline Survey; Mid-Term Visit Report by John Burns, Tufts University (2006); Evariste Karangwa, Meghan Armisted and Mahamadou Ouhoumoudou, LWR staff, pers. comms.

Case study 6.7: Building on existing feed supply lines and distribution points

When a major earthquake occurred in 2001, Gujarat State in India had been experiencing a consecutive two-year drought. As such, the government already had a national committee in place to monitor and implement drought mitigation activities. Therefore, the railroad and truck supply lines being used to bring feed (concentrate and fodder) to livestock in drought-stricken areas could be drawn on to deliver feed to distribution points in the weeks following the earthquake. Local NGOs and village institutions were able to assist in providing temporary shelters and secure holding areas for livestock, along with feed and water. These groups also helped to coordinate the receipt and distribution of feed sent to the earthquake-affected area by private organizations and NGOs from outside the state.

Source: Goe, M. R. (2001) 'Assessment of the scope of earthquake damages to the livestock sector in Gujarat State, India', Consultancy Mission Report, FAO, Bangkok/Rome; Goe, M. R. (2001) 'Relief and rehabilitation activities for the livestock sector in earthquake affected areas of Kachchh District, Gujarat State, India', Technical Cooperation Project Proposal. FAO, Rome/Bangkok.

Case study 6.8: Emergency cattle feeding in Bangladesh floods

The Bangladesh chars are sandy islands and low-lying flood-prone areas at the river's edge that are frequently eroded and re-deposited by the river. The UK government's Department for International Development (DFID) Chars Livelihood Project has been working with Char residents in Northern Jamuna to support livelihoods through asset transfer, homestead improvements to withstand flooding, water supply provision and training and capacity building.

In July 2007 sudden severe floods affected over 60 per cent of the country, with particularly negative impact in Northern Jamuna. The Chars Livelihood Project responded with a relief effort that lasted for two weeks, when the floods receded. The relief effort included food aid, water purification tablets, rescue operations and some livestock support. The latter centred on the provision of livestock feed for 15,000 cattle over an eight-day period, which was sufficient for at least 9 out of 10 families in the project area. In addition, over 3,800 people were rescued, together with 3,375 cattle.

A 'customer satisfaction survey' revealed that on average 79 per cent of the households were highly satisfied with the relief effort as a whole, with a further 20 per cent being fairly satisfied. Only 1 per cent of beneficiaries were dissatisfied with the relief activities.

Source: Marks, M. and R. Islam (2007) 'The CLP flood relief activities (August 2007): Summary of relief efforts and customer satisfaction survey', Innovation, Monitoring and Learning Division, Chars Livelihood Programme, Maxwell Stamp plc, DFID and Government of Bangladesh, London and Dhaka.

Chapter 7: Provision of water

Case study 7.1: Impact of watering stations in Borana, Ethiopia

An East African NGO, Action for Development, has been building watering stations at a number of locations in the Borana rangelands of southern Ethiopia. These stations have been very successful in supplying water and consequently have helped to keep many livestock alive through the droughts that have struck the area in recent years. However this has come at a price with the aggregation of livestock around the watering stations leading sometimes to severe fodder shortages. Future activities in the area will attempt to resolve this problem by building further watering stations where rangeland is still relatively plentiful. In the meantime, other activities of the programme include the provision of feed at the water points to ensure that participating livestock can be adequately fed as well as watered.

Source: www.irinnews.org/report.aspx?reportid=32688

Case study 7.2: Water trucking for drought relief in Somalia

VETAID received funding from the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) for a water trucking project to benefit pastoralists in Gedo, Bari and Karkaar regions, Somalia, areas that have been severely affected by drought. The project in Gedo trucked water to 2,500 breeding cattle and 1,100 sheep and goats to allow them to make more effective use of the pasture areas of Bardera and El-wak Districts. This intervention helps to preserve the livelihood base of the community and allow them to recover more rapidly from the drought by maintaining at least some of their core breeding stock. The project also supplied water to 3,600 pastoralist families. In addition, with a view to the longer-term sustainability of the water resource, VETAID is carrying out the rehabilitation of water catchment structures and removal of livestock carcasses from wells and dams.

Source: www.vetaid.org/emergency-work.asp

Case study 7.3 Strengthening water supply infrastructure in Pakistan

During the Pakistan drought of 2000, a number of initiatives involving the public, private and NGO sectors were undertaken to reduce impacts on livestock. An initiative of the Cholistan Development Authority supported the commercial supply of water wells equipped with solar pumps. This initiative established drinking water stations in the 6 million acre area of the Cholistan Desert to help save the herdsmen and cattle stranded under drought conditions. This represented a major attempt to counter the severe drought that threatened as much as 50 per cent of the livestock in parts of the country. Even the military were involved during this particular drought: in a similar agreement, the Punjab Rangers established six sweet-water wells and 60 water supply systems with desalination capacity at a number of their border outposts. These were able to supply around 500 herdsmen and their cattle at each of 70 water stations.

Source: http://findarticles.com/p/articles/mi_m0EIN/is_2000_June_27/ai_62981972

Chapter 8: Livestock shelter

Case study 8.1: Humans and livestock cohabiting in crisis in Kosovo

In 1999, during the conflict in Kosovo, families cohabited with animals in livestock shelter, because their war-damaged houses could no longer provide suitable shelter from the cold climate. Families benefited from the body heat of livestock during the winter nights. Co-location with their animals also helped to reduce the risk that livestock assets would be stolen. Shelter and tool kits were designed to allow livestock shelter to be upgraded and expanded to cope with increased human occupation as well as animal occupation.

Source: A. Porter, IRC, pers. co.m., 1999.

Case study 8.2: Access to shelter support in insecure areas in Pakistan

In the response to the 2005 Pakistan earthquake some animal shelters were constructed to enable livestock owners to bring their stock down from the higher altitudes where they were at considerable risk from the extreme cold and lack of feed. However, some livestock owners remained in the mountains for fear of losing their houses, land and possessions.

Source: P Manfield, IOM, pers. com., 2005.

Case study 8.3: Post-earthquake animal shelters in Pakistan

Following the 2005 Pakistan earthquake, a joint programme was initiated by Dosti Development Foundation, FAO, WFP and the Pakistan Government to provide livestock shelter and supplementary cattle feed to assist farmers in the Mansehra and Batagram districts. The objective of the programme was to improve livestock health and productivity and to introduce earthquake resistant construction techniques for livestock shelter, based on the cob construction technique. Cob is a mixture of sand and clay, with long pieces of straw. The construction method is easy and the materials cheap and generally locally available. Training was provided to beneficiaries in construction methods.

In total 3,000 shelters were built, 108 by communities using their own resources, and supplementary cattle feed was provided to beneficiaries, focusing on the most vulnerable families with a high dependency on livestock.

Source: Dosti Development Foundation and FAO (2007) 'Livestock shelter and supplementary cattle feed project report, 2006–2007, Dosti Development Foundation and FAO; further details, including working drawings for cob wall livestock shelter construction, are available from: White, C. M. (2006) 'Pakistani cob animal shelter (technical drawings)', unpublished, contact: Caroline Meyer White, Natural Building Architect, Hojt Paa Straa, Skraldhedevej 8, 6950 Ringkobing, Denmark; Darcey Donovan, Eco Engineering, PE 59754, PO Box 1083, Truckee, CA 96160, USA.

Case study 8.4: Animal shelters in Bangladesh

Flooding from rivers and the sea affects many parts of Bangladesh, where a means of livestock protection is the killa, an extensive, flat-topped and compacted earth-mound onto which animals can be herded in response to flood warnings. Cyclone shelters, for use by the local population, are ideally located with killas adjacent, so that people and their animals are protected together. In the past, without this facility, some people have refused shelter protection.

Source: Government of Bangladesh/UNDP/World Bank (1993) *Multipurpose Cyclone Shelter Programme*, Final Report, Part 1, July, Bangladesh University of Engineering & Technology/Bangladesh Institute of Development Studies, Dhaka, (information supplied by James Lewis).

Case study 8.5: Community animal shelters in Pakistan

The timing of the 2005 Pakistan earthquake meant that herds of sheep and goats were migrating back from pastures, resulting in a large number of deaths. The death toll was even higher in static farming systems where buffaloes, cattle and poultry died when the shelters in which they were kept collapsed. Remaining livestock were extremely valuable to survivors, as they provided a vital milk source for the winter and retained residual wealth. In response to this need, The Brooke offered pastoralists community-based rather than individual shelters for animals, since resources and land for building shelter were limited and hence communal shelter meant more animals could be protected during the approaching winter for the amount of available resources. People that lived in close proximity were encouraged to build a wood frame that was large enough to shelter livestock for several families, up to 30 animals. They were provided with technical support, plastic sheeting, nails and corrugated iron sheets to complete the shelter. Beneficiaries were selected by talking to village leaders and surveying away from the road to find the most vulnerable and needy. If people were unable to construct the shelter within their group, then The Brooke offered them support. People were reluctant to build community animal shelters to begin with, fearing that disease would be spread. The Brooke provided vaccination and health care to the livestock before animals were put together, ensuring that disease was not spread and health was improved. This project had the added benefit of sharing livestock care among women, acting as a labour-saving measure. After this project, The Brooke went on to provide training in animal health and husbandry to women, and then to formally train CAHWs to improve the long-term health and welfare of the animals.

Source: Julia Macro, The Brooke, pers. com.

Chapter 9: Provision of livestock

Case study 9.1: Herd reconstitution using cash transfers, Kenya

Isiolo District in Kenya's Eastern Province suffered from a severe drought in 2005 that resulted in high livestock deaths and elevated acute malnutrition rates among infants. Following improved long rains in April/May 2006, Save the Children Canada provided 750 households in 22 communities with a one-off cash transfer of KSh30,000 (approximately $490). The cash was intended to assist families to reconstitute their herds with animals of their choice or to invest in alternative productive uses, and also to have some cash to meet pressing immediate needs.

On average, livestock prices at local markets did not change significantly as a result of the cash distribution, although sellers did attempt to charge exorbitant prices because of the sudden increase in demand. Beneficiaries adopted a variety of methods for dealing with this attempted inflation, including purchasing as

groups with a representative, travelling to more distant markets, and delaying their purchases.

An evaluation was carried out seven months after the distribution, which found that recipients appreciated the cash-based intervention because it gave them the choice to purchase the specific animals of their choice and exert more quality control than is possible with in-kind restocking. It also allowed recipients to spend some of the cash on other needs. In total, 85 per cent of the cash was spent on livestock – mainly goats, sheep and cattle, with some donkeys. The remaining 15 per cent was split between items such as shelter construction, investing in business/petty trade, debt repayments, veterinary care, healthcare, education and food. Children's attendance at school, especially for girls and at the secondary level, has increased for the recipients compared to non-recipients.

The programme targeted only 11 per cent of all households, and hence clearly did not reach all of those in need. However, this was linked to the availability of funding, and it was agreed that it was better to provide larger amounts of cash to a smaller number of people than to spread the available money more thinly across all those in need.

Seven months after the cash distribution, the impact on food security has been modest. Recipients have improved the diversity of their diet, especially because of increased access to milk; however their reliance on food aid has not been significantly reduced. Based on herd growth in the first five to seven months (+3 per cent for cattle, +16 per cent for goats and +25 per cent for sheep), it has been estimated that herds should be large enough to ensure food security within two years, which is substantially faster than if there had been no intervention. However, the final impact of the programme will only be clear in the longer term and in particular during the next drought when the beneficiary households' resilience will be put to the test.

Source: O'Donnell, M. (2007) 'Cash-based emergency livelihood recovery programme, Isiolo District, Kenya', project evaluation draft report, Save the Children, Nairobi; Croucher, M., Karanja, V., Wako, R., Dokata, A. and Dima, J. (2006) 'Initial impact assessment of the livelihoods programme in Merti and Sericho', Save the Children, Nairobi.

Case study 9.2: Livestock distribution as a drought preparedness strategy

The Pastoralist Survival and Recovery Project in Dakoro District, Niger, is run by Lutheran World Relief (LWR), with partner organization CEB. The project was initiated following LWR's emergency food-relief intervention during the Niger food crisis in 2005 in order to increase the resilience and preparedness of affected communities to cope with future droughts and famine. In discussion with communities in Dakoro District, four key interventions were identified: provision of livestock ('restocking'); feed banks; water point development; and community forums to facilitate community participation in all aspects of the project, address issues such as conflict between farming and herding communities, and raise awareness on rights.

Through the participatory planning forum the different components of the project were designed and planned. The livestock distribution activity was prioritized by the nomadic herding community in response to the threat of future drought, following the 2005 famine. In times of drought, the men travel south with the bulk of the livestock looking for pasture, while the women and elderly remain behind with the small stock. When resources are low, the first assets to be disposed of are these small stock in the care of the women. The communities identified the need to replace and build these assets, to protect the food security of the women and also to help protect the large stock assets from sale.

This activity is a drought-preparedness intervention rather than an attempt to reconstitute herds, hence the number of stock involved can be relatively small. The community prioritized sheep over the mix of sheep and goats originally suggested by the project, since the former have better market value.

The livestock distribution component was based on a traditional redistribution mechanism, called *habbanaye*, whereby animals are given to beneficiaries who keep the first offspring and pass on the original animals to the next beneficiary. Based on community suggestions each initial beneficiary received one male and four female sheep. The initial 200 beneficiaries were identified by their own communities according to community criteria, based on poverty levels. To date, all the first batch of beneficiaries have received offspring and passed on the original animals to the second batch of beneficiaries.

The impact of the project thus far is that the beneficiary women, many of whom had previously had between 7 and 30 small stock of their own, which they lost in the drought, now have at least four animals that they can sell in case of hardship or that may reproduce during the coming year to increase their livestock assets. In other words, the distributed animals form a 'drought contingency fund' for poor women.

The livestock distribution activity is complemented by water development and feed bank initiatives (see Case study 6.6), which also help to keep the livestock alive and thus protect assets.

Source: Lutheran World Relief Pastoralist Survival and Recovery Program (ARVIP) Proposal (2005); ARVIP Baseline Survey; Mid-Term Visit Report by John Burns, Tufts University, December 2006; Evariste Karangwa, Meghan Armisted and Mahamadou Ouhoumoudou, LWR, pers. comms.

Case study 9.3: Livestock fairs in Niger

Between June 2005 and June 2006, the northern part of Dakoro District in Niger, a pastoralist and agro-pastoralist area, had seen livestock losses of up to 60 per cent (mainly cattle). At this level of loss, it would take nearly 30 years to rebuild the herds to their pre-crisis levels. Livestock represents the main, even the only, source of revenue for these populations. Oxfam and its local partner AREN took the initiative to help rebuild livestock assets via an animal fair system. A total of 1,500 beneficiaries received $360 worth of vouchers in order to buy the animals of their choice (cattle, sheep, goats, donkeys) from local traders and large livestock owners participating in the eight fairs organized during January and February 2006. In addition, to avoid quick cashing in of the distributed animals to meet immediate needs, the beneficiaries received $30 in cash. The fairs were held in partnership with the PROXEL project (run by Vétérinaires Sans Frontières Belgium and their local partner KARKARA), which oversaw the health inspection of animals before entry to the fairs and the vaccination of the animals purchased. Oxfam also contracted PROXEL to carry out a mid-term follow up of the distributed animals and provide technical support to beneficiaries, notably through a prophylaxis programme and awareness raising on new livestock husbandry techniques.

One year later, an evaluation of the programme highlighted the importance of this follow up in the success of the programme. The herd increase rate was 74 per cent: 11,476 animals were purchased through the fairs, which at this rate of growth would mean a total herd of around 20,000 one year later. The off-take rate, including sales and home consumption, was very low (goats: 0.4 per cent; sheep: 0.6 per cent), in line with the objectives of the project, which focused on rebuilding herds. These positive outcomes were linked by the evaluators to the veterinary follow up and the training provided to beneficiary communities. The target communities were also noted to have increased their demand for veterinary services for their other livestock as a result of the programme.

Source: Oxfam GB/VSF-B (2007) 'Rapport d'activité. Opération de reconstitution du cheptel, département de Dakoro, Région de Maradi, Niger, Janvier 2006–Mars 2007, Oxfam GB/VSF-B, Niamey; Bernard, J. (2006) 'Animals fairs, an Oxfam GB trial in the Sahel', Oxfam, Dakoro, Niger.

Case study 9.4: Community contributions to herd reconstitution

In 2006, in response to the Horn of Africa drought, Save the Children USA carried out herd reconstitution in selected districts of Oromiya and Somali Regions in southern Ethiopia. The activity was designed around traditional 'restocking' mechanisms, in terms of both the targeting of beneficiaries and the numbers of animals provided.

The five targeted districts were areas where the predominantly pastoral population had been severely affected by the drought. Local institutions who could participate in the initiative were identified among the Borana and Degodia Somali communities and played a primary role in the selection of beneficiaries and the management of the activity. In Borana, traditional restocking is called *Bussa Gonifa.* Under this system, a pastoralist who loses his livestock due to drought, conflict or raiding and is left with less than five cows is eligible for the benefit and has the right to claim a minimum of five cows from his clan in order to remain in the system as a pastoralist. The Degodia Somali also have a similar customary livestock redistribution system.

Save the Children USA substituted sheep and goats for cows, since small stock have a faster reproduction rate and are also increasingly preferred as they are better able to withstand drought conditions. In discussion with the community it was therefore agreed that Save the Children would provide 15–20 sheep/goats (including one or two males) and one pack animal per beneficiary and that the community would match this amount through their traditional restocking mechanism. The total number of livestock was considered a minimum herd size for the priority target households who had lost most or all of their stock in the drought.

The activity was jointly managed by Save the Children USA and representatives from the indigenous community institutions identified at the beginning of the initiative. The latter oversaw purchasing of the livestock as well as identification of beneficiary households and the management of the community contribution. Save the Children vaccinated and treated most of the livestock before distribution.

In two of the beneficiary districts, the matching of the Save the Children livestock with an equivalent number from the community worked successfully: the community contributed a total of 1,364 sheep and goats, and community members took great pride in providing livestock of better quality than the purchased animals. In the other target areas the community contributions were less successful for two key reasons. First, in some communities the effects of the drought were more widespread, households were poorer and the indigenous institutions were reluctant to push their clan members for contributions when all of them had suffered livestock losses in the drought. Second, the willingness of community members to make the contributions also appeared to reflect the quality and duration of the relationship with the partner agency – where there was a positive history of community-based development activity contributions were successfully obtained, compared to other

areas where the linkages with the external agency were of shorter duration or the relationship was less developed.

On balance, Save the Children USA concludes that matching contributions from the community is a useful approach that may be particularly appropriate in the context of more localized droughts in the future, particularly in areas where there is a strong relationship between the operating agency and the community, and where community members have not all been equally hit by the drought.

Source: Gebru, G. (2007) 'Documentation of the Save the Children-USA Restocking Implementation Program in Somali and Oromia Regional States', Save the Children USA, Addis Ababa.

Case study 9.5: Livestock distribution following the Pakistan earthquake

Shortly after the 2005 Pakistan earthquake hit, and following initial responses such as the distribution of food, tents and blankets, the German Red Cross initiated an activity to improve the nutritional status of children in households affected by the earthquake through the provision of a lactating cow with a calf. The target households were those who had either lost all their animals in the disaster, or vulnerable households such as women-headed or poor households with more than four children who may not have had livestock in the past. Village-based committees were established to oversee beneficiary selection, including representatives from among the elders, different castes, women, religious leaders and teachers. The beneficiary selection was cross-checked by field visits and community discussions.

Before the livestock were distributed, the beneficiaries received training in livestock management, including feeding, breeding and animal health. Certain breeds and types of cattle were selected based on agreed criteria such as adaptability to the cold climate, milk production, size and age. Local contractors supplied the cows, which were checked by the Red Cross and treated for mastitis and ticks, and were vaccinated and disinfected prior to distribution. A lottery system was used for the actual distribution of the cows to the beneficiaries.

CAHWs were also trained in each village and refresher trainings continued throughout the life of the project. Plans are in place to link the CAHWs to specific government veterinary services such as artificial insemination and bull schemes in the future.

Source: Matthew Kinyanjui, ICRC, pers. com.

Case study 9.6: Deciding against livestock distribution following the Pakistan earthquake

On the 8 October 2005 three districts in Azad Jammu Kashmir (AJK) and five districts in Northwest Frontier Province (NWFP) of Pakistan were struck by a severe earthquake. In support of the government's short-term recovery and reha-

bilitation programme, FAO undertook a review of the livestock component of the programme in May/June 2006. The objective was to formulate a strategy for the first six months of the short-term recovery phase. The review made 'best estimates' of the post earthquake feed supply and demand situation in the affected districts. The situation is summarized below.

District	Total feed demand	Total feed supply	Surplus (deficit)
	MJME* (m)	MJME (m)	MJME (m)
AJK:			
Muzaffarabad	5,361	7,560	2,199
Bagh	2,688	1,757	(931)
Rawlakot	5,092	3,306	(1,787)
NWFP:			
Mansehra	9,339	7,096	(2,242)
Battagram	4,037	1,871	(2,165)
Shangla	3,097	2,901	(197)
Abbotabad	6,339	3,336	(3,003)
Kohistan	11,962	11,103	(860)

Note: *MJME is megajoules metabolizable energy.

Post-earthquake, only Muzaffarabad District (AJK) had a significant feed surplus although Shangla and Kohistan Districts (NWFP), neither of which experienced high animal losses, had a reasonable balance between the feed demand and the associated feed resource. For the remaining districts there was a significant feed deficit.

Based on these findings, FAO changed its original plan to restock affected households and instead focused its attention on supporting the surviving livestock through the provision of winter (2006–07) feed, animal shelters and animal health care. Despite the concerns expressed regarding the sustainability of the feed resource, of the nine implementing agencies providing livestock assistance in AJK and the 13 in NWFP:

- 27 per cent have indicated they will provide large ruminants;
- 33 per cent will provide small ruminants;
- 33 per cent are said to be providing both small and large ruminants;
- 7 per cent are providing support for livestock inputs only.

Source: Simon Mack, FAO, pers. com.

Case study 9.7: Post-earthquake livestock distribution in Iran

In late December 2003 an earthquake measuring 6.4 on the Richter scale hit the region of Bam, Kerman Province, in southern Iran. In a period of 15 seconds, over 70 per cent of the buildings in the city and the surrounding villages collapsed, and more than 40,000 of the area's 130,000 population lost their lives. The livelihoods of the majority of people living in the Bam area were focused on farming dates and/or farm labour, but many kept a small number of animals to supplement their food supply and income, mainly cattle, sheep and goats. Livestock keeping is particularly important for poorer farmers who own either a small plot of land or none at all. While many of the date palms remained intact, livestock losses in the earthquake are estimated at 31 per cent for cattle and 26 per cent for sheep and goats. Most of these animals were housed in simple shelters near their owners' homes and many were killed when the buildings collapsed. Others ran away in the panic following the earthquake, while some were stolen or sold to meet urgent cash needs.

In response to these losses ACF-Spain designed a livestock distribution project to provide two goats together with 300kg of feed (barley) to 1,200 vulnerable families in 17 earthquake-affected villages in the Bam area. The aim of the project was to support the target households to gain milk for their families and an additional income. The project targeted poor families who had lost livestock, in particular widows and other vulnerable people, but the selection criteria required that beneficiaries had experience with raising sheep and goats and had access to adequate shelter for the animals in order to ensure the sustainability of the initiative. Selection of beneficiaries and distribution was carried out in collaboration with local councillors. The Iranian Veterinary Network was contracted to provide veterinary services to the purchased livestock before distribution, including vaccination against enterotoxaemia, disinfection, de-worming and provision of mineral and vitamin supplements.

The 1,200 target beneficiary families each received two female goats, one local Mahali breed and one Rachti breed (mixed local Mahali and Pakistani high-quality breed), together with 300kg of barley for feed. The original plan was to distribute sheep, but this was changed following discussions with potential beneficiaries to goats, which are easier to feed, require less intensive care and produce more young per pregnancy than sheep. It was also originally planned to distribute pregnant animals but this proved logistically more challenging and it was determined that sufficient male goats had survived the earthquake to enable the distributed goats to reproduce quite quickly after distribution.

Post-distribution monitoring (one to two weeks after the distribution had been completed) showed that the vast majority of beneficiaries were satisfied with both the breed selected (84 per cent) and the distribution process (87 per cent). Only one of the goats from the sample of 70 households had been stolen and another sold, while six had been given to relatives to care for due largely to lack of appropriate

housing. Nine of the beneficiaries were already milking one goat, two households were milking both the goats they had received and 27 had already mated their goats to a buck.

When asked about the impact of the livestock distribution project on their lives, beneficiaries listed economic benefits (milk and wool production – mostly considered to be potential benefits, as it was too soon for the livestock to have reproduced) and also emphasized the psychological benefits (for example entertainment for the children, increased motivation to get involved in other activities). Most were positive about the opportunity to resume livestock activities after losing some or all of their animals in the earthquake.

Source: ACF-Spain (2004) 'Livelihoods Recovery Project (Livestock Distribution)', ACF-Spain, Bam, Iran; Leguene, P. (2004) 'Evaluation Report: Restoration of the livelihood and longer-term food security for the earthquake-affected farmers and agricultural labourers in Bam, South-East Iran, Project implemented by ACF-UK and ACF-Spain, London.

Annexes

Annex 1 Glossary

Backloading:	Using lorries or other vehicles that are transporting one item, to carry another item on the return journey (for example livestock traders bringing feed to an area prior to transporting purchased stock out of the area).
Capital assets:	(Part of the livelihoods framework) The resources, equipment, skills, strengths and relationships that together are used by individuals and households to pursue their livelihoods. They are categorized as: human, natural, financial, physical and social.
Cluster approach:	New international initiative to facilitate collaboration between humanitarian agencies in emergency response. Clusters focus on particular relief sectors (such as water and sanitation, food etc.) with an allocated 'lead agency' accountable to the rest of the cluster membership, and they develop a joint strategy for implementation.
Cold chain:	Maintaining veterinary (or human) medicines at the required temperature during storage and transportation through for example the use of refrigerators and mobile cold boxes.
Drought cycle management:	A model that divides drought into four phases, which may be defined as follows: *Alert phase:* delayed rains or poor and short rainy season, pasture and water resource not being replenished; *Alarm phase*: initial price movements (for example cereal prices begin to rise and livestock prices begin to drop), still no rain/poor rains, pasture and water resources begin to be depleted; *Emergency phase:* significant price movements, water sources and pasture depletion, migration, still no rain or rain just starting (which can cause human and livestock illness, transport constraints affecting food supply etc.); *Recovery phase*: livestock begin to recover, livestock prices improve, cereal prices begin to fall, pasture and water resources recover.
Livestock off-take:	Animals sold to traders or otherwise removed from the herd.

Purposive sampling:	The selection of a 'typically' representative group, based on particular characteristics (for example livestock owners affected by drought; women livestock owners; inhabitants of a flood-affected village).
Rapid onset:	A disaster that hits very suddenly, sometimes without warning, such as an earthquake, flood or tsunami. Can be divided into three key phases: the *immediate aftermath* – the period just after the disaster has struck when the impact is at its greatest; the *early recovery* phase – the days (and perhaps weeks) after the disaster when the initial impact is over and some emergency response activities may be initiated; and the *recovery* phase, which may take months or years, during which time lives and livelihoods are slowly rebuilt.
Real-time evaluation:	The evaluation of a (generally humanitarian) operation during implementation in order to allow for feedback and adjustment during the life of the operation itself (see Sandison, 2003 and Herson and Mitchell (no date) in the references to Chapter 3).
Slow onset:	A disaster whose effects may be felt gradually, such as a drought. Commonly divided into four phases (see 'drought cycle management', above).
Zoonosis:	(Also zoonotic disease) Disease that can be transmitted from animals to humans (or vice versa).

Annex 2 Acronyms and abbreviations

ACF	Action Contre la Faim/Action Against Hunger
AJK	Azad Jammu Kashmir
ALDEF	Arid Lands Development Focus
ARV	antiretroviral
AU/IBAR	African Union – InterAfrican Bureau for Animal Resources
CAHW	community-based animal health worker
CCCM	camp coordination and camp management
CEB	Contribution à l'Education de Base
CP	civil and political
DFID	Department for International Development
DRR	disaster risk reduction
EMPRES	Emergency Prevention System (for Transboundary Animal and Plant Pests and Diseases)
EPaRDA	Ethiopian Pastoralist Research and Development Association
ESC	economic, social and cultural
EWS	early warning system
FAO	United Nations Food and Agriculture Organization
FEWS-NET	Famine Early Warning Systems Network
FSAU	Food Security Analysis Unit for Somalia
GIEWS	Global Information and Early Warning System
GIS	Geographic Information System
HEA	Household Economy Approach
HPAI	Highly Pathogenic Avian Influenza ('bird flu')
ICRC	International Committee of the Red Cross
IDP	internally displaced person
IPC	Integrated Food Security and Humanitarian Phase Classification
JEMED	Jeunesse En Mission Entraide et Developpement
LWR	Lutheran World Relief
M&E	monitoring and evaluation
NGO	Non Governmental Organisation
NORDA	Northern Relief Development Agency
NWFP	Northwest Frontier Province
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OIE	World Organisation for Animal Health
PLHIV	people living with HIV and AIDS
PRA	participatory rural appraisal (also known as PLA – participatory learning and action)
PRIM	LEGS Participatory Response Identification Matrix
SADC	Southern Africa Development Community

SMART	Standardized Monitoring and Assessment of Relief and Transitions
USAID	United States Agency for International Development
VAC	Vulnerability Assessment Committee
VSF	Vétérinaires sans Frontières (Vets without borders)
WFP	United Nations World Food Program

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Annex 4 Acknowledgements and contributors

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The LEGS Consultation Group and mailing list

LEGS has been developed with the support and contributions of a wide range of people, too many to be named here. The LEGS mailing list is made up of approximately 1,700 individuals and organizations, many of whom have participated in the development of LEGS through comments on the consultation draft, feedback from field testing, sharing experiences through meetings and workshops, and other inputs. The LEGS Project gratefully acknowledges all these contributions.

Annex 5 LEGS feedback form

The LEGS Project welcomes feedback and comments on all aspects of the LEGS publication. Responses will be used as the basis for the revision of LEGS for future editions.

Name	
Organization	
Position	
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- Please give your general comments on LEGS (content, format, style):

- Please give any specific comments on particular chapters, standards and/or indicators:

- What have been your experiences of using LEGS in the field?:

- Would you like further information on LEGS or to join the LEGS mailing list (if so, please ensure you have given full contact details above)?:

Please email this form to: coordinator@livestock-emergency.net or post to: The LEGS Project, c/o Feinstein International Center, Tufts University, Box 1078, Addis Ababa, Ethiopia.

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The Livestock Emergency Guidelines and Standards (LEGS) Project

The Livestock Emergency Guidelines and Standards (LEGS) Project was initiated in 2006 in response to concerns about the quality and timeliness of livestock interventions in emergencies. The LEGS handbook was published in 2009 and provides a set of international guidelines and standards for the design, implementation and assessment of livestock interventions to assist people affected by humanitarian crises. Following publication of the handbook, the LEGS Project is also engaged in a global training programme, focusing on the training of trainers to increase awareness and uptake of the LEGS standards, in order to contribute to improving the quality of response for livestock keepers affected by disaster. The LEGS Project is managed by a Steering Group that coordinates and oversees the production and uptake of LEGS. For more details please visit the LEGS website: www.livestock-emergency.net

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Website: www.livestock-emergency.net

LIVESTOCK EMERGENCY GUIDELINES AND STANDARDS

Livestock play a crucial part in people's livelihoods throughout the world and when humanitarian emergencies arise, rapid assistance is needed to protect and rebuild the livestock assets of affected communities. *Livestock Emergency Guidelines and Standards (LEGS)* is a set of international guidelines and standards for the design, implementation and assessment of livestock interventions to assist people affected by humanitarian crises. *LEGS* expands the commitment in the Sphere handbook – the *Humanitarian Charter and Minimum Standards in Humanitarian Response* – to strengthening livestock assets, by presenting clear and practical options for supporting livestock during and following disasters.

LEGS provides guidance on the identification of appropriate livestock responses, followed by detailed information on a number of interventions, namely: destocking, veterinary services, the provision of feed, the provision of water, livestock shelter and settlement, and restocking. Each technical chapter contains minimum standards, key indicators, and guidance notes, together with decision-making tools and a discussion of key cross-cutting issues.

LEGS should be read by donors, programme managers and technical experts designing or implementing livestock interventions in disasters.

LEGS was developed by a steering group of professionals from the Feinstein International Center of Tufts University, the Food and Agriculture Organization of the United Nations, the International Committee of the Red Cross, the African Union and Vétérinaires sans Frontières Belgium, working with a team of technical writers and contributors from around the world.

'LEGS *should enable agencies such as Oxfam to provide more appropriate, more accountable, more consistent and better quality emergency livestock programming.'*
Lili Mohiddin, Emergency Food Security & Livelihoods, Oxfam GB

The Sphere Project

LEGS is recognized as a companion standard to The Sphere Project's *Humanitarian Charter and Minimum Standards in Humanitarian Response*

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LEGS

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