

# A NOTE ON COMPARING INTERNATIONAL EXPERIENCES OF DROUGHT MANAGEMENT IN THE PASTORAL AND AGRO-PASTORAL LIVESTOCK SECTORS

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While there has been considerable international experience of various drought-related activities<sup>1</sup> aimed at pastoral and agro-pastoral livestock production, drawing policy lessons from this experience is not easy. This note will attempt to clarify some of the issues involved.

## **Specificity of National Experiences**

Approaches to drought management in the livestock sector depend very heavily on the level of resources that national governments or donors or both are able and willing to commit. This level of resources is determined by a country's per capita income, its size, and the priority it enjoys among donors, but also by historical, political and cultural factors. Thus Morocco has committed massive resources to drought management, including very large amounts to the distribution of free and subsidised feed. These amounts have shown a pronounced tendency to grow until last year, when a radical policy shift on drought management in the livestock sector was undertaken.

Morocco is a middle income country, and although drought management is funded from the government's own resources, the current levels of aid flows to other parts of the economy must make such expenditure easier. However the high levels of expenditure have also been favoured by an explicit concern with combating drought in order to prevent unplanned and disruptive rural-urban migration, by a political culture emphasising the government's, and the monarchy's, responsibility for its subjects, and by the tendency of drought-related expenditure to become delinked from objective drought conditions under pressure from local political and bureaucratic interests.

As a result, Morocco, like other middle-income countries of the Middle East and North Africa, was (until the change in policy) subject to the criticism that feed distribution was contributing to an unsustainable build-up of herds (Oram 1998, Morton and Sear 2001). The likelihood of countries outside this region using feed distribution to the extent of triggering environmental concerns remains small. However, various forms of supplementary feed distribution, including pen-feeding in cattle-camps, are reported for: Kenya (on a small-scale and linked to purchase of other livestock – Morton, Barton *et al.* 2002); India (where it relates to public and political concern for cow welfare, but also to the level of drought expenditure possible in a poor but very large country); and Zimbabwe (Scoones 2001).

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<sup>1</sup> One of the countries considered in this note is Mongolia, where the major immediate threat to livestock comes from *dzud*, snow disaster, rather than drought (though the two are interlinked in various ways). For convenience, the blanket terms "drought management" and the like are used here to refer also to *dzud* management.

Mongolia is also a middle-income country, but more important for patterns of drought management, it was also during the communist period a country in receipt of fuel at well below world prices from the dominant power, the Soviet Union. This set a pattern for large-scale trucking of fodder round the country in times of drought and *dzud* (snow disaster), which in turn led to the underdevelopment of more sustainable forms of drought management such as pastoral mobility.

### **Relief-Like Interventions**

In order to conceptualise drought management in Kenya, we have previously (Barton, Morton and Hendy 2001 a and b) put forward a distinction between mitigation activities that aim to minimise the impact of drought on production systems and livelihoods, and relief activities that directly intervene in human welfare. Relief was conceptualised as ideally occurring at the trough of the drought cycle, after mitigation, and in a sense ministering to those not reached by mitigation. Expenditure on free or heavily subsidised livestock feed in countries as diverse as Morocco, Mongolia and India makes this distinction hazier. Feed distribution intervenes in livestock-based livelihoods, but its character as a top-down handout, and its palliative, rather than systemic, impacts, seem to put it on a different plane to well-designed mitigation activities such as emergency purchase, negotiation of emergency grazing access or veterinary care. It may be that feed distribution lacks a multiplier effect or has a weak benefit:cost ratio (although provisional analyses in Morton *et al.* 2002 do not show this, and the definition of costs and benefits of drought interventions is shown there to be extremely problematic).

However we redefine the categories, it does appear that the international *experiences* of drought interventions for livestock (as distinct from analyses or designs) are heavily weighted towards relief-like interventions: food relief itself, feed distribution, bureaucratically planned labour-intensive public works. Analysis of *dzud* preparedness in Mongolia, as part of major multi-lateral projects in preparation or in early stages of implementation, has given rise to designs for livestock insurance, recommendations on rangeland tenure policy, and on provision of herding infrastructure. But most of the experience so far has been of feed distribution in response to and after the onset of *dzud*. In Morocco still more, the livestock sector is a relatively minor concern for drought management, drought management for the sector has meant relief-like interventions, and donor-funded projects are only beginning to sketch alternative mitigation strategies.

The prevalence of relief-like interventions, which is unlikely to disappear in the short term, raises its own opportunities and imperatives. These interventions can certainly be made more cost-effective by better and less politicised declaration of drought and subsequent targeting of assistance. This will make some use of technological approaches to drought-monitoring. It will also place constraints on the extent to which the declaration of drought can be a purely participatory affair dependent on local perceptions and definitions of drought.

## **Specificity of Local Conditions**

Beyond the influence of national factors on the levels and types of drought management, even where there is a commitment to cost-effective and sustainable mitigation, national and local factors will influence the form this should take.

This can be illustrated with reference to emergency drought-time grazing interventions. These will be heavily dependent on the nature of rangeland tenure in the country concerned. In Kenya, the design of emergency grazing will take place in the context of an ill-defined *de facto* tribal tenure of rangelands, involving as a consequence investments in conflict resolution (Hendy and Morton 2001). It will also need to take note of particular categories of rangeland such as commercial ranches (see Heath 2001), national parks, forest reserves and areas normally avoided by pastoral livestock because of tsetse. These constrain pastoral movements but also present opportunities for limited exceptional movement in time of drought. Likewise in Zimbabwe, spontaneous negotiations by Communal Area farmers with commercial farmers for drought-time grazing were becoming increasingly common in the late 1990s (Scoones 2001). In Mongolia, dual land tenure is not an issue, and conflict resolution much less of one, but maintaining the possibility of long-distance emergency pastoral migration, in a post-collective rangeland tenure system subject to competing policy pressures will be crucial. In this way, the need for drought mitigation, externally-assisted or spontaneous, needs to inform rangeland tenure policy as well as being shaped by it.

Similarly, emergency purchase programmes, “destocking” or purchase transport subsidies appear a fruitful approach (Barton and Morton 2001, Morton and Barton forthcoming), but it needs to be determined whether livestock-owners are keeping stock they would like to sell, and what constraints on timely marketing of stock they actually experience. These can include the difficulty of trekking stock to market, market infrastructure, terminal market demand, market information, trustworthy climate early warning information and exploitative practices (real or perceived ) by livestock merchants. Whether any external intervention is justified, and what form it will take, is dependent on clear identification of objectives and constraints.

## **Insurance**

The possibility of using index-based insurance for the livestock sector has excited much discussion (see summary and references in Swift 2002). It is worth recalling that the idea from which it is derived, rainfall-based index insurance for crops, is still virtually untried in developing countries, so that even there we are mainly dealing with analyses and projections rather than experience. Adapting the concept to livestock requires insuring against loss of an asset as well as reduction in an income stream. It also (at least theoretically) raises issues of a special kind of moral hazard, reinvestment of insurance pay-outs in more livestock, with environmental costs. On a more

practical scale, there is some resistance to piloting such an experimental concept as index insurance (crop or livestock) with loan funds.

## **Commonalities**

In pointing out the dependency of drought management strategies, and particularly drought *mitigation* strategies, on local conditions, it is not intended to deny that there are important commonalities, especially at the level of overall management systems. Successful drought management is possible, and the overall management framework is likely to be similar everywhere. We highlight some of the most important lessons.

The rapidly improving prospects for drought early warning presented by remote sensing and climate forecasting are very important. The example of Mongolia shows how ordinary herders can listen to and make use of government-funded, scientifically-derived weather forecasts (Morton 2001). The scientific prospects for early warning will of course vary by climatic region across the world.

Such technological early warning must be integrated with a local understanding of drought and its impacts, with field-level monitoring, and with appropriate local-level planning and action (Swift 2001).

There are both imperatives and resources in many countries for large expenditure on relief-like interventions, and there is a proper role for the state in providing relief as a last resort. But donors can and should advocate a shift towards better-designed mitigation interventions that are ultimately more cost-effective, less dependency-creating and more environmentally sustainable.

Effective drought management will depend on many aspects of long-term policy, in many cases not superficially linked to drought and in many cases influenced by powerful vested interests. What these policies are will vary considerably from country to country; they may include cereal tariff and pricing policy (as in Morocco), security (as in Uganda and Kenya), and rangeland tenure (virtually everywhere).

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