The growing demand for livestock

Will policy and institutional changes benefit poor people?

As global demand for meat and milk increases, many policies focus on promoting international trade in livestock and livestock products. How does this affect the community-based livestock services that poor people use, and who will benefit from the expanding global markets?

In all developing countries, people live side by side with livestock. Animals are reared in nearly all ecosystems, from arid high-mountain zones to low-lying deserts. People benefit from livestock in many ways:

- Livestock are used for food, income and draught power. Their skins are used for housing, clothing and household utensils and their dung is used for fuel and manure.
- Livestock often provide a substantial proportion of household wealth; they are the key asset in many dryland environments.
- For poor families with just a few chickens or goats, livestock-derived foods (such as eggs and milk) are an important source of nutrition, especially for children and mothers.

The 2008 World Development Report on Agriculture surveyed 14 countries and noted that most rural households, and 40 percent of the poorest households, own livestock. The World Bank estimates that livestock are the main livelihood asset for up to 200 million pastoralists and agropastoralists in arid and semi-arid environments worldwide. Furthermore, 35 to 90 million of these people are extremely poor.

Policy and institutional changes in the livestock sector, and the growing demand for meat, milk and other livestock products, will affect poor livestock producers in many ways. This issue of id21 insights examines some of the implications and suggests how the livestock sector can focus on ‘pro-poor’ development.

Recent successes

The last twenty years have seen some important successes and promising trends in livestock development. For example, many developing country governments increasingly accept private veterinary ‘para-professionals’ (people with some level of college-based veterinary training) as appropriate for delivering basic animal healthcare services. Community-based workers are also officially sanctioned in some countries, meaning more people can access some level of animal healthcare.

Efforts to clarify international standards for livestock trade, for example sanitary standards, and make them more ‘user-friendly’ are also progressing. This may enable developing regions to export more livestock and livestock products – to developed countries and other developing regions – without risking human or animal health.

Animal health services

Despite these successes, several challenges remain. Jeannette Gurung and Kanchan Lama argue that women must play a greater role in livestock management and own animals, rather than just provide labour to look after them. Many current debates focus on how marketing and trade issues affect the livestock sector at many levels. David Leonard and Cheikh Ly discuss how to improve the provision of veterinary services at the community level. Alastair Bradstock looks at how non-governmental organisations can support communities dependent on livestock. Both articles note the important policy and legislation changes that enable the wider use of para-professionals, working under the supervision of professional veterinarians.

From a trade perspective, improving animal health standards is important for two reasons. First, the high number of livestock deaths in marginal areas could be reduced by basic, private veterinary services, such as delivering vaccines and drugs. Research shows that many livestock keepers recognise the benefits and will pay for these services. In areas where trade is limited by market supply problems, traders at Afar market, Ethiopia, will sell more animals if losses due to disease can be reduced, if infrastructure can be improved, and the government can better support the private sector and export trade. Dawit Abebe
(meaning too few animals for sale), more animals means more trade. This may be particularly important for poorer livestock keepers, as additional animals can be traded in local markets and do not need to be exported.

Second, international trade is based on trust between trading partners. Trust is enhanced when an exporting country can demonstrate a strong national livestock disease surveillance system. Para-professionals can play a key role in such systems. However, as Leonard and Ly point out, governments in developing countries have been slow to contract private professionals to carry out these tasks. This remains a major challenge.

Assessing animal disease risks

There are currently academic debates about whether pastoralism is still a viable livelihood option in the Horn of Africa. Ian Scoones suggests greater commercialisation of herds is one way to strengthen pastoralist livelihoods. This seems logical, as there is a growing demand for milk and meat in the expanding urban centres of countries with pastoralist populations, as well as other countries.

However, policymakers often regard pastoralist areas as problematic, where many animals have serious diseases. This perception means that current international standards prevent trade with pastoral areas. These standards are based on the assumption that eradicating diseases from a given area or country is the only way to guarantee livestock products as safe for trade. But is this assumption correct?

Ahmadu Babagana and Tim Leyland make several objections to the view that disease eradication is necessary to ensure the safe trade of livestock or livestock products. The authors argue that international standards should place greater emphasis on the risk analysis of specific livestock products and commodities, which will complement disease eradication.

These commodity-based standards require livestock products to be processed in a way that greatly reduces the risk of these products containing disease agents. This process is already starting in some regions; in 2006, six private abattoirs in Somalia exported 600,000 chilled livestock carcasses to the Gulf States. The World Organisation for Animal Health (l’Organisation Mondiale de la Santé Animale, or OIE) also now acknowledges the need to revise international standards and provide better guidance on commodity-based trade.

The rising demand for livestock products

In terms of pro-poor development, the livestock sector faces similar challenges to other agricultural sectors. Markets are expanding, and some international standards are becoming more achievable, but how can poorer producers gain access to these markets?

Recent models predict dramatic increases in meat and milk consumption and prices, suggesting that a huge market is waiting to be supplied. Mark Rosegrant and Philip Thornton outline some opportunities and threats facing poorer livestock producers. They warn that livestock production systems are likely to exclude poorer producers and higher cereal prices will impact negatively upon all poor people.

In many developing countries, women provide much of the labour for livestock tasks. Yet, their livestock production has been undervalued by policymakers and research on this issue widely ignored.

In Nepal, local women doing extension work, and their supporters in the Department of Forests, were able to change male foresters’ attitudes about women in livestock production.

In the last twenty years have seen some promising trends in livestock development such as efforts to clarify international standards for livestock trade.

In his article examining a recent commercial destocking project in southern Ethiopia, Adrian Cullis explains how investments by private export traders during drought periods led to substantial benefits for pastoralists. However, the export markets were fragile and later collapsed due to weak government veterinary services. This example offers a glimpse of what might be possible in the long term if governments can encourage appropriate involvement from the private sector.

In areas affected by repeated droughts, donors and United Nations agencies are beginning to understand the benefits of more livelihoods-based livestock programming. This includes a shift towards long-term development approaches in which drought is predicted and planned for, rather than being regarded as an unexpected ‘shock’. This move towards livelihoods-based analysis and programming is particularly important in dryland areas and as a response to climate change.

Currently, some policymakers recognise the need to promote the participation of poorer livestock producers in international trade. However, there are few examples of how to make this happen. The key is to improve government policies, including an increased commitment to poor livestock producers. The articles in this issue of id21 insights suggest some of the policy changes within the livestock sector that will help the poorest people benefit from the predicted expansion in the sector.
Veterinary medicine
The slow road to community and private sector participation

Veterinary medicine in developing countries has changed over the last 25 years. Fiscal crisis and structural adjustment in the 1980s meant that highly subsidised, state-led animal health services could not survive.

The transition from state-led to private veterinary practices was faster than expected. With dramatically reduced state funds for pharmaceuticals, and the real value of their salaries in steep decline, veterinarians (vets) and other animal health practitioners quickly required producers to pay for services, often informally.

This has left several unresolved issues regarding the provision of veterinary services to poor livestock keepers. Studies pay for services, often informally. Practitioners quickly required producers to valorise their salaries in steep decline, funds for pharmaceuticals, and the real value of their work, but also because poor people lack the power or influence to access highly subsidised government services.

- Transport costs (both for practitioners and customers) are usually higher than professional veterinary fees.
- Access to veterinary care is a much bigger constraint than cost, especially in remote areas.

Vets and para-professionals
An important issue, which remains unresolved, is who should provide privatised services. The economic value of most smallholder production is too low to justify the fees of fully qualified vets; besides, they rarely want to live in the remote areas where some livestock keepers operate.

In poor or remote areas, ‘para-professionals’ are usually the most economically viable option. Para-professionals range from ‘near-professionals’ with one to three years of college-based veterinary education, to Community Animal Health Workers (CAHWs), who may have less than six months training. Near-professionals usually work in areas of higher population density (especially with dairy animals); CAHWs tend to work in the less dense, poorest regions. Our research in Senegal and Uganda indicates that CAHWs work best in supportive relationships with vets (or at least near-professionals), who provide training, pharmaceuticals, oversight and help through referrals. Without these referrals, vets feel that the integrity and survival of their profession is threatened and strive to keep legal recognition to themselves and near-professionals. This leaves poorer, more isolated livestock keepers without services.

Research in Senegal and Uganda indicates that Community Animal Health Workers work best in supportive relationships with vets or near-professionals, who provide training, pharmaceuticals, oversight and help through referrals

Veterinary public goods
A further challenge concerns the funding of veterinary public goods. These goods include disease surveillance and control, and the certification of livestock and livestock products for human consumption and/or international trade. Poorer producers will not pay for these, because the benefits are indirect, but international regulations require state vets to supervise these activities.

For many public goods tasks, it makes economic sense for governments to contract private vets and near-professionals to supervise CAHWs to carry out the tasks. This approach, common in several developed countries (such as Sweden), benefits from the relative efficiency of the private sector. It also strengthens the viability of higher-end private practices, building useful relationships between them and CAHWs. This approach has rarely been used in developing countries, however; donors have tended to promote private vets, CAHWs and state services as independent, rather than as an integrated system.

The reform of veterinary care for poor people is still incomplete. The most beneficial approach would see state vets, private vets and para-professionals working together, which is also necessary for international trade.

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See also ‘Market Structure and the Demand for Veterinary Services in India’ Agricultural Economics, 29, pages 27-42, by Vinod Ahuja, Dina Umali-Deininger and Cees de Haan, 2003


http://repositories.cdlib.org/ucaiapubs/editedvolumes/5/


Supporting livestock-centred livelihoods
What can NGOs do?

As donors increasingly favour direct budget support to deliver aid programmes, non-governmental organisations (NGOs) have an important role to play. They not only support grassroots innovations in the livestock sector, but can also use lessons from these to influence national policies.

NGOs can support governments and donors to develop strategies that combine relief and development objectives. For example, NGOs can identify how relief interventions following a crisis can undermine the sustainability of longer-term development programmes. Oxfam’s work in Turkana district, northern Kenya, is seeking new ways to integrate relief and development. The long-term development objective is to strengthen the resilience of livestock keepers, but Oxfam is including contingency plans to cope with sudden shocks, such as drought.

Livestock keepers in Turkana, Kenya. The livelihoods-based approach of Oxfam GB in the region means viewing drought as an expected event and planning for drought with contingencies in long-term development programmes. Michael Wadleigh

Livestock keepers living in areas with poorly developed markets are often unable to access technical advice. In Kenya in the 1980s and 1990s, a range of international NGOs developed a core group of community animal health workers to address the gap in veterinary services. By training local people to deliver some basic treatments, they successfully initiated a small-scale service that focused on rural livestock keepers excluded from mainstream support.

While these practical interventions frequently improve the health and management of livestock, it is just as important to create favourable policies so that these schemes can thrive. NGOs, with their intimate knowledge of rural issues, are well placed to represent ‘voiceless’ livestock keepers in policymaking decisions. For instance, in Tanzania, in the early 2000s, international and national NGOs played a key role during national policy and legislative review meetings convened by the Ministry of Water and Livestock Development. This led to the government broadening the range of people and organisations that could deliver primary veterinary services.

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February 2008
Do higher meat and milk prices adversely affect poor people?

The prices of meats, milk and cereals are expected to increase in the coming decades, dramatically reversing past trends. This is driven by increasing demands for food. Although higher prices can benefit agricultural producers, a larger number of poor consumers will have reduced access to food.

This is the key finding based on new projections for global food demand, produced by the International Food Policy Research Institute’s ‘IMPACT’ model, and linked to ‘SLAM’, the International Livestock Research Institute’s livestock allocation model.

The growing demand for food
Population and economic growth in developing countries are increasing the demand for food, particularly meat and milk. The growth in food consumption is shifting from developed to developing countries. The IMPACT model (see Figure 1) projects that under a ‘business-as-usual’ scenario:
- annual meat demand will increase by 6 to 23 kilograms per person worldwide by 2050
- the absolute increase will be fastest in Latin America, East and South Asia and the Pacific, with demand doubling in sub-Saharan Africa
- the demand for maize and other coarse grains for animal feed will increase global cereal demand by 553 million metric tons between 2000 and 2050 – nearly half of the total increase in demand for that period.

The rising demand for meat and milk is expected to contribute to increased prices for maize and other coarse grains and meals used for animal feed. It will also divert agricultural production away from food crops and towards livestock feed, reducing cereals for human consumption. This particularly hits poor consumers, as the price of cheap staple crops will rise. Additionally, growing demands for bioenergy will increase competition for water and land.

The expected growth in demand and supply will also mean profound changes for livestock production systems. Expanded market activity, and a rise in exports of livestock and livestock products, could threaten food safety and increase the risk of animal disease transmission, if appropriate food standards and regulatory systems are not implemented. Declining resource availability could lead to the degradation of land, water and animal genetic resources in livestock systems. In grassland-based systems, grazing intensity is projected to increase by 50 percent globally as early as 2030, which may result in resource degradation in places. Considerable opportunities for livestock growth exist, but there is a danger that smallholder producers and other poor, livestock-dependent people may not be able to take advantage. This is because their access to markets and technologies is constrained. Long-term policies will be necessary to ensure that the development of livestock systems plays a role in reducing poverty, as well as mitigating negative environmental impacts, encouraging income equality and supporting progress towards reducing malnutrition. For example, policies will be needed to ensure that small-scale farmers can produce safe livestock products and sell them in appropriate markets.

Impacts of growing food demand and supply
These changes will progressively constrain food production, causing adverse impacts on food security and the environment. The rising demand for meat and milk is expected to contribute to increased prices for maize and other staple crops. With this strong demand, the model projects that livestock populations will also increase rapidly. Between 2000 and 2050:
- the global cattle population will increase from 1.5 billion to 2.6 billion
- the global goat and sheep population will increase from 1.7 billion to 2.7 billion.

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See also
www.ifpri.org/pubs/books/globalfoodprojections2020.htm
Meat and milk

Developing countries and the global livestock trade

The global demand for meat and milk is growing, as populations increase and incomes rise. Retailers and fast food outlets are benefiting but is this growth reducing poverty in developing countries?

Meat consumption per capita is relatively stable in the developed world, but between 1980 and 2002, annual per capita meat consumption doubled in developing countries, and this trend is likely to continue. The Food and Agriculture Organization estimates that global meat and milk production must double by 2050 – a huge opportunity for developing country suppliers.

However, the estimated 987 million poor people who rely on livestock are unlikely to benefit:

- The increasing global production in livestock products is dominated by a few countries, notably Brazil and China (for meat) and India (for milk). African countries contribute just two percent of global trade.
- Much of this increase has been industrialised production, which often excludes and undermines small producers.

Increasing access to global livestock markets

Inefficient supply and production systems limit access to export markets in most developing countries. This barrier has been overcome in other agricultural sectors, however; horticultural exports contribute significantly to smallholder incomes in Kenya, Ghana and Senegal. What is holding back the livestock sector?

International standards governing the global livestock trade focus on the geographical origin of a product, and the disease status of that region. This favours developed countries that have removed significant livestock diseases. Countries or regions with a particular livestock disease have little chance of fully eradicating them in the near future, meaning few options for accessing lucrative international markets.

Alternative quality control standards

One alternative is for international standards to adopt a ‘commodity-based’ approach. This means a focus on the quality of each product and how it was produced, rather than where it originated. This would not undermine disease control and eradication measures, as countries would actually have greater incentives to strengthen veterinary services and improve disease control.

Currently, such commodity standards are almost non-existent. However, the World Organisation for Animal Health (OIE) has recently recognised this, and the Terrestrial Animal Health Standards Commission plans to ensure that requirements in the OIE Code relevant to commodities trade get more attention. In the coming years, developing countries must prioritise developing further commodity standards that meet market demands.

There will be challenges while these new standards are formed and tested. For example, the European Union, an influential importer, inspects the veterinary authorities of a country to determine their ability to meet EU standards (called ‘pre-listing’). They recognise very few developing country authorities as competent, so global markets are likely to remain closed in the short to medium term. Developing countries must find new ways to certify their livestock commodities whilst supporting their ‘competent’ veterinary authorities.

More developing countries need to trade their livestock products with both developed and developing countries:

- The international community must understand the potential of new product standards to increase market access for developing countries without increasing risks. This requires renewed commitments from governments and a review of their policies.
- If this can be done, then developing countries could attract private investment for new production technologies, and even provide ethically produced and sourced foods.

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Commercial destocking

A livelihood-based drought response in southern Ethiopia

The 2006 drought in the Greater Horn of Africa affected 11 million people, including many pastoralists. Drought responses focused primarily on food aid, with inadequate attention given to livelihood protection and support.

Under the USAID-funded Pastoral Livelihoods Initiative, Save the Children US piloted several livestock-focused drought responses in pastoral areas of Ethiopia, with two aims:

- To protect core breeding livestock through emergency animal healthcare, supplementary feeding and the redistribution of livestock among families after rains began.
- To remove other livestock from the rangelands, which would otherwise have died due to drought, through commercial destocking.

Commercial destocking

Working closely with the Department of Fisheries and Livestock Marketing (MoARD), Save the Children US organised livestock trader meetings in Addis Ababa and supported 21 livestock traders to travel to Ethiopia’s drought affected southern rangelands. Two traders subsequently established cattle buying centres around Moyale District in southern Ethiopia, and in early 2006 purchased 20,000 cattle for USS 1.01 million. The cattle were transported to fattening units around Addis Ababa, the majority then exported to Egypt. This had several benefits:

- Over 5,400 households benefited, selling on average 3.7 cattle and earning 1,620 Ethiopian Birr in total (US$ 186).
- A Participatory Impact Assessment showed that this money was mostly spent on supporting the core livestock herd and buying food for families.
- Of all the money earned, 79 percent was spent locally on livestock support, food, clothing, paying off debts and supporting relatives.

Key lessons learned

While this intervention had a major impact on pastoralists around Moyale, it was not possible to engage traders in other drought affected areas. This was partly due to poor quality roads and high transport costs. To achieve a wider impact, the road network must be improved. At the time of destocking, cattle were sold to Egypt. However, Egyptian and Middle East markets were later closed temporarily to importing live animals from Ethiopia, because of livestock disease outbreaks in the Greater Horn of Africa. For livestock traders to continue commercial destocking during droughts, structural weaknesses in Ethiopia’s livestock marketing industry must be addressed, particularly veterinary and phytosanitary standards.

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See also ‘Livelihoods Impact and Benefit-cost Estimation of a Commercial De-stocking Relief Intervention in Moyale District, Southern Ethiopia’, Disasters, by Dawit Abebe, Adrian Cullis, Andy Catley, Yacob Aktilu, Gedlu Mekonnen, Yodit Ghebrechristos (forthcoming in 2008)

An impact assessment of commercial destocking during a drought in Moyale, Ethiopia, showed that pastoralists used the income from selling animals wisely. They invested in protecting their remaining livestock with feed and veterinary care, and used trucks to move animals to better grazing areas. All these activities were arranged with the private sector.

Dawit Abebe
Is pastoralism a viable livelihood option?

Debates about the future of pastoralism are re-emerging in the Greater Horn of Africa. Are there too many people and too few livestock? Should pastoralists pursue alternative market-based livelihoods, or can better policies help to maintain pastoral systems?

Pressure on pastoral livelihoods in the Greater Horn of Africa (GHA) has been increasing. Challenges include weather-related crises (such as drought or floods), conflict, livestock disease, disrupted access to markets and the loss of grazing land to agriculture. These problems leave many communities dependent on food aid and other relief.

Too many people, too few livestock

Some researchers argue that pastoralists need a certain number of animals per person to meet income and nutritional needs. As the human population in the GHA is growing at 2.5 percent each year, more animals are needed. However, herd sizes are limited by the amount of forage available and the loss of grazing land to other uses.

This argument concludes:
- There is an urgent need to reduce the number of people dependent on pastoralism. An ‘exit’ from pastoralism may be a good option for many.
- There is greater potential to increase the productivity of rainy-season irrigated agriculture than fodder and rangelands, making farming a better option than pastoralism.
- Diversified income-generating activities are needed, making at least some part of people’s livelihoods not dependent on rainfall.

New challenges, new livelihoods

But is this argument too pessimistic? In some purely pastoral systems, there may be a minimum viable herd or flock size. However, this assumes a closed, isolated system; in reality, pastoralists across the GHA combine livestock keeping with agriculture and trade, and many also receive money from relatives living overseas. Assessments of ‘viability’ based simply on people to livestock ratios are therefore inappropriate.

‘Traditional’ semi-nomadic pastoral livelihoods are increasingly difficult, and alternative options are clearly needed. Abandoning pastoralism will be necessary for some, but often with a view to re-establishing a pastoral livelihood in the future. The key is to ensure that exiting from pastoralism does not increase poverty or destitution. Options include:
- Commercialisation: pastoralists can make more money from their existing herds, for example by exploiting local trade and export opportunities. This requires extra inputs (particularly veterinary care) that may only be available to a few.
- Diversification: pursuing different income-generating activities can reduce the number of livestock a family needs. These can be related to pastoralism (such as trading in livestock by-products) or separate (such as selling clothes or charcoal).

The future for pastoralism

Questioning the viability of pastoralism and suggesting its abandonment may be an argument used by governments who are suspicious of pastoralists. But talk of a crisis should urge constructive action, not pessimism, and should recognise the many options available to pastoralists.

Revitalising pastoral economies requires further support to encourage commercialisation and diversification. Policies should aim to increase income-earning options (for example through education) and remove the constraints that prevent pastoralists from fulfilling their undoubted economic potential.

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See also
Too many people, too few livestock: pastoralism in crisis? Future Agricultures debate, 2007
www.future-agricultures.org/pastoralism_debate.html
www.ids.ac.uk/ids/bookshop/wp/wp269.pdf

Useful web links

Eldis resource guide – pastoralism
www.eldis.ids.ac.uk/go/topics/resource-guides/agriculture/pastoralism

FAO – Pro-Poor Livestock Policy Initiative
www.fao.org/ag/pplpi.html

FARM-Africa
www.farmafrica.org.uk

Future Agricultures Consortium
www.future-agricultures.org

International Food Policy Research Institute
www.ifpri.org

International Livestock Research Institute
www.ili.org

Oxfam – pastoralism resources
www.oxfam.org.uk/resources/learning/pastoralism/resources.html

World Organisation for Animal Health (OIE)
www.oie.int/eng/en_index.htm