Pro-Poor Livestock Policy Initiative

Livestock Sector Policies and Programmes in Developing Countries

A Menu for Practitioners

A Living from Livestock

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Preface

Interventions aimed at strengthening the livestock sector in the developing world are relevant for reducing poverty and hunger as hundreds of millions of rural households rely heavily on livestock for sustaining their livelihoods. Farm animals generate opportunities for on- and off-farm employment and provide an important supplement to the cereal-based diets of the less well-to-do. At the same time, demographic growth and gains in real per caput income are drivers of increased demand for animal-source foods, particularly in rapidly growing, often densely populated developing countries.

The livestock sector's potential for reducing poverty and enhancing food security has been under-exploited as the the sector has long been treated as an appendage only to agriculture, with both policy-makers and development practitioners giving priority to staple crops over high-value agricultural products such as fruits, vegetables and animal-source foods. In addition, livestock sector interventions have been mostly of a technical nature, focusing on the elements of animal husbandry, feeding/nutrition and disease control. While important, these interventions tended to disregard the broader policy and institutional framework within which farmers operate. In other words, the range of incentives and disincentives that underpin household production and consumption decisions have thus been overlooked. In addition, when on rare occasions adequate attention has been paid to policy and institutional dimensions, livestock sector policies/programmes have been designed by technical staff in livestock departments, NGOs or international organizations with little consultation with other ministries, and limited appreciation of and connection with the 'non-livestock' policies and markets critical for livestock sector development.

The Livestock Sector Policy Menu presented in this volume (hereafter, the Menu) has been prepared by the Pro-Poor Livestock Policy Initiative (PPLPI), funded by the Department for International Development (United Kingdom) and launched by FAO in 2001 with the objective to enhance the capacity of FAO and its Member States to formulate and implement policy and institutional changes in the livestock sector to the benefit of the poor. The Menu comprises a user-friendly, non-technical compilation of livestock sector policies/programmes, including case studies, to assist policy-makers and development practitioners in formulating and implementing plans for institutional reforms and livestock sector-related policies that will benefit livestock farmers in particular and, in general, all stakeholders along the value chain. The Menu views the livestock sector in the broader context of agriculture, and provides some 60 examples of policies and programmes from a variety of domains, including land tenure, insurance, animal health service provision, credit, marketing, trade, environment and research, all of which have a vital role in promoting the rapid, inclusive growth of the sector.

The Menu is innovative in some respects. First, many of the policies and programmes identified draw on market-based instruments that rely on public-private partnerships. Public institutions dealing with the livestock sector may promote such partnerships, both within the sector and in non-livestock-specific domains, thereby tapping into the entrepreneurial capacity of rural households to promote the development of livestock and livestock-related markets. This is particularly important when livestock ministries face strict monetary policies and budgetary restrictions. Second, by showing that any policy objective can be served by a variety of complementary or alternative public actions rather than by blueprint solutions, the Menu provides the reader with a range of options, including how to select the most appropriate action to remove country-specific constraints on livestock sector development. Third, for ease of reading, the policy and programme descriptions contain no technical jargon but include bullet points highlighting their pros and cons, and the role of the public and private sectors in their design and implementation. Finally, each chapter stands on its own as a comprehensive policy review of the subject matter, thereby allowing the reader to decide which chapters to read and in what sequence.

Although, on its own, the Menu is not sufficient fully to support the design of policies and programmes promoting the rapid, inclusive development of the livestock sector, it should be useful in helping policy-makers and development practitioners to recognize the broad context that livestock keepers operate in, and to appreciate the multiplicity of options available for addressing livestock development constraints. Policies and programmes can be formulated and implemented to promote the efficient, equitable growth of the livestock sector only when different options are reviewed and compared; depending on the prevailing structure of the sector and on institutional and market conditions, these options have different costs and benefits for farmers, government and, ultimately, society as a whole.

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In preparing the Menu both official and grey literature were drawn upon, as well as field work, working papers and research reports prepared under the FAO Pro-Poor Livestock Policy Initiative (PPLPI), funded by the Department for International Development of the United Kingdom and launched by FAO in 2001. The objective of the PPLPI is to enhance the capacity of FAO and its Member States to formulate and implement policies and institutional changes in the livestock sector, to the benefit of the poor.

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Abbreviations and acronyms

ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ATM	automated teller machine
BNDA	National Agricultural Development Bank (Mali)
BSE	bovine spongiform encephalopathy
CAHW	community animal health worker
CBPP	contagious bovine pleuropneumonia
CVECA	self-administered village savings and credit bank (Mali)
CVGT	village land use management committee (Burkina Faso)
DAC	Department of Agriculture and Cooperation (India)
DCS	dairy cooperative society (India)
DDA	Dairy Development Authority (Uganda)
DLS	district local services (Indonesia)
DVS	Department of Veterinary Services (Malaysia)
DRP	Disaster Response Product (Mongolia)
EMC	environmental management committee
ESI	environmental services index
EU	European Union
EWS	early warning system
FAO	Food and Agriculture Organization of the United Nations
FMD	foot-and-mouth disease
GDP	gross domestic product
GPS	global positioning system
GTZ	German Agency for Technical Cooperation
HPAI	highly pathogenic avian influenza
IER	Institute of Rural Economy (Mali)
IFAD	International Fund for Agricultural Development
ILCA	International Livestock Centre for Africa
ILRI	International Livestock Research Institute
INCORA	National Land Reform Institute (Colombia)
IPR	intellectual property right
LGA	Local Government Act (Uganda)
MAP	Marketing Assistance Project (Armenia)
MDGs	Millennium Development Goals
M&E	monitoring and evaluation
MIDP	Marsabit Integrated Development Programme (Kenya)
MINAS	Mineral Accounting System (the Netherlands)
MIS	market information system

MO	membership-based organization
NABARD	National Bank for Agriculture and Rural Development (India)
NGO	non-governmental organization
OIBM	Opportunity International Bank of Malawi
OIE	World Organisation for Animal Health
PES	payment for environmental services
POS	point of sale
PPLPI	FAO Pro-Poor Livestock Policy Initiative
PSB	Burkina Sahel Programme
RAC	regional agricultural chamber (Mali)
R&D	research and development
ROSCAS	rotating savings and credit association
SEDC	Sarawak Economic Development Corporation
SHG	self-help group
SPS	sanitary and phytosanitary srandard
TLMP	Tanzania Livestock Marketing Project
TLU	tropical livestock unit
TRIPS	Trade-Related Aspect of Intellectual Property Rights
UNDATA	Uganda National Dairy Traders' Association
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WTO	World Trade Organization
ZAMACE	Zambia Agriculture Commodities Exchange

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1. Pro-poor livestock sector policies and programmes

1.1. RATIONALE FOR THE LIVESTOCK POLICY MENU

Poverty reduction is an ongoing imperative of present-day development policies. Eradicating extreme poverty and hunger, and reducing by half the number of people living on less than one dollar a day are two of the objectives encompassed in the United Nations Millennium Development Goals (MDGs). Growth in agriculture can make a direct contribution to the overall objective of eradicating hunger and poverty because, essentially, three out of every four people in the developing world live in rural areas. This translates into 2.1 billion people living on less than two dollars a day and 880 million on less than one dollar – and most of them depend on agriculture for their livelihoods (World Bank, 2008a).

Within agriculture, the livestock sector constitutes an important engine of growth and poverty reduction. In the first place, a large proportion of the poor keep livestock: preliminary estimates indicate that, to some extent, almost one billion of the world's extremely poor depend on livestock for their livelihoods as a source of food, income, manure, draught power, hauling services, social status, a buffer against risk and a form of savings (FAO, 2008; LID, 1999; Upton, 2004). In addition, growing populations, gains in real per capita income and progressive urbanization fuel the demand for high(er)-value agricultural products, including fruit, vegetables, fish, meat and dairy products, thereby expanding the business opportunities for many livestock farmers (Delgado *et al.*, 1999; FAO, 2006). Finally, livestock sector development generates a demand for labour, supports backward and forward linkages (e.g. in the feed and processing industry), and sustains trade balances. It also contributes to better food security through increased supplies (and possibly lower prices) of animal-source food, thereby stimulating economic growth and development[1] (IFCN, 2004; Pica *et al.*, 2008).

The livestock sector's potential for reducing poverty and contributing to economic growth has remained largely untapped to date, to such an extent that it is difficult to identify a single developing country where growth in the sector has been unambiguously pro-poor. On the contrary, from a pro-poor perspective, the sector's performance has been unsatisfactory in most developing regions over recent decades. Current national and supra-national policies often pay scarce attention to the livestock sector and overlook its potential contribution to reducing poverty (Byron Nelson, 2005; LID, 1999; Pica-Ciamarra, 2005). For example, over the last 20 years, producers in the developing world have been

[1] Livestock sector development may also result in negative outcomes: animal wastes can pollute soils and water sources; expansion of livestock production is frequently associated with deforestation; some animal diseases may affect human populations; and increased demand for feed grains may lead to unsustainable use of land resources (de Haan *et al.*, 2001; FAO, 2006).

unable to satisfy growing local demand for milk and dairy products, as evidenced by sharp increases in import volumes in the majority of such countries (Knips, 2005). A review of 61 (Interim) Poverty Reduction Strategy Papers (PRSPs) concludes that livestock-poverty linkages are by no means appreciated by national policy-makers, as only four PRSPs contained a detailed strategy for livestock sector development in their early versions (Blench *et al.*, 2003). Overall, the revision and re-elaboration of prevailing policies/programmes governing livestock sector development appear to be critical for capitalizing on existing opportunities for achieving the MDG objectives in agriculture-based economies.

Box 1. POLICIES AND PROGRAMMES

There are a number of different definitions and understandings of policies and programmes.[2] Policies are here considered as a set of government actions oriented towards a long-term economic and/or social purpose in a broad subject field; they are pan-territorial and permanent, i.e. they cover an entire country and stay in place until a new policy regime is designed and put into effect. Liberalization of animal health services, rules and regulations that allow banks to accept livestock as collateral for loans, and environmental taxes on discharges from livestock may be termed policies. Instead, programmes are defined as actions managed by public or private agents, which are limited in time and resources and involve direct interaction with particular stakeholder groups such as livestock farmers and financial institutions. Examples of programmes include the establishment of drought early-warning systems; establishment of a commodity exchange, and the one-off distribution of vouchers to farmers to purchase livestock services and veterinary supplies at market prices. Programmes, which include 'projects', are often seen as tools for implementing a broader policy and, as such, should be consistent with the prevailing policy framework. In most instances, policies and programmes should go hand-in-hand, because policy reforms only become effective when supportive programmes nurture changes in the way that governments and private-sector institutions/organizations operate.

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2 Policy is "a course or principle of action adopted or proposed by a government, party, business, or individual, etc." (OED, 2006). "Policies [...] constitute the means for implementing a vision" (Norton, 2004). Policies are "the methods used by governments to change the environment" wherein economic agents operate (Ellis, 1992). Policy is "a deliberate act of government that in some way alters or influences the society or economy outside the government. This includes, but is not limited to, taxation, regulation, expenditures, and legal requirements and prohibitions" (Deardorff, 2006). Policy is "very much like a decision or a set of decisions, and we 'make', 'implement', or 'carry out' a policy just as we do with decisions. [...]. In some other ways a policy is not like a decision. The term policy usually implies some long-term purpose in a broad subject field. Sometimes, however, we conceive policy not so much as actively purpose oriented but rather as a fairly cohesive set of responses to a problem that has arisen" (Sandford, 1985). A programme is "a planned series of actions" (OED, 2006). "Programmes are defined as only those [actions] that ... are delivering a service ... and have a well developed plan" (World Bank, 2006). "Programmes are limited in time and resources. They require the active participation of the government (even if the implementation is contracted out to the private sector), and when the funding terminates, the programme ends" (Norton, 2004).

A number of technical manuals deal with specific livestock development issues. These include, for instance, guidelines for epidemiological surveillance in animal health or for the management of transmissible spongiform encephalopathies (Dufour and Hendrikx, 2009; FAO, 2007); the few comprehensive analyses of livestock sector policies/programmes tend to be sector-specific and technical in nature (e.g. Ehui *et al.*, 2003; ILRI, 1995; Jarvis, 1986). Therefore, there are no manuals or guidelines to help policy-makers appreciate the multi-faceted dimensions of the livestock sector or to elaborate approaches to formulating policies/programmes taking account of the economic/institutional context in which livestock farmers arrive at their production and consumption decisions.

The Menu presents a number of practical guidelines and examples to assist policy-makers and development practitioners to (i) view the livestock sector from a broad socio-economic and institutional perspective, and (ii) formulate effective sector policies and programmes that take account of the economic and institutional context in which livestock producers operate.

1.2. FOCUS AND STRUCTURE OF THE LIVESTOCK SECTOR POLICY MENU

Focus has been placed here on direct links between livestock sector development and poverty reduction. These links mainly involve increased production and productivity of livestock producers: a precondition for second-round poverty reduction effects such as employment generation along the supply chain and greater availability of affordably priced animal-source foods. In particular, the Menu:

- reviews and details a key selection of policies and programmes that (aim to) enhance the efficiency and equity of livestock production systems;
- looks both at livestock sector policies/programmes and at public actions in related and cross-cutting sectors – such as credit and environmental policies/programmes – that are critical to ensuring efficient and equitable livestock sector growth.[3]

Efficiency and equity are standard rationales for government interventions in markets (Stern, 1991; Stiglitz, 1989). They also justify policies and programmes in livestock and livestock-related markets:

- Some livestock-related goods and services, such as disease control and prevention, are public goods with the attributes of non-rivalry (can be used jointly by many) and non-excludability (those not paying for the goods also benefit). These goods and services, therefore, are not supplied by the private sector. For instance, no individual farmer will control tsetse flies on open rangelands because the benefits thereby generated will extend to the whole grazier community free of charge. For the supply of public goods, therefore, someone must take charge of organizing collective action. This can be done at various levels, from voluntary cooperation in local communities to compulsory actions legislated by central government in the event such goods, such as for the control of zoonotic diseases, benefit a large proportion of the population.

[3] Economic growth is efficient when scarce resources are allocated to maximize the production of goods and services; it is equitable when it maximizes the benefits to society, which depends both on the quantity and distribution of the goods and services produced among the population.

- The lack of, and asymmetries in, information on many livestock and livestock-related markets may go against the interests of livestock producers. For instance, financial institutions have limited information on farmers' capacity to make remunerative investments and repay loans. But, because acquiring that type of information is prohibitively costly and difficult, if not impossible, loans are usually only offered to farmers able to provide collateral. Many livestock keepers, therefore, are unable to capitalize on profitable investment opportunities because they are 'credit-rationed'; this results in a net loss to society as a whole. To correct this type of market failure, there is a need for increasing the quantity/quality of information to stakeholders, for instance, by establishing credit bureaus and marketing information systems.
- Some livestock production activities generate externalities. These occur when the actions of some actors in the livestock production chain benefit or harm other actors, but without the benefits being paid or the damage compensated for. For instance, a farmer who immunizes his/her animals against a contagious disease also reduces the risk of infection among other farmers' animals, thereby generating a positive externality. However, since the farmer is not remunerated for that positive externality, he/she might 'under-vaccinate'. The result would be an under-supply of goods that generate positive externalities, whereas the opposite occurs for goods generating negative externalities. In these cases, government is expected to step in and support the production of goods that generate positive externalities (e.g. through subsidies) and prevent the excessive 'supply' of goods generating negative externalities (e.g. through taxes).
- Government activities aimed at supplying public goods, reducing information gaps and managing externalities make for more efficient use of productive resources. However, even in well-functioning markets, the distribution of income is not necessarily socially desirable. This typically happens when economies of scale and transaction costs are large: the former occurs when the average cost of production decreases with output quantity; the latter are indirect costs that reduce the profitability of market exchanges such as travel, time and paper costs. The implication of both is that some private goods will not be available on the market, at prices consumers are willing to pay, unless there is some degree of support from the public sector. For instance, despite livestock keepers being willing to pay a given price for concentrate feed, such feed may not be available on the market because the high fixed production/transaction costs in sparsely populated rural areas reduce private investors' profits. Thus, even in 'efficient' markets, economies of scale and transaction costs can lead to socially undesirable outcomes that justify government intervention, for instance, through provision of key infrastructure or fiscal advantages to stakeholders operating in remote rural areas.

Policies/programmes that address efficiency and equity issues only in the livestock domain are, however, insufficient to promote sustainable livestock sector growth. The development of the sector also depends, and often in a critical manner, on non-livestock sector policies/programmes at the macro and agricultural sector levels, such as monetary, trade and rural credit policies. For instance, public action focusing exclusively on improving animal breeds and the quality/coverage of animal health services, may have little chance of success unless farmers also have access to feed, labour, water and other inputs, as well as to output markets. What are the incentives for livestock keepers to keep high-quality livestock breeds if they have limited access to the feed necessary to raise them? Who will they sell their surplus meat or milk to if they lack access to remunerative markets?

A comprehensive livestock sector policy agenda should view livestock farming from a broader perspective, and take account of the multiplicity of elements necessary to sustain the sector's development. Such an agenda could be subsumed into three major components aimed at assisting farmers in: (i) managing the basics of livestock production; (ii) enhancing livestock productivity and competitiveness; and (iii) sustaining livestock productivity and competitiveness (Dorward *et al.*, 2004a; 2004b; Pica-Ciamarra, 2005).

- Policies/programmes to assist farmers in 'managing the basics of livestock production' are public actions that both provide livestock keepers with adequate and secure access to basic production inputs, such as land, feed and water for animals, and help them to cope with risks and shocks such as natural disasters and price swings. While secure access to basic production inputs and to risk-coping mechanisms are preconditions for engaging in production, they are not sufficient for livestock keepers to produce market production surpluses and rise out of poverty.
- Policies/programmes aimed at enhancing livestock productivity include all actions intended to facilitate farmers' access to animal health services, credit and output markets – both national and international – all of which are critical for farmers to generate and market production surpluses and for improving livestock's contribution to household incomes.
- In order to avoid being forced out of the livestock sector, farmers must be able to respond and adapt to changing market conditions and consumer demand. Policies/programmes that aim to sustain livestock productivity and competitiveness include research, environmental protection and all other public actions necessary to support the sustainability and competitiveness of livestock farmers in the medium to long term.
- For each of these three components, the Menu details a variety of complementary and/or alternative livestock-related interventions, including land, risk-coping, animal health, credit, marketing, trade, research, and environment policies/programmes. The Menu describes the rationale of each policy/programme; reviews the role of the public and private sectors in their formulation and implementation; identifies major implementation issues; and presents a country case study. Table 1 lists the policies and programmes presented in the Menu.