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## Livestock Development for Rural Poverty Reduction: Issues and Options

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### Abstract

1. Combating the causes of rural poverty is pivotal for global poverty eradication. This was expressed in the Millennium Development Goals (MDGs) which — if realised — would lead to the eradication of extreme poverty and hunger, promotion of gender equality, provision of universal primary education, reduction of child mortality and improved mental health, elimination of pandemic and other diseases, and ensured environmental sustainability.
2. Most of the rural poor reside in the marginal areas characterised by low soil fertility, rugged terrain, remoteness and poor infrastructure. These areas are drylands with low and erratic rainfall or wetlands with excessive rain, mudslides and eroded watersheds. The marginal and resource-poor areas could be flat plains or hilly and mountainous areas. The common feature of these areas is their vulnerability and inability to cope with natural or human induced shocks which depletes, erodes or threatens the livelihood assets of their marginalised populations.
3. The rural poor are economically insecure with low and unsteady resource availability and are very sensitive to the slightest changes in external factors. The rural poor are “functionally vulnerable groups” such as: smallholder farmers, landless, nomadic pastoralists, hired herders, ethnic minorities, indigenous people, artisanal fisherfolks, displaced refugees, or female / young / elderly headed households (IFAD: *The State of World Rural Poverty*, 1992; *The Rural Poverty Report 2001*; and *The Rural Poor: Survival or a Better Life — WSSD*, 2002). The livelihood of the poor can be sustainable if this can cope with and recover from stresses and shocks and can build or maintain its capabilities and assets. Most (75 %) of the 1.5 billion people living in extreme poverty are rural, and 66 % of them at least half of them (0.74 billion) depend completely or partially on raising livestock (THORNTON et al. 2002). The poor smallholders keep nearly one billion livestock. Livestock raising is one important activity which, if properly developed and sustained, could lead to the exit of the impoverished rural households from the poverty cycle.
4. Livestock contribute to the sustainable livelihoods and security of the rural poor in many ways; as *Natural Capital* (meat, milk, wool, hide, rangeland, and pasture); source of *Financial Capital* (cash, saving, credit, insurance, gifts, remittance) and *Social Capital* (traditions, wealth, prestige, identity, respect, friendship, marriage dowry, festivity). Most of the rural women manage livestock and process livestock products. The elderly and the young participate in raising the small stock and therefore, become

economically active members of the family labour force. Livestock offer the poor and poorer families sources of high quality nutrition especially for the pregnant women and for improving the cognitive skills and mental growth of the children. Also, livestock offer the smallholders and pastoralists low cost and efficient source of Animal Source Foods (ASF) from, otherwise, poorly unutilised primary production. However, lack, insecurity or instability of resources and inputs keep livestock raising a “resource driven commodity” which can not respond to market demands in a competitive and sustainable way.

5. There are opportunities as well as weaknesses and threats which need to be kept in mind while attempting to research or invest in livestock development for rural poverty reduction. The increasing demand for livestock products in the developing countries, the global trend toward urbanisation, the rise in demand for cereal based feed, and shift in livestock production from temperate to humid areas are leading to the so called *livestock revolution* (DELGADO et al. — IFPRI/ILRI/FAO —, 1999,2001) where the livestock sector is projected to being the most important agricultural sector in terms of added value and land use (DE HAAN, C. et al. — The World Bank, 2001). The developing countries, where the majority of the rural poor live, are projected to be the most important contributors to this growing market. Such realities should stimulate stronger partnership among the development community (research, IFIs, governments) in order to support the developing nations to develop sound livestock sector strategies. On the other hand, addressing this huge shift in volume and locations of livestock production would require stricter environmental and public health regulations, and would entail the need for technological improvements which require long-term commitments and considerable financial and human resources (DE HAAN, C. et al. 1997). Furthermore, we must acknowledge that this rapid expansion of livestock development might “*crowd out*” the poor as economies of scale in production and marketing and inequitable application of environmental regulations will favour the larger units. In addition, there will be a shift in the functions of livestock as mechanisation replacing animal traction and inorganic fertiliser replacing manure. Moreover, and without pro-poor strategies aiming at increasing the capacity of the poor to improve productivity and efficiency and without measures and incentives to destock and restock their herd and flocks, the rural poor will be not be able to cope with low and unsteady resource availability and will be the most effected by the negative aspects of the natural and economic changes. Beside the *potential serious equity effects* of this concentration, it might also lead to greater vulnerability to epidemic disasters (FMD, biological warfare, anthrax) and food safety. Both policy and technological research to ensure that the needs of poor livestock keepers are adequately taken into account is therefore required.
6. The earlier research and development projects focused on increased productivity and did not pay attention to sustainability of assets and resources and equity issues (SIDAHMED; IFAD — LRKB WebPage 2002). Attempts to support livestock development during the last 50 years were mostly through unsuccessful sectoral and large scale mega projects aiming at the alleviation of the production constraints (e.g. breed improvement to attain increased milk or meat yield or quality; improved feed conversion co-efficient; improved animal health) — (SIDAHMED, Eschborner Fachtagung '99; IFAD/DANIDA. WB: GI-SLP under preparation). The second generation of projects featured complex and integrated rural development working in geographic enclaves which were not NRM oriented and did not care for biodiversity and environmental health of the resources as well as the local knowledge, household labour and food security.
7. These and other failed attempts and donor fatigue lead to the evolution of a new paradigm of pro-poor livestock development which takes into consideration all of the causes of poverty of the smallholder or the pastoralist. The development community realised that the focus on *technology driven* rather than *demand driven* programmes has limited the involvement of livestock producers in decision making and has im-

paired the capacity of the technologists to interact with the social and economic scientists. Also realised was the lack of vision about population dynamics (e.g. the Cattle Posts failed because the assigned areas could not hold the increasing number of people and their livestock); resource vulnerability; the need for incentives (marketing outlets, prices, etc); concern for food security; and concern for human health and wellbeing (e.g. current research on animal source foods in the diets of children in developing countries — GLCRSP — USAID, 2001). As a result a generation of new holistic and community-based livestock development has emerged recently. We believe that working with the poor and building broader coalition with a large scope of stakeholders is a step in the right direction.

8. Equally noted are the progressive linkages and complementarity between upstream (scientist managed) research and down stream (demand driven) research. One example of such a breakthrough is the development of a simple, inexpensive, heat-stable, and highly efficacious recombinant vaccine and a rapid diagnostic kit for rinderpest at the International Laboratory of Molecular Biology (ILMB) at the University of California Davis (YILMA, TILAHUN, et. al. published in Science, Nature/Biotechnology and others, 1988–2002). Both the vaccine and the test, tailored-made for developing countries, permit one to distinguish vaccinated from infected animals. This research is a true example of a problem driven research which was the intermarriage between grassroots field experience and advances in biotechnology.
9. Other examples are driven from IFAD's experience in supporting investment projects in the NENA region. First, the results of basic and applied research on barley and sheep breed improvement were tested in collaborative tasks involving the farmers and the scientists (ICARDA and the NARS). This was followed by funding investment projects which support community driven tasks where the farmers for example were engaged in the production of better quality sheep breeds or in community practices which assisted in reversing rangeland degradation (SIDAHMED; IFAD-LRKB WebPage 2002).