



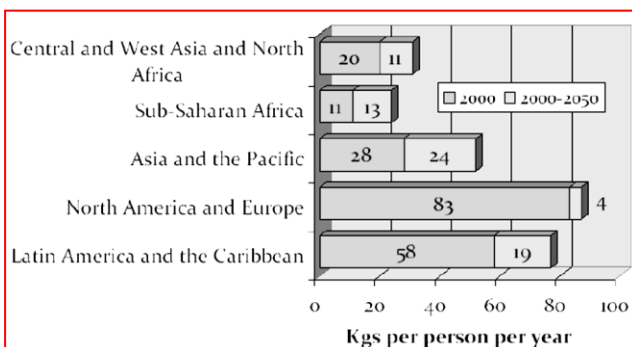
Briefing Note

Livestock as Integral Part of the Rural Economy

Background

Global demand for animal products is on the rise. The livestock revolution is a well-known phenomenon, since the late 90's. Similarly to the green revolution for staple crops, the intensification of animal production has been the agribusiness response to market and consumers' demands. These have been driven by the global growth of income and population, especially in urban areas. From 1987 to 2007 meat production has increased more than 63 %, from 165 million tons to 269 million tons. Production of processed milk products increased in the same time span by more than 20 %, not considering fresh milk and dairy products. The increase in meat and milk consumption has been, however, not uniform in all continents over time. Yet, projections indicate a relative low but an overall increase in demand for meat in developing countries by 2050.

Figure:



Source: IFPRI Impact Projections, 2007.

With the exception of North and West Africa, where increase of livestock production has relied on extensive grazing by pastoralists, in the rest of the world has been the result mainly of large scale operations, driven by the private sector. The sector employs 1.3 billion people along highly complex value chains. The success of the livestock industry is heavily criticised by western civil society. Animal welfare, health issues and economic subsidies have put livestock under attack. The notorious environmental and ecological impacts have been comprehensively described in 2006 in the renowned FAO study, "Livestock's long shadows". This report has provided the scientific data for putting livestock also at the centre of the UN debate on climate change. The main issues raised in this report are:

- the negative environmental impacts of the livestock revolution seen as a major contributor to the pollution of water and soil, and to the emission of green house gases;
- the predominance of grain-fed diets for industrially raised animals is seen as a threat to global food security, because those can be in competition with human food value chains;
- the high complexity of value chains for animal products and their scarce visibility have led to frequent failures of livestock development projects and the lack of interests by political decision makers;
- the predominance of an highly specialised livestock industry and high food safety requirements

have increasingly eroded the role of livestock as public good and natural resource, leaving its development in the hands of the private sector, which has marginalised smallholder production;

- the emergence of new diseases, such as avian and swine influenza have fomented fears of possible human pandemics by highly contagious and lethal viral strains;
- life-style and values of modern urban societies have led to different food habits and perceptions about food production and culture in rural areas.

Livestock provide currently 43% of total agricultural output and constitute an important sector for global economic stability and growth. Livestock production is a vital component of the agricultural economy in developing countries. It provides a vital source of income for millions of smallholders on highly diversified mixed farms, as well as subsistence for the poorest sharecroppers, female-headed households and landless – all in all a 16% of today's global population. Pigs and poultry are sought after for their ability of scavenging around rural homesteads. Cattle, sheep and goats, graze on otherwise unused grasslands transforming fibers inedible for men into high value food and leather. Manures maintain soil fertility, supplying soil nutrients and organic matter, in alternative to chemical fertilizers. Buffaloes and oxen provide draught power for tilling soils for crop production and for transport. Extensive animal production systems practiced by 300 millions pastoralists, make use of vegetation cover in marginal mountainous and semi-desert environments, providing often the only source of food security in remote areas, where agriculture is hardly possible.

Livestock has multiple positive functions, especially in informal economies. Not only is it important for local food security but it is also an essential capital and a social security asset. It plays a crucial role in the recovery process after natural disasters and in paying-back social and financial debts. The integration of livestock in natural resource management or bio-mass production programmes enhances overall system efficiency and increases economic benefits from programmes. The complexity of livestock value chains is seen often only as a challenge. Yet, it represents a great employment creation and income generation opportunity,

because of the long value chains and the supply gap for meat and milk products.

GIZ's position

Despite the obvious relevance for development cooperation and the consistent share of the sector in achieving the MDGs, livestock is considered on the global development agenda more as a threat rather than an obvious opportunity. Livestock has been generally regarded as an agricultural sub-sector. It is frequently marginalised in terms of development priorities and in the allocation of resources. This trend in development cooperation had already started in the 90's, with the gradual closure of the livestock project portfolios built throughout the 70's and the 80's, as well to the dismantling of divisions dealing with livestock in most aid agencies. The support to the livestock sector in today's development cooperation is in general limited to relatively small or indirect initiatives in the natural resource management and local economic development programmes, which are often part of larger decentralisation and regional development programmes.

The “neglect” of the livestock sector by development agencies and national governments, has been exacerbated by an overemphasis in developing countries of its visible negative impacts rather than their systemic causes:

- Degradation of grasslands and natural vegetation is due to a growing rural population keeping a high number of low-producing animals, lack of services and control mechanisms regulating access to common pool resources;
- Deforestation is not only caused by cattle ranching. Lack of good governance and enforcement of sustainable land management, guaranteeing land ownership rights, make logging and beef production a disproportionately lucrative business;
- The spreading of tropical animal diseases, such as blue tongue to temperate zones like central Europe is due to the lack of appropriate disease control measures and milder winters allowing disease vectors to survive;
- The increased incidence of animal diseases transmittable to humans is due to high concentration

of large industrial livestock units around cities. This increases the likelihood of the exchange and recombination of viral genetic material between humans and animals and the creation of new virus strains that can spread from human to human.

- The lack of innovation in the livestock sector is caused by the priority setting of the industry and research institutes concentrating on problems of large livestock industrial systems. These systems guarantee better returns on investments but oversee the research needs of smallholder and pastoralists in developing countries.

The marginalization of the livestock sector in rural development and poverty alleviation strategy and its clear positive contributions to the same shows the paradoxical nature of the present debate in development cooperation. By leaving livestock production to market forces without a public sector providing regulatory frameworks to ensure sustainability of animal production systems, the negative impacts attributed to it may just worsen.

Action required

The present productivity increase in developing countries calls for innovative approaches and renewed investments by international public research and development institutions. Tackling the challenges of the livestock sector requires a coordinated effort at global level which is able to differentiate between the needs of developed and developing countries. It must recognise the need of intensifying animal production in fast-growing economies, the diversity of food systems based on animal production, and last but not least, the right to food for the one billion of people whose livelihoods depend on animals.

Public development agencies should become more aware that incentives to reduce green house gas (GHG) emissions from livestock at global level are hardly effective and difficult to realise in most developing countries. Environmental fixes to reduce methane emissions should focus on more obvious methane sources, such as urban dumping sites. By contrast, well managed grasslands have a high capacity to fix carbon and better animal husbandry increases animal productivity. This means a better ratio of GHG produced per Kg of livestock produce and/or fewer animals to ob-

tain the same output. Such measures do not require complex changes of consumption and life-style, neither controversial carbon taxes on staples, such as milk and meat.

Livestock-related policy measures and funding by public sector institutions have to be prioritised according to four global public goods:

1. The protection against highly contagious zoonotic diseases

- a) Vaccine and diagnostic kit development based on gene technology
- b) Food safety, based on Good Agricultural Practices, Good Management Practice in processing and storage and the HCCAP principles
- c) Preparedness of public health to prevent and control epidemics
- d) De-concentration of intensive livestock units and markets in cities.

2. Preservation of the environment and biodiversity

- a) Natural resource management in dry areas and support to pastoralist societies. This may include reforms in land use rights and alternatives for capital investment and social security
- b) Conservation of animal domestic and wild genetic biodiversity through utilisation, keeping the environmental conditions in High Value Areas of Biodiversity
- c) Reduction of soil and water pollution by animal factories including reduction of direct greenhouse gases (GHG) emissions by appropriate technologies, many of which are already known and available
- d) Reduction of indirect GHG emission by extensive cattle ranching systems when they are primarily caused by deforestation. Introduction of REDD mechanism and better law enforcement may be valuable tools.



3. Food availability, access and healthy nutrition

- a) Use of animal products to improve nutrition of child-bearing women and assure normal growth and development children under five years of age
- b) Develop animal feeding systems in alternative to grains, based on crop by-products and industrial bio-mass wastes
- c) Animal breeding for higher feed-to-food conversion rate and low-fat good-fat animal products
- d) Support diversity of food systems that include livestock.

4. Poverty reduction through economic growth and social stability

- a) Ensuring use of livestock as a pathway out of poverty for the majority of the poor, specially women and smallholders by using simple interventions

- b) Intensification of livestock systems and integration into formal market for better off livestock keepers
- c) Access to technology by research findings and knowledge on sustainable livestock production systems
- d) Developing new business models based on equity schemes for large scale livestock production operations in countries with fast growing economies (BRIC countries, including a few in Africa) based on economic, social and environmental principles of sustainability.

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