

Table 3: The capital value of Sudan livestock in 2009, Sudanese pounds (SDG)

Livestock species	2009 population northern states	2009 population southern states	Assumed mean value/ head SDG at 75% of sale price	Capital value of stocks – northern states	Capital value of stocks – southern states
Cattle	29,210,477	12,352,525	809	23,631,275,890	9,993,192,725
Sheep	38,743,585	12,811,421	145	5,617,819,825	1,857,656,045
Goats	30,332,270	12,937,730	75	2,274,920,250	970,329,750
Camels	4,520,999	0	768	3,472,127,232	0
Total	-	-	-	34.996 billion SDG	12.821 billion SDG

Table 4: Gross value of livestock production in 2009, Sudanese pounds (SDG)

Product	Northern states	Southern states	Sudan total
Cattle milk	9,123,015,552	1,964,428,576	11,107,444,120
Camel milk	3,247,597,056	0	3,247,597,056
Sheep milk	1,066,348,320	352,611,232	1,418,959,552
Goat milk	3,025,559,008	1,290,592,396	4,316,061,344
Subtotal milk	16,462,519,936	3,627,542,144	20,090,062,080
Cattle offtake	4,727,715,702	1,999,256,171	6,726,971,873
Camel offtake	740,720,640	0	740,720,640
Sheep offtake	2,018,826,224	667,603,212	2,686,429,436
Goat offtake	758,306,700	323,443,200	1,081,749,900
Poultry meat, tons	n.a.	n.a.	302,746,300
Subtotal animal offtake	8,245,671,266	2,990,302,583	11,235,973,849
Eggs	n.a.	n.a.	287,309,800
Fish	n.a.	n.a.	728,661,300
Manure for fertilizer	n.a.	n.a.	
Change in stocks	n.a.	n.a.	1,198,176,400
TOTAL OUTPUT	24,708,191,202	6,617,844,727	33,843,129,729

The estimates in Tables 3 and 4 are indicative only. Because little field research on livestock production has been conducted in rural areas of Sudan in the last couple decades, these estimates rely in large measure on studies on Sudanese livestock production that are a quarter of a century old. Moreover, the official producer prices used in these calculations are based on market surveys in northern Sudan, despite the likelihood that prices in southern Sudan are substantially different from those in the north.

Even at the crude level of precision that is now possible, the magnitude of the difference between livestock output in northern and southern Sudan is notable.

Policy Recommendations

- It is essential that a livestock census or large scale sample survey be undertaken as soon as possible in both north and south Sudan. Until a reasonably complete national census or large-scale livestock survey has been conducted, there can be no compelling answer to the question of the economic value of Sudanese livestock and livestock products.
- With technical support from interested international and national research institutes and universities, MARF and

SCBS should undertake a national survey of the value of animal power to the economy in northern Sudan and of the role of animal power in sustaining both rural and urban livelihoods. This survey should include all forms of animal traction, transport and haulage by all species of working animals – cattle, equines and camels – in rural and urban areas and in all economic sectors – agriculture, manufacturing and services. As well as the commercial provision of animal power, the survey should assess the monetary value of the services that working animals directly provide for their owners.

- In Ethiopia, over half of livestock exports are unofficial, but at least the magnitude of the unofficial trade can be roughly estimated from academic and project-based studies. The same is not true for either northern or southern Sudan, where we know that unofficial crossborder live animal trading exists but there is insufficient evidence to estimate the importance or size of trade flows. As a regional organization committed to regional trade, IGAD should support investigations of unofficial livestock trading from both northern and southern Sudan. Some idea of the extent of this trade is essential to formulating policies to support regional economic integration.
- Despite data shortcomings mentioned above, it is clear that livestock are the largest subsector of the Sudanese domestic economy and are a growing contributor to exports. The great bulk of all livestock production – possibly 90% of the total, though no one really knows the actual figure – comes from small holders and migratory producers. To a remarkable extent, the Sudanese economy is based on a combination of mobile and sedentary pastoral and agropastoral production by farming and herding households in almost every region and state. It is essential that Sudanese policy makers recognize the centrality of pastoralism to their economy and take practical steps to support the livestock sector.

Note: Data sources that substantiate the calculations in this briefing paper are given in the original report: The Contribution of Livestock to the Sudanese Economy (IGAD LPI Working Paper No. 01 – 11) 2012, by Roy Behnke and Hala Mohamed Osman.

The brief was based on:

An ICPALD working paper entitled;
The Contribution of Livestock to
the Sudan Economy [ICPALD 6/CLE/8/2013].
Published by: IGAD Centre for Pastoral Areas and Livestock Development (ICPALD). Opinions expressed in this brief do not necessarily reflect positions of ICPALD and other partners.

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POLICY BRIEF SERIES

IGAD Center for Pastoral Areas & Livestock Development (ICPALD)

Policy Brief No: ICPALD 6/CLE/8/2013



The Contribution of Livestock to the Sudan Economy

A recent report by IGAD (Intergovernmental Authority on Development) demonstrates the centrality of livestock to the Sudanese economy (IGAD LPI Working Paper No. 01 – 12, *The Contribution of Livestock to the Sudanese Economy*).

The most commonly quoted measure of the importance of an economic sector or industry is the size of its contribution to the a nation's national gross domestic product (GDP). From this perspective, Sudan's official national accounts reveal the very significant contribution made by livestock to the country's domestic economy. Using official statistics compiled before the independence of South Sudan, livestock has in recent years consistently provided more than 60% of the estimated value added to the agricultural sector, and is a substantially more important contributor to agricultural GDP than crop farming.

With the advent of oil production and exports in the late 1990s, the relative contribution of the agricultural sector to GDP has declined, but at no time in the last decade has the contribution of petroleum to GDP come close to equalling the contribution of agriculture, of which livestock provides the biggest part. Livestock is by value the largest subsector of Sudan's domestic economy, larger even than petroleum.

While not as large as its domestic economic contribution, livestock's share of exports is considerable, and it is growing – up from less than 10% in the 1960s to just under 50% today. It would appear that the era in which crops dominated the agricultural export scene is past. Taking a balanced view of their combined domestic and export significance, official figures suggest that the livestock and crop subsectors are now relatively evenly balanced in their contribution to the Sudanese economy.

This report refers to statistics on the Republic of Sudan prior to the independence of South Sudan, and therefore covers what has become both North and South Sudan.

The estimation of agricultural GDP in Sudan

The Ministry of Animal Resources and Fisheries (MARF) provides most of the official data on livestock production and trade and the Sudan Central Bureau of Statistics (SCBS) prepares the official national accounts estimates.

Sudan follows the production approach to estimating GDP, in which the goods and services produced by all categories of economic

activity are summarized to arrive at total GDP. For livestock this approach involves four stages. First, national livestock populations are estimated. Second, production coefficients are applied to the livestock population estimates to generate estimates of the total output of goods such as meat, milk, butter, dung for fuel etc. Third, based on market surveys, a monetary value expressed in Sudanese pounds – the gross value of output – is ascribed to the total output of each kind of livestock product. Finally, input costs (intermediate costs) are deducted from the gross value of output to derive value added.

The production approach followed by Sudan is a reliable method for estimating agricultural GDP. The problem in Sudan is that the accuracy of the entire calculation rests on an estimate of the size of the country's livestock population, and there has been no attempt to count the national herd since 1975.

Figure 1 presents official estimates of the numbers of livestock in Sudan from the early 20th century to the present. The numbers in Figure 1 have been generated by a variety of estimation procedures: the subjective estimates of experienced senior veterinary officers in the colonial period, an aerial survey in 1975, constant assumed rates of growth, and since the late 1980s, a herd growth and output model. Except during an extreme drought in the mid-1980s, all these estimation techniques depict an ever larger national herd, with remarkably high rates of growth in the 1990s.

Figure 1

