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The social uses of livestock among pastoralists in Sudan: Food systems, stores of value, wealth, power, and authority

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The programme Assisting Regional Universities in Sudan and South Sudan (ARUSS) aims to build academic bridges between Sudan and South Sudan. The overall objective is to enhance the quality and relevance of teaching and research in regional universities.

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wealth, power, and authority*

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Abstract

The impact of livestock on the economy of Sudan and its social uses within the pastoral sector are of great importance in the future development of the country. The role of livestock is that of a food system and store of value, wealth, power, and authority in areas where pastoralists practice their daily life without being reached by modern banking systems and market economy. There are four major uses of livestock in Sudan; namely, domestic, economic, social, and political. A key aspect of the issue is the social significance of livestock and how the wealth it generates transforms itself with power and authority. Indigenous knowledge in land management as well as the pastoralists' use of different types of animals to satisfy their short- and long-term needs has to be understood in order to effectively implement any strategic planning. Elements that should be considered are the impact of drought in the marginal areas of the northern part of the country, land grabbing in the central areas, and civil war in the southern region, specifically focusing on the contribution of the livestock sector to the Gross Domestic Product (GDP) under the pressure of the shrinking grazing areas. A brief attempt is made toward explaining issues of edification of pastoralists in order to transform the system. An advance in this direction can only come through education and creation of awareness towards the relevance of high quality livestock for the local, regional, and national economies of the state. This calls for creative engagement in processes of planning and developing the pastoral sector.

Introduction

African pastoralists have developed certain uses and management systems based on strategic mobility that are well adapted to their living conditions and environment. According to the African Union Policy Framework for Pastoralism (2010), African pastoralism is not static but changes with changing socio-economic, environmental, and other conditions. “Pastoralists in many areas are adapting to trends such as new economic opportunities and better access to modern means of communication” (African Union Policy Framework for Pastoralism 2010, 1). Different uses of livestock in the continent stem from a number of facts. Pastoralism occupies 40% of the African land mass and contributes 50% of the total marketed production and subsistence production consumed by an average pastoralist household (ibid.). Livestock, which is the major component of the agricultural sector of the economy in African countries, has very significant social uses in the everyday life of pastoral groups. Pastoral livestock functions as a food system, store of value, wealth, power, and authority for these households.

Livestock represents a major part of the agricultural sector and an important part of the country export. In his early study on the social role of cattle, Cunnison (1960, 18) outlined how significant cattle are in the life of the Humr ethnic group.¹ What Cunnison said for the Humr can be extended to all pastoralists in the country. In the late 1990s, the agricultural sector in Sudan declined due to the advent of oil production and export. Now, having lost most of its oil revenue after splitting the country in two, Sudan is turning back to reviving investments in its agricultural modern sector. This is the most promising sector for enhancing any chance for future sustainable development of a country that was once thought of as the breadbasket of the Arab world.² One important part of development is the livestock component managed by pastoralists and considered the backbone of the agricultural production and export. Very small, if at all present, investments are directed to the pastoral sector in the semi-arid part of Sudan’s savannah belt.

Although the value of livestock is significant in what the country exports, official figures show that it only represents 2% of the value of the livestock domestic market (Kraatli et al. 2013, 7). This is due to a provision made by the modern sector toward the needs of the country’s urban population. Even with the rapid process of commercialization and its leading position as a foreign exchange earner in the Sudan economy, livestock dominates the domestic daily life of pastoralists. Evidence indicates that most livestock, especially the portion used for export, comes from the pastoral sector. It should be noted that this sector plays an important social and economic role before reaching the domestic and export markets. “Pastoral systems support at least 500,000 households of primary producers [...] the value of subsistence milk alone in the 2008 census was certainly above one billion SDG per year (or

¹ Cunnison stated that, “It has already been recognized by cattle experts in the Sudan that animal husbandry is still in the family subsistence stage or in ownership-for-dignity stage. It is rarely undertaken for profit” (Cunnison 1960, 18).

² This concept emerged in the early 1970s and was left dormant until recently, when the government started to think of reviving the role of its agricultural sector. Many rich Arab countries from Saudi Arabia and the Gulf started to invest in this sector for reasons of food security.

500 million USD)” (ibid.). The pastoral sector also generated full-time jobs and auxiliary markets at home, benefiting a number of temporary employees along the market chain. What is not adequately captured is its contribution to the local food system and its significant role when it comes to social values, wealth, power, and authority.

The social contribution made by the traditional livestock systems in developing countries is mostly downplayed, as is the social impact of this sector (Riethmuller 2003, 245). This paper addresses the social importance of animal resources in Sudan with special reference to the pastoralists. It examines the role of livestock (cattle, sheep, and camels) as a food system, store of value, wealth, and means of access to power and authority in places where the banking systems and market economy do not reach the targeted areas or function properly. It addresses four major uses of animal resources. These are namely their domestic, economic, and political uses, as well as their social significance and their possible transformation with power and authority. It briefly looks at indigenous knowledge and at how animal owners, especially pastoralists, deal with their environment as well as at how they use different types of animals to satisfy their short- and long-term needs. It briefly reviews the impact of drought in the marginal areas in the northern part of the country, land grabbing in the central part, and civil war in the southern part of present-day Sudan. It also outlines the contribution of the livestock sector to the local, regional, and national economy and the challenges and opportunities the livestock sector faces in Sudan.

Livestock: An overview

Livestock is a major contributor to global food systems and a major source of livelihood for nearly one billion poor people in developing countries (Swanepoel et al. 2008, 3). It is one of the fastest growing agricultural sub-sectors in most developing countries, reaching 33% of the Gross Domestic Product (GDP) in some. One main reason is that population growth, urbanization and, most importantly, higher incomes have resulted in a rapid increase in demand for livestock products. This trend is likely to continue in the future (ibid.).

Sudan is no exception. According to IGAD (2013, 1), official figures reveal that the livestock sector makes a significant contribution to the country's domestic economy. Although the advent of oil in the 1990s led to the relative decline of the agricultural sector, never did the contribution of oil to the GDP equal the contribution of agriculture, of which livestock is the biggest part. Livestock is, in terms of value, the largest subsector of Sudan's domestic economy, larger even than petroleum (ibid.). This is even more the case now, after the country was divided in two, with South Sudan emerging as a separate country.

Table 1: Livestock Numbers and Production Trends in Sudan

Species	Stocks (1,000 Head)	Milk (1,000 ton)	Meat (1,000 ton)	Eggs (1,000 ton)	Skins and Hides (Pieces)
Sheep	39,483	394	246	-	11,693
Goats	30,837	1,088	112	-	10,921
Cattle	29,840	2,776	951	-	2,758
Camels	4,751	60	142	-	-
Total	104,911	4,318	1,451	-	25,372
Poultry	-	-	45	40	-

*Source: Ibtisam Gorish and Yasir Hassan, Animal Resource Research Corporation (ARRC), Dagrís Project Planning Meeting, 22-23 July 2013, ILRI, Kenya.

Although the focus of this paper is on the importance of livestock among pastoralists, it is necessary to keep in mind that the livestock sector in Sudan has at least five components. These are (a) animals owned by pastoral groups who make the most significant contribution to the country's GDP through their participation in the domestic and export markets; (b) animals raised by farmers in the irrigated areas mainly for household uses, such as draft animals, or those used to satisfy other needs; (c) animals raised in settled households on the plains away from the irrigated areas and used for their daily product or sold for domestic markets; (d) animals raised by the rain-fed scheme owners using the byproducts of their schemes as fodder; and (e) animals raised by the modern sector mainly to provide for the needs of the growing daily consumption of the population in urban areas (e.g., poultry production). While the livestock sector includes all of these five categories, the emphasis here is on the social impact of the portion raised by pastoral ethnic groups. Table 1 gives livestock numbers and production trends for all the above categories.

Uses of livestock among pastoralists in Sudan

Livestock has many uses – domestic, social, political, and economic – that impact the social life of pastoralists in Sudan. While many researchers have addressed the contribution of the livestock sector on the national economy in the past few years,³ this paper shall focus on the domestic and social use of livestock by owners, especially pastoralist.

It has already been mentioned that the highest percentage of the country's livestock is raised by pastoral ethnic groups. Livestock is the main source of food in the domestic arena. It provides milk and meat for families' local consumption, for households or for the camp unit, depending on the way the ethnic group organizes itself. Hides, wool, and other animal products are part of the daily use of the pastoral household and are carefully looked after.⁴ Pastoralists use their small ruminants as means of exchange to satisfy needs for goods they do not produce. They are also used by almost all pastoral ethnic groups in Sudan for sacrifices during circumcision, marriage, and other social occasions. Some of the animals, such as camels or the oxen of the Baggara of Kordofan and Darfur and the pastoral Fulani in the Blue Nile, are used as means of transport especially during these groups' annual movements in search of better grazing areas for their herds.⁵

They are also used as stores of value in the sense that they are the most important means for investing the surplus generated by the household; hence, they act as the pastoralist's bank. As Haaland stated, "cattle constitute the only way of accumulating capital and are investment that gives profit from calves" (1969, 63). Accumulating large herds is a source of prestige among pastoralists. A person's position is judged by the number of animals owned. Livestock is like money, and it is used to express generosity and ability to welcome guests, express support for leaders, buy support for gaining positions of power or authority within and outside one's ethnic group, and go to the Haj, which Muslims are expected to do once in their lifetime. These, among other reasons, recently prompted the Rashayda to include sheep in their camel herds since they can be easily used for such purposes. They refer to sheep as cash or "dollars" since they can be sold, killed or given as presents.⁶

Livestock is seen, by its owners, as "money-on-hooves" or as the Baggara of Kordofan call it *Elfadha um sof* (silver that has wool). The best description is perhaps offered by Cunnison in his book "Baggara Arabs: Power and the Lineage in a Sudanese Nomad Tribe" where he writes that "among the Humr, as elsewhere, wealth is one road to prestige, power, and political position. Here perhaps the main road. Humr keep most of their wealth in cattle: a

³ For more details on this issue see IGAD Policy Brief Series (2013), Casciarri and Ahmed (2009), Kraatli et al. (2013), and Behnke (2012).

⁴ For more details on the issue of livestock as a food system see Tag El Sir Ahmed Mohamed and Abdel Ghaffar M. Ahmed "Camel Pastoralism as a food System in Sudan: Limitations and Changes," in *Nomadic Peoples* 29 (1991), 61-67.

⁵ This is no longer the case among the Rashayda of Eastern Sudan who are now using pickup trucks to transport their household goods during annual migrations.

⁶ Private communication with the Rashayda leader near Kassala.

man is wealthy only when he has cattle in camp to prove it. The drive to obtain cattle, and to keep them, dominates his life” (1966, 28). Things have remained more or less the same since Cunnison made these statements. Fighting and cattle rustling between the Baggara and the Dinka in the Abyei area have always been related to such values.

Among pastoral groups livestock used to be, and still is, considered as the major part of the payment of a bride’s wealth. Today, goods handed over on such occasions may vary, but their basic component is livestock. Livestock is also the main source of cash, which is used to settle taxes, as compensation in cases of great physical harm made to others, and sometimes as a bribe to officials, especially by those seeking positions of authority such as Nazirs (present-day Amirs), shaykhs or omdas. Another important element in having large herds is that they strengthen group solidarity by allowing, for example, those who have large herds to lend some animals to those who have smaller herds or no herd at all, or to those who lost theirs due to drought or epidemics and civil wars in order to keep them moving with the group. The poor households will then become closely linked to relatives and will not hesitate in giving them the necessary political support, when and if it is needed. This symbiotic relationship extends beyond the group to the relationship with settled villagers through whose lands the pastoralists move. Moreover, large herds encourage cooperation between herd owners during annual movements, grazing, and at watering points.⁷

However, the mutating political situation in the country has forced some changes in the symbiotic relations between villagers and pastoralists as well as in the relations within the pastoral ethnic group itself. Cattle rustling in areas where security is lacking has become conspicuous, while cooperation over grazing and watering has been overtaken by hired labor. Rather than looking for support from one’s group members, it became essential to build relations with major political actors in the regional center or the federal state capital. Excess animals are sold for the domestic or export markets. It is here, more than anywhere else, that the impact of modernization and globalization seems to have its influence on the traditional value systems of pastoralists.

⁷ In most cases, there can be three or four individuals looking after 100 cattle or camels or 150 to 200 sheep. Such herds can be owned by a larger number of families among the pastoral group and the herders may be changed every two or more weeks. The same happens for watering animals in central and northern Sudan during the dry season. Those who do the watering do not necessarily own all the herds. This is arranged in a cooperative manner among the herd owners.

Challenges and opportunities

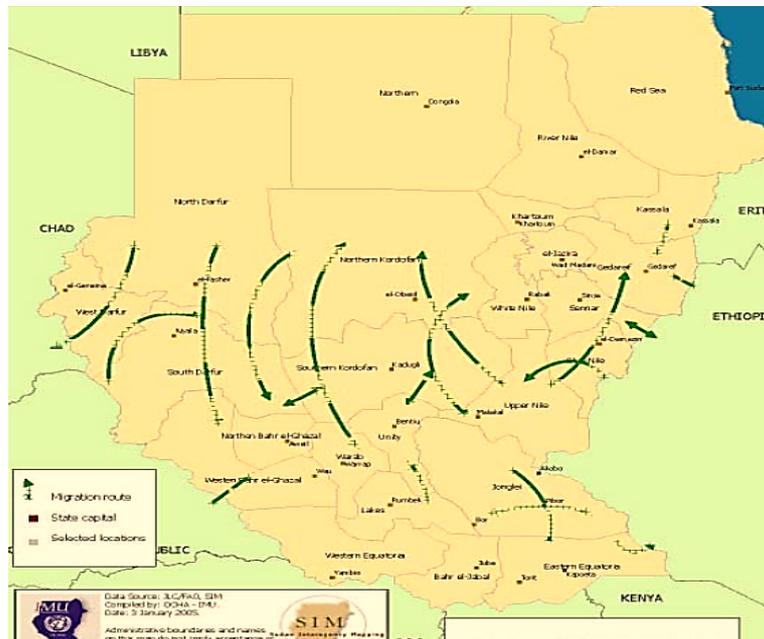
Environmental issues in Sudan such as land degradation, shrinking grazing areas due to climate change, civil wars, and land grabbing by elites and investment companies have had a negative impact on the role of livestock among pastoral groups and the country as a whole. This, however, should not come as a surprise since the pastoralist sector was given a low priority since the first comprehensive plan for development suggested in Sudan's "Soil Conservation Committee's Report" of 1944. The committee's report recommended that "in the event of conflict of interest arising between nomads and settled communities it is in the interest of the permanent well-being and development of the Sudan that the rights of the settled communities should prevail and that the nomads should be excluded from all areas to be settled" (Sudan Government 1944, 15). This was based on the assumption that crop yields had a bigger return per unit area compared to that of the pastoral products. Unfortunately, and despite the clearly large economic contribution of livestock mostly raised by pastoralists, national planners seem to have aligned with the bias of the Soil Conservation Committee against pastoralists. With the intensive investment in the planned and unplanned rain-fed schemes of the early 1960s, most of the land used for grazing in the savannah belt started to shrink (Shazali and Ahmed 1999). Figure 1 shows the traditional annual migration routes. These traditional routes have been intercepted by planned and unauthorized agricultural schemes and have had to adjust accordingly.

This being the case, it can be noted that pastoralism in Sudan has been going through many forms of transformation.⁸ There is a clear awareness of the self-interest of some pastoralists and of the fact that this may sometimes lead to overgrazing. At the same time, the pastoralists' indigenous knowledge in managing resources, especially in marginal areas, needs to be understood and acknowledged. Livestock mobility is more effective as a result of cultural assets such as customary institutions for such resource management and social capital (Kraatli et al. 2013). The way pastoralists use their cultural heritage in many ways shows their indigenous awareness of what came to be known as "the tragedy of the commons."⁹ They do their best to avoid any negative consequences that may impact the utilization of their grazing lands.

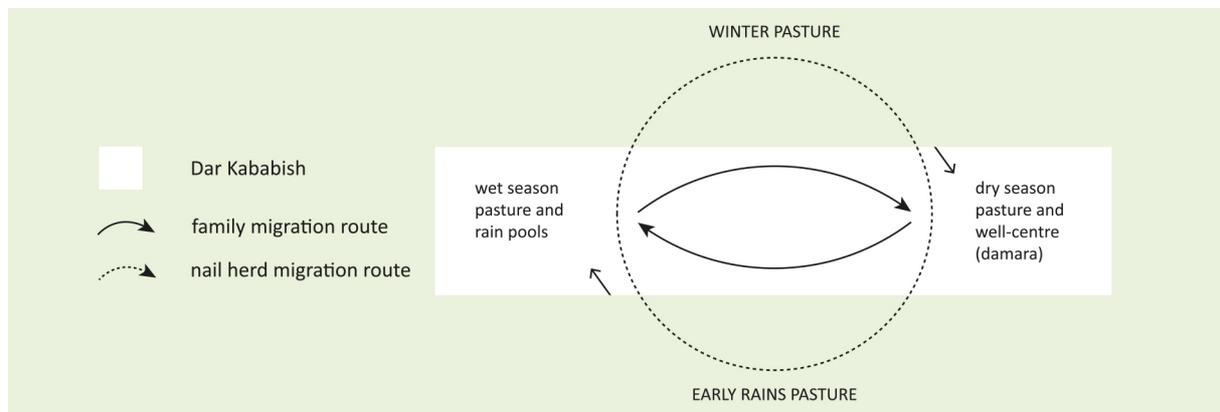
⁸ For a detailed illustration of this process of pastoral transformation see Ahmed (2009).

⁹ Reference is made to ecologist Garrett Hardin's (1968) useful concept for understanding how to look at environmental crises and how attempting to maximize one's benefit might do harm to the common interests of the group.

Figure 1: Nomadic Movement in Central Sudan, El Hassan and Birch 2008.



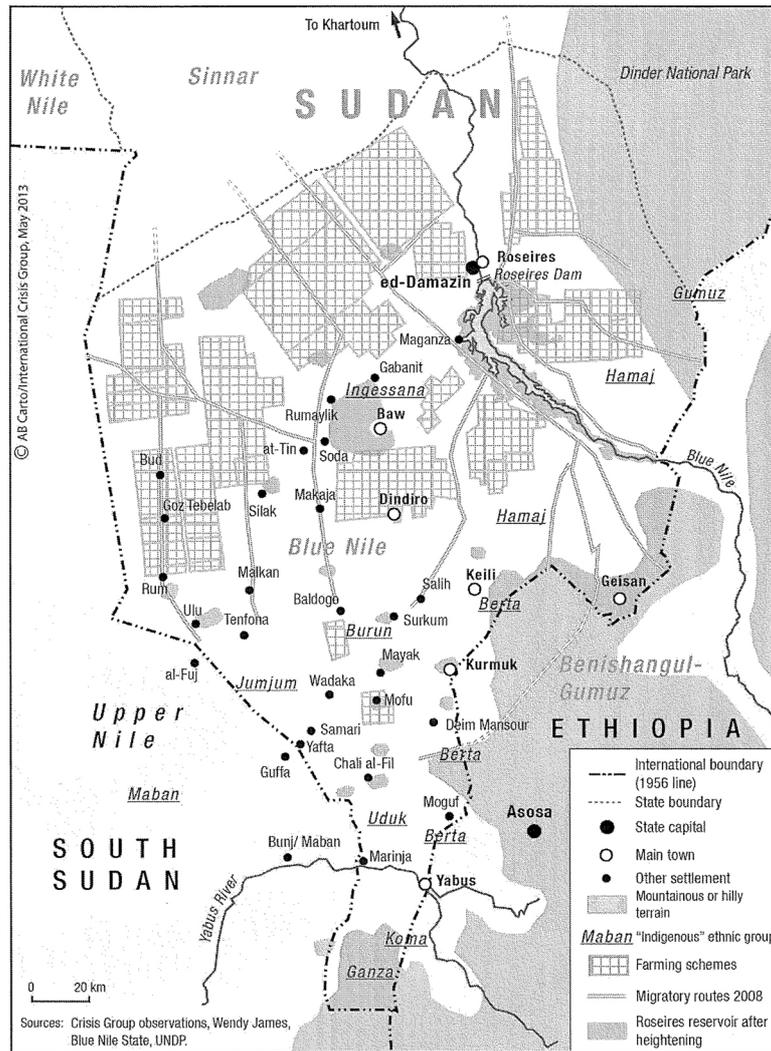
At this point it is relevant to recall the statement made by Gillespie in 1966 in responding to those who were arguing for settling the nomads. He showed how pastoralists in marginal areas use their environmental indigenous knowledge to overcome the type of land degradation these groups are facing today, and he wrote that “if at a stroke of the pen, it were possible to compel the Kababish or the Beni Helba to settle within the restricted areas of their Dars, full provision having been made for a permanent water supply, the numbers of animals would need to be drastically reduced. None of the Dars or homelands could possibly contain the present livestock population for more than a few months during and after the rains” (Gillespie 1966). Pastoralists manage their movement in a manner that overcomes possible land degradation and overgrazing leading to reduction of the land’s carrying capacity. This allows reserve areas to be used during the dry season. Figure 2 below shows how the Kababish arrange their annual movement using different routes to reserve grazing areas in different seasons.

Figure 2: The Kababish's Seasonal Movement

Source: Pastoralism in Practice, Helen Young et al. 2013 (based on Asad 1976).

Related to this is the Anglo-Egyptian colonial administration's regulation enhanced by the strict enforcement of "grazing lines" in the northern part of the country to separate cultivation and grazing. These lines constitute the limits of sedentary cultivation and no farmer is allowed to cultivate north of them, as we see today in the southern parts of the Butana (Shazali, Adam, and Adam 2006, 18; Suleiman and Ahmed 2013).

However, following post-independence processes of development of land use and assigning annual migration routes/corridors for the pastoralists in the face of land grabbing by absentee land lords over the last four decades is essential. This can lead to a better understanding of why the argument for settling pastoral ethnic groups without satisfying their human needs and comprehending their use of the environment cannot work. Pastoralists know what their environment offers and how best to utilize it. They realize that their annual migration routes/corridors have to take into account severe droughts, dwindling range resources, and insecurity, and they design mechanisms to deal with them. The Rufa'a al Hoi, Kenana, Fulani, and the White Nile Baggara are cases in point. It is essential to be aware of the fact that, over the past few decades, pastoralism in Sudan has been able to transform itself through initiatives taken by pastoral groups without any help from state planners (Ahmed 2009, 2012).



Source: Map of the Blue Nile: Land and Resources, Int. Crisis Group Report 204.

In recent years the established patterns of pastoral movements were severely disrupted due to drought in the northern grazing lands and insecurity in the southern areas (Shazali, Adam, and Adam 2006, 4). If this was the case in the early 1960s and after, it is reasonable to wonder about what the elites have in mind now for developing this sector. Do they want pastoralists to become forcibly settled by grabbing their lands without consideration of their contribution to the regional and national economies or the social use of their herds? Or do they want to continue the policy of providing water in the semi-arid belt, which has already proven to lead to further land degradation? To what extent can the improvement of services and increase in animal herds continue without considering the livestock owners' quality of life? To what extent will population growth in urban areas impact the sustainable development in this sector? What are the challenges and opportunities involved in a top-down approach to development? These are all urgent questions that need to be addressed when dealing with any proposed sustainable development in the livestock sector. None of these questions can be answered without engaging the pastoral livestock owners in the process or valuing their indigenous knowledge and marrying that with any possible method for transforming the sector.

Social and other related uses of livestock by pastoral groups in the Sudan savannah belt have been curtailed by the civil war in the southern part of this area. The conflict between government forces and rebel groups before reaching the Comprehensive Peace Agreement (CPA) in 2005 has led some of the pastoralists to limit their annual movement to the southern part of the savannah belt. This also led them to come in close contact with settled villagers and mechanized scheme owners in the central and northern part of this belt, leading to conflicts over land and watering places. Some of the pastoralists who lost their herds during this period were forced to settle and others to keep smaller herds than what they used to have. This has a negative impact on the social, economic, political and other uses of livestock, especially in light of the recently enacted land laws (see Shazali and Ahmed 1999). It should also be noted that livestock rustling became evident during this period. Cattle rustling has increased with the wars in the southern part of the Blue Nile, South Kordofan, and Southern Darfur. Both the fighting forces and pastoralists take part in it. While the fighting forces need livestock to feed their members, pastoralists want to augment their herds for social and economic purposes.

The appropriation of land by the state, the expansion of authorized and unauthorized semi-mechanized schemes, and the takeover of significant land areas by international oil companies and Arab agricultural investors, together with the civil wars, have squeezed the pastoral groups in the Sudan savannah belt forcing some to settle. However, such land appropriation has a long history in the country and has over the years been supported by a number of laws and administrative decisions. Table 2 shows how this process has increased in 2009 and 2010.

Table 2: Recent International Land Grabbing in Sudan

SN	Country	Area (ha)	Location	Type of contract	Nature of contract
1	Syria	30,000	Unknown	Gov-to-Gov	50-year free lease
2	China	100,000	Gezira Scheme	Private investors	Unknown
3	South Korea	700,000	Unknown	Unknown	Unknown
4	UAE	400,000	Unknown	Unknown	Unknown
5	Egypt	400,000	Unknown	Unknown	Unknown
6	Saudi Arabia	60,000	Nile State	Private (Al-Rajhi Group)	40-year lease
7	USA	400,000	South Sudan	Jarch Management Group, Ltd	Unspecified lease
8	Morocco	Unknown	White Nile	Private investor	Unknown
9	Jordon	170,000	Nile State	Gov-to-Gov	Unknown
	Total	2,260,000			

Source: Mustafa Babiker (various media reports in Sudanese newspapers during 2009-2010).

This phenomenon goes back to the nineteenth century when the Turko-Egyptian colonial powers took the Baraka and Gash Rivers from the Beja agro-pastoral groups for commercial cotton production. This was followed by a number of decisions and laws, prominent among

them were the Soil Conservation Committee Report, the 1970 Unregistered Land Act, the 1983 Civil Transaction Act, and the 1990 Encouragement of Investment Act. During the settlement process they lost some of their herds, which negatively impacted the social uses of their livestock. They had to adjust their priorities in using the money they got from the sale of their animals. What happened in the case of the transformation of the household economy among the Rufa'a al Hoi ethnic group in the Blue Nile is an illustrative example (see Ahmed 2009). The situation in the Butana, though it may look different, led to a similar squeeze of the pastoral groups in the area. The Lahweyeen and the Rashiyda had to compete with the expansion of the unauthorized schemes in the Batana grazing areas, which are not supposed to be cultivated. The rich Rashiyda came out as winners in this competition because they could take advantage of the schemes' byproducts while using tankers to bring water to their herd and hence reduce their movement. The same observation can be made with regards to the rich pastoralists in the Blue Nile and Kordofan.

Concluding remarks

The above discussion can perhaps be seen, by some, as a romantic view of the pastoral livestock sector. Given the land grabbing by elites, by the state, and by investment companies excavating for oil, as well as due to the rapid urban growth, the issue of food security becomes a pressing one that needs to be urgently addressed. This calls for strategic planning of the pastoral sector not only for export purposes but also to promote food security in rural and urban areas of the country. This can only be achieved when attention is paid to both the human and animal population in the livestock sector. “The failure of the pastoralists to defend their land tenure rights may be explained by their political marginalization and the hijacking of their representative institutions by livestock traders [...] It is therefore not particularly surprising that the pastoralists all over the country are carrying arm to defend their rights” (Babiker 2011, 7).

Pastoralists know what their environment offers and how best to utilize it. They realize that their annual migration routes/corridors are entangled in complex processes but they design mechanisms to deal with them. What is urgently needed is to convince animal owners that a participatory process of development, rather than an authoritarian one, is possible. Operationalizing the ideas expressed in the National Strategic Plan (Sudan Government 1992) with the participation of all those concerned is essential at this point in time so that pastoralists can see themselves as part of the development planning process.

The transformation in uses of pastoral livestock can only be achieved through empowerment and creation of awareness in improving the quality of life of the pastoralists and the animals they raise, as well as preserving the grazing lands and maintaining annual migration routes. Transformation requires hard work and intensive education that planners, veterinarians, and others can undertake. Education is the key element in any future sustainable development of this and other sectors in society. To make the pastoralists accept that the quality of animals is more important and rewarding than their quantity is not any easy task nor can it be done without planning and intensive education and research addressing values and uses of livestock in this sector.

The revival of a research station such as the one in Um Banein, which was established to spearhead such transformation, is essential.¹⁰ At present, the Animal Production Research Center has eight regional livestock breeding stations spread throughout the country. However, they are geared towards developing the modern livestock sector rather than improving the quality of animals that the pastoralists raise. The high demand in urban areas has directed all research efforts to indiscriminate crossbreeding of indigenous species, especially dairy cattle (Butana, Arishi, Kenana) with the temperate Friesian cow (Gorish and Hassan 2013). Such

¹⁰ The Um Banein Livestock Research Station was established in 1957 in the Blue Nile province (present-day Blue Nile State), about 360 km south of Khartoum. The station was established in order to (1) improve the Kenana breed of cattle for milk and beef production by continuous selective breeding, so as to create a Sudanese dairy cow, (2) produce elite Kenana bulls and distribute them to farmers near the station and in other districts, (3) carry out research on forage production and animal nutrition (Saeed et al. 1987).

breed does not suit the environment in which pastoralists operate, hence, they do not benefit from the services of the regional research centers. Stations like Um Banein are all the more relevant and important because they focus on developing indigenous cattle.

The social uses of livestock will remain as long as no alternative is provided. They shall continue to be stores of wealth as long as the market economy with its modern banking systems is unable to reach the pastoralists in their remote areas. Even more significant is this sector's contribution to both domestic and national economy, including the export sector. The need for food security at both the national and international levels requires more in-depth consideration of sustainable investment in the pastoral sector in Sudan.

Returning to the agricultural sector after the loss of a greater part of the Sudan oil revenue is the correct measure. The agricultural sector can serve the domestic and export markets as stated above. Even though pastoralists have the bulk of the animals in this sector, other groups that raise livestock should not be ignored in the process of transformation and development. The need for food security on both the national and international levels requires more in-depth consideration of the sustainable development and modernization of the pastoral and other livestock sectors in Sudan.

It is important to emphasize here that there is a need to be more thoughtful, creative, and able to engage local communities in a participatory planning process rather than going for authoritarian development, land grabbing and policies that may lead to the further degradation of land. It is important to understand that the social use of livestock by the pastoral communities represents a cornerstone in their daily life and, hence, that they do what they can to save it from any possible decline. Yet, at the same time, it is important to create awareness among local communities in order to allow for a smooth transformation process that can have significant impact on social uses and integrate them into the modern economic and political life of the country.

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The impact of livestock on the economy of Sudan and its social uses within the pastoral sector are of great importance in the future development of the country. The role of livestock is that of a food system and store of value, wealth, power, and authority in areas where pastoralists practice their daily life without being reached by modern banking systems and market economy. There are four major uses of livestock in Sudan; namely, domestic, economic, social, and political. A key aspect of the issue is the social significance of livestock and how the wealth it generates transforms itself with power and authority. Indigenous knowledge in land management as well as the pastoralists' use of different types of animals to satisfy their short- and long-term needs has to be understood in order to effectively implement any strategic planning. Elements that should be considered are the impact of drought in the marginal areas of the northern part of the country, land grabbing in the central areas, and civil war in the southern region, specifically focusing on the contribution of the livestock sector to the Gross Domestic Product (GDP) under the pressure of the shrinking grazing areas. A brief attempt is made toward explaining issues of edification of pastoralists in order to transform the system. An advance in this direction can only come through education and creation of awareness towards the relevance of high quality livestock for the local, regional, and national economies of the state. This calls for creative engagement in processes of planning and developing the pastoral sector.