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The Future of Mechanized Schemes and Agricultural Investment in the South Kordofan State / Nuba Mountains

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ABSTRACT

This paper tackles the issue of the future of mechanized schemes and investment in the agricultural sector in the South Kordofan State/Nuba Mountains. The main objective of this study is to assess the viability of investment in mechanized scheme areas in South Kordofan, such as Habila, which witnessed the intervention of mechanized farming in the 1960s. The study suggests that there are overlapping socio-economic, political, environmental and security factors that have affected the process of investment in agriculture in the area. The approach is multi-disciplinary and the researchers relied on secondary and primary data by using diverse sources and techniques. The study documents that the socio-economic, political and security environments emerging in South Kordofan over the last two decades have seriously changed the conditions for investments in the Habila area. Indicators show that Habila is no longer a part of the planning for agricultural investment in South Kordofan. Other areas, such as the AbuJubaiha, Talodi and Kalogi localities are the areas with most potential for future investment, because of the availability of lands free from disputes and conflicts. However, factors other than security are also relevant for the willingness of investors to focus on these areas. The productivity of land shows a deteriorating trend as a result of overexploitation. Confusion following the two contradicting land ownership systems emerging out of the civil war, as well as environmental changes, have resulted in the emergence of disputes and conflicts in the mechanized schemes of the Habila area. The appearance of Village Development Committees indicates that the future of investments in the agricultural sector in Habila is ambiguous and discouraging.

We are indebted to Leif Manger for reading this paper and for suggestions he made to improve on the paper's structure.

The authors

INTRODUCTION

In an interview in October 2014 with the manager of the Department of Rain-fed Agriculture in South Kordofan State, we discussed the issue of agricultural investment in the region. During that conversation, the manager showed us two tables illustrating his point about declining investments in his area of operation. “Look,” he said, “here is an overview of the investments in my area during the period from 1970 to 1984.” He showed us the information contained in Table 1, below.

Table 1. Schemes in SKS (1970 to 1984)

Source: Records of the Mechanized Farming Corporation

No.	Location	Schemes	Space / Feddan
1	Ancient Habila/directed	309	359 000
2	Kurtala/special/directed	170	187 500
3	Om-Lobia	140	140 000
4	Abbasia	277	277 000
5	Mitaimeer	280	280 000
6	El Baida/Tosi Karandal	218	218 000
	Total	1394	1 466 500

“Then look at this table,” he said, showing us data related to areas no longer considered as possible investment areas today.

Table 2. Targeted areas for agricultural planning and investment

Source: Records of Rain-Fed Farming SKS (2014).

Area	Space/ Feddan	Locality
South Mitaimir	100 000	Abujbaiha
Lagawa	150 000	//
Kurn	50 0000	//
Elssahal	50 000	//
Mowailih	50 000	Abujbaiha
Om-Safafeer	300 000	Talodi
Elshark,	250 000	Talodi (South Kalogi)
Shag Rabih	100 000	Talodi (West Kalogi)
Outh Omlobia	100 000	Rashad/ Talodi
South Elbaida (Beer Balayel)	350 000	Talodi
South Liri (Wlaiaan)	250 000	Talodi
El-Gardood (Bahar)	250 000	Talodi

“The point,” the manager said, “is that I get no interest from anyone in these new areas. No investor is coming forward with any intent of investing.”

Of course we were interested in the causes behind this lack of interest, and asked him about them. He willingly listed the following reasons (we present his points in the order in which he gave them to us) to support the decline in, or absence of, investments captured by his data:

1. The war and insecurity in the Habila area; particularly in the southern part of Habila town.
2. The new regulation and redistribution of lands (60% for locals, 20% for investors from South Kordofan, and 20% for investors from outside South Kordofan). This new system has mainly been implemented in mechanized schemes for the Habila area where there was a decreased viability of large-scale farming (became less than 5 000 feddans). In turn the process of reallocation of agricultural lands in

Habila forced investors to flee the area and reduced the capacity of investment in agricultural sectors in Habila.

3. Habila is surrounded by high-density population centers, compared to other areas. The lands reserved for agricultural planning and investment have diminished accordingly.
4. The emergence of other virgin and potential areas for agricultural investment (e.g., El-Tayara and its surrounding villages in the Abujubaiha locality). These expanses of fertile agricultural lands are not suffering from any kind of problem that can impact agricultural investors who are interested in large-scale schemes. So, most of the new investors prefer to invest in Abujubaiha and new high-fertility areas. Comparatively, the yield of feddans (12 sacks of sorghum) was higher in Abujubaiha than in Habila (where the yield ranges between 3–5 sacks) in the agricultural season of 2013. However, these new potential areas of agricultural investment in South Kordofan/Nuba Mountains border with the new state of South Sudan/Upper Nile and there are some reported disputes and conflicts between communities alongside those borders. In the long run, this situation will have negative implications on the expansion of agricultural schemes, as disputes and conflicts may take on a political dimension.
5. The emergence of new predatory shrubs that affect productivity.
6. Space for investments is limited and tied to leases with locals rather than with the government.
7. The emergence of development committees that are supported by SPLM-oriented native administrations (Meks). These committees have just recently emerged in the Habila area as a body parallel to the State Ministry of Agriculture to collect illegal local duties from investors of mechanized scheme areas.
8. The administration of rain-fed farming used to redistribute and reallocate schemes after expiration of the lease. Of note is that the reallocation of agricultural schemes is highly supported by native administrations.
9. The emergence of community-based conflicts over access and utilization of agricultural land because of inadequacy of land.

Subsequent to the conversation with the manager, the authors decided to seek a broader understanding of the processes that seem to be blocking investors from coming forward. Follows an overview of historical developments of land tenure in Sudan and of the specific developments in the Habila scheme, the first and the biggest of the schemes established in the Nuba region. Similarly, there is a discussion of the factors relating to the dynamics within the agricultural systems themselves, particularly issues of productivity.

THE REGION: A GENERAL VIEW ON LAND TENURE

The adaptive pattern in the Nuba Mountains region is characterized by Nuba communities clustered around the mountains, cultivating house-fields and near-fields on the sandy soil, but also, when possible, cultivating so called far-fields on the surrounding plains. Off-farm activities are also important to the region, especially for women and the poor. Access to the large plains has always been a problem. In precolonial Sudan slave raiders limited access to those areas, while in colonial and independent Sudan struggles with neighboring Arab groups affected access

Feddan
'a yoke of oxen'
Unit of area

1 feddan
= 24 kirat
= 60 metre × 70 metre
= 4200 square metres (m²)
= 0.42 hectares
= 1.038 acres

altogether. Most importantly, public mechanized schemes took large parts of territory from the local Nuba. The schemes also interfered directly with the migration routes of the pastoralists in their movement from the rainy season pastures, in the north of the area (in the southern part of North Kordofan), to the dry season pastures, in the south of the area (into the Upper Nile province).

One type of scheme, and the type we are focusing on in this paper, was introduced through a direct state intervention in the agricultural sector. One result of this state intervention was the introduction into the Nuba Mountains of large-scale mechanized schemes, comprising farms of 1 000 acres each. These were administered by the Mechanized Farming Corporation (MFC) established in the 1960s. The first scheme of this type in the Nuba Mountains was Habila, in the late 1960s, and, further south, the Beida scheme was established in 1976. These schemes were not created with small-holder farmers in mind, but rather targeted people with capital who could afford the investments. Initially, there was a fee to be paid to the MFC in order to get a scheme, which then became a yearly rent. But the real cost was in clearing the land of trees and buying mechanical equipment (tractors and dicers). Furthermore, the management of such schemes, with all the capital involved, the organization of hundreds of wage laborers and the marketing, was way beyond the competence of the local farmers, be they Nuba or Arabs. As a result, when the schemes first came into being, there was a proliferation of traders (*jellaba*) who most effectively exploited this opportunity.

The impact of the schemes was on several levels. First of all, they represented processes through which the Nuba lost land to traders and other business groups. Economically, the MFC schemes became a success for their owners. The profits reaped by the traders were considerable, and this success created increasing income differences in the region. In 1979, Leif Manger (1994) did a calculation of the distribution of incomes among owners and workers in the schemes; i.e., between capital and labor in the Beida scheme. He found that 53% of the total income went to the owners and 47% to the workers. Since there were usually only one or two owners, while there were several hundred workers, the dramatic difference in the distribution of incomes from the schemes is obvious. The traders' position as the dominant economic group in the area continues to be strengthened, and the workers (i.e., the local farmers and poor migrants from the south) continue to be poor, with the schemes providing a vital additional income for these groups.

These vast schemes also had an ecological impact. Due to the lack of rotational practices, the land deteriorated. Whenever the land was no longer usable, a new scheme would be launched. This was contrary to the rules of the MFC, but experience showed that the rules were not applied. The schemes thus appeared to be places of agricultural mining rather than agricultural farming. This meant that the agricultural value of this land was reduced and that such areas, even if they were transferred back to Nuba ownership, would need rehabilitation. The schemes also took up large areas that were previously part of pastoral migration routes.

Of the total income:

53%
to the few owners

47%
to the many workers

THE OVERALL CONFLICT – CIVIL WAR IN THE NUBA MOUNTAINS

There were dramatic changes when Sudan was hit by the civil war, a war that started in the south in 1983, but which entered in the Nuba Mountains territory in 1985. This war, between the Government of Sudan (GOS) and the Sudan People's Liberation Movement/Army (SPLM/A), led to different areas within the Nuba Mountains being under the control of different warring parties. Here, we will only mention those aspects of the war that we believe are of direct relevance for our discussion in this paper. Although pastoralist groups played a significant role in the war, for purposes of our discussion, focus will be on issues of security only.

During the war, the GOS always defined the SPLM/A presence in the mountains as a result of the war itself, and decided to deal with them and their collaborators

as rebels. The government of Sadiq al-Mahdi (1985–1989) armed Arab militias (*murhaleen*) and employed them in warlike activities in the area. In the 1990s, the Khartoum regime (1989-to present day) staged a military “*jihād*” campaign into the same areas in which the new military institution of Popular Defence Forces (PDF) was used. People were relocated into so-called “peace villages” where they got support from government-controlled NGOs and other relief organizations.

Against this backdrop, and in the territories that SPLM/A took over, an alternative political and administrative system emerged, with a separate parliament, civil administration and judiciary. Civil society organizations, schools and a development agency (the Nuba Relief, Rehabilitation and Development Organization) were also established.

The military cease-fire of January 2002, supervised by the Joint Military Commission (JMC), created some optimism. It looked like things could be changed, even more so with the end of the war itself, through the Comprehensive Peace Agreement (CPA) in 2005. However, improvements in the areas were slow. And in 2011 the war broke out again, after the secession of the South. Through local and regional disagreements and conflicts, the region again drifted back into war, a war that is still ongoing.

The current situation directly affects agricultural investment. We must look at two historical axes to fully understand why investors are not coming forward—the one related to land developments in Sudan and in the South Kordofan/Nuba Mountains region, and the one related to war and insecurity. The historical context from which they arise will be discussed in the paragraphs that follow.

LAND TENURE DEVELOPMENT IN SUDAN – A HISTORICAL PERSPECTIVE

The period of independent regimes, in Africa in general and in Sudan in particular, saw a lot of land tenure legislation, and also reform. Various paths were chosen in different African countries; individualization of tenure (Kenya), co-operativization of production (Tanzania), re-institutionalization of indigenous land tenure (pre-revolutionary Ethiopia), reform of inheritance law, nationalization and bureaucratization of land administration. This last type of legislation—i.e., through nationalization and bureaucratization of land administration—is typical for Sudan, with its declaration of state ownership of nearly all land through the 1970 Unregistered Land Act, an act which also instituted a leasehold tenure system. In Sudan’s case, traditional tenure continued, but the state used its powers to acquire land for development of modern schemes.

The choice of paths or models was related to basic ideological outlooks existent at the time. The Sudanese law introducing the legislation referenced above came in the early, socialist-oriented years of the Nimeyri regime (1970). The argument was that a leasehold system was more consistent with the traditional situation in which the state was supposed to operate as a “super-tribe,” playing the same role the tribal leaders had had. However, the state did not maintain a neutral role, but rather became an operator in its own right, using the laws and the system to establish enterprises that benefited the supporters of the state itself. The Mechanized Farming Corporation (1968) was one mechanism with which to achieve this. Between 1968 and 1986, the area of Sudan under mechanized farming expanded from under 2 million hectares to over 8 million hectares. Other parastatals were created to deal with other sectors. When public schemes came under increasing criticism during the internationally driven economic liberalization and “anti-state drive” in the 1980s, private scheme development took over, but produced more or less the same results. In spite of the Islamization efforts in the 1980s, leasehold remains the instrument through which the government makes land available for development projects, both in irrigated and rain-fed areas. Rents are nominal. Lack of political will, leading to slack conservation and husbandry requirements, along with the inability or unwillingness to stop

Area of Sudan under
mechanized farming

2 000 000
hectares in 1968

8 000 000
hectares in 1986

mechanized cultivation outside scheme areas, have added to the issues within the traditional sector. In addition, the present regime has forwarded a specific policy of privatization, explained as a necessary encouragement for investment. They have issued “investment maps” and have brought foreign investors in alongside government supporters. All this has fueled conflict, not only in the Nuba Mountains but in most regions with resources of interest to these investors.

To further illustrate the above points, we surveyed existing literature on the matter. Starting with colonial agricultural policies in east and southern Africa in general, such studies noted that political considerations as well as influences from outside the colonies were significant factors in the implementation of land use systems (Anderson and Grove 1987). Abdel-Ati (2001, 102) stated that, since the beginning of the last century, agriculture in northern Sudan witnessed a remarkable change in character, from being for subsistence only to becoming commercially driven, a process that was closely linked to the development in irrigation technology. Unruh (2004) argued that during the first thirty years of the condominium period, the traders, religious and tribal leaders, particularly in northern Sudan, benefited from the increasing prosperity of trade throughout the country. The administrative system allowed them to accumulate rights of labor and land through government contracts and gave them stake in the new political economy of the country. But the land registration system brought to Sudan was an alien one. At that time, illiteracy was dominant in all parts of Sudan and people, cities included, did not bother to register even their marriages, let alone land. Some of the local chiefs benefited from that ignorance and robbed substantial areas from the vulnerable people, simply by registering land in their names (Ajawin and De Waal 1999).

Komey (2004) asserts that the first modern and large-scale agricultural schemes geared towards export were introduced by the colonial administration after 1910, and initiated the production of irrigated cotton in the Gash and Baraka deltas in eastern Sudan. For instance, the Gezira irrigated scheme was launched through the “transformation development approach,” which covered one million feddans on the fertile clay plains of central Sudan, following the construction of the Sinnar Dam in the 1920s. Other irrigated schemes were the pump schemes along the Blue Nile and White Nile, launched during the late 1920s and early 1930s, followed by the New Halfa and Rahad and Suki ones during the 1960s and 1970s (Ali 1994). In the mid-1940s, rain-fed mechanized farming, known as “mechanized crop production schemes,” was introduced by the British in the Gedaref area to produce sorghum for the allied troops during the Second World War (Ijaimi 2005). According to Ijaimi (ibid.), in 1968, the Mechanized Farming Commission, replaced in 1975 by the Mechanized Farming Cooperation, expanded the sector to the clay plains of the Blue and White Nile, Upper Nile and Nuba Mountains. The area under mechanized farming was estimated to be around 17.5 million feddans (Federal Ministry of Agriculture 2002). More than 50% of this expansion is believed to have been in the unplanned (squatter) sector.

According to Daly and Sikainga (1993), despite the mechanization of agriculture and expansion of social services, the vast majority of even the northern Sudanese population remained in the traditional sector of the economy. The cultivators and herdsmen participated in the modern sector only to a very small degree, and subsequently as labor (e.g., in the Zandi Scheme). Suliman (1999) stated that the national independence in 1956 created the political condition for the Jallaba traders to break away from the constraints of direct colonialism. By the 1960s, their focus had shifted from the pump-irrigated cotton schemes to large-scale mechanized farming in rain land areas, which spread from eastern Sudan southwards, into the Blue Nile area, South Kordofan (Nuba Mountains), and Darfur. Jackson (2002) also argued that, since the advent of mechanized agriculture in the Blue Nile region in the 1990s, more Arabs and more Jellaba businessmen had moved in and been granted large tracts of land by the government. Local inhabitants were wary of the government deliberately underdeveloping the region and giving their land away to outsiders, which created a serious dilemma for peasant communities regarding

1956
Sudan national
independence

their traditional land tenure system. Manger (1994, 20) noted, “The increase in the rate of commercialization is an ongoing process in the Sudan, and its manifestation among various local farmers and pastoralists shows that they are to an increasing degree, becoming involved in the market sector through buying consumer goods and selling of crops and animals. In contemporary Sudan, the very production of rural communities is dependent on these market links. Cash crops are being cultivated at an increasing rate.” Komey (2004) argued that the different socio-economic policies were significant in reinforcing wealthy religious-based groups and elites from the core regions of Sudan. According to Manger (1994), the indigenous trade in Sudan, notably in the clay plains, has traditionally been dominated by the Jellaba traders from the Nile valley. Their command of capital, organizational skills and links to political power, made them superior in solving problems inherent to trade. Nevertheless, in recent decades, new and more profitable options have opened up for these groups, mainly in the form of agricultural investments (Manger 1994). The implication here is that the expansion of the colonial capitalism through the investment of northern merchants in large-scale production of cash crops, for instance in the Nuba Mountains, has resulted in major socio-economic and cultural transformations that distorted and disturbed the traditional mode of life in those areas (Komey 2004). In turn, these transformations would undoubtedly impact the view of indigenous people towards agricultural lands and thereby investment in mechanized scheme areas.

LAND USE LEGISLATION IN SUDAN

One aspect of land use and land use policies is land use legislation. Again, we need a historical perspective, as again we see that linkages between the law and political and economic interests of power-holders emerge in various periods, defining the developments of the land-tenure systems themselves.

1. The 1905 Land Settlement Ordinance made general provisions for the settlement and legislation of claims to land. It stated that the government had little to do with land issues but that the government could intervene and allocate land for large agricultural schemes regardless of claims to ownership (Craig 1991, 101–102).
2. The 1925 Land Settlement and Registration Act enabled anybody to register a title or right to land. Title to land was classified as either freehold or leasehold ownership. Customary rights such as Dar and Hakura rights in western Sudan were recognized but were never registered under this law. In practice however, the government did not interfere in the administration of customary rights, and disputes were solved by mediation, conciliation or even formal arbitration (FAO 2004; Egemi 2003). According to the act, the government divided large-scale agricultural land as schemes in the Gazera area, at the expense of small farmers. These schemes were allotted to members of the political parties, traditional leaders, previous officers and businesspersons (Ali 1994). The intervention of government in the Nuba Mountains during the colonial era, starting approximately in 1925, was guided by the “Improvement Development Approach” rather than by the “Transformation Development Approach” pursued in the Gazera scheme (Komey 2004).
3. In 1970, the Unregistered Land Act introduced a dramatic change in land law. Per the act, all unregistered land became governmental land with a stroke of a pen (Shazali 2002). The 1970 Land Act abolished the right of native administration to allocate the land. Until 1970, the rights of non-registered land were to some extent protected by recognition of the native administration and its authority over land, but the 1970 Land Act heavily restricted the powers, the rights and the influence of native authorities (Yahya 2009). This made all unregistered land open to possible registration (Ajawin et al. 1999).

4. The Construction Planning on Land Disposition Act (1994) included new provisions for the compensation of expropriated land, which were favorable to land owners and which should be considered an excellent opportunity for compensation in kind of lost land and property for returnees (FAO 2004).
5. Current land organization in Sudan depends on the “Sudan Transitional Constitution” (STC) of 2005, Article 186, which refers to “the establishment of National Commission of lands to resolve land disputes and conflicts.” Accordingly, land access should be related to its utilization.

The point of all this is that the early regulations are still in use, alongside more recent reformulations. Agricultural regulations and acts are certainly not constant and the relationship between different actors also varies. For instance, the administration of mechanized farming is still dealing with investors and the leasing of land according to acts from 1925, 1970, and 1984. The contact between Mechanized Farming Corporation or the General Administration of Rain-fed Farming and investors is still based on a 1925 act. However, in practice, a lot of developments in land tenure come in the form of presidential decrees, which are “above the law,” in the sense that no one can bring such decrees to court or appeal them.

Thus, and as also reflected in the legal sphere, the issue of land remains a key matter of conflict in Sudan.

THE HABILA SCHEME IN HISTORY

1 394
schemes in the region
between 1970 and 1984

As we saw in the first table presented to us by the manager of the Department of Rain-fed Agriculture in South Kordofan State, Habila was, at one point, the biggest scheme. The table also showed that there was no lack of investments in schemes; with 309 schemes in Habila specifically, and a total of 1 394 schemes in the region more in general, in the period between 1970 and 1984 (1984 being the year before the war hit the region).

As explained above, the South Kordofan area became of central importance with the introduction of government policies such as the Unregistered Land Act of 1970, which allowed traders and wealthy people from the Nile Valley and central Sudan to invest in large agricultural schemes in the area. In the course of a few years, Habila developed into an area hosting the biggest number and largest area covered by mechanized schemes in the 1970s and 1980s. It was considered as the breadbasket of the Kordofan region during the droughts and famines of 1973 and 1984. Thousands of people from different parts of Sudan and diverse ethnic groups and tribes settled in Habila during that time, some to invest in the agricultural sector, others to seek work opportunities.

And Habila showed the general pattern of scheme developments with the appropriation of land by people who had the financial ability to provide required inputs to work the heavy clay soils. Officially, 60% of land was supposed to go to local people and 40% to investors. But the financial and operational inability of local people to handle big farms and modern technical equipment forced them either to sell or lease their lands to outside investors, becoming wage laborers on their own land in the process.

Seeing the economic benefits generated by the non-local investors created deep frustration within the local communities. The utilization of land in mechanized schemes in Habila has thus, from its inception, been linked to local people’s feeling of historical injustice, triggering inter- and intra-community disputes. This situation relates directly to the beginning of the civil war. And it relates also to the resumption of fighting in the area by those Nuba who had organized in the SPLA in 2011.

LAND TENURE, WAR, AND INSECURITY

Many voices argued that the Nuba wanted a clear tangible benefit from the Comprehensive Peace Agreement (CPA) that concluded the civil war in 2005. The recommendation of many was that the government make concessions on the land issue and also acknowledge the customary rights to use the land in areas claimed by individual tribal groups. The peace agreement most definitely did not mean that all tension disappeared. Rather, Leif Manger (2005) argued that the CPA led to increased tensions as both local Nuba people, pastoralists and mechanized scheme investors returned to areas that had for long not been accessible to them, as did an increasing number of displaced people. This, Manger argued, would become the object of inter- and possibly intra-community competition and conflict. Manger recommended that a land commission implement the following measures as part of the CPA:

1. Freezing registration of rain-fed mechanized schemes pending review;
2. Securing legal registration for all customary practices;
3. Examining and adjudicating cases of existing land ownership;
4. Establishing the right to appeal;
5. Examining customary land tenure, particularly measures within traditional systems that discriminate against women.

Egemi (2008) focused on disputes and conflicts between pastoralists and farmers, particularly in the areas of mechanized farming. He argued that the traditional stock routes and water points had undergone several changes, which caused escalation of conflict between pastoralists and farmers particularly in mechanized scheme areas. According to Egemi (2008), stakeholders in the natural resource management and farmers believed strongly in the role of route demarcation as the entry point for the development of the pastoral sector and reduction of disputes and conflicts between agricultural schemes owners and pastoralists.

The study of Caroline Gullick (2007) demonstrated that securing customary rights to land through registration, would be the key entry point to empowering communities to manage and protect their natural resources. The study referred to the following types of conflicts over agricultural lands as prevalent in South Kordofan:

1. Between pastoralists and farmers;
2. Among agro-pastoral communities (exacerbated by return after war);
3. Between farmers and traders;
4. Between returnees and laborers in mechanized farming.

Whatever the views, the CPA allowed for two parallel legal systems to operate in South Kordofan. Specifically, the government's system based on the belief that "all the land belongs to the government," and the SPLM one based on the understanding that instead "all the land belongs to the people." These are diametrically opposed positions. SPLM favored a system based on customary law, while the government made use of the national legal system. Regardless, there was the hope that things would be worked out. The SPLM-Nuba Julud Conference (17–23 July 2005) discussed three main issues; one of them was the land question. Land was controversial, but there was a general agreement that the CPA, between the GOS and SPLM/A, could handle any controversies related to land. What was clearly recognized by the participants in the conference, was that the land laws since the 1970s, and mainly in 1983, were intended to disown and displace the communities of the Nuba Mountains. The Julud Conference wanted to address that and ended with recommendations to acknowledge the issue of traditional authorities and with a new communal awareness on land ownership and land rights. Many lower-level, tribal conferences were also organized by Nuba clans to discuss the viability of the CPA in South Kordofan/Nuba Mountains, with special emphasis on the land issue.

"All the land belongs
to the government"
|
"All the land belongs
to the people"

To solve the dilemma within land systems, the CPA suggested future investments in mechanized scheme areas. Land also represented the key issue in the Nuba tribal conferences and debates among educated people and elites, mainly from Nuba tribes. The Land Commission in South Kordofan State as well as in the Blue Nile had the following mandate:

1. Review statutory licenses and leases on customary properties;
2. Recommend required changes, including redistribution or payment of compensation and;
3. Advise local and state government on required new tenure policies and administration.

The CPA did not offer a direct solution to the problem of ownership rights for land or for incorporating customary land rights, practices and laws in the new legislation envisaged in the CPA. Instead, the final settlement of land issues was left to the judgment of the Land Commission (Komey 2010, 139). Unfortunately, the Land Commission was never established. So, land, particularly in the areas of mechanized schemes, remained a very important outstanding and controversial issue.

Instead of a Land Commission, after the CPA the state government of South Kordofan issued an act stating that agricultural schemes should be redistributed. But no clear and permanent agricultural investment policy was articulated. On the contrary, the government changed land policies from time to time according to political and economic needs and shifting government visions. As a result of all this, and as argued in 2014 by Secretary General Ahmed Abdelmalik of the Farmers Union, investors and mechanized scheme owners fled the area and abandoned their agricultural schemes. The agricultural production decreased, and thereby the future of mechanized farming and investment in agricultural sectors in South Kordofan State became uncertain. Similarly, the head of the Farmers Union, Nala Atocha (2014), declared that there was no land available for practicing long term investments, exception made for annual leaseholds.

According to Abdelmalik, the insecurity in the area escalated, particularly in the southern parts of Habila after the eruption of the violent clashes in 2011. One outcome was the organization of young people in Village Development Committees. Members of such committees went to scheme owners, pushing them to pay local duties. A practice that was illegal, but which was locally accepted and explained as part of a “compensation” for utilization of their own land. This deeply affected investment activity in the area. Many investors abandoned their schemes because of the growing insecurity.

Evidence also shows that in 2012 Chinese investors were given a chance to invest in Habila. They cultivated around 4 000 feddans, to then turn around and leave their schemes because of the risks connected to them. This indicates that international investors also stepped away from agricultural investments in South Kordofan because of conditions of uncertainty and insecurity.

PRELIMINARY CONCLUSION

We can conclude that war and insecurity both have played crucial roles in the development of the agricultural landscape in the area in general, and in Habila in particular. Issues related to land tenure are not locally driven, but relate to broad historical developments in Sudan. Hence, the present lack of investments is only one symptom of a bigger historical problem facing the nation as a whole.

As shown in Table 2 discussed above, some new agricultural areas do not have the level of insecurity and risk associated with Habila. Yet, even these new areas experience a lack of investments. Why do private investors refuse to enter these new areas? To answer this question, we need to look at the development of agricultural cultivation itself.

AGRICULTURAL PRACTICES

1. Cultivated crops

Sorghum and sesame are the main crops in mechanized farming areas. According to records of general administration of rain-fed farming, a total of 4.5 million feddans (one feddan equals 0.42 hectares) have been allotted to mechanized schemes, but only 35% of this area is used over a year. Sorghum occupies 52% of the cropped area, sesame 16%, groundnut 13%, millet 5%, cotton 9%. Other crops like cowpea and Bambara groundnut approximately cover 5% of the cultivated area.

Year	Sorghum	Millet	Sesame/kantar/feddan	Groundnut/kantar/feddan
1997/98	2.0	1.0	3.00	5.0
1998/99	2.46	2.0	2.00	6.0
1999/00	2.00	1.8	1.50	3.0
2000/01	0.98	1.6	1.14	4.0
2001/02	2.3	1.1	1.33	4.0
2002/03	1.5	1.0	1.00	2.0
2003/04	1.3	0.6	1.23	2.8
2004/05	2.3	0.6	1.75	4.0
2005/06	1.5	1.5	1.25	5.0
2006/07	0.80	1.5	0.59	4.0

Table 3. Yield (sack*/feddan**) of the main crops in mechanized schemes in South Kordofan State during ten (10) seasons (1997/98- 2006/07)

*One feddan = 0.42 Ha

** One sack of sorghum/millet = 90 kg and one sack of sesame = 2 kantars

Source: Records of Rain-fed Farming.

Regardless of the yield, Table 3 shows the main crops cultivated in mechanized schemes areas in SKS over the last decades. Of note is the absence of cotton. Cotton was the first cash crop to be introduced in the Nuba Mountains area in 1918 based on traditional shifting cultivation, which was progressively improved by extension and insect/pest control. During the period of 1923 to 1967, cotton witnessed an increase in production from 13 000 kantars in 1925/26 to 350 000 kantars in 1939, almost doubling by 1953, reaching 650 000 kantars (CHSC 2008). Finally, there was a record-setting 1 016 733 kantars in cotton production for the 1962/63 season. From 1967 to 1987, cotton production and the areas devoted to it decreased, as shown in Table 4 below (CHSC 2008):

Year	Area	Production
1967	14 2845	455 539
1987	27 853	42 441

Table 4. Variation of cotton production over twenty (20) years

Source: CHSC (2008)

The reasons behind this decline, according to CHSC (2008), were:

1. An absence of planning;
2. Shortage of equipment and technical staff;
3. Shortage of fuel;
4. Lack of financing, which made it impossible to execute the successive and complimentary agricultural operations during the seasons.

In a succession of changes and failures, cotton production in the Nuba Mountains witnessed sizable fluctuations and reductions, down to almost zero kantars in the 2007 season. As a result, cotton is no longer one of the main cash crops targeted by investors in mechanized schemes.

2. Productivity of the main crops

Table 5. Productivity (Kg/feddan) of the main crops in South Kordofan as compared to regional and international standards
Source: CHSC (2008).

Region	Sorghum	Millet	Groundnut	Sesame
Dry Land	336	252	546	210
Africa	569	281	403	170
North Kordofan	55	50	144	57
West Kordofan	130	85	173	75
South Kordofan	236	150	320	88
Research (SK)	952	402	593	173
Record	1682	679	1218	362

Table 5 shows that average yields obtained from the main crops are very low compared to regional and international standards. Proportionally, yield of crops in South Kordofan are better than in North and West Kordofan. This could explain why big farmers and investors from the northern and western areas in Kordofan invested in the mechanized farming areas of Habila before the civil war.

3. Extension services

Part of the problem in agriculture is that no extension or awareness services concerning best practices in agricultural production were provided to farmers in mechanized scheme areas. Farmers and investors were left to rely on their own experience. Professional services were only provided upon request, according to the financial capacity of the investor. Most of the existing investors inherited their schemes and experience in cultivation from their fathers (e.g., families of Yousuf Shami and Kurmoty), who, before them, invested in agriculture during the golden era of mechanized farming (1960s and 1970s). The director of rain-fed farming in South Kordofan State (interviewed in 2014) revealed that land productivity in Habila deteriorated significantly and fell way behind productivity in similar schemes in Gadarif. The difference between Gadarif and Habila with regard to yield is, according to the director of rain-fed farming, attributable mainly to provision of extension services, agricultural inputs and the use of modern technology in Gadarif.

4. Investment policies

After the CPA, the state government of South Kordofan issued an act stating that agricultural schemes should be redistributed to engage more investors from the area. This might have been a positive idea for local inhabitants, but for outside investors there was simply no clear and permanent agricultural investment policy. As stated above, the government changed land policies from time to time according to its political and economic needs, putting investors' rights on the back burner (Ahmed Abdelmalik, Secretary General of the Farmers Union, 2014).

In 2006, the government issued a presidential act requiring that agricultural schemes be redistributed with a majority of the land (60%) going to local inhabitants, 20% going to farmers from South Kordofan State, and the remaining 20% going to outside investors. According to investors in the agricultural sector, this new policy of redistribution decreased the already limited lands allotted for investment.

5. Views on challenges and constraints of production

To further our discussion, we collected the views of people on the most important challenges and constraints that are facing agricultural production in the area under review. Farmers and general administrators of rain-fed farming in the Greater Dalanj locality provided the following as examples:

- Inefficient land and water management.
- Environmental degradation due to poor land use practices.
- Deterioration of soil fertility.
- Inadequate infrastructure and lack of health and education services, particularly during the rainy season.
- Poor crop genetic stock.
- Political war and conflicts among target groups.
- Fuel restrictions (after the eruption of war in 2011, the government restricted access to fuel primarily to avoid its use by rebels. Accordingly, it is not allowed to take more than one parcel—198 liters—of fuel from any petrol station at any given time).
- Pests and diseases.
- Labor constraints.

The interview with the manager of rain-fed farming in South Kordofan in 2014, confirms that lower yields in the area, compared to international and regional levels, relate to lack of agricultural inputs and infrastructure fostered by poor government policy. This explains why even potential scheme areas that are not necessarily impacted by security risks, are having difficulties attracting investors.

2006 redistribution of land:



AGRICULTURAL INVESTMENT IN AN INTERNATIONAL CONTEXT AND THE WAY FORWARD

The discussion above has shown that the reasons for a lack of agricultural investment in the scheme areas in South Kordofan are many and complex. They relate to the historical development of land tenure regulations and policies in Sudan, and to the development of the Sudanese state itself and its involvement in agriculture. We have seen that the development, over time, has contributed to an increasing level of conflict and insecurity, ending in an outright civil war.

Having highlighted the backdrop for land tenure in Sudan, we will conclude by looking at the Sudanese situation with regard to investment in agriculture through the lens of international standards. International organizations such as FAO, IFAD, the UNCTAD Secretariat, and the World Bank Group have all developed key principles for investment success and sustainability in any given area (IFAD 2010). These principles are:

- 1. Respecting land and resource rights:** The existing use or ownership rights to land, whether statutory or customary, primary or secondary, formal or informal, collective or individual, should be respected.
- 2. Ensuring food security:** Investments do not jeopardize food security but rather strengthen it. Whenever there are potential adverse effects on any aspect of food security (availability, access, utilization or stability), policy-makers should make provisions for the local populations.
- 3. Ensuring transparency, good governance, and a proper enabling environment:** Processes relating to investment in agriculture should be transparent, monitored, and ensure accountability by all stakeholders, within a proper business, legal, and regulatory environment.
- 4. Consultation and participation:** All those materially affected should be consulted, with agreements from consultations recorded and enforced. Sustainability of investments in agriculture requires that investments be designed in a participatory manner, consistent with local people's vision of development.
- 5. Responsible agro-enterprise investing:** Investors should ensure that projects follow the rule of law, reflect the industry's best practices, be viable economically, and result in durable shared value.
- 6. Social sustainability:** Investments should generate desirable social and distributional impacts and should not increase vulnerability.
- 7. Environmental sustainability:** Environmental impacts of a project should be quantified and measures should be taken to encourage sustainable resource use, while minimizing the risk/magnitude of negative impacts.

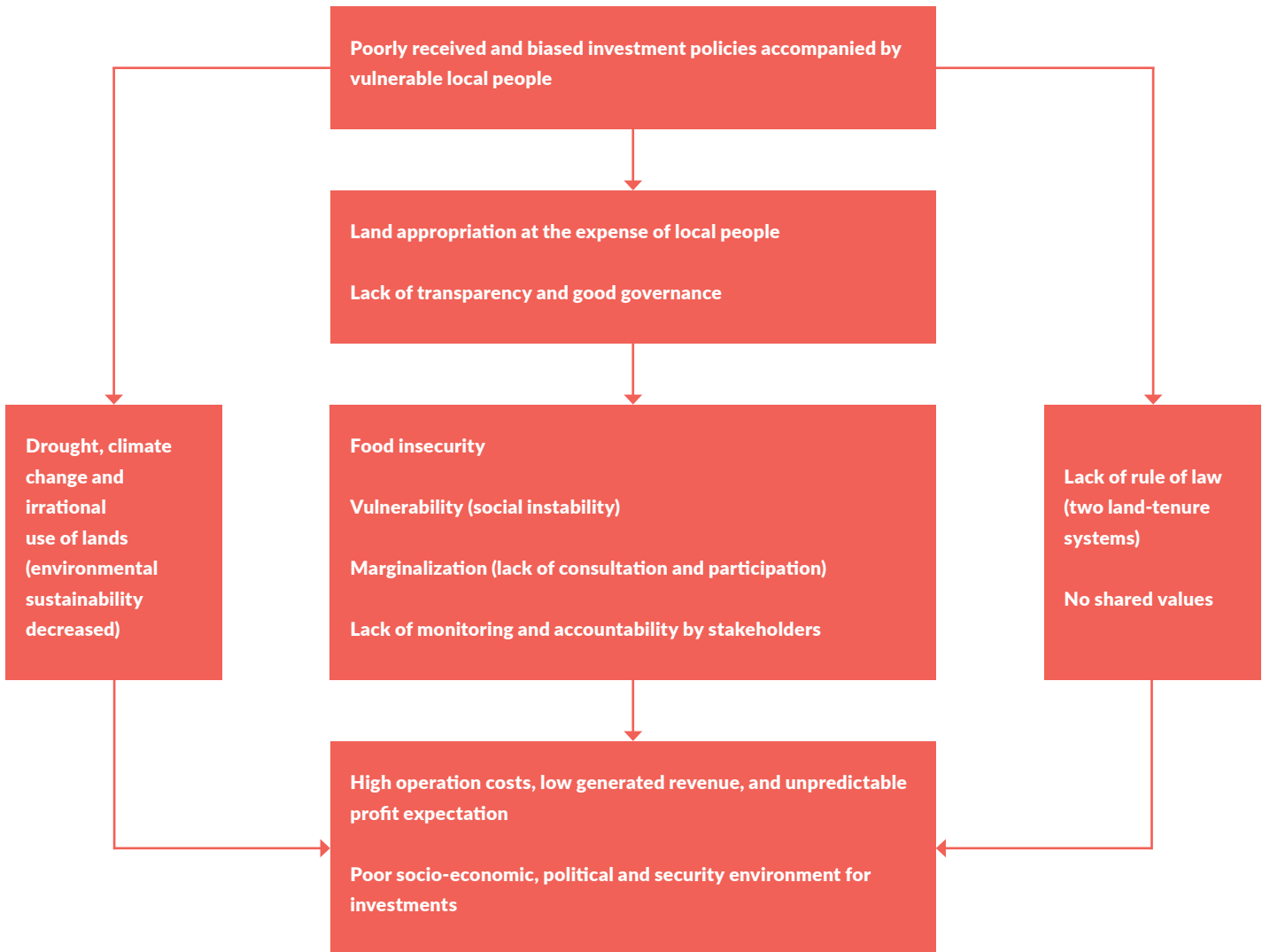
We can apply the seven principles listed above, focusing on the specific aspects of the case at hand and on how those principles are being implemented, or not, in Sudan.

Principle	How the principle is being applied in Sudan? (Indicators)
Respecting Land and Resource Rights	<p>The CPA, mainly in the area of mechanized schemes, contains the explicit recognition of the rights of local inhabitants on land, despite there being no such recognition when mechanized schemes were first introduced.</p> <p>Demarcation and registration or recording of agricultural land is fully authorized by the government, through general administration of rain-fed farming.</p> <p>There are no reported efforts from either the government or investors to resolve disputes over access and utilization of land.</p>
Ensuring Food Security	<p>The introduction and expansion of mechanized schemes at the expense of traditional resource users (peasants and pastoralists) have reduced opportunities for local people to have access to fertile lands.</p> <p>Reduction of land fertility and productivity, accompanied by fluctuation of rainfall and droughts, have all resulted in vulnerability and food insecurity.</p>
Ensuring Transparency, Good Governance and a Proper Enabling Environment	<p>Unfortunately, all planned and unplanned lands in the Habila area are either exploited by investors or locals. Currently, there is no available land for investment purposes in Habila.</p> <p>The director of rain-fed farming in South Kordofan emphasized that no efforts have been made for developing the capacity of agricultural institutions that handle investment selection, land transfers and incentives.</p> <p>Also, the successive governments at the state and national levels have not maintained a clear monitoring system to secure an attractive investment climate.</p>
Consultation and Participation	<p>In the process of land appropriation within the mechanized schemes, there was no involvement of local stakeholders.</p> <p>No special consideration has been given to local inhabitants with regard to sanctions and contracts, and dealing with land users in mechanized schemes areas.</p>
Responsible Agro-Enterprise Investing	<p>Land leasing agreements between administrators of mechanized farming and investors are still governed by the 1925 Land Act. However, the unregistered Land Act of 1970 is also the benchmark for land appropriation for investment purposes.</p> <p>The 2006 regulation of redistribution of land to locals, can be considered as the first step towards a legal reform.</p> <p>Processes of land appropriation for agricultural investment in South Kordofan/Nuba Mountains do not adhere to global best practices for transparency, accountability and corporate responsibility.</p>
Social Sustainability	<p>Social issues such as land tenure, education, and provision of social services are not properly identified and satisfied.</p> <p>The interests of vulnerable groups are not explicitly considered.</p> <p>Mechanized farming contributed to the emergence of modern technology in agriculture, but local people have not benefited from it as they have been working with investors as precarious wage labors.</p> <p>The production of crops is determined by the market rather than by realistic needs of local communities.</p>
Environmental Sustainability	<p>No environmental impact assessment has been conducted to investigate the impact of mechanized farming in Habila.</p> <p>Inadequate or lacking agricultural inputs for securing and increasing yield accompanied by intensive cultivation have resulted in deterioration of soil fertility and in the disappearance of cotton as an important cash crop.</p> <p>Administration of rain-fed farming in South Kordofan doesn't have a clear environmental management plan.</p>

From the table above, we immediately see that international principles are not being applied. Rather than benefitting local populations, the expansion of mechanized schemes in our case has happened at the expense of traditional agro-pastoral production systems, and has seriously affected the process of food security in the area.

To further elaborate on the Sudanese situation, we provide here an empirical model that draws together the elements relating to the agricultural investments in our case.

Empirical model: Land appropriation and challenges of investment in agriculture in SKS/Nuba Mountains



The flowchart is of course just another way of illustrating the topics discussed in this paper. But by collecting the information in one empirical model, we can provide a stronger and more integrated impression of the problems we are discussing. The flowchart also helps us transition to the conclusions and recommendations listed below:

- Improvement of security is a basic element for any realistic agricultural investment in SKS.
- Establishment of land commissions to review regulations and acts concerning land tenure, access and use in SKS is vital.
- Implementation of the Presidential Act of 2006 concerning redistribution of schemes, giving special consideration to locals, will encourage the participation of local populations in modern agriculture.
- The investment climate and the security of investment can be improved by stable and predictable policy environments.
- Provision of agricultural inputs (equipment, improved seedling, fertilizers) can enable small and local farmers to benefit from modern technology, reducing the feeling of frustration and exclusion they might have.
- There should be special consideration given to extension services, as well as improved agricultural rotation.
- Commitment to clear marketing policies, with fair prices for agricultural products, can protect small farmers from market fluctuations.

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INTERVIEWEES (2014)

No.	Name	Direction
1	Nala Atosha Eldooma	Head of Farmers' Union in the greater Dalanj locality
2	Abdelmalik, Ahmed Omer	Farmer, General Secretary of Farmers' Union
3	Mohammed Ibrahim Hammad	Secretary General of the Habila Farmers' Union
4	Gumaa Ibrahim	Farmer, former minister of education
5	Ibrahim Omer Hamouda	Manager, General Administration of rain-fed farming, SKS
6	Abdelrahman Hassan Idris	Department of planning and monitory, mechanized farming
7	Ali Suliman Adam	Ex farmer in Habila
8	Sami Yousuf Shami	Ex investor in Habila
9	Yasir Ibrahim Ahmed	Investor in mechanized schemes
10	Mohammed Nour Hamid	Member of village development committee

APPENDIX. METHODOLOGY OF THE STUDY:

1. Data Collection

Bearing in mind that this study stays in the domain of the qualitative researches, the study has adopted a multidisciplinary approach to address and explore mechanized schemes and agricultural investment in the Habila locality of SKS. Accordingly, many tools and techniques of data collection have been used in order to obtain secondary and primary data.

Secondary data: books, references, published and unpublished reports.

Primary data collected through the following tools and techniques:

- Semi-structured interviews with government officers, staff members in the administration of mechanized farming, investors and owners of agricultural schemes, farmers in Habila, native administration representatives, community leaders, farmers' union members, and other stakeholders (including women and youth);
- Focus group discussions;
- Field observation.

2. Study population:

The sample size of the study has been chosen purposely, from investors and farmers in mechanized farming areas. Interviews were conducted with different people representing different interests. However, the study focused on the Habila locality as a geographical area for data collection and analysis.

3. Data analysis:

The study is a qualitative research, where typology and descriptive statistics have been used for the analysis of the collected information.



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