

Cross-Border Challenges of Semi-Nomadic Populations in the Borderlands of Sudan and South Sudan

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The establishment of the Republic of South Sudan in July 2011 created a new reality for the diverse nomadic and semi-nomadic tribes living along Sudan – South Sudan borderlands. Transitional dynamics that occurred in one country (often in the grips of civil war) had become international cross-border dynamics. The aim of this paper is to map, investigate, and analyze the effects of border-making and climate change on tribal practices in borderland regions. We focus on grazing and trade, two prominent cross-border interactions. The methodology includes a survey of various cross-border interactions and a theoretical discussion of border perceptions. It also utilized an empirical analysis, including interviews with local agents and questionnaires distributed to the South Sudanese students. The article illustrates how new barriers and restrictions in the Sudan – South Sudan borders changed the daily practices of borderland communities. Global climate change constitutes another geographic phenomenon that affects spatial interactions. We argue that the inconsistent regulations and governance in the borderlands create a hybrid system of continuity and change.

Keywords: Sudan, South Sudan, Border, Borderlands, Grazing, Trade, Tribes

INTRODUCTION

Throughout history, the borderlands between Sudan and South Sudan have been a region of dynamics of connection and separation. In addition to the fact that this area is a climatic buffer zone between the desert and the tropics, it is also a region where Islam meets Christianity and Arab Africans meet black Africans, and other religions and ethnic affiliations.

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On July 11, 2011, the Republic of South Sudan gained independence from the mother state of the Republic of Sudan, forming a new international border and transforming traditional spatial interactions in the region. The new border with no pass barriers was an old administrative boundary between provinces (The Anglo-Egyptian Sudan Agreement, 1905). Its formation generated new regularization of movement and visual elements in the region, such as physical barriers in some cases. The borderline extends for 2,010 km, making it the longest land border in Africa. It extends over a wide area of various settlement forms, lifestyles, occupations, and cross-border interactions, while most of the borderland population on both sides of the border is composed of tribal society (Johnson, 2010).

Today, cross-border interactions such as grazing, trade, communication, travel, and immigration, are common practices in these borderland communities. In this paper, we address the border's effects on regional spatial interactions. Despite being a mostly unmarked and intermittently open border, we assume that border regulations and increasing nationalism have reshaped traditional tribal practices in the borderlands. This change is most apparent in tribal societies where dynamic spatial patterns, such as roaming nomadism and migration, are common. We examine the border influences by focusing on grazing and trade, while analyzing the nature and scope of tribal spatial changes in these two practices.

African borders attract many scholars in search of contextualizing the traditional spatial practices in the era of modern borders (Little 2015; Cormack, 2016). Pastoralism and livestock trade still represent widespread economic fields in Africa and they both comprise common cross-border activities. This is very much the case on the border between Sudan and South Sudan. Grazing, trade and other cross-border activities signify domination and supremacy of local actors while challenging state sovereignty in the borderlands (Little, 2015).

Since the 1990s, border theories have tended to highlight the centrality of the borderland as opposed to the centrality of the state's core (Newman & Passi, 1998). International borders pose a paradoxical dilemma to researchers. On the one hand, the borders are peripheral to the state core. On the other hand, they are a focal points of cross-border interactions and regional practices (Asiwaju and Adeniyi, 2008; Baud & van Schendel, 1997). In this study, we focus on the borderlands as our main spatial research unit, rather than the state core. The border in our case may seem like a line on maps, but in fact, the border has a vague presence on the ground. It represents a network of loose local and state institutions (Cormack, 2016).

The Sudan – South Sudan border represents a political division as well as a social and environmental boundary. Socially, the border separates ethnic, tribal and religious groups, but it can also be regarded as their meeting point. The majority of residents north of the border are semi-nomadic Muslim-African tribes of Arab origin. On the southern side of the border reside predominantly Christian tribes of black African and Nilotic origin (Collins, 2008). Environmentally, this border region is a climatic buffer zone between desert and tropics, located in the southern part of the

Sahel Belt (Climate-fragility Risk Factsheet, 2021). Similar to other countries along the Sahel Belt, uncontrolled grazing has accelerated the desertification that has been spreading southward over time. The fragility of these borderlands is a result of a lack of resources, subsistence shortage, and absence of an adequate development policy, which are all leading to increased security threats and terrorist attacks (Koren & Behar, 2021). Therefore, any examination focused on this region should include both environmental and social factors, in addition to political factors.

To explore our research question, we used historiographical works, theoretical literature, and primary documental sources published by diverse organizations, including research institutions, NGOs, and UN agencies operating in the area. In addition to a literature review, we conducted interviews and questionnaires that were valuable for understanding local perceptions of territoriality and boundaries. We performed eight semi-structured interviews with journalists, academics, diplomats, and borderland residents. The interviews included three main issues: family and personal background, the influence of the borders on their life and identity, and the sense of personal safety and national security. The questionnaires highlighted the common perception of the border and the attitude toward Sudan since the partition. We distributed the questionnaires to 120 students at the University of Juba in South Sudan.

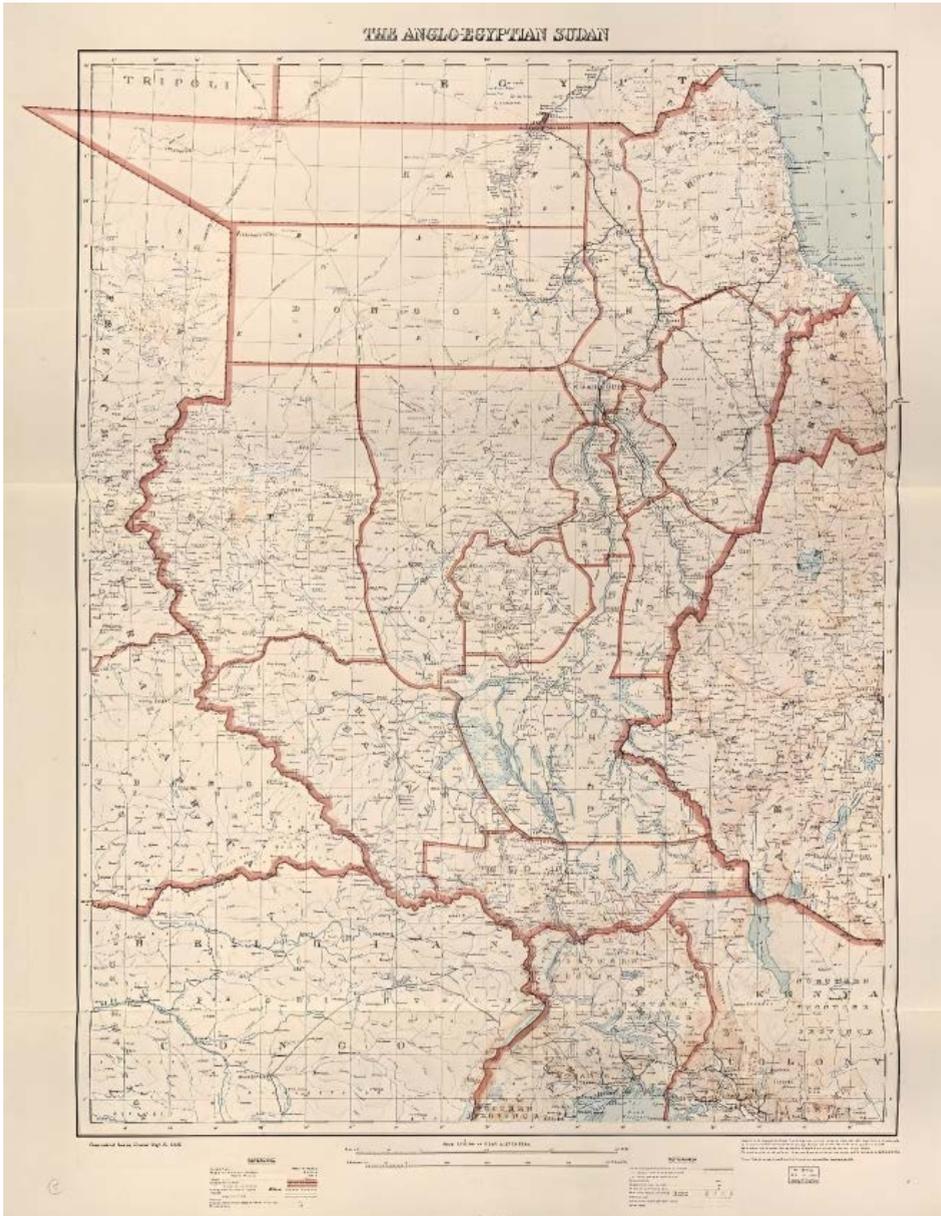
BORDER EVOLUTION AND FEATURES

Historical Overview

The relationship between the borderland communities has a long history of tension and mistrust. Before the demarcation of the international border, the region was separated into administrative provinces (Figure 1). The tension increased following the slavery and ivory trades between the northern and the southern parts of the region. During the two civil wars in Sudan (1956-1972, 1983-2005), armed militias of local border Arabs, named *Murhalin* (mostly belonging to a branch of the *Baggara* tribe), carried out raids into the south and were responsible for war crimes that resulted in displacement, thirst, hunger, and diseases. On many occasions, the civil wars triggered historical conflicts and affected seasonal migration, trade, and tribal tensions.

In January 2005, the government of Sudan and the South Sudanese leadership (SPLA) signed a Comprehensive Peace Agreement (CPA, 2005). The main achievement of the agreement was the establishment of the Government of South Sudan as an autonomous political body. The Sudanese government evacuated all military personnel and bases in southern Sudan, but it was not clear if southern Sudan was heading toward full independence. A key expression in the CPA agreement was “making unity attractive” which appears in several quotations, such as the following:

Figure 1: Administrative borders in Anglo-Egyptian Sudan 1928



Source: Library of Congress, 1928

“Design and implement the Peace Agreement so as to make the unity of the Sudan an attractive option, especially to the people of South Sudan” (Clause 1.5.5 of CPA Agreement). The South Sudanese leadership initiated a referendum “That the people of South Sudan have the right to self-determination, inter alia, through

The status of these borders remained under dispute in the mentioned areas until today. Many reports on border negotiations frequently appear in the media (Dabanga Radio, 24.10.2019; SABC News, 26.26.2021; Sudan Tribune, 01.07.2022).

The Role of NGOs and Third Parties in Border Management

Many organizations operate along the Sudan – South Sudan border, especially in the conflict zones. The UN operates several agencies in this area,² apparently focusing on promoting mediation talks between local communities and organizations. In February 2021, for instance, the UN attempted to convene a local conference ahead of the upcoming grazing season in northern Bahar Al Ghazal. This conference adopted a resolution prohibiting the possession of firearms. It determined that any member of Rezeigat or Dinka Malual found in possession of firearms in either Sudan or South Sudan will be prosecuted according to the respective laws of each country (UNDP, 2021). This third-party involvement strengthened, at times, the governance of the borderlands.

International organizations have also invested efforts to promote bilateral trade between Sudan and South Sudan. International organizations can play a role in monitoring the markets, which play a very significant role in the economic and social culture of the area. They can assist governments with bilateral trade agreements, find solutions to emerging problems, and even become involved in establishing markets.

Global Climate Change

Similar to many other pastoralists worldwide, the pastoralists of this region are highly vulnerable to climate change effects, being directly dependent on natural resources. Data collected over the last 50 years prove that the African Sahel has experienced one of the most dramatic long-term climatic changes worldwide (Brooks, 2006; USAID, 2016). Studies show that temperatures rose by 0.2°C to 0.4°C per decade between 1960-2009, and annual dry season rainfall totals increased by 20-30 mm per decade. According to these studies, the annual rainy season rainfall totals decreased by 10-30 mm per decade (UNHCR Report, 2021). Climate change in the Sahel is causing heavy rains, including massive thunderstorms and a combined effect of drought and floods. There is an increase in year-to-year variability in the amount, frequency and duration of rainfall, as well as more extreme climatic events, particularly droughts in Kordofan, Darfur, and part of central Sudan. While highly unpredictable, the frequency of floods also increased noticeably. Under these circumstances, the land loses its fertility. Mali and Niger, for example, suffered destructive river floods and numerous flooding episodes in 2019. In the Sahel, two out of three people depend on agriculture and livestock. Thus, more than elsewhere, these natural disasters are harming the natural resources essential to agropastoral livelihoods. All these factors, together with increased water demand and changes in land use patterns, contributed to the desertification of millions of

hectares and the depletion of water sources over these decades (USAID, 2016). The Intergovernmental Panel on Climate Change (IPCC) predicts that in some areas of the Sahel agricultural yields will fall by 20% per decade by the end of the 21st century (UNHCR, 2021).

The decreasing natural resources in the region have become a source of conflict between farmers and herders, especially as climate change has altered the routes and grazing periods closer to the cultivation period (Bronkhorst, 2011). The economic consequences are also devastating, both for agropastoral communities and consumers. The farmers and herders are losing their crops and livestock, and the rest of the population, who mostly relies on local food products, is forced to pay higher prices (Mayans 2020; Thornton et al., 2021). Price inflations are causing further scarcity in the markets and greater insecurity in the region.

Agricultural areas have become grazing areas, causing a decline in vegetation cover. Uncontrolled grazing accelerates desertification and creates prairie lands covered by grass on abandoned farmlands. This process may also change the ethno-religious composition of the region, as well as its geography (Koren and Behar, 2021; USAID, 2016).

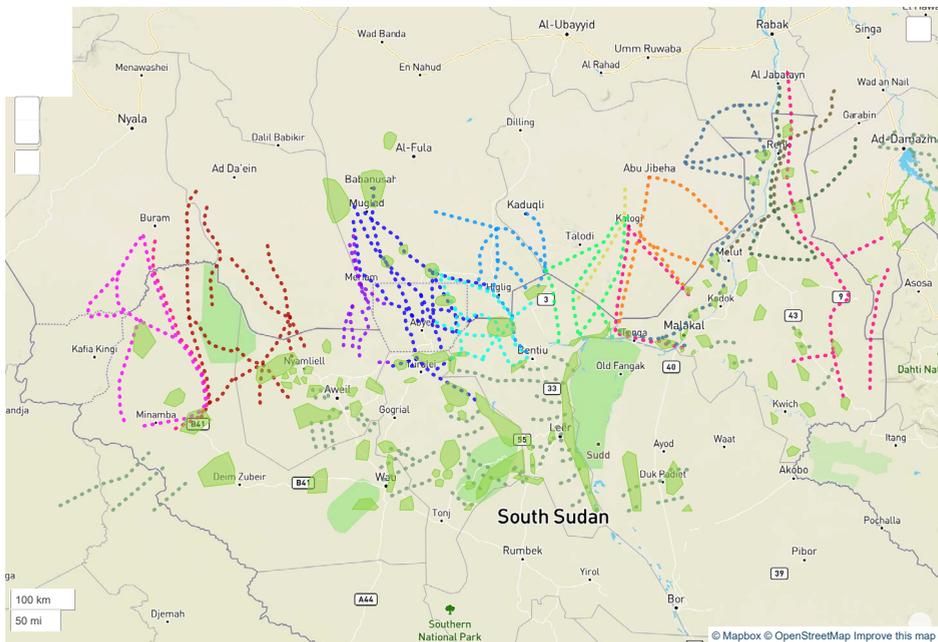
Pastoralism and Trade as Cross-Border Practices

The seasonal nomadic pastoral economy is a traditional element that predates the Turku-Egyptian administrative division of tribal homeland rights, *dar* (zones that the sultans granted to specific leaders and their followers) into two categories. Owners of *dar* with primary rights were entitled to build permanent buildings, cultivate land, grow crops, dig wells, and inscribe their tribal symbols on landmarks within their territory. They also had the right to deny the use of their land to outsiders. In contrast, secondary rights were granted on a limited, occasional or seasonal basis to outside communities that needed land (Johnson, 2010). Seasonal movements (Figure 3) have been an integral part of the socio-economic relations between the migrants and host societies for generations. These movements created both opportunities as well as negative phenomena such as raids and other violent disputes involving the partisan communities, giving rise to cycles of intercommunal conflicts (UNDP, 2021).

Grazing and trading comprise the two main traditional activities in the region. Their spatial manifestation may reflect various political, social, and environmental events such as drought, ethnic conflicts, or political disturbances. Both activities were forced to adapt their spatial practices to the new border. The significance of livestock and cattle herding in the Sudanese space (both in North and South Sudan) is enormous. Pastoral activities are the main source of income and food in South Sudan, with over 70% of the population participating in the pastoral economy (Idris, 2018). In these communities, livestock plays a role in the population's nutrition, finance, social status, and culture. The income from milk and meat production, cattle is also highly valued for dowries and for the prestige and status (including political status) that ownership bestows.

The various clans of the large semi-nomadic Baggara tribe on the northern side of the border cannot raise their cattle on permanent ranches, and during the dry season, between November and May, they drive herds of cattle southward in search of pasture and water (Craze, 2013). These Baggara cattle herders are spread along the Sahel³ from east to west via South Kordofan, Chad, Cameroon and Nigeria. The origin of their name is from the Arabic word *bakkara*, which means cattle. The Baggara itself is divided into two large subdivisions: the Misseriya of Kordofan and the Rizaiqat of South Darfur.

Figure 3: Adjusted map of grazing routes of Sudanese cattle herds in 2013 (based on IPIS map platform)



Source: Spittaels, & Weyns, 2013⁴

In addition, similar to seasonal grazing, trade is also highly affected by climate conditions. In the wet season, transferring goods over long distances (except by air) is problematic, while in the dry seasons, agricultural yields are limited. The goods that are exported to South Sudan are mainly medical items and basic agricultural products such as maize flour and grain, wheat flour, sorghum flour, sugar, groundnuts, lentils, rice, onions, and dates (The African Development Bank Group, 2016).

Trade has a long history in the region. Under the Turko-Egyptian Condominium, the trade in ivory and slavery reached enormous proportions due to the ability of new steamboats to sail up the Nile and cross the Sudd swamp. The Arab areas dominated the slavery market in the north while establishing camps of enslaved people in the

south, current-day Juba. The city of Khartoum became a huge slave trade center and the capital city of Sudan (Collins, 2008). The consequences for the local southern tribes were devastating, and the Shilok, Dinka, Nuer and Azenda were particularly affected. The penetration of the slave traders from the north was referred to in the local Nile dialects as “the time the world was destroyed” (Natsios, 2012).

Today, market places along the borderland areas between Sudan and South Sudan constitute prime locales for inter-communal ties and have the potential to promote peaceful coexistence, yet, the markets along the northern border of South Sudan – Northern Bahr el Ghazal, Unity, and Upper Nile – are challenged by poor road quality and the unstable security situation. With the eruption of civil war in South Sudan in December 2013, people became more dependent on markets, yet markets have had less to offer and at higher prices (Forcier Consulting, 2015).

TRADE AND GRAZING IN THE CASE OF SUDAN – SOUTH SUDAN DISPUTED AREAS

The demarcation of the border led to changes in the tribes’ spatial practices. We analyzed the border as a function of barrier and as transparent in the cross-border dynamics in three disputed areas: Mile 14, Abyei, and Upper Nile.

“Mile 14”

“Mile 14” is a stretch of land extending 14 miles south of the Kiir/Bahr al Arab River, located west of Abyei, between northern Bahr-Al-Ghazal and East Darfur. The black African Malual Dinka have traditionally been the principal residents of the area, while the Rizeigat Arabs seasonally migrate southwards into the area during the dry season with their livestock to access grazing lands south of Kiir River. Following grazing disputes between the two groups in 1918, the British governor of Darfur tried to impose a new grazing boundary and create a Rizeigat area that extended 40 miles south of the Kiir. Due to complaints of the Malual Dinka, a compromise was agreed upon in 1924, creating a new borderline named the Munro-Wheatley line (after Patrick Munro, the governor of Darfur, and Major Mervyn Wheatley, the governor of Bahr el Ghazal). The contemporary territory known as the 14-Mile area was adjusted to fit the need of the northern Sudanese Rizeigat. Every year, at the beginning of the dry season, the Rezeigat of eastern Darfur and other pastoral communities migrate from their settlements in Sudan into South Sudan in search of water and grazing grounds for their livestock, as well as for trade opportunities. In the interim period between (2001-2005), this area was one of the most contested zones along the border, with the Sudan Arm Forces (SAF) repeatedly attempting to dislodge the SPLA positions along the Kiir. Today, this area is under the control of the SPLA in South Sudan and is claimed by the government of Sudan (Craze, 2014).

During the implementation phase of the 2012 agreement, great mistrust developed between the local communities on both sides. The Dinka Malual community showed little interest in acknowledging the grazing rights of the Rizeigat. On the other side of the border, the Rizeigat's leadership refused to meet and negotiate over the issues. As a result, Sudanese pastoralists did not cross into the northern state of Bahr el Ghazal during the 2011-2012 grazing season (Craze, 2013). This case illustrates how the new border became a barrier for the first time. In the 2012-2013 grazing season, tensions increased when the SPLA blocked 50,000 Sudanese pastoralists who attempted to cross the 14-Mile area. Only in the 2013-2014 season did the Rizeigat shepherd their cattle following new negotiations and agreements between the leaderships (Craze, 2014). At a post-migration conference in Gokk Machar on May 26-27, 2014, the two sides agreed to pay compensation for the infractions that occurred during the 2013-2014 season (Craze, 2014; Radio Tamazuj, 01.06.2014).

The government of Sudan frequently closes border crossing points, using them as a political bargaining chip. This is especially true during the dry season when local productivity is at its lowest and the population is most dependent on markets for food. In 2016, the trade routes from Darfur and Kordofan to Bahr Al Ghazal were usually closed by Sudan (African Development Bank Group, 2016). For example, in 2016, the trade routes from Darfur and Kordofan, used to convey goods to Gok Machar, Warawar and Aweil, the main markets of the province, were usually closed by Sudan. In this case, the South Sudanese succeeded in maintaining the flow of basic goods (such as flour and oil) to Aweil via a route to Uganda. The border barriers greatly affect trade in Mile 14's borderlands. On the South Sudanese side of the border, in north Bahr Al Ghazal, there are three key markets: Gok Machar, Warawar and Aweil (African Development Bank Group, 2016).

Trade activities are also highly affected by the seasons. During the dry season, when local productivity is at its lowest, the population is most dependent on markets for food. During the wet season, it is difficult to find alternative supply routes from Juba due to the greater distance, which makes the endeavor unprofitable, and the condition of the muddy and unpaved roads that often close. However, Dr. Yok Madut Yod, professor of citizenship and public affairs at Syracuse University, New York, stated in an interview with SABC News that the closure of borders does not usually imply a halt in the flow of goods:

“Even when the borders were supposedly closed, this closure was more symbolic than real. Goods still flowed to South Sudan as it was a new country needing all kinds of materials supplies from food to construction material to army gadgets and so forth. So goods continue to flow mainly from Sudan to South Sudan, even if the Sudanese government has officially closed the border. This did not stop the flow of goods, and this tells you that when the Sudan government says they had closed the border, in essence, they had opened the border; when they said they had opened the border, in essence, the border had not been closed, to begin with” (SABC News, August 26, 2021).

This description illustrates the complexity of the border and the gap between its barrier function and its de-facto enabling of movement. The markets are a tangible example of these interactions.

Abyei

The area of Abyei is an enclaved 10,400 square km territory, surrounded by South Kordofan in the north, Bahr el-Ghazal in the west, Unity in the south-west, and Warrap in the south. The geographic and political heart of the area is the network of waterways flowing from the clay plain in the south and southeast to the main river Bahr el Arab.

Two distinct groups migrated to this area in the eighteenth century from different directions: the Ngok Dinka and the Humr Misseriya. The Ngok Dinka are a branch of the black African and mostly Christian Padang Dinka who migrated eastwards along the Bahr el Ghazal River and now reside mostly in Abyei. The Humr Misseriya is a branch of the Baggara Missiriya, a large Baggara Arab-Muslim tribe who were forced to pay higher taxes to the SPLA as a result of the 2005 CPA (McNeily, 2012). The new situation had a particularly devastating effect on the smaller-flock herders who could not afford to travel southward. Despite this problem, grazing herds flowed freely into South Sudan until 2010. At the time of South Sudan's independence in 2010, clashes erupted in Abyei, and for the first time, the Missiriya were unable to migrate to the south or graze their cattle in the area of the Kiir River (Craze, 2013).

Perhaps the clearest example of an effect on the local communities was the establishment of the Amiet Market in Abyei in 2016, encouraged by a peace-keeping force of the United Nations, UNISFA (United Nations Interim Security Force for Abyei). In less than a year, this remote empty area became a thriving marketplace that attracted many merchants, even from distant destinations on a daily basis. From the UN's perspective, the market was a great success (Rolandsen, 2019). The market facilitates and creates opportunities for negotiations and meetings that are not necessarily related to the market's operations, such as negotiations over grazing rights and corridors for the movement of cattle further southward. Furthermore, following permission and protection from leaders of the Misseriya, it became possible for South Sudanese to travel to Sudan through the ungoverned 70km stretch between Abyei and Jabateen. As a result, the Amiet Market route to Khartoum became cheaper than air travel for thousands of South Sudanese (Rolandsen 2019).

However, even though Amiet is considered a "safe zone", there has been an upsurge in violent crimes, traffic accidents, and prostitution in the area. Conflicting actors are deeply embedded in the market, reaping profits from trade as well as tax revenues. From the time the market opened there was a dispute over allocation – the Misseriya took over the ownership of most of the shops and rented them to people of the N'gok. In the summer of 2017, violence resulted in the market being closed for weeks while different militias attacked supply convoys and even fired

missiles on the market (UNISEFA, 2017). Some of the militiamen were in the service of the government of Sudan and the Misseriya, and some of the Twic Dinka, that lived south of Abyei who were in tense relations with the Ngok Dinka over the market. Some of these perpetrators are probably gangs of criminals operating autonomously rather than military units operating under a military chain of command (Rolandsen, 2016).

Climate changes also affected spatial dynamics and cross-border interactions in Abyei. In 2009, Southern Kordofan in Sudan borderland suffered a massive depletion of its large herds due to severe drought. At least 36% of the entire livestock population in the area has perished. Livestock constitutes a significant source of income and food security (Sudan Tribune, 15.12.2009). According to SIPRI study, Abyei is highly exposed to global warming and already causing a scarcity of resources. This leads to political marginalization of local communities, namely the Ngok Dinka and the Misseriyya, and violent conflicts (Tarif et al., 2021). Additional study shows that the productivity range in the area decreased due to climate change (Maalla et al., 2015).

Upper Nile

The Upper Nile Renk County, one of the most fertile border areas, has traditionally seen good relations between the two border communities: Abialang Dinka and Shiluk in the south, and the Seleim in the north. In addition, there is the Baggara nomadic group who traditionally come to graze their cattle or to do business along the southern area of the border (Johnson, 2010).

Renk County is also exceptional in its relationships with Sudan. In 1920, the British administration removed Renk from the rest of South Sudan, and promoted the same political, educational and development programs as in the north. Renk has maintained strong links with Sudan. Usually, it would be much easier to travel from Renk to Khartoum than to Juba. In some ways, Renk does not fit the pattern seen in other counties on South Sudan's side of the border, where communities are distrustful of the north after decades of deprivation and raiding (Johnson, 2010).

Since 2005, grazing agreements between the Abialang Dinka and the Seleim have generally been respected. In 2011, the two governments used military harassment and border blockades in an effort to prevent a harmonious relationship between the two sides (Craze, 2013). The increased militarization of the area affected agricultural production. The SAF occupied farms, farmers had to abandon their fields and ongoing tensions over large-scale agricultural projects generated agricultural insecurity.

Attempts at reconciliation in the Upper Nile tended to fail, mostly on the state level. For example, the government of Sudan prevented Sudanese pastoralists and traders from participating in the annual migration meetings of the 2011-2012 season in the Renk area (Craze, 2013). This exemplifies the use of borders as a political tool by the state, despite the relatively low governance on the borderlands.

On the east side of the border, between the provinces of Upper Nile (South Sudan) and Blue Nile (Sudan), the official crossing point in Renk County for Renk Market is usually closed. A report on Al-Jazeera from November 2016 showed that most of the commodities in Renk Market are smuggled through the border. In a related video, the Renk commissioner stated: “Yes the border is open, but only for civilians; no goods can enter from Sudan, there is nothing on the markets, and it’s not our fault there is nothing there, it’s Sudan’s” (Al Jazeera, 2016).

The above citation highlights once again the “border as a barrier” function for grazing and trade as a result of regulatory border management of both governments. Yet, in most cases, the goods eventually arrived in South Sudan markets. In an interview with Dr. Leben Mord, a professor at the University of Juba, we asked about his border perceptions. According to Mord, “the water is from God and the grass to cattle is from God, we have no authority to prevent them from people who need them” (Mord, 06.03.19). This view illustrated how the institution of the modern border is not yet rooted in the local culture. Nevertheless, the questionnaires show that 72% of the students believe that the demarcation of the border was a positive step for their country. Yet, our questionnaires referred also to South Sudanese views on the attractiveness of the border regions and their sense of personal safety. About 29% of the respondents defined the borderlands as “economically prosperous”, however, 80% preferred not to live there.

DISCUSSION AND CONCLUSION

The international border between Sudan and South Sudan is not only a new state institution in this region of semi-nomadism, pastoralism and free movement, but also a new concept for the two governments and the local society on both sides. Both the communities and the governments are still working to redefine the spatial practices in the borderlands. The study demonstrates how low governance in the borderlands leads to inconsistency and uniformity that characterizes these regions. It also demonstrates that these inconsistencies are especially salient in disputed areas along the borderlands, which are still numerous.

In the cultural tension between traditional and modern spatial practices, it seems that the Sudan – South Sudan border is still transparent to a large extent, and many traditional activities remain unchanged, among them grazing and trade. Nevertheless, seasonal migration became much more difficult due to increasing border regulations. Also, during periods of armed conflicts, military presence increases, and cross-border interactions decrease, as the state-level agencies apply greater governance on the borders and use them as a political tool. These new barriers led to the phenomenon of illegal trade. Another crucial influential factor is climate change which creates a growing shortage in grazing areas and active water wells. The borderland between Sudan and South Sudan is more sensitive to global warming effects due to its location

along a climatic buffer zone and the immediate danger of desertifying fertile lands. From that perspective, the border area between Sudan and South Sudan does not differ from other areas in the Sahel, and there is no question that global warming already presents considerable challenges to the borderland residents.

We conclude that the border between Sudan and South Sudan is indeed a dynamic state institution, as Paasi suggested in his theoretical framework (Paasi, 1998). The border and the borderland represent a hybrid system of continuity and change. Their location coincides with the delineation of past administrative divisions and many traditional interactions strive to maintain the status quo, but those interactions encounter changes in border management that sometimes force them to change their spatial practices.

NOTES

- 1 In January 1898, Britain and Egypt signed a joint governmental agreement on the Sudan, known as the Anglo-Egyptian “Condominium”. This partnership was only symbolic and in practice, Sudan was under British control.
- 2 Including UNISEFA (United Nations Interim Security Force for Abyei) – a peace keeping force, FAO (Food and Agriculture Organization), UNDP (United Nations Development Program), UNMISS (United Nations Mission in South Sudan), and UNHCR (UN Refugee Agency).
- 3 The Sahel is a geographic transition zone in Africa between the Sahara Desert in the north and the savanna of Sudan in the south.
- 4 IPIS is an independent research institute providing tailored information, analysis and capacity enhancement to support those actors who want to realize a vision of durable peace, sustainable development and the fulfillment of human rights. Based on this framework IPIS created an interactive web map named “Mapping Conflict Motives: the Sudan-South Sudan border”. IPIS analyses the conflict dynamics in the wider border area spanning Sudan and South Sudan. The analysis specifically looks into the motivations and interests of the parties involved in the interstate, intrastate and local conflicts.

ACKNOWLEDGMENT

The authors thank the Chaikin Chair for Geostrategy at the University of Haifa for supporting this research. The authors also thank the Small Arms Survey and Joshua Craze for their permission to use the maps, as well as the cartography of Jillian Luff (www.mapgrafix.com).

REFERENCES

- Al Jazeera (2016, November 5) Unclear Sudan-South Sudan border a smuggling boon [Video article]. Retrieved from YouTube. <https://www.youtube.com/watch?v=DgsIPOAllzQ> [accessed 21 March 2023].
- African Union, Department of Rural Economy and Agriculture (2010) Policy Framework for Pastoralism in Africa: Securing, Protecting and Improving the Lives, Livelihoods and Rights of Pastoralist Communities. Retrieved from – https://au.int/sites/default/files/documents/30240-doc_policy_framework_for_pastoralism.pdf [accessed 13 November 2021].
- Asiwaju A.I., & Adeniyi, P.O. (1989) *Borderlands in Africa: A multidisciplinary and comparative focus on Nigeria and West Africa*. Lagos: University of Lagos Press.
- Baud, M., & van Schendel, W. (1997) Toward a comparative history of borderlands. *Journal of World History*, 8(2), 211-242.
- BBC (2012, June 27) South Sudan shuts oil output amid export row with Sudan. <https://www.bbc.com/news/world-africa-16781592> [accessed 23 March 2022].
- Bronkhorst, S. (2011) Climate change and conflict: Lessons for conflict resolution from the Southern Sahel of Sudan. Retrieved from: <https://www.africaportal.org/publications/climate-change-and-conflict-lessons-for-conflict-resolution-from-the-southern-sahel-of-sudan/> [accessed 21 March 2022].
- Brooks, N. (2006) Climate change, drought and pastoralism in the Sahel. *Discussion Note for the World Initiative on Sustainable Pastoralism*.
- Climate-Fragility Risk Factsheet: The Sahel (2021, March) Climate Security Expert Network. Retrieved from: https://climate-security-expert-network.org/sites/climate-security-expert-network.org/files/documents/csen_climate_fragility_factsheet_the_sahel.pdf [accessed 18 April 2022].
- Collins, R. (2008) *A History of Modern Sudan*. Cambridge: Cambridge University Press.
- Cormack, Z. (2016) Borders are galaxies: Interpreting contestations over local administrative boundaries in South Sudan. *Africa*, 86(3), 504-527.
- Craze, J. (2013) Dividing lines: Grazing and conflict along the Sudan-South Sudan border. *Small Arms Survey*. Retrieved from – <https://www.smallarmssurvey.org/resource/dividing-lines-grazing-and-conflict-along-sudan-south-sudanborder-hsba-working-paper-30> [accessed 10 February 2020].
- Craze, J. (2014) Contested borders: Continuing tensions over the Sudan-South Sudan border. *Small Arms Survey*. Retrieved from – <https://www.smallarmssurvey.org/resource/contested-borders-continuing-tensions-over-sudan-south-sudanborder-hsba-working-paper-34> [accessed 10 February 2020].

- Dabanga Radio (October 24, 2019) *Agreement signed on contested Sudan-South Sudan border areas*. <https://www.dabangasudan.org/en/all-news/article/agreement-signed-on-contested-sudan-south-sudan-border-areas> [accessed 18 March 2022].
- Forcier Consulting (2015) *Market Assessment – July 2015*. *Concordis international*. Retrieved from – <https://concordis.international/wp-content/uploads/2016/04/4240-ARABIC-ENGLISH-Forcier-Market-Assessment-brochure-WEB.pdf> [accessed 23 January 2021].
- Idris, I. (29 October 2018) *Livestock and conflict in South Sudan*. *K4D – Knowledge, Evidence and Learning for Development*. GSDRC, University of Birmingham.
- Johnson, D.H. (2010) *When boundaries become borders: The impact of boundary-making in Southern Sudan's frontier zones*. *Rift Valley Institute*. Retrieved from – <http://riftvalley.net/publication/when-boundaries-become-borders#.XZG9CkYzbIU> [accessed 13 April 2021].
- Koren, H., & Behar, G. (2021) *Security in the shadow of climate change in the Sahel*. *Economarks*, September 1, 2021. Retrieved from – <https://economarks.com/security-in-the-shadow-of-climate-change-in-the-sahel-dr-haim-koren-and-gideon-behar/> [accessed 23 November 2021].
- Library of Congress (1928) *The Anglo-Egyptian Sudan-Map*. Retrieved from – <https://www.loc.gov/item/2012593692/> [accessed 23 March 2022].
- Maalla, O.S.A., Abakar A.M., Hamdi, Y.M., Maruod, E. and Adlan O.E. (2015) *The impact of climate change on pastoralist's livelihood in South Kordofan State, Sudan*. *Journal of Novel Applied Sciences*, 4-11/1142-1148.
- Machakos Protocol (20 July 2002) Retrieved from – <https://www.diplomatie.gouv.fr/IMG/pdf/IGAD.pdf> [accessed 18 October 2021].
- Mayans J. (March, 2020) *The Sahel in the midst of climate change*. *Solidarites International*. Retrieved from – <https://www.solidarites.org/en/live-from-the-field/the-sahel-in-the-midst-of-climate-change/> [accessed 11 march 2021].
- McNeily, M. (2012) *A condominium approach to Abyei*. *Chicago Journal of International Law*, 13(1), 265-290.
- Mord, L. (6.3.2019) Interview held in University of Juba Center for Peace and Development Studies.
- Natsios, A.S. (2012) *Sudan, South Sudan & Darfur: What everyone needs to know*. Oxford: Oxford University Press.
- Newman, D., & Passi, A. (1998) *Fences and neighbors in the postmodern world: Boundary narratives in political geography*. *Progress in Human Geography*, 22(2), 186-207.

- Rolandsen Ø.H. (2019) Trade, peace-building and hybrid governance in the Sudan-South Sudan borderlands. *Conflict, Security & Development*. 19: 1, 79-97.
- Paasi, A. (1998) Boundaries as social processes: Territoriality in the world of flows. *Geopolitics*. 3.1: 69-88.
- Radio Tamazuj (June 01, 2014) Misseriya nomads welcomed in Northern Bahr al Ghazal pastures. Retrieved from – <https://radiotamazuj.org/en/news/article/misseriya-nomads-welcomed-in-northern-bahr-al-ghazal-pastures> [accessed 3 May 2022].
- SABC News (August 26, 2021) Sudan, South Sudan to re-open borders after 11 years [Video]. Retrieved from YouTube. <https://www.youtube.com/watch?v=vvvbm6ewPWQ> [accessed 3 May 2022].
- Spittaels, S. & Yannick, W. (2013) Mapping Conflict Motives: The Sudan-South Sudan border. IPIS. <https://ipisresearch.be/publication/mapping-conflict-motives-sudan-south-sudan-border/>
- Sudan Tribune (December 15, 2009) Messeriya suffers lost of over 36% livestock to drought. <https://sudantribune.com/article33300/> [accessed 13 May 2022].
- Sudan Tribune (July 1, 2022) Northern Bahr el Ghazal governor in Sudan for border talks. <https://sudantribune.com/article261054/> Retrieved on [accessed 15 May 2022].
- Tarif, K., Broek, E. and Seyuba, K. (September 23, 2021) Abyei offers lessons for the region on climate-related security risks. *SIPRI*. Retrieved from – <https://www.sipri.org/commentary/blog/2021/abyei-offers-lessons-region-climate-related-security-risks> [accessed 13 May 2022].
- The Anglo-Egyptian Sudan: A compendium prepared by officers of the Sudan government (1905) Retrieved from – <https://archive.org/details/angloegyptiansud01gleiuoft> [accessed 15 April 2021].
- The African Development Bank Group (2016) *Promoting bilateral trade between Sudan and South Sudan*. Retrieved from – https://www.afdb.org/fileadmin/uploads/afdb/Documents/Knowledge/Promoting_bilateral_trade_between_Sudan_and_South_Sudan_-_05_Feb_2017.pdf [accessed 23 January 2020].
- The Comprehensive Peace Agreement (CPA) between the Government of the Republic of the Sudan and the Sudan People's Liberation Movement, January 9, 2005.
- Thornton, P., Nelson, G. Mayberry, D. & Herrero, M. (May 2021) Increases in extreme heat stress in domesticated livestock species during the twenty-first century. *Global Change Biology*. DOI: 10.1111/gcb.15825

- UNDP (2021, February 5) Promoting sustainable peace and cohesion among Sudan-South Sudan border communities. Retrieved from – https://www.ss.undp.org/content/south_sudan/en/home/presscenter/articles/2021/migration-conference-sudan-misseriya-dinka-malual-south-sudan-peace-2021.html [accessed 18 February 2022].
- UNHCR (2021) Climate risk profile: Sahel. Retrieved from – <https://www.unhcr.org/publications/brochures/61a49df44/representative-concentration-pathways-climate-risk-profile-sahel-region.html> [accessed 13 March 2022].
- USAID (2016, August) Climate change risk in Sudan: Country Fact Sheet. Retrieved from – https://pdf.usaid.gov/pdf_docs/pa00mtz6.pdf [accessed 13 March 2022].