

## COMMENTARY

# Climate Change and Conflict in the Western Sahel

Ricardo René Larémont 

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The states of the western Sahel (Mauritania, Mali, Burkina Faso, Niger, Chad, and northern Nigeria) are politically quite fragile. Recent severe changes in climate are accelerating conflict and violence in an already economically desperate region, causing increased skirmishes between pastoralists and farmers, while depleting water resources and encouraging many to migrate either within the region or to North Africa. Pastoralists and farmers have attempted to share the land and water resources of the Sahel for millennia, but the quest for these resources has often resulted in armed confrontation. From 2016 until 2021, Sahelian countries experienced unprecedented levels of violence. Data provided by ACLED clarify the sites in Mali, Burkina Faso, and Niger where acts of pastoralist-farmer violence have occurred (see [Figure 1](#)).

Northern and eastern Mali, northern Burkina Faso, northern and north-western Niger, and the Lake Chad region are areas of particular concern, with each experiencing a steep surge in violence. This violence has largely been the result of inter-communal conflicts between pastoralists and farmers. However, more recently, jihadist groups have also exploited the pastoralist-farmer competition for land and water for their own recruiting and taxation purposes. Climate change is accelerating in the western Sahel, leading to changes in traditional rainfall patterns, with torrential rains often arriving later in the rainy season. These changing rainfall patterns have forced pastoralists to migrate southward in search of water and land for their livestock and has exacerbated the armed conflict between the pastoralists and farmers.

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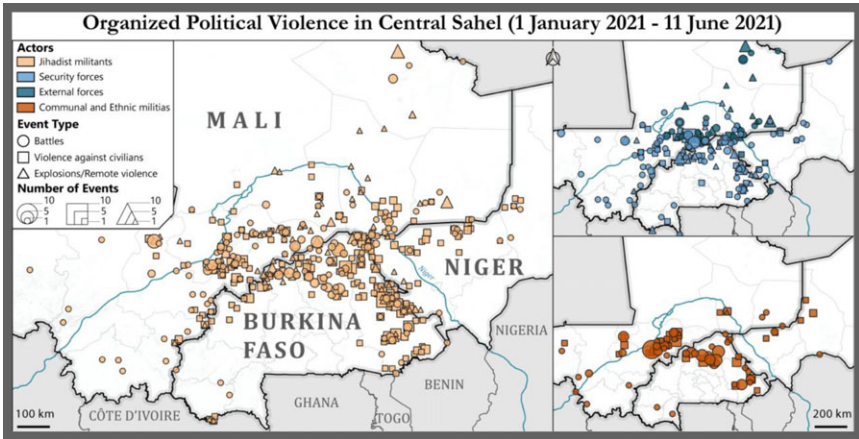
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**Figure 1. Organized Political Violence in Central Sahel (ACLED 2021b).**



The accelerating climate change is also causing an acceleration in conflict. Regarding regional surface temperatures, according to the United Nations, the western Sahel region has temperatures that are rising at 1.5 times the global average. By 2050, temperatures in the region may be three to five degrees Celsius warmer. Perhaps more important than increases in regional surface temperatures, however, have been the gradual warming of the Atlantic and Indian Oceans, which has led to changing rainfall patterns within the region (Giannini 2010). The new rainfall patterns are now occasioned by “false start and early cessation of rainy seasons, increased frequency of intense daily rainfall, increasing number of hot nights and warm days and a decreasing trend in diurnal temperature range” (Salack et al. 2016). The most important feature of this new rainfall pattern has been the increased frequency of intense rain, particularly at the end of the rainy season, which often washes away crops and increases competition over land between the agriculturalists and the pastoralists. These changing conditions have affected access to food, leading to increased migration within and out of the Sahel, while straining the ability of the governments to provide either material or physical security. The erratic rainfall has altered the timing of planting and harvests, making agricultural and pastoral planning increasingly unpredictable (Salack et al. 2016; Biassuti 2019; Giannini 2010).

According to some climate models, temperatures in the Sahel may climb by four degrees Celsius by 2030 and by six degrees Celsius by the end of the twenty-first century, with potentially deadly consequences (United Nations 2018). Eighty percent of the residents of the Sahel live in rural areas where the capacity of state institutions is thin, making day-to-day survival a real challenge. Sahelian inhabitants, the overwhelming number of whom are pastoralists and farmers, while having successfully adapted to climate change during more recent decades, may not be able to deal with further anticipated temperature changes and their unanticipated consequences. Farmers and

pastoralists are suffering from climate whiplash, which leads to sudden, unpredictable rainfall in one season, followed by drought.

Tied to this climatological challenge is a demographic threat in a region that has one of the fastest growing populations in the world, coupled with rising food insecurity. Estimates place the Sahel's current population at around 75 million; that number will almost triple to nearly 240 million by 2050 (Saavedra 2019). This fragile ecological and demographic environment has led to increasing food insecurity, extreme poverty (80 percent of the inhabitants live on less than two Euros per day), and high unemployment, especially among males younger than 24 years of age. Approximately 33 million people in the Sahel are classified as food insecure (Climate Institute 2019; UN News 2018). Food insecurity leads to two phenomena: migration, either within the region or toward North Africa, or recruitment of employable young men to either contraband and migration networks or, alternatively, jihadist groups.

### **Declining State Capacity in Rural Areas, Pastoralist-Farmer Competition, and Jihadist Groups**

A combination of factors has led to the fracturing of state institutions in rural areas, which impedes plans for economic development. A state's inability to create viable economic opportunities for employable youth leads them to resort to employment in the commodity and people trafficking networks (Honwana 2019). These businesses in turn are taxed by jihadist or irredentist groups rather than by the state, which leads to a situation whereby the state's finances are further weakened. As state capacity weakens and as climate and demographic conditions deteriorate, contraband and terrorist groups have mushroomed, making governance problems worse and rendering the entire region systemically unstable.

Instability is particularly acute in Mali, which with Burkina Faso, Niger, and the Lake Chad region are at the epicenter of the security crisis. Mali has experienced a series of military coups (President Amadou Toumani Touré in 2012, President Ibrahim Baboucar Keïta in 2020, and President Bah N'daw in 2021), leading to the continued deterioration of the state's institutional capacity, particularly its ability to provide security or judicial services in remote rural regions. Into this gap in the provision of state capacity, jihadist groups have entered the arena, providing their own security and judicial processes to rural communities.

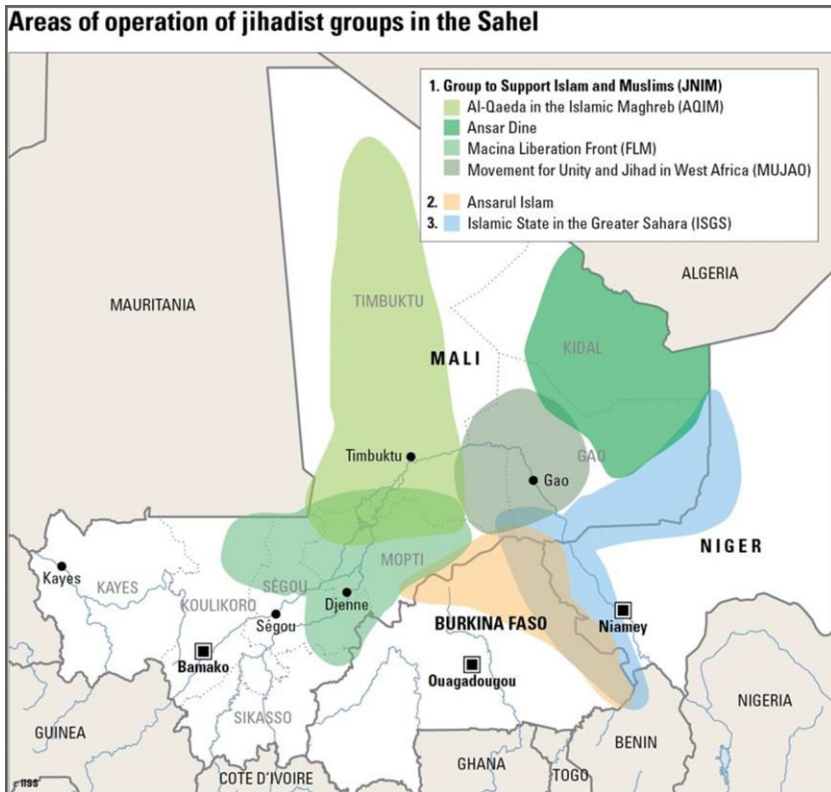
Struggles over land between pastoralists and farmers lie at the heart of the conflict in eastern Mali, northern Burkina Faso, and northwestern Niger. As pastoralists in Mali have attempted to assert control over the land for grazing, they have come into conflict with farmers who are attempting to resist pastoralist incursions into land that they believe is rightfully theirs. In Mali and Burkina Faso, jihadist groups have mostly aligned themselves with the pastoralists, substantially because of familial and ethnic ties, and also

because jihadists often espouse a pro-pastoralist discourse. Members of the Fulani ethnic group, who with the Tuareg comprise the bulk of the pastoralists, have aligned themselves with the jihadists, because they believe the jihadist groups will protect their interests (Benjaminson & Ba 2018; International Crisis Group 2020).

Jihadist groups have been operating in Mali since the Groupe salafiste pour la predication et le combat (GSPC), which was founded in Algeria, spilled over into northern Mali and began operating there. (See Figure 2 for areas of operation of jihadist groups within the Sahel.) In 2007 the GSPC changed its name to Al-Qaida in the Islamic Maghreb (AQIM). Its base of operations has mostly been in northern Mali (Lounnas 2013). From 2011 to the present, the organization has been largely in control of the northern region of Mali that borders Algeria (Giraud 2013; Bamba 2018).

One of AQIM’s principal quasi-rivals has been Ansar Dine, with whom it shares an ethnic constituency of primarily Tuareg and Arab members. Ansar Dine was founded in December 2011 by Iyad Ag Ghali, with the objective of establishing *sharia* law across Mali. Ansar Dine’s ideology was closely allied with that of AQIM despite its different leadership. Its most notable

**Figure 2. Areas of operation of jihadist groups in the Sahel (Berger 2019).**



accomplishment had been to ally with the more secular National Movement for the Liberation of Azawad (MNLA, led by Alghabass Ag Intalla) and another jihadist group called MUJAO in 2012, after President Amadou Toumani Touré was deposed in a coup d'état. These groups captured substantial territory in central and northern Mali during 2012, only to be reversed by a joint Malian-French military operation called Operation Serval in 2013.

A third group of importance is the Mouvement pour l'unification et le jihad en Afrique de l'Ouest, or MUJAO. MUJAO was established in October 2011 after it split from AQIM. The founders of MUJAO initiated the split because they claimed that AQIM's leadership, which was dominated by Arabs, was not giving non-Arabs a meaningful role within the organization. MUJAO's stronghold has been in the Gao region of Mali. MUJAO has also claimed responsibility for attacks beyond the Gao region, principally in Bamako, Ouagadougou, and Grand Bassam (in Côte d'Ivoire).

The fourth group is Katiba Macina, which operates in central Mali. Katiba Macina was founded by Amadou Kouffa, a protégé of Iyad Ag Ghali (the founder of Ansar Dine). While Kouffa originally articulated a pan-ethnic, jihadist program to challenge the Malian government, France, and the G5, more recently Kouffa has focused on developing a core base of support from the Fulani pastoralists, with whom he has had more success in recruitment. This success has encouraged farmers from the Bambara and Dogon farming communities to set up their own self-defense militias (International Crisis Group 2019). Because of this inter-ethnic pastoralist-farmer rivalry, the Mopti region has become the most violent region of Mali.

A fifth group—operating along the borders of Mali, Niger, and Burkina Faso—is the Islamic State in the Greater Sahara, led by Adnan Abu Walid al-Sahraoui, which emerged as an offshoot of MUJAO (Stanford Center for International Security and Cooperation 2018). Like Katiba Macina, the Islamic State in the Greater Sahara has developed a core constituency among Fulani pastoralists. Its secondary constituencies include Tuareg pastoralists and some sedentary Djerma (alternatively referred to as Zarma). Given the lack of capacity of the Malian, Nigerien, and Burkinabé governments in these remote border regions, this Islamic State in the Greater Sahara has stepped in, resolving disputes between pastoralists about cattle thefts and between pastoralists and farmers about land use.

### **Jihadism and Counterterrorism Efforts**

Hoping to increase their effectiveness, on March 2, 2017, Ansar al-Din (Defenders of the Faith), Katiba Macina (Macina Battalion), al Mirabitoun (the Sentinels), and AQIM joined forces to create an organization called Jamaat Nasr al-Islam wal Muslimin (JNIM), or the Group to Support Islam and Muslims. JNIM operates as an umbrella organization, while the groups that comprise it remain operational and maintain their own separate leadership.

Although jihadist forces were initially pushed back from central Mali by the French and Chadian military during 2013, by 2015 these groups had largely recovered from their losses and reestablished themselves. They are omnipresent throughout central and northern Mali, northern Burkina Faso, and the border regions of Mali, Burkina Faso, and Niger. Like Mali, Burkina Faso also witnessed a sharp increase in jihadist attacks during 2018, more than four times the number reported in 2017. ACLED researchers counted some 158 jihadist attacks last year, most of which were concentrated in the country's Sahel (78) and Est (53) regions (ACLED 2021a).

According to ACLED, Niger registered a tripling of protests and riots and rising border violence in 2018 from 2017, with approximately thirty mass protests occurring in 2018, compared to only eleven in 2017. Roughly 60 percent of these events were concentrated in Niger's capital, Niamey. Inter-communal violence is also on the rise, including the area of western Niger on the border with Burkina Faso and Mali. More than 52,000 people were displaced in 2018 alone (added to the estimated 144,000 persons who are already internally displaced) (Internal Displacement Monitoring Center 2020). Making matters worse, the number of people who were chronically food insecure in Niger during 2019 numbered around 1.22 million people (World Food Program 2021; USAID 2019).

Meanwhile, Nigeria's Middle Belt is also a site of considerable violence. During the past decade, over ten thousand people have died in pastoral-farmer-related violence in Nigeria (Ilo, Jonathan-Ichaver, & Adamolekun 2019). Most of the confrontations have taken place in the "Middle Belt" of Nigeria, which includes the states of Adamawa, Benue, Kogi, Kwara, Nasarawa, Niger, Taraba, and the Federal Capital Territory of Abuja. According to the International Crisis Group, pastoralist-farmer violence is now far deadlier than the havoc wreaked by Boko Haram (Adebayo 2018). Violent disputes involving pastoral militias result from an interplay of factors, including control over grazing areas, disputes over land, and manipulation by political elites.

Because jihadist groups have been instigating violence in the western Sahel since the 1990s, Western governments and organizations have come to the aid of Sahelian governments, primarily by providing military assistance and training. With this assistance, Sahelian governments have been successful in driving jihadists from the cities into rural areas. However, despite these military successes, the governments of the Sahel have insufficient economic resources to implement economic development plans in rural regions that would provide alternatives for employable young males who would otherwise be recruited into jihadist militias. The state's insufficient capacity in Mali, Burkina Faso, Niger, and the Lake Chad area is particularly noticeable, allowing jihadist groups to flourish there.

When Sahelian governments and militaries have been able to assert their authority, it has most often been in larger cities, thereby ceding territory or authority in rural areas to either jihadist groups or to the transnational commodity, contraband, or migration businesses. In this milieu, jihadist



groups, with their access to armaments, either enter the commodity, contraband, or migration businesses, or else they “tax” those who do. Given the weakness of governmental institutions in rural areas, jihadist groups have provided security and rule of law to pastoralists, farmers, and transnational business networks alike. In exchange for the provision of security and rule of law, jihadist groups can operate as the functional equivalent of a state in their territory. Countering the rise of jihadist authority in rural areas would require a significant investment in both military and economic development by local governments, which states in the region do not have the resources to accomplish.

Many jihadist groups thrive and survive because the governments of the western Sahel have limited financial resources either to fund their police and militaries or to provide legitimate employment for their citizens. These groups often find recruitment to their ranks rather easy because of the very limited employment options available to young men in rural areas. Moreover, these groups can recruit from ethnic communities (such as the Tuareg, the Tubu, or the Fulani) who feel politically marginalized by the state.

Counter-terrorism efforts undertaken or underwritten by France, the European Union, or the United States have emphasized military operations, which have had a limited effect in constraining the growth of violent jihadist activities in this area. Western governments and organizations have supported the security collective known as the Group of 5, or G5, comprising Mauritania, Mali, Burkina Faso, Niger, and Chad, which has sought to address the jihadist challenge. The states of the G5 are financially weak, however, which detracts from their effectiveness. Furthermore, the activities of the G5 and the EU have lacked sufficient coordination, which has led to an inability to change security and economic conditions materially on the ground.

Besides financial support given to the G5 security effort, France established *Opération Barkhane* in 2014, which conducts counter-terrorism operations in the region. *Opération Barkhane* is France’s largest overseas military operation, with approximately 4,500 deployed soldiers (Berger 2019). Germany, the United States, and other Sahelian countries also participate in this effort (International Crisis Group 2021). Its headquarters are in Chad, with Niger field operations in Niamey, Agadez, Arlit, and Tillabéry, and Mali operations at Gao, Kidal, Timbuktu, Tessalit, and Gossi. Another smaller counter-terrorism force called *Operation Sabre* operates in Burkina Faso.

As in most counterterrorism efforts, *Opération Barkhane* has a military component that is aimed at eliminating jihadist soldiers and a rural development component that is aimed at improving material conditions in rural areas. Following the establishment of *Opération Barkhane* in 2014, France, Germany, and the EU in 2017 created the Sahel Alliance, which works with the UN Development Program, the African Development Bank, and the World Bank to funnel approximately eleven billion Euros in investments into rural development, education, food security, employment, and the development of police and military forces (Alliance Sahel 2021). Nevertheless, despite the allocation of these development funds, actual

implementation of programs has become well-nigh impossible because of the underlying security situation and because of the emergence of the COVID-19 pandemic crisis in 2020. These two factors (lack of security and the ongoing COVID-19 crisis), along with insufficient state resources, have created a situation wherein development officials have not been able to enter these regions to implement rural initiatives.

Because of these two factors, jihadist groups, particularly the al-Qaida-linked JNIM and the Islamic State in the Greater Sahara, have proven to be resilient in Burkina Faso, Mali, and Niger. They have been particularly successful among disgruntled ethnic groups, especially Fulani and Tuareg nomadic pastoralists and the more sedentary Djerma. In this ethnic vortex, the Fulani have become their key constituency. The Fulani are pastoralists who move their cattle herds across Mali, Burkina Faso, and Niger in order to survive. The jihadists, because of their presence and their superiority in armaments in these desolate rural regions beyond the reach of centralized state institutions, have stepped in to resolve cattle and land disputes, often in favor of their pastoralist constituencies. Because of the underlying tension between nomadic pastoralists and sedentary farmers, there have been frequent armed conflicts resulting in deaths, most notably between Fulani and Mossi in Burkina Faso's Soum and Center North Provinces and the Tillaberry Region in southwest Niger.

As noted previously, the foci of French, German, EU, and U.S. foreign policy in this region has been to provide military assistance to vanquish jihadist movements and, by obtaining some level of security, to constrain migration from the Sahel to North Africa and onward to Europe. This anti-migration policy seems illogical, given declining fertility rates in Europe and the need for labor. In Europe, the over-65 demographic that needs welfare support will increase, while the population in the 18 to 25 age cohort is decreasing. In this demographic scenario, most European states will need more migrant workers from the 18 to 25 age cohort to finance the care of its elderly population.

Before the COVID-19 pandemic crisis and during its aftermath, French and EU policies prioritized the elimination of the jihadist threat and the constraint of migration, while giving lesser emphasis to the origins of pastoralist-farmer conflict, which revolves around access to water and land (International Crisis Group 2021). A further economic effect of the COVID-19 crisis has been that the foreign assistance resources that ordinarily would be available to France and the EU have been diminished, as GDP shrank in Europe during 2020. With the resources that have been available during 2021, EU funds have been directed to the military effort, while rural development projects have been sidelined with tragic consequences, given the prevalence of COVID infections in the region. In France, the GDP dropped by 8.23 percent in 2020, causing French parliamentarians to reexamine France's military and development objectives in the Sahel (Statista 2021). The important corollary to the anti-jihadist effort, which focused on



rural development and the hoped-for partial resolution of the pastoralist-farmer conflict, has consequently suffered (International Crisis Group 2021).

The Sahelian states have been pressured by the West to focus on security and migration suppression measures, even though these activities create substantial economic and social dislocations. Nevertheless, there is an economic environment in the rural Sahel in which the commodity, contraband, and people trafficking businesses may provide the only lucrative economic opportunities that exist as an alternative to pasturage or farming. The profitability of these businesses leads to their growth, as they continue to operate beyond state control, further weakening the capacity of the state. A recent study has shown that residents of Agadez who had derived their income from trading in commodities or migrants have lost their employment opportunities and income and, without resort to alternatives, they have been subjected to increased poverty (Larémont, Attir, & Mahamadou 2020). Similarly, in the Lake Chad area, efforts by Nigeria and Cameroon to combat the terrorist activities of Boko Haram have led to increased control over the movement of people, leading to decreasing trade and increasing penury.

### **Alternate Policy Considerations**

Despite the Western focus on military and migration issues, six additional factors need to be addressed in order to deal with this crisis: (1) thoroughgoing analyses of climate change and its effects in the region; (2) the development of programs to enhance agricultural and pastoral sustainability; (3) the development of conflict resolution mechanisms to address farmer-pastoralist conflict; (4) the enhancement of local government effectiveness; (5) youth employability, education, and training; and (6) the improvement of water, sewage, and health services.

First, it is heartening to know that the scientific community recognizes the nexus between climate change and conflict. Numerous studies have been undertaken to examine the relationships, with formidable research having been undertaken, for example, in Syria, the Sahel, and India. Now that climate change-conflict studies have gone mainstream, it is time for Western governments and philanthropic institutions to increase investments in this kind of research, which investigates the sources of conflict and the possible means available for their attenuation and resolution.

Regarding the second factor—developing programs to enhance agricultural and pastoral sustainability—one of the approaches that has been suggested by the World Bank would involve the development of a process whereby electronic cash transfers could be made by telephone directly to pastoralists and farmers who are suffering from food insecurity (World Bank 2018). Obviously, a verifiable register of eligible aid recipients would have to be made, but the use of direct cash transfers rather than using intermediary governmental institutions would deliver money to recipients more quickly and might obviate the possibility of graft and corruption.

Regarding factor three, national and state governments need to take a more active role (using GPS technology) in identifying both the water sources and the transhumance routes used by pastoralists, so that local mediating teams can be deployed along with local elders in efforts to mediate conflict, especially by using traditional conflict mediation methods (Centre for Human Dialogue 2020; Schönegg 2015; De Haan, Dubern, Garancher, & Quintero 2014). The most important challenge in implementing this initiative would be obviously the provision of security for these conflict mediation teams, given the often hazardous security situations in rural areas.

Youth employability, education, and training—the fifth factor—is also an essential element for a comprehensive resolution. Given that there are three real opportunities for employment in the Sahel—pasturage, farming, and commodity/people smuggling—it is clear that commodity and people-smuggling businesses would provide the greatest financial return but do not require legions of workers. The survival or growth of the commodity/people smuggling businesses will not address burgeoning youth unemployment in the Sahel. Regarding farming, given the variability in rainfall patterns in the Sahel, the opportunities in market gardening will be better in the southern belt of the Sahel than in the northern belt. Along the borders of the Niger River there will always be the possibility of obtaining higher yields from rice cultivation, but the business challenge will be the cost of transporting goods to markets, given the inadequate existing road infrastructure. The bright spot is that there are considerable opportunities in livestock pasturage. The demand for beef, lamb, and poultry is flourishing in Nigeria (France 24 2019). With Africa's most populous country within reach of the Sahel, a market strategy focusing on providing meat to Nigeria may be profitable.

The availability of water and access to water is a key factor that needs to be addressed in a comprehensive approach to address violence, instability, and prosperity in this region. In all the countries of the Sahel, the water distribution systems and sewage systems are insufficient to promote public health and mitigate conflict. Besides access to land, water lies at the heart of pastoralist-farmer conflict. Inadequate sewage systems are also an issue, leading to continuing prevalence of high rates of diarrhea, polio, and parasitic diseases. Besides water and sewage, waste disposal is another critical public health issue. When waste is allowed to decompose in open areas, it becomes unhygienic, particularly during the rainy season.

From a governance, economic, and security perspective, the Sahel is fragile. Western governments and philanthropic organizations have focused on either security responses or the suppression of migration. There is a great deal at stake here. If we were to include climate change analysis, agricultural and pastoral business planning, innovative conflict resolution modalities, improvement of local governance, effective training and education of youth for available labor markets, and the amelioration of water, public health, and sewage services, we would begin to have a more comprehensive approach to this problem.

## References

- ACLED. 2021a. Dashboard. <https://acleddata.com/#/dashboard>.
- ACLED. 2021b. "Sahel 2021: Communal Wars, Broken Ceasefires, and Shifting Frontlines." <https://acleddata.com/2021/06/17/sahel-2021-communal-wars-broken-ceasefires-and-shifting-frontlines/>, accessed on July 19, 2021.
- Adebayo, Bukola Adebayo. 2018. "Nigeria's pastoral conflict 'six times deadlier' than Boko Haram, ICG says." <https://edition.cnn.com/2018/07/27/africa/nigeria-herdsmen-boko-haram-report/index.html>, accessed on February 8, 2020.
- Alliance Sahel. 2021. <https://www.alliance-sahel.org/en/the-projects/>, accessed on July 5, 2021.
- Bamba, Gaye Serigne. 2018. *Conflicts between herders and farmers against a background of asymmetric threats in Mali and Burkina Faso*, Friedrich Ebert Stiftung, FES Peace and Security Series, No.28. <https://library.fes.de/pdf-files/bueros/fes-pssc/14174.pdf>, accessed on February 6, 2020.
- Benjaminsen, Tor A., and Boubacar Ba. 2018. "Why do pastoralists in Mali join jihadist groups? A political ecological explanation." *The Journal of Peasant Studies* [http://catalogue.unccd.int/314\\_Article\\_Benjnt\\_Studies\\_2018.pdf](http://catalogue.unccd.int/314_Article_Benjnt_Studies_2018.pdf).
- Berger, Flore. 2019. "West Africa: shifting strategies in the Sahel," IIS, October 1. <https://www.iiss.org/blogs/analysis/2019/10/csdp-west-africa-sahel>; <https://www.iiss.org/blogs/analysis/2019/10/csdp-west-africa-sahel>, accessed on February 14, 2020.
- Biassuti, Michela. 2019. "Rainfall Patterns in the African Sahel: Characteristics, processes, and causes." *WIREs Clim. Change* 10:e591. <https://doi.org/10.1002/wcc.591>; <https://doi.org/10.1002/wcc.591>, accessed on April 9, 2021.
- Centre for Human Dialogue. 2020. "Agro-Pastoral Mediation in the Sahel Region." 2020. <https://www.hdcentre.org/activities/pastoral-conflict-mediation-in-sahel/>, accessed on February 16, 2020.
- Climate Institute. 2019. "Risk and Resilience: Climate Change and Instability in the Sahel." <https://climate.org/risk-and-resilience-climate-change-and-instability-in-the-sahel/>, accessed on 1 February 1, 2020.
- De Haan, Cees, Etienne Dubern, Bernard Garancher, and Catalina Quintero. 2014. "Pastoralism Development in the Sahel: A Road to Stability?" World Bank Global Center on Conflict, Security and Development. [http://cega.berkeley.edu/assets/miscellaneous\\_files/18-ABCA\\_-Pastoralism\\_and\\_stability\\_in\\_the\\_Sahel\\_master\\_-\\_Final\\_for\\_translation-\\_June\\_9\\_2014.pdf](http://cega.berkeley.edu/assets/miscellaneous_files/18-ABCA_-Pastoralism_and_stability_in_the_Sahel_master_-_Final_for_translation-_June_9_2014.pdf), accessed on February 16, 2020.
- France 24. 2019. "Hunger for beef offers rewards and risks for Nigeria's pastoralists." June 26, 2019. <https://www.france24.com/en/20190626-hunger-beef-offers-rewards-risks-nigerias-pastoralists>, accessed on February 17, 2020.
- Giannini, Alessandra. 2010. "Mechanisms of Climate Change in the Semi-Arid African Sahel: The Local View." *Journal of Climate* 23: (3).
- Giraud, G. 2013. "Cinquante ans de tensions dans la sahélo-saharienne." In *La Guerre au Mali. Comprendre la crise au Sahel et au Sahara. Enjeux et zones d'ombre*, 27–57. Paris: La Découverte.
- Honwana, Alcinda Manuel. 2019. "Youth Struggles: From the Arab Spring to Black Lives Matter and Beyond." *African Studies Review* 62 (1): 8–21.
- Ilo, Udo Jode, Ier Jonathan-Ichaver, and Yemi Adamolekun. 2019. "The Deadliest Conflict You've Never Heard Of. Nigeria's Cattle Herders and Farmers Fight a Resource War." *Foreign Affairs*, January 23.

- International Crisis Group. 2019. "Speaking with the 'Bad Guys': Toward a Dialogue with Central Mali's Jihadists." <https://www.crisisgroup.org/africa/sahel/mali/276-speaking-bad-guys-toward-dialogue-central-malis-jihadists>, accessed on 13 February 2020.
- International Crisis Group. 2020. "Sidelineing the Islamic State in Niger's Tillabery." June 3, 2020, <https://www.crisisgroup.org/africa/sahel/niger/289-sidelineing-islamic-state-nigers-tillabery>, accessed on July 6, 2021.
- International Crisis Group. 2021. "A Course Correction for the Sahel Stabilisation Strategy." <https://www.crisisgroup.org/africa/sahel/299-course-correction-sahel-stabilisation-strategy>, February 1, 2021, accessed on July 5, 2021.
- Internal Displacement Monitoring Center. 2020. "Niger." <https://www.internal-displacement.org/countries/niger>, accessed on February 10, 2020.
- Larémont, Ricardo René, Mustafa O. Attir, and Moussa Mahamadou. 2020. "European Union and Italian Migration Policy and the Probable Destabilization of Southern Libya and Northern Niger." *The Journal of the Middle East and Africa* 11 (4): 359–80.
- Lounnas, D. 2013. "Confronting Al-Qa'ida in the Islamic Maghreb in the Sahel: Algeria and the Mali Crisis." *The Journal of North African Studies* 19 (5): 810–27.
- Saavedra, Laura Torres. 2019. "The demographic explosion in the Sahel region: its governance's new challenge." *Instituto Español de Estudios Estratégicos*, June 27.
- Salack, Seyni, et al. 2016. "Global warming induced hybrid rainy seasons in the Sahel." *Environmental Research Letters* 11: p. 1.
- Schöneegg, Günter. 2015. "A complementary relationship turns competitive," *Development and Cooperation*, June 19.
- Stanford Center for International Security and Cooperation. 2018. "Islamic State in the Greater Sahara." <https://cisac.fsi.stanford.edu/mappingmilitants/profiles/islamic-state-greater-sahara>, accessed on July 6, 2021.
- Statista. 2021. "France: gross domestic product (GDP) from 2016 to 2026." April 2021, <https://www.statista.com/statistics/263604/gross-domestic-product-gdp-growth-rate-in-france/>, accessed July 5, 2021.
- United Nations. 2018. "Building climate resilience and peace, go hand in hand for Africa's Sahel." <https://news.un.org/en/story/2018/11/1025671>, accessed on February 27, 2020.
- UN News. 2018. "Building climate resistance and peace, go hand in hand for the Sahel." <https://news.un.org/en/story/2018/11/1025671>, accessed on February 1, 2020.
- USAID. 2019. "Assessment of Chronic Food Insecurity in Niger, March 2019." <https://reliefweb.int/sites/reliefweb.int/files/resources/Chronic%20FI%20Niger%20report%20Final%20English.pdf>, accessed on February 10, 2020.
- World Bank. 2018. "Sahel Adaptive Social Protection Program." <http://documents.worldbank.org/curated/en/636621554356565460/pdf/Sahel-Adaptive-Social-Protection-Program-Annual-Report-2018.pdf>, accessed on February 15, 2020.
- World Food Program USA. 2021. "Niger." <https://www.wfpusa.org/countries/niger/>, accessed on August 6, 2021.