

Technical Paper 7. Trade Patterns and Trade Networks in the Lake Chad Region

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8.1 Introduction

The Lake Chad Region (LCR) is an economically interdependent area that encompasses parts of Cameroon (Extrême-Nord), Chad (Chari Baguirmi, Hadjer Lamis, Kenam, and Lac), Niger (Diffa and Zinder), and Nigeria (Adamawa, Borno, and Yobe). The region is characterized by strong historical, ethnic, cultural, and political ties, as well as commercial linkages that extend across its porous borders. Indeed, many if not most of the cross-border exchanges are not recorded in official import and export statistics.

Informal trade is widespread throughout Africa (Bouet, Pace, and Glauber 2018; World Bank 2020), particularly if formal state institutions are under stress. Traders try to avoid import or export declarations as well as border taxes, and customs and other border agencies often tolerate the cross-border trade of small consignments without the need to comply with formal procedures. This does not necessarily mean that these trade flows go untaxed, though. Border officials might levy fees that do not have a legal basis, and state or local authorities often ask for informal payments at roadblocks or in marketplaces.

The LCR is far from a seaport and, hence, heavily landlocked. This condition means that the cost of connecting to international markets is high. As a result, consumers in the LCR pay a high price for imports from global markets, whereas producers in the region get a low price for their exports to international clients. The region faces other challenges that stress its production base and depress economic development. These challenges include erratic weather patterns with frequent periods of drought, as well as environmental degradation of the lake. The most important threat to the well-being and the livelihood of the population in recent years has been the deteriorating security situation, though.

Conflict and violence related to the rise of the Boko Haram movement and counterinsurgency measures

taken by the government have severely affected economic activity and cross-border trade in the LCR. Official border crossings have been closed, the movement of people has been limited, and the supply of agricultural inputs, such as N fertilizer and fuel, has been restricted. These impediments and the insecurity of traditional trade corridors have triggered a shift toward alternative, longer trade routes, thereby increasing transaction costs. Yet despite the insecurity-related challenges, cross-border trade continues at a reduced level through formal and informal channels with crops and livestock from Cameroon, Chad, and Niger being supplied to markets in Nigeria in exchange for cereals and semifinished or finished merchandise from Nigeria.

There is a risk that a vicious cycle will develop around trade and conflict in the LCR. Conflict and insecurity reduce trade, with adverse consequences for economic growth and household incomes. Increased poverty, in turn, incites discontent and the willingness to join rebel groups, which further fuels conflict. Breaking this cycle requires that the authorities encourage and support productive activities so that the population has prospects of an improving economic situation and, thus, a stake in a peaceful future.

The following analysis describes and assesses the trade patterns and trade networks in the LCR on the basis of available information from national authorities, international organizations, and academic observers. The focus is thereby on comparisons between the current situation, which is marked by the Boko Haram insurgency and countermeasures taken by the authorities, with the “normal,” pre-Boko Haram period. The paper aims to highlight the effect of the conflict situation on economic activity and cross-border trade and thereby help identify strategies that can be used to improve the livelihood of the LCR population. Unfortunately, quantitative information on economic activity and developments in trade flows in the region is virtually absent, so the discussion has often

to fall back to estimates or rely on anecdotal evidence. These data should be interpreted with care.

8.1.1 Trade policies and institutions

The Lake Chad region extends across four countries that use different currencies for trade transactions. Nigeria uses the naira, and Cameroon, Chad, and Niger use the franc. In practice, these different means of exchange do not pose a major obstacle to cross-border trade, though, as traders in the LCR are used to operating in different currencies in parallel and will often accept payment in a currency other than their own.

Another institutional difference is that the four countries are members of different regional trading blocs. Cameroon and Chad are members of the Economic and Monetary Community of Central Africa (CEMAC) and the Economic Community of Central African States (CEEAC), whereas Niger and Nigeria are part of the Economic Community of West African States (ECOWAS). Whereas trade policies and procedures are to a large extent harmonized within the regional trade agreements (RTAs), this is not the case across RTAs. For example, the import tariffs applied by Cameroon (CEMAC) are generally higher than those charged on imports into Niger and Nigeria (Table 8.1). The fact that different trading blocs meet in the LCR makes formal trade integration between the neighbors more difficult, as other countries in the respective blocs would have to agree to any trade policy changes. That said, all four countries are signatories of the African Continental Free Trade Area (AfCFTA), which promises to reduce the remaining tariff and nontariff barriers to intra-African trade and harmonize trade procedures over time. To advance this longer-term goal, members of ECOWAS and CEMAC could discuss and implement trade facilitation and integration measures in the region, which might, for example, lead to the adoption of provisions similar to the ECOWAS Trade Liberalization Scheme (ETLS). The ETLS involves visa-free movement of persons and an exemption for agricultural and livestock products as well as handicrafts from the requirement to provide a certificate of origin. As long as the tariff and nontariff measures of ECOWAS

and CEMAC are not fully aligned, the aforementioned provisions could be applied on a reciprocal basis.

Given the preponderance of informal cross-border transactions in the LCR, official import and export procedures seem to be handled flexibly. A recent World Bank study reports that at the Figuil border crossing between Cameroon and Chad, tariff levels are applied differently depending on the officials in charge, the truck

Table 8.1: Average MFN Applied Duties by Product Groups, 2019

	Cameroon	Niger	Nigeria
Animal products	21.8	24.5	24.5
Dairy products	24.8	17.2	17.2
Fruits, vegetables, plants	27.0	17.8	17.8
Coffee, tea	29.9	18.5	18.5
Cereals and preparations	21.4	13.6	13.6
Oilseeds, fats, and oils	19.8	11.1	11.1
Sugars and confectionery	20.6	12.6	12.6
Beverages and tobacco	27.3	17.4	17.4
Cotton	10.0	5.0	5.0
Other agricultural products	16.4	9.6	9.6
Fish and fish products	25.7	16.0	16.0
Minerals and metals	17.1	11.6	11.6
Petroleum	9.6	7.7	7.7
Chemicals	11.4	7.2	7.2
Wood, paper	20.5	11.2	11.2
Textiles	19.7	16.1	16.1
Clothing	30.0	20.0	20.0
Leather, footwear	20.9	12.3	12.3
Nonelectrical machinery	12.1	6.8	6.8
Electrical machinery	17.2	11.2	11.2
Transport equipment	16.0	8.3	8.3
Manufactures, n.e.s.	22.1	14.2	14.2

Source: WTO database on Tariff Profiles, 2019.

Note: No data are available for Chad, but rates should be identical to Cameroon/CEMAC. CEMAC = Economic and Monetary Community of Central Africa; MFN = Most Favored Nation; n.e.s. = not elsewhere specified.

size and load, or the time of day (World Bank, 2018a). Also, guidance notes from the customs authority leave substantial room for interpretation and, hence, digression by officials, which can facilitate trade but can also enable demands for informal payments.

According to Cantens and Raballand (2017), this flexibility is typical for fragile borderlands. Informal agreements with headquarters provide leeway for local customs officers to adjust the fiscal burden on traders to the prevailing circumstances. Importers meet regularly with customs officials to negotiate and agree on an acceptable tariff and tax burden. These arrangements make it possible to reduce clandestine border crossings and the associated risks of detection by border patrols or encounters with rebel fighters, while providing state authorities with a certain amount of tax revenues.

8.1.2 International connectivity

The Lake Chad region is heavily landlocked. The two main consumption centers in the region, Maiduguri and Ndjamen, are located more than 1,300 kilometers (km) from the nearest gateway seaport. The trade corridor from Port Harcourt to Maiduguri is 1,370 km long; the one from Lagos to Maiduguri, 1,530 km; and the one from Douala to Ndjamen, 1,800 km. For comparison, in West Africa, the distance from Abidjan to Bamako amounts to “only” 1,115 km, and in East Africa, the trade corridor from Mombasa to Kampala is “merely” 1,165 km long. The remoteness of the LCR means that trade transaction costs are high and thus imported goods from Europe, Asia, and the Americas will be relatively expensive in local markets, while goods that are destined for export to global customers will fetch a relatively low price.

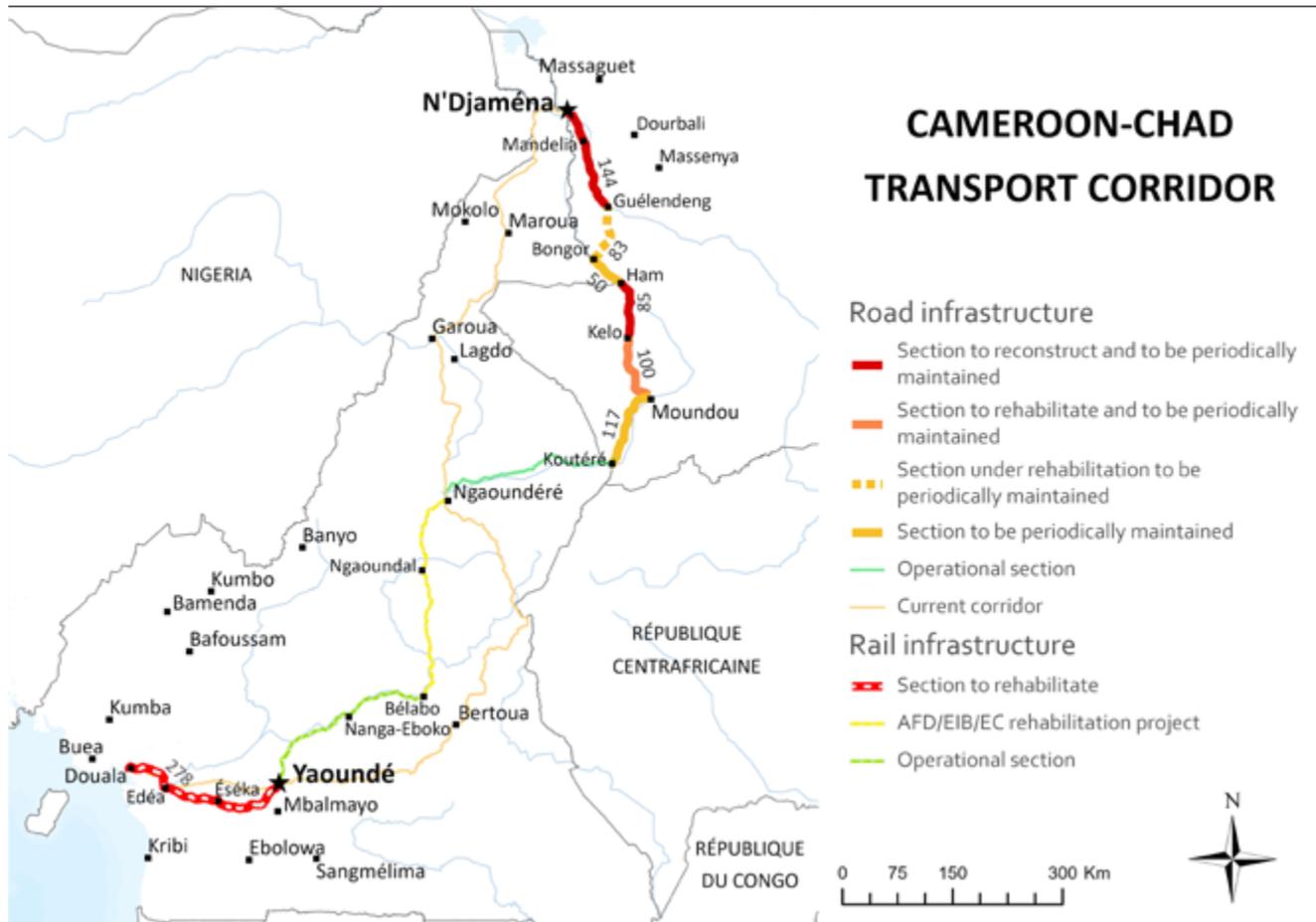
The Douala-Ndjamen regional rail/road corridor passes through the Far North region of Cameroon and plays a critical role in linking secondary population centers, such as Garoua, Maroua, and Kousséri, to the capital cities Ndjamen and Yaounde, as well as to international markets via Douala. Strong transport activity along the corridor also benefits the communities

adjacent to the road, as it provides them with an opportunity to supply goods and services to transport operators. The performance of this corridor is, thus, important for international trade and the prosperity of the LCR and also plays a key role for political, social, and economic integration in the region.

Almost 80 percent of Chad’s imports enter the country through the Douala-Ndjamen corridor. The deteriorating security situation and attacks by Boko Haram on the northern segment of the corridor have, therefore, been a very serious concern for transport operators, who have explored the use of alternative transport routes to Ndjamen. In particular, a passage that avoids the Far North of Cameroon and runs on Chadian territory has gained interest and traffic, and the Chadian authorities and their developing partners are considering upgrading and developing the track (World Bank 2018b). Instead of going from Ngaoundere via Garoua and Maroua to Ndjamen, the alternative route would run from Ngaoundere east to Koutéré and then continue north to Moundou and Ndjamen (Map 8.1). Parts of the road still need to be reconstructed or rehabilitated to make this alternative branch capable of handling a substantial increase in traffic, but corresponding preparation and work are in progress.

The new eastern branch of the Douala-Ndjamen corridor would provide transporters with an alternative, more secure route to ship their goods to Ndjamen and thus mitigate the risk of Chad being cut off from international markets by Boko Haram attacks in the Far North of Cameroon. On the other hand, the rerouting would drain traffic from the Ngaoundere-Garoua-Maroua branch and, hence, deprive the population along the corridor of business opportunities. Moreover, there is significant risk of a hysteresis effect. Even once Boko Haram is defeated and the Far North of Cameroon is safe again, it seems unlikely that all the previous traffic would return to the Ngaoundere-Garoua-Maroua branch. The emergency-inspired development of the Ngaoundere-Koutéré-Moundou branch could thus lead to further economic depression and isolation of the LCR in the longer term.

Map 8.1: Alternative Routing of the Douala-Ndjamena Corridor



Source: World Bank.
 Note: AFD/EIB/EC = African Development Bank, European Investment Bank and European Commission.

8.2 Violent conflict and international trade

The Boko Haram insurgency that started in 2009 has severely affected economic activity in the LCR. Originating in northeast Nigeria, the conflict has spread across borders into Niger, Chad, and Cameroon. Boko Haram has repeatedly launched deadly attacks, including on economic targets such as commercial roads and markets, and has generally created an atmosphere of fear and insecurity. Key livelihood activities, such as fishing and harvesting cash crops, have been disrupted or abandoned because of fear of reprisals from Boko Haram or the state's response to the terrorist group. More than 2.6 million people within the region have been displaced because of the hostilities.

Conflict creates humanitarian tragedy and misery, as well as representing an major impediment to development. Violence and insecurity have been shown to disrupt and slow down economic growth (Blomberg and Hess 2002) and can lead to affected countries falling into a so-called conflict trap if the hostilities are ongoing or repeated (Collier et al. 2003). Trade itself can be either a driver of conflict, by providing rebels with supplies from neighboring countries as well as a potential stream of income from informal taxation, or a force of stability, by generating employment and prosperity that would be put at risk by disruptive violence or fundamental changes in governance.³⁸⁶

The response by the authorities to rebel or terrorist violence can also cause trade and economic disruption. Measures such as border closures; restrictions on the production, use, and sales of certain products; or curfews and other constraints to people movement can have a profound effect on economic activity. Such actions might be necessary as emergency responses to rein in and defeat the uprising, but if they stay in place for a long time,

substantial damage might be inflicted on the economy. Indeed, the containment measures might turn out to be counterproductive in the longer run if they lead to an impoverished population sympathizing with the rebels, supporting them, and strengthening their ranks with new recruits.

8.2.1 Border closures

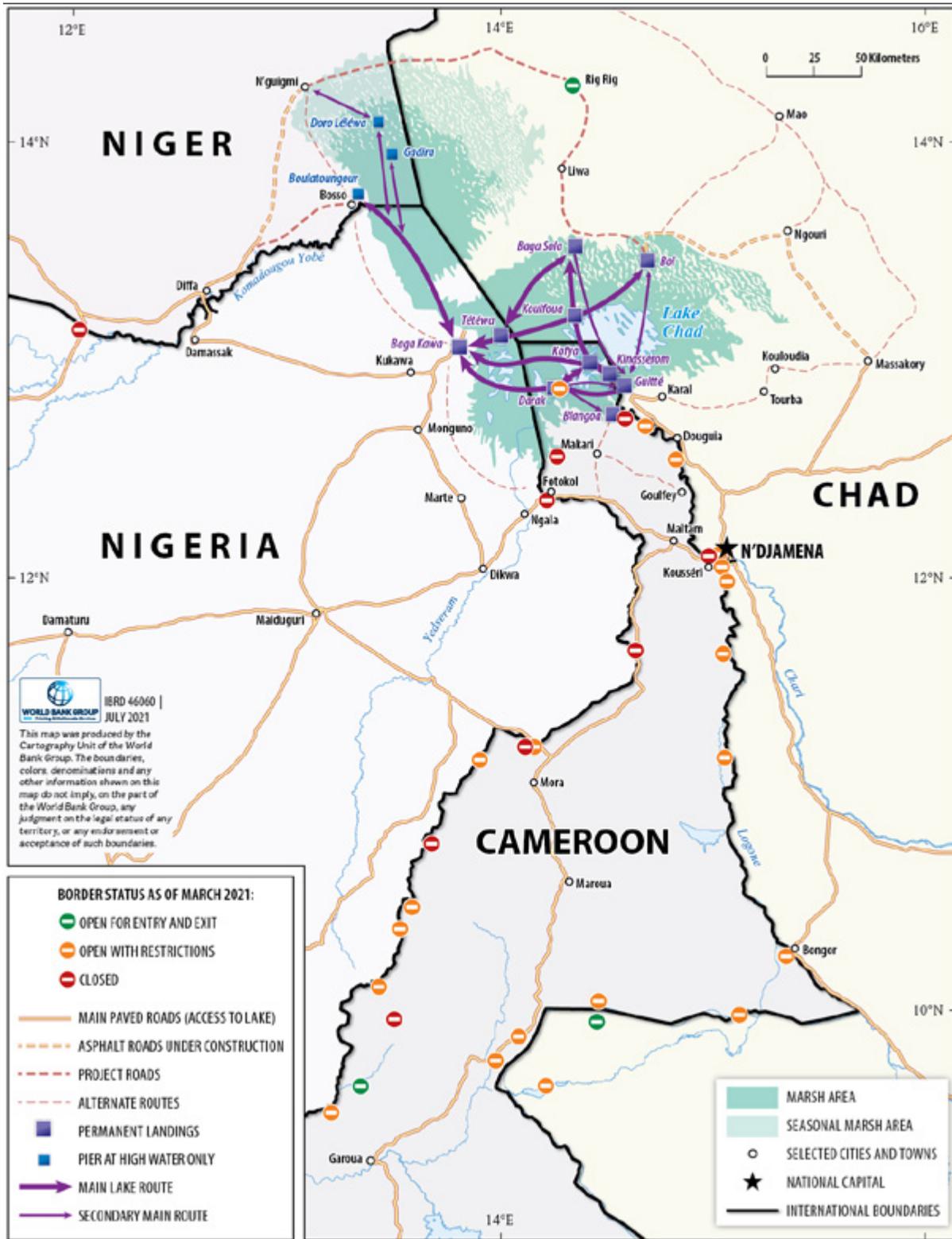
At the beginning of 2012, Nigeria closed its international borders in the northeast part of the country to limit the movement of Boko Haram fighters, disrupt their supplies, and inhibit their ability to levy informal taxes on traders. As the violence subsequently intensified and spread to neighboring countries in the LCR, Cameroon, Chad, and Niger also imposed stricter border controls and closures. The severity of the situation has been further compounded since 2020 by the COVID-19 pandemic, which led to the imposition of additional cross-border travel restrictions and bans.

Data from the International Organization for Migration (Map 8.2) show that as of March 2021, many border crossings in the northeast of Nigeria remain closed (red squares), while almost all other border posts in the LCR are open only for commercial traffic (yellow squares). Very few crossings are described as open for entry and exit (green squares).

Border closures have a severe impact on the local populations. They imply a drastic reduction in demand for transport and other trade-related services, which often provide employment for a sizable share of the men and women of the border communities.

³⁸⁶ In countries with point-sourced export commodities, such as oil or gemstones, there is also the risk that the concentrated export revenues will provide a trigger for the government and rebels to fight over control of the production locations (Calli 2015).

Map 8.2: Border Status in the Lake Chad Region as of March 2021



Source: International Organization for Migration database, March 2021.

Border closures also depress trade volumes and force traders to make costly detours. This means longer transport times, more fuel and vehicle maintenance expenses, and higher payments to clear roadblocks and checkpoints on the longer route. In some cases, there are also higher trade taxes involved. For example, the closure of borders in northeastern Nigeria has shifted trade flows from Lagos and other Nigerian ports that are destined for Chad to pass through Niger. Nigerian customs has collected new transit fees on these trade flows to Chad, and goods have subsequently also been taxed by Chadian customs. In 2016, Niger and Chad signed an agreement to avoid this double taxation (Cantens and Raballand 2017).

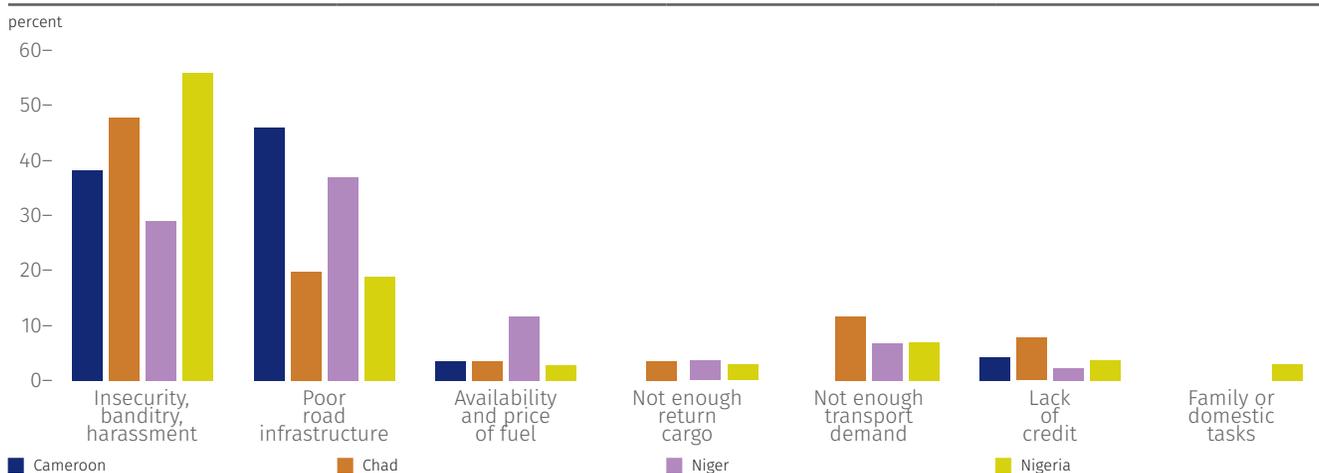
Yet despite the widespread border closures, interviews with local traders in June 2019 suggest that it is still possible to traverse into the neighboring country at supervised border crossings if “facilitation payments” are made. An individual would have to pay US\$12.50–14.00 in bribes to cross from Cameroon into Nigeria (Sagagi and Thorburn 2019). For trucks, the unofficial payments were reported to be at least 20 times higher. Hence, it is still possible—but expensive—to cross at closed border stations in the LCR.

8.2.2 Transport impediments

Trade in the LCR is slowed down and taxed by formal or informal checkpoints and roadblocks along transport routes. These controls by the police and military are intended to impede the movement of Boko Haram fighters and their supplies. In addition, bandits and terrorists operate their own informal checkpoints to extract payments from traders and travelers. A survey of 305 transporters in the LCR undertaken on behalf of the World Food Programme in 2016 found that supply routes for cereals in Borno State are subject to a particularly high number of checkpoints (Table 8.2), reflecting the intensity of Boko Haram activity and corresponding countermeasures in this region. Similarly, the total amount of payments demanded is very high in Borno State and also in some other regions, such as Diffa in Niger.

The transporter survey also asked the respondents to identify the main constraints to their trading activity. Insecurity and poor road infrastructure were seen as the main impediments to trade and transport (Figure 8.1). In the Chadian and Nigerian parts of the LCR, insecurity was mentioned more than twice as often as infrastructure as the most serious concern, while in Cameroon and Niger, the poor state of the road network topped complaints about the lack of security.

Figure 8.1: Principal Constraints Faced by Transporters in the LCR



Source: Brunelin and Renk 2016.
Note: LCR = Lake Chad region.

Table 8.2: Transport Impediments on Cereal Supply Routes

	Cameroon	Chad		Niger	Nigeria		
	Extrême-Nord	Lac	Hadjer Lamis	Diffa	Adamawa	Borno	Yobe
Average distance (km) to main cereal market supply	93	50	178	109	34	249	92
Number of formal checkpoints	2	3	8	5	2	16	3
Number of informal checkpoints	5	1	2	2	1	8	3
Total number of checkpoints per 100 km	7.5	8.0	5.6	6.4	8.8	9.6	6.5
Amount of taxes paid by pickup driver (US\$)	1	11	11	40	1	3	2
Amount of taxes paid by truck driver (US\$)	73	N/A	19	76	1	127	12

Source: Brunelin and Renk 2016.
Note: km = kilometers.

8.2.3 Restrictions on fertilizer use

The authorities in the Lake Chad basin have implemented strict limits on the use and trade of nitrogen fertilizer (N fertilizer) because of fear that it could be used by Boko Haram for bomb-making.³⁸⁷ In Nigeria, imports of nitrogen fertilizers have been limited to a positive list of “safe” products, and a comprehensive tracing protocol has been put in place to govern the import, manufacture, distribution, and handling of N fertilizer.³⁸⁸ Similarly, in Niger, farmers in the Diffa region have had to apply for licenses to buy nitrogenous fertilizer, and imports from Nigeria have been prohibited. These restrictions have resulted in higher fertilizer prices and reduced application rates, with adverse consequences for crop yields.

Nitrogen fertilizer can and has been used by terrorist groups to produce improvised explosive devices that were later used in violent attacks. Some fertilizers, such as ammonium nitrate, can be used as explosives in their own right and are, therefore, on the list of banned imports in Nigeria. Others, such as urea, are chemically stable

and must be treated with particular chemicals, notably nitric acid, to produce an explosive. This transformation into explosive materials requires advanced education in chemistry and specialized laboratory equipment, which might be difficult for a terrorist group in a field camp to procure and operate. Some observers have therefore argued that it would be more effective and less disruptive for farming if the authorities were to strictly control the import and handling of nitric acid instead of restricting a broad range of fertilizers that are by themselves not dangerous (Argus Consulting Services 2016).

8.2.4 Restrictions on access to farming and fishing locations

The presence of Boko Haram in certain zones and the response by the authorities to militarize large areas has cut off some farmers and fishers from their land or fishing grounds. Farmers in these areas have been reluctant or unable to work their land because of fear of encounters with Boko Haram or fear of being taken by the military to fight Boko Haram. In addition, restrictions

387 Improvised explosive devices pose a significant threat. Bombs and land mines have been injuring or killing people in the LCR and restricting people's access to agricultural land. The Mines Advisory Group reported that between January 2016 and March 2018, 439 casualties resulted from land mines and unexploded bombs in northeastern Nigeria. See Mines Advisory Group website, <https://www.maginternational.org/what-we-do/where-we-work/nigeria/>.

388 See End User Certificate Portal, “Guideline for Procuring Fertilizer Chemicals,” <https://euc.nsa.gov.ng/fertilizers>.

on certain transport vehicles (for example, motorbikes in Niger) have impeded access to more remote farming locations. As a result, crop production has suffered and output of cash crops for export is down (see, for example, section 3.4 of this paper, “Dried red pepper exports from Diffa”).

Similarly, bans on fishing boats, fishing, and fish selling have had a devastating effect on the fishing communities around the lake and on cross-border fish trade. The bans are intended to deprive Boko Haram of escape and supply routes across the lake and to cut the income stream that the terrorists supposedly derive from the fish trade. For the fishers, the ban has meant that they and their families had to look for alternative livelihoods or continue to fish clandestinely and thereby expose themselves to significant security risk or severe sanctions (see, for example, section 3.3, “Smoked fish exports from Diffa”).

8.3 Trade relationships

The Lake Chad region has a history of lively cross-border exchanges. Products from agricultural surplus areas supply towns and cities, while manufactured goods are shipped from the south of Nigeria or Cameroon to the agglomerations of Maiduguri and Ndjamena, from which they are distributed to the surrounding areas. Large urban centers and border towns feature important permanent markets, as well as warehouses. The latter make it possible to store surplus merchandise and later deliver it to other localities. Smaller towns typically hold weekly markets.

The transport infrastructure to the south of Lake Chad is better developed than that on the lake's northern shore (Map 8.2). In fact, some cross-border trade of fish and other products used to occur across the lake using pirogues, as this direct link is quicker and cheaper than road transport around the northern shore.

Mutual trust is of fundamental importance in trade relationships, and many trader networks in the LCR are based on regional or ethnic affiliations. Many of these networks among Hausa, Kanouri, Arab, Peul, or Fezzanais extend across borders and facilitate import and export transactions. Research using high-frequency price data found that informal networks along the border between Niger and Nigeria are highly effective in integrating markets (Aker et al. 2014). Common ethnicity was reported to result in lower price dispersion across countries than across regions of differing ethnic composition within countries.

The following sections illustrate the cross-border trade relationships for several commodities in more detail.

Some of the value chains are important across the entire region (cereals, fish), while others illustrate sectors that are of significance in individual countries or regions (red pepper in Diffa, Niger; onions in northern Cameroon; cattle in Chad).

8.3.1 Intraregional cereals trade

Nigeria is the origin of most grain supplies in the LCR.

Cereals are grown in rural areas throughout Adamawa, Borno, and Yobe States. In addition, substantial supplies come from Kano or even further afar. These supply streams continue, despite the Boko Haram insurgency, but local production has been adversely affected by reduced N fertilizer availability and higher fertilizer prices, restricted access to land in militarized zones, and direct regulation of selected agricultural activities. For example, the cultivation of “tall” crops, such as maize or sorghum, was banned because it was seen as decreasing military visibility and potentially creating hiding grounds for the insurgents.

Table 8.3: Farmer-Reported Typical Harvests before and during Conflict in Borno State

Farmer ID	Crop planted	Typical harvest (2004–08), tons/ha	Typical harvest (2009–13), tons/ha	Percent change
1	Cowpea	1.0	0.3	-70
2		2.0	0.5	-75
1	Maize	2.8	0.4	-86
2		4.8	1.0	-80
3		15.0	2.2	-85
1	Sorghum	0.8	0.0	-100
4		20.0	6.4	-68
3	Rice	3.0	1.5	-50
4	Millet	5.0	1.1	-78

Source: Kimenyi et al. 2014.
Note: ha = hectare.

Anecdotal information from interviews with four farmers in Borno State suggests a major slump in agricultural output. Higher prices and reduced availability of farming inputs has depressed yields by more than 50 percent (Table 8.3). The magnitude of these changes is confirmed in a report by the Center for Strategic and International Studies' Global Food Security

Program, which estimated changes in sorghum, rice, and millet production in Borno State between 2010 and 2015 to amount to, respectively, 82 percent, 67 percent, and 55 percent (CSIS 2020). These findings attest to the damage that the Boko Haram violence and the countermeasures taken by the authorities have inflicted on the agricultural economy.

The Diffa region in Niger traditionally imports substantial amounts of cereals from Nigeria. Before the Boko Haram attacks, the axis Damasack–Diffa was the major trade corridor. However, this route is no longer used because it is no longer safe, and supplies have instead been sourced along the Geidem–Gashua corridor. According to reports by the World Food Programme, these places of origin are providing almost 70 percent of the traditional grains, maize, and cowpeas (*niebe*) found in markets in Diffa (Brunelin and Renk 2016).

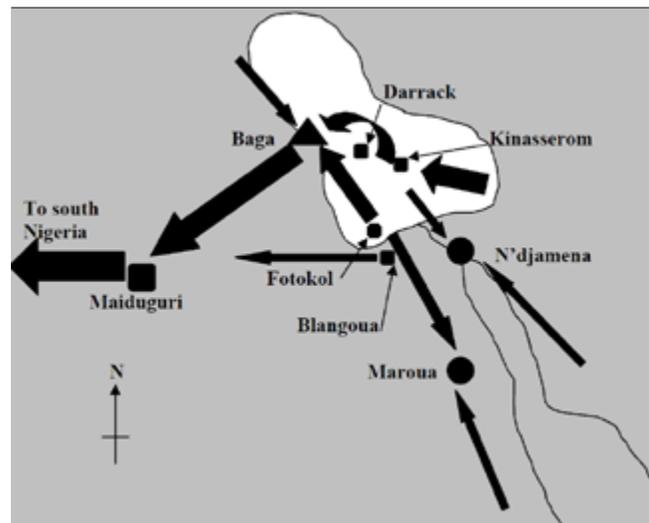
Similarly, the long land border between Nigeria and Cameroon used to see lively cross-border trade, mainly of an informal nature. Estimates put the value of exports from Cameroon to Nigeria of paddy rice, other agricultural products, and soap at US\$64 million, while Nigeria exported US\$176 million worth of cosmetics, plastics, footwear, and other general merchandise to Cameroon (World Bank 2013). A number of major trade routes link the two countries, several of which connect northeastern Nigeria to the Extreme North Region of Cameroon. These include the corridors from Maiduguri to Kousséri, Maiduguri to Maroua, Banki to Mora, Mubi to Guider, and Jimeta/Yola to Garoua. However, the northernmost of these corridors have become subject to important security risks and are therefore avoided by transporters in favor of the more secure corridors from Mubi to Guider, Jimeta/Yola to Garoua and routes running further south (Sagagi and Thorburn 2019).

In Chad, most cereal supplies for the food deficit region of Hadjer Lamis originate in the Lac region or other domestic surplus regions.

8.3.2 Traditional trade flows for fish

Two types of fish trade exist around and across Lake Chad. The first type is the supply of fresh or processed fish by fishers or merchants to markets in nearby villages and towns for consumption in proximity to the fishing grounds. The second type is the long-distance trade of dried or smoked fish. This second type of trade involves specialized traders and large transport vehicles, and it connects to urban centers within countries or across borders. In particular, large quantities of fish have been shipped through Baga and Maiduguri to major agglomerations in southern Nigeria (Map 8.3), such as Abuja, Onitsha, Enugu, Lagos, and Ibadan. It should be noted that most of these exports are informal and not recorded in official trade statistics.

Map 8.3: Historical Trade Flows for Fish in Lake Chad Region



Source: Neiland and Béné 2004.

In Cameroon, a large share of fish production used to be exported to Nigeria. The main trade routes run from the markets of Fotokol and Blangoua to the market centers at Baga on the western shore of Lake Chad in Nigeria or directly to Maiduguri.

In Chad, major export trade used to occur across the lake. Fish caught in Chadian waters were transported and sold to the island markets of Kinasserom and Darrack,

from which they would continue their journey to Baga in Nigeria.

In Niger, exports of fish caught in Lake Chad or its tributary rivers also run through Baga and Maiduguri in Nigeria.

The entrenchment of Boko Haram on the shores of Lake Chad, large-scale attacks such as the Baga massacre of January 2015, and containment and reprisal actions by the national and joint military forces have fundamentally disrupted the aforementioned traditional trade routes for fish. As a result, cross-border trade volumes have been reduced, and longer, more costly trade corridors are being used.

8.3.3 Smoked fish exports from Diffa

Exports of smoked fish from the Diffa region in Niger to Nigeria used to be of substantial importance.

Estimates suggest that until 2014, about 14 percent of the population on the shores of Lake Chad and alongside the Koumadougou River that separates Niger and Nigeria derived their livelihood from fishing, fish smoking, and fish trade (Sissons and Lappartient 2016). The imposition of the state of emergency in the Diffa region in February 2015 and the subsequent surge in Boko Haram attacks have fundamentally disrupted fishing activity and stopped smoked fish exports altogether.

Lake Chad and the Koumadougou River are fertile inland fishing grounds. In the Diffa region, about 15,000 fishers and their families used to make a living from fishing. It is notable that a large number of fishers were foreign citizens. The local chamber of agriculture estimated that only 40 percent of fishers in 2010 were from Niger, while the remaining 60 percent were from Cameroon, Chad, Nigeria, and other countries (Chambre Régionale d'Agriculture de Diffa 2010a).

Smoked fish production typically involved the entire family. The men would go out on the lake or river to catch the fish, and the women and children handled the

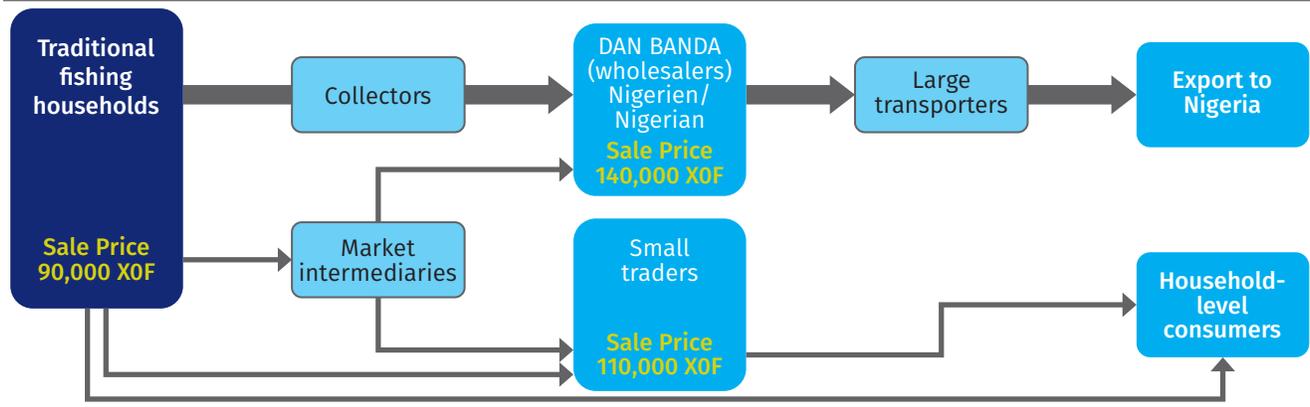
smoking process and local sales. Because of the difficulties of stocking and transporting fresh fish in the climate of the Sahel, not much fish was sold fresh. Instead, the catch was most often immediately smoked in traditional ovens to make it storable. It was then packaged in 50 kilogram boxes for marketing.

A small share of the fish caught used to be sold in local markets for consumption by the local population, but 80–90 percent of all fish caught was exported to consumption centers in Nigeria, notably Maiduguri. For this cross-border trade, fishers would work through specialized intermediaries. Wholesalers would send collection agents into the villages to buy up the fish and transport it to local market centers for consolidation into larger lots and subsequent truck-based export to Nigeria (Figure 8.2). In 2014, the value of fish production in the Diffa region was assessed as CFAF 20 billion or US\$34.5 million (Sissons and Lappartient 2016), so if an estimated 85 percent of this production was exported, then the export value amounted to about CFAF 17 billion or US\$29.3 million.

Before the imposition of the state of emergency in February 2015, Boko Haram already had an adverse effect on the smoked fish trade in the LCR. The terrorist group occasionally attacked transports on their way to Maiduguri, thereby increasing the risks of such transports and augmenting transport costs. Moreover, Boko Haram forced fishers on the lake shore to make informal payments, thus reducing the profitability of their activity. Yet despite these criminal activities, fish production and trade continued.

In contrast, the declaration of the state of emergency for the Diffa region on February 10, 2015, quickly brought fishing and fish trade to a halt. It entailed a curfew, a prohibition on motorbike transport, a stronger military presence, and more frequent violent attacks from Boko Haram, which was reinforcing its presence in the lake area. Moreover, fishing and fish selling were banned, as these activities were seen as a source of revenue for Boko Haram, and the lakeside population was evacuated inland

Figure 8.2: The Smoked Fish Market Chain in the Diffa Region



Source: Sissons and Lappartient 2016.
Note: XOF = West African CFA franc.

or fled from their villages and camps to avoid encounters with Boko Haram. The border to Nigeria was closed.

The authorities have actively enforced the restrictions.

In particular, the military has arrested fish transporters, seized fish transports, and subsequently burned the cargo and vehicles. For example, the regional authorities destroyed 2.7 tons of smoked fish in April 2016 (van Lookeren Campagne and Begum 2017).

As all fishing-related activities became illegal, most actors in the value chain had to look for alternative sources of income, such as petty trade, charcoal production, or firewood and straw collection. Few individuals take the risk of fishing illicitly, and those who do so limit themselves to catching fish at night without boats for sale to local households. Smoked fish exports to Nigeria became marginal. Sissons and Lappartient (2016) report that the income of the remaining, clandestine fishers has dropped by more than 70 percent compared with the revenues they had before the state of emergency.

In March 2019, the authorities lifted the ban on fishing and fish trade. Yet as the supply of credit and inputs that fishers used to get from their wholesalers disappeared, a lot of the fishing equipment has fallen into disrepair. This deterioration of the production base, together with the impoverishment of the fishing population and the disappearance of the network of traders and other intermediaries in the value chain, means that the recovery

of smoked fish exports after the fishing ban was lifted is slow. The conflict with Boko Haram has destroyed a lot of physical, institutional, and social capital, and restoration will take time.

8.3.4 Dried red pepper exports from Diffa

Red pepper is an important cash crop in the Diffa region. Oxfam estimates that 80 percent of rural households have been involved with pepper cultivation, processing, and sales (Sissons and Lappartient 2016). Annual production used to amount to 10,000 tons, with a market value of CFAF 8 billion or US\$13 million (Chambre Régionale d'Agriculture de Diffa 2010a). About 80 percent of total production, with a value of US\$10.4 million, was exported to Nigeria via Damasak and Maiduguri. The imposition of the state of emergency in February 2015 led to a significant reduction in dried red pepper production and trade, as sales and transport of the crop were initially banned and then (from June 2015) restricted to transactions within Niger only. These restrictions were motivated by the presence of Boko Haram along the border between Niger and Nigeria and the fear that the terrorist group used informal taxes on red pepper trade to finance its activities.

Also known as “red gold” because of its high market value, red pepper used to be grown by 5,000 to 6,000 pepper producers in the area that is irrigated by the

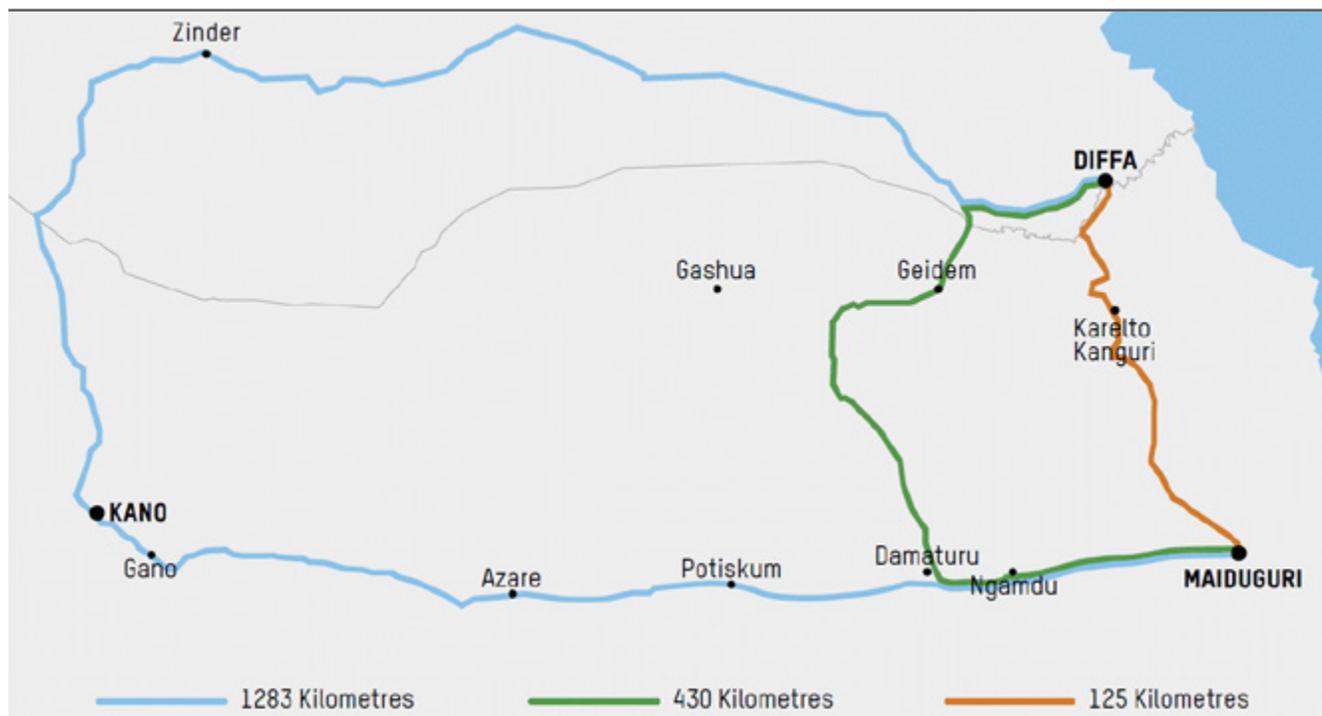
Koumadougou River. At harvest time, the pepper was sun-dried for 15 to 25 days and then packaged in jute bags that typically contain 17 kilograms of product. Intermediaries that are operating at the village level on behalf of pepper traders negotiated the prices with farmers and organized the transport to market centers, where the shipments were sold locally or consolidated onto large trucks for export to Nigeria. Consumers would typically buy the product in powdered form to prepare sauces or to season meat and rice.

The closure of the local border with Nigeria forced traders to ship their product to Nigeria via trade routes that are substantially longer (Map 8.4). Instead of taking a direct route of about 125 km from Diffa to Maiduguri, traders are now diverting their trip through Geidem and Damaturu (430 km) or even pass through Zinder and Kano (almost 1,300 km). The longer route exposes them to extra security risk for themselves and their cargo and significantly augments their transportation costs.

The local border closure also means that farmers can no longer purchase fertilizer to nourish their crops and fuel to operate their irrigation pumps from across the river in Nigeria. Moreover, domestic purchases in Niger of fertilizer and fuel have been restricted for fear that Boko Haram might use nitrogen fertilizer for bomb making and use fuel to propel the vehicles and motorbikes of its fighters. Farmers need a permit to obtain fertilizer and fuel, and allocations are substantially below historical levels of use, so pepper yields have suffered.

Moreover, the militarization of the border zone has meant that many farmers have been unable to access their land. Military forces have established ad hoc camps in the pepper production zone, and regular patrols of the border zone by national and multinational forces limit the possibility for farmers to work their fields. In addition, many farmers have fled their villages because they fear that Boko Haram might attack them. As a result, the cultivated pepper area has dropped markedly.

Map 8.4: Red Pepper Trade Routes from Diffa to Maiduguri



Source: Sissons and Lappartient 2016.

The combination of the restraints on sales and trade of red pepper, the restrictions on fertilizer and fuel use, and the limitations on land access have had a profound effect on the pepper sector. Red pepper output in the Diffa region is estimated to be 50 percent lower than before 2015, and farmers' income from pepper production is as much as 80 percent below the pre-emergency level (Sissons and Lappartient 2016). Also, intermediaries, such as transporters, have been adversely affected by the reduced volumes and increased transaction costs. For example, transporters face a 50 percent drop in their activity volume and income.

8.3.5 Onion exports from Cameroon

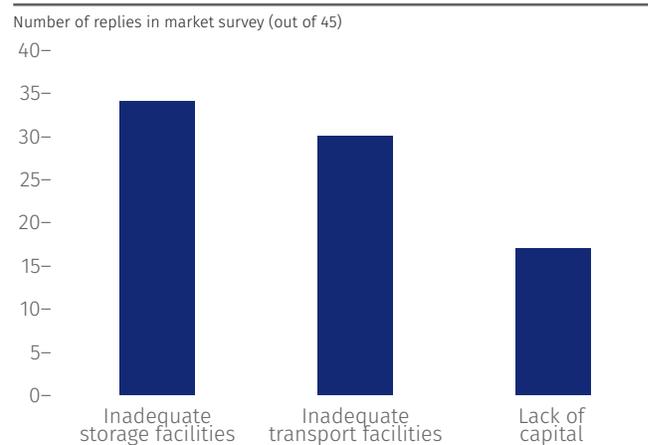
Onion production is an important branch of agriculture in some parts of Cameroon. It is estimated that 85 percent of onion production is concentrated in the North and Far North regions of the country, where it is the most important cash crop (Kamdem, Kamga, and Schreinemachers 2017). As a result of cultural norms, onion production is mostly controlled by male farmers (Kanga et al. 2016).

Parts of the local onion production are sold in nearby markets to local consumers, but a significant share is shipped to consumption centers in the south of Cameroon or exported to Nigeria and Chad from markets such as Kousséri and Amchide. Ndenkah (2013) estimates that total formal and informal exports of onions from Cameroon to Chad amounted to 19,249 tons, at a value of CFAF 3.4 billion. The main market for onions on the Nigerian side of the Nigeria–Cameroon border is Wolgo in Borno State (Magrin and Ngaressem 2014).

In a survey of onion traders in Borno State, the lack of adequate storage facilities and appropriate transport facilities were identified as the most important challenges to onion marketing (Figure 8.3). The lack of security was not mentioned as a primary problem in this survey. However, this absence is consistent with other survey findings on cereal markets in the LCR, where it

is the transporters and not the traders who are most seriously affected by and concerned about attacks, theft, and violence (Brunelin and Renk 2016).

Figure 8.3: Constraints to Onion Marketing in Borno State



Source: Sulumbe, Shettima, and John 2015.

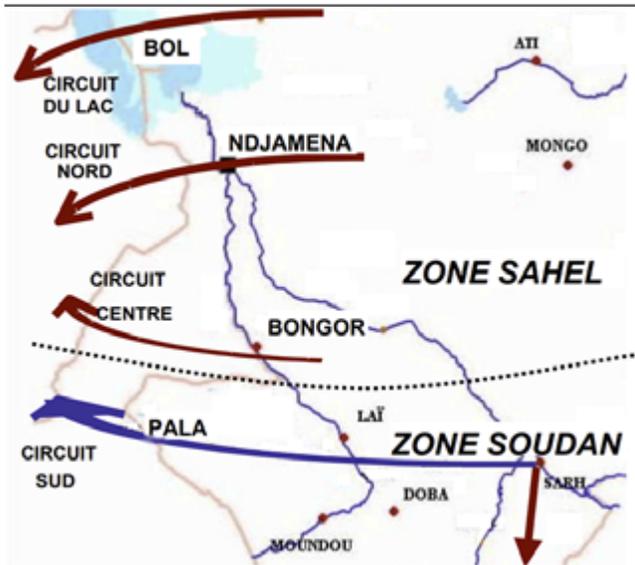
8.3.6 Cattle exports from Chad

Chad is a major exporter of animal products. Because meat requires refrigeration during transport, most trade takes place by transporting live animals. A significant share of Chad's exports is thereby destined for Nigeria and transits through the North or Far North region of Cameroon. Major transshipment points in Cameroon are the cattle markets of Bogo and Adoumri (Engola-Oyep and Herrera 1997).

There are several marketing pathways (Map 8.5). One circuit crosses the Lake Chad region and supplies the Maiduguri market. This export flow is particularly active in the dry season. The so-called northern circuit passes through Ngueli and also joins Maiduguri. It is active year-round and drains export herds from markets located in the center and north of Chad. The center circuit passes through Bongor to reach the Banki market via the Bogo relay market in Cameroon. This pathway brings animals from the center and the south of Chad. In addition, the southern circuit crosses the area of Pala in the province of Mayo-Kebbi Est and leads to the market of Mubi in

Nigeria after crossing Cameroon. It is supplied by flows from the southeast of Chad.

Map 8.5: Circuits of Cattle Exports from Chad



Source: Duteurtre and Koussou 2002.

Live cattle trade is highly organized along ethnic lines. Animals are mainly sold at weekly markets. Transactions rely on the presence of guarantors (*damin*), who are appointed by the traditional chiefs of different groups of nomadic herders and are recognized as such by market authorities. Their role is to welcome the traders of the ethnic group concerned, to house them, to accompany their animals to the market, to put them in contact with buyers, to certify the origin of the animal, and to guarantee the payment of official taxes. The guarantors only intervene in the trade of their own ethnic group: Missiré Arabs, Ouled Rached Arabs, or Peuls. The ethnic networks of traders rely primarily on a relationship of trust, which does not necessarily involve family ties.

A large share of cattle trade is informal. Even if borders are formally closed, herders seem to have little trouble walking their cattle across into their destination country.³⁸⁹ Estimates put the annual cattle exports from

Chad to Nigeria at 520,000 animals in 2000, of which only about 35 percent were declared and captured in official statistics (Duteurtre and Koussou 2002). More recent estimates put the volume of live cattle exports from Chad to Nigeria at 300,000 animals (Koussou and Duteurtre 2013). Although these estimates might need to be treated with care, they suggest a marked slowdown in transit and trade between the pre-Boko Haram period and the period of insurgency. Moreover, the subsequent intensification of the conflict has led to further reductions in trade flows. Data from the customs authority in Yagoua, an important livestock crossing point from Chad into Cameroon and Nigeria, suggests that cattle transit fell from 53,662 animals in 2015 to about 33,000 animals in 2016 and 2017, which corresponds to a reduction by about 39 percent (World Bank 2018a).

In addition, the number of cross-border livestock theft incidents in Cameroon has increased on both the Nigerian and Chadian sides, depressing the usual intensity of cross-border transactions. Estimates indicate that during 2013–18, Boko Haram stole at least 17,000 heads of cattle and thousands of sheep and goats in Cameroon, worth around US\$6 million (World Bank 2018a). The stolen animals were then sold in Nigeria to finance the insurgency.

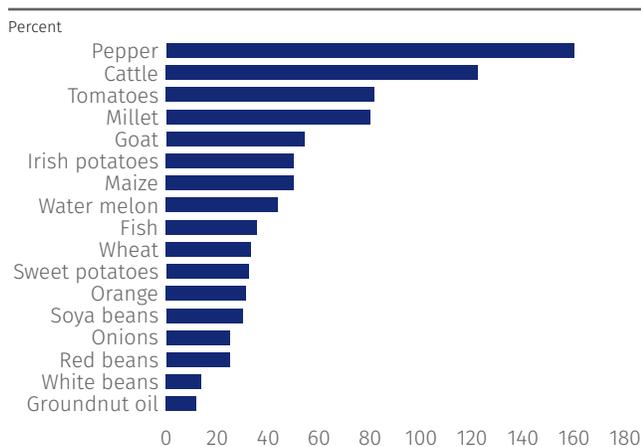
Moreover, there have been a number of violent attacks by Boko Haram on livestock markets. Cattle and other livestock sales involve large cash transactions, which makes traders who carry large amounts of currency an attractive target for bandits. Fear of theft and violence has depressed market activity, in particular for cattle. Markets for smaller ruminants, such as sheep and goats, have been more resilient (Kimenyi et al. 2014).

389 A saying among local transporters is “The ox has no border; the border was erected for human beings.” See Canalblog, <http://neoindependance.canalblog.com/archives/2014/11/12/30940857.html>.

8.4 Market activity and food supplies

The preceding discussion has highlighted the adverse effect that the deterioration of the security situation has had on cross-border trade and trade transactions costs. These higher costs will ultimately have to be borne by consumers in the form of higher prices. Indeed, field surveys undertaken in three major markets in Maiduguri—Monday market, Gomboru market, and Baga market—reveal that some food prices have risen substantially since the start of the Boko Haram uprising (Awodola and Obosh 2015). Vegetables (peppers, tomatoes, Irish potatoes) and livestock products (cattle, goats) are the products that showed the largest price increases in percentage terms (Figure 8.4).

Figure 8.4: Increase in Food Prices in Maiduguri Markets, Pre-Boko Haram Uprising to December 2013



Source: Awodola and Oboshi 2015.

Similarly, analysis by the World Food Programme (2016) showed substantial food price inflation due to insecurity and increased transport costs. Staple food prices in the Nigeria and Niger parts of the LCR were found to be 50 to 100 percent higher than the previous five-year average. Moreover, in 2017, prices of staple cereals in the northeastern Nigeria were 70–124 percent higher than those in the previous year (George, Adelaja, and Weatherspoon, 2019).

8.4.1 Market activity

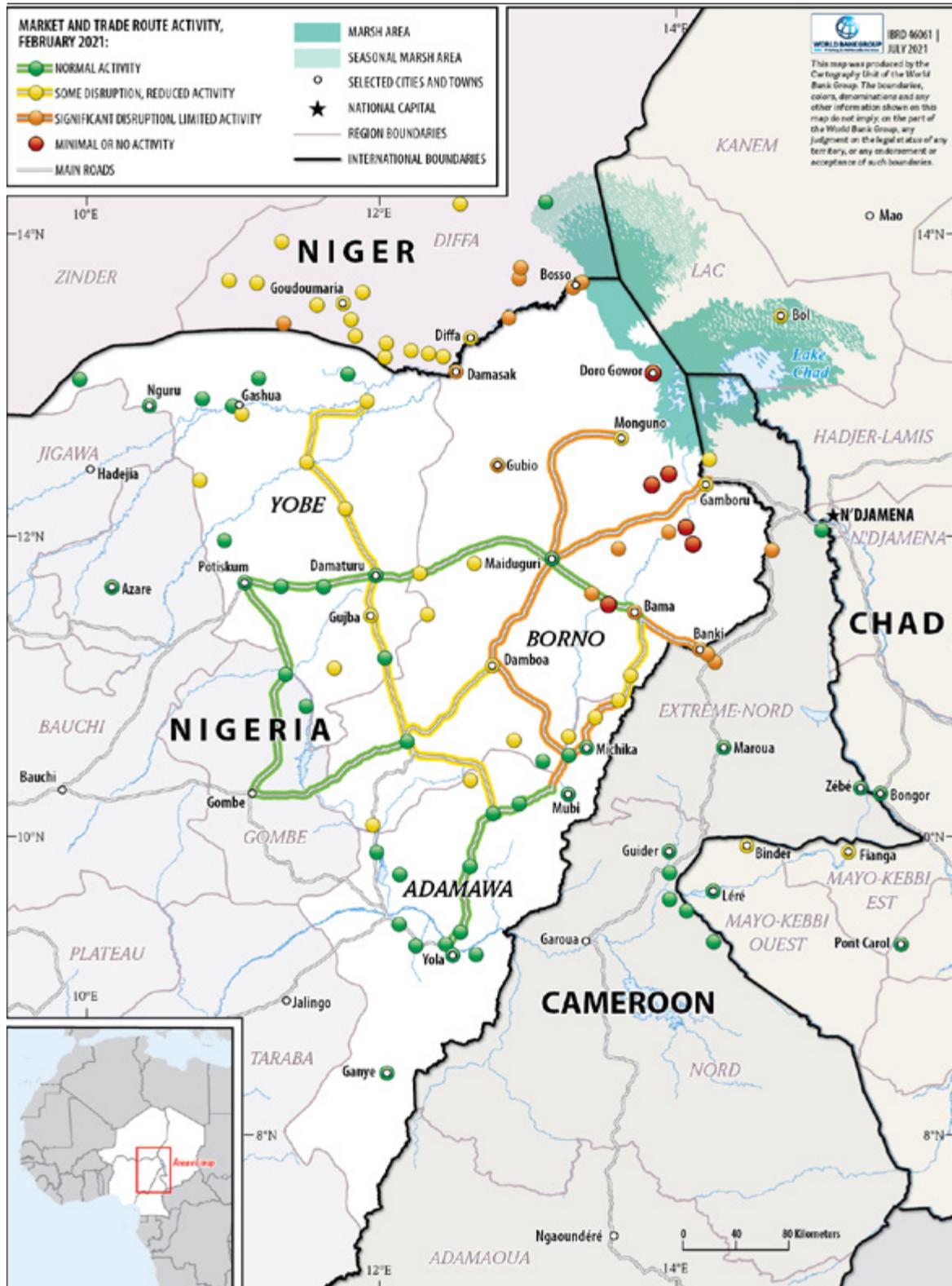
The activity in many markets in the LCR remains below the level of the pre-Boko Haram period. Most markets in Nigeria east of Maiduguri faced significant disruption or had completely ceased to function as of February 2021 (Map 8.6). Also, all markets in the Diffa region of Niger showed significant disruption or reduced activity.

Map 8.6 also shows that the disruption of economic and trade activity is not uniform across the LCR. It is the area in Borno State to the east of Maiduguri that faces the most severe economic depression, as does the Diffa region in Niger (to a lesser extent). Conversely, the Far North of Cameroon and the Adamawa Region in Nigeria are (again) operating at or near normal level.

8.4.2 World Food Programme operations

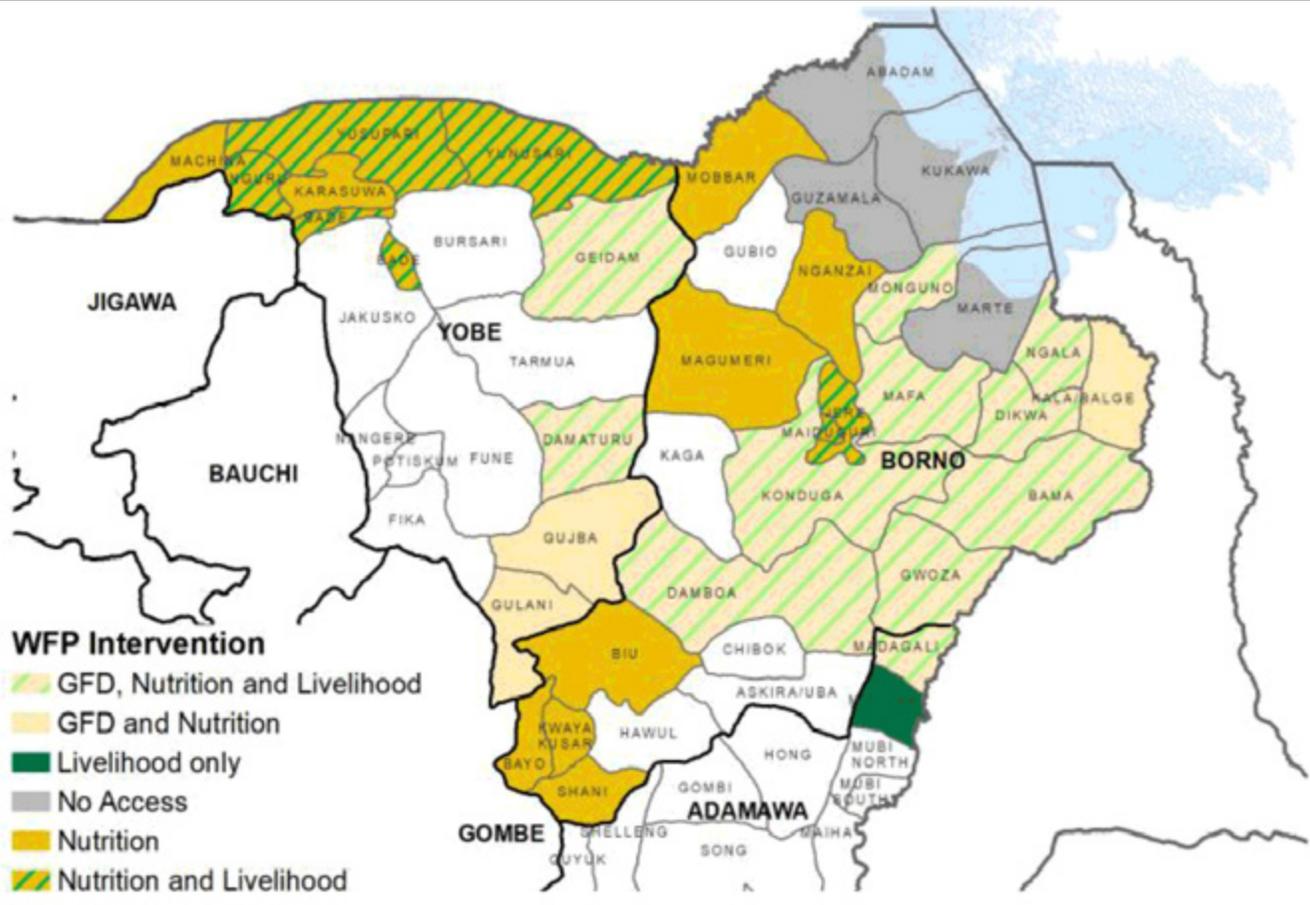
The areas within the LCR where the market and trade activities are most depressed are also the areas where the food security situation is the most critical. The World Food Programme (WFP) has relief operations in all four countries of the LCR and has been providing food, nutrition, and livelihood aid to displaced communities or otherwise severely affected parts of the population. WFP tailors its operations to the local requirements and tries to supply relief aid to all areas within LCR that are in need, except for those zones where the insecurity is too high. For example, in Borno State in northeastern Nigeria, WFP has interventions throughout the state, except for a few districts close to Lake Chad (Map 8.7). In October 2020, WFP and other food security sector partners supported 3.9 million people with food security interventions in Borno, Adamawa, and Yobe States, including 1.7 million provided with emergency food assistance and 2.2 million with support for agricultural livelihoods (WFP 2020).

Map 8.6: Market and Trade Route Activity, February 2021



Source: FEWS NET, February 2021.

Map 8.7: World Food Programme Operational Presence in Northeast Nigeria, January 2021



Source: WFP 2020.
 Note: GFD = General Food Distribution; WFP = World Food Programme.

For its emergency food assistance, WFP uses both in-kind food and cash-based transfers. The latter are disbursed as electronic vouchers or mobile money. In 2016, WFP undertook an assessment throughout the LCR to determine the potential for private sector traders to quickly respond to increased demand (Brunelin and Renk 2016). A high-response capacity makes cash transfer programs effective without disrupting local markets to a significant extent. The survey found that in northeastern Nigeria and the Diffa region in Niger, traders estimated to have the capacity to respond quickly to a 100 percent increase in demand. In contrast, in the Far North region of Cameroon and in the Lac region of Chad, almost 40 percent of traders reported that they would not be able to meet a potential increase in demand by 100 percent in less than a week. In these regions, any cash-based transfer

assistance might need to be particularly carefully dosed and phased in to avoid strong price hikes that would adversely affect consumers.

8.5 Conclusions and recommendations

The preceding discussion illustrated the adverse effect that increased insecurity in the LCR has had on cross-border trade. Reduced trade flows and higher transaction costs are translating in higher prices for consumers in a region that was already one of the poorest in Africa before the Boko Haram conflict, while the region faces other challenges such as remoteness, environmental degradation, and climate change. Part of the economic damage can be directly connected to terrorist violence, but another part is related to counteractions by the national and regional authorities to contain and eradicate Boko Haram. To counter the ongoing threat and respond to the immediate and longer-term needs of the population, regional authorities need to look beyond security cooperation and move to more significant civilian components for economic development and regional integration. In this context, policy makers in national and regional administration and their development partners might want to consider the following issues as part of a strategy to improve trade and help restore long-standing economic linkages.

8.5.1 Information

Before listing desirable policy direction that Lake Chad countries could investigate, the paucity of reliable and comprehensive information about trade flows in the area must be underscored. Without good trade data, it is difficult to form a picture of one of the key drivers of the economy in the region and an economic dimension that is core to understanding the crisis and its developments. Therefore, a first issue to consider is how to improve economic intelligence of cross-border flows. The following are some recommendations:

- Consider digitizing and using available quantitative and qualitative information from all border agencies (customs) in the region to draw a more precise picture

of trade flows and transport conditions along key corridors.

- Investigate additional means to collect high-frequency economic data on cross-border economic activities—such as price data, surveys of border flows, and so forth—in cooperation with other donors and to learn from prior experience in the region (for example, the Permanent Interstate Committee for Drought Control in the Sahel and and Famine Early Warning Systems Network [FEWS NET] surveys).
- Promote the digitization of public data and information, such as farmer registries, to gain knowledge of who is producing and selling which crops.
- Support the collection of information on economic activity and trade to provide policy makers with a better information base. In addition to the compilation of more comprehensive and consistent market price data as is currently available from FEWS NET and WFP, data on traded quantities in markets and the sources of supplies could be collected and monitored.

8.5.2 Trade facilitation

The following are some short-term measures for mitigating the costs of conflict:

- Consider encouraging trade through trader groups or associations and provide military escorts, if necessary, for convoys along key trade corridors to relaunch cross-border trade.
- Collect information on illegal checkpoints and other blockages; trade and share this information across relevant agencies to improve enforcement and to identify mitigating strategies that improve the performance of regional value chains where possible.
- Strengthen the capability of customs agencies to detect illicit trade while facilitating commercial transactions. Equip customs agencies with more modern equipment and intelligence techniques for improved surveillance

and better targeting of risk. Interconnect customs agencies regionally to improve exchange of data and information.

- Ensure that traditional border agencies (instead of security forces) retain in control of border crossings; clarify the roles of border agencies; and minimize the presence of multiple agencies to avoid rent seeking.
- Arrange regular meetings between border agencies in neighboring countries to coordinate security issues, address common challenges, and monitor progress on trade facilitation.

The following are some long-term measures for rebuilding for growth:

- Strengthen and consolidate the provision of border agency services, such as veterinary inspection services, at key border crossings to provide better service quality for traders. Use border crossings as a place to build out and restore the provisioning of government services.
- As security considerations allow, reconstruct damaged infrastructure and markets that are instrumental for relaunching regional trade. Maximize the returns from investments in connective infrastructure (both between and within countries) by coordinating with regional partners.
- Because the new branch through Chad would likely have adverse effects on the prosperity of the LCR in the longer term, critically assess the effects of the planned rerouting of the Douala-Ndjamena corridor and identify mitigating measures where possible.
- Implement AfCFTA commitments and create a cooperation framework to further facilitate trade at borders between ECOWAS and CEMAC members (for example, by allowing visa-free movement of persons and providing an exemption for trade in agricultural and livestock products, as well as for handicraft, from the requirement to be accompanied by a certificate of origin). These measures are already part of the ECOWAS Trade Liberalization Scheme and could possibly be applied at ECOWAS–CEMAC borders on a reciprocal basis.

- Simplify measures at the border for small-scale traders and invest in infrastructure tailored to the needs of small traders.
- Improve the performance of long-distance trade corridors, notably with respect to trade procedures, reduction of harassment, and infrastructure quality.

8.5.3 Other policy issues

The following are some short-term measures for mitigating the impact of conflict:

- Regularly assess the effectiveness and efficiency of economic and trade measures intended to counter Boko Haram, as these affect the livelihoods of export producers and traders:
 - Consider ways to allow gradual and safe access to parts of the lake to renew fishing and fish trading.
 - Reevaluate restrictions on movement, access to farmland, and tall crops to balance the need to contain and suppress Boko Haram with the desirability to restart the local economy.
 - Critically evaluate and manage the risk that agricultural inputs, such as N fertilizer and fuel, pose as potential weapons, with a view of improving farmers' access to these inputs. Examples of possible risk management approaches include trusted trader programs that certify the intermediaries who can trade in particular products.
- Provide support for communities that have been deprived of their traditional export production and trade livelihoods, so that they remain stable and do not offer recruitment potential for Boko Haram.
- Promote the use of solar-powered irrigation pumps to overcome fuel restrictions and shortages.
- Advance the application of digital agriculture innovations, such as mobile money or animal tracing, to reduce the risk of theft.

The following are some long-term measures for mitigating the impact of conflict:

- Provide additional public services close to borders or in cities and markets nearby to build trust in public authority.
- Target support for specific value chains to improve key sources of livelihood in the region. One possible way could be to approach this regionally and thus focus on mutually beneficial value chains.

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