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POLICY BRIEF

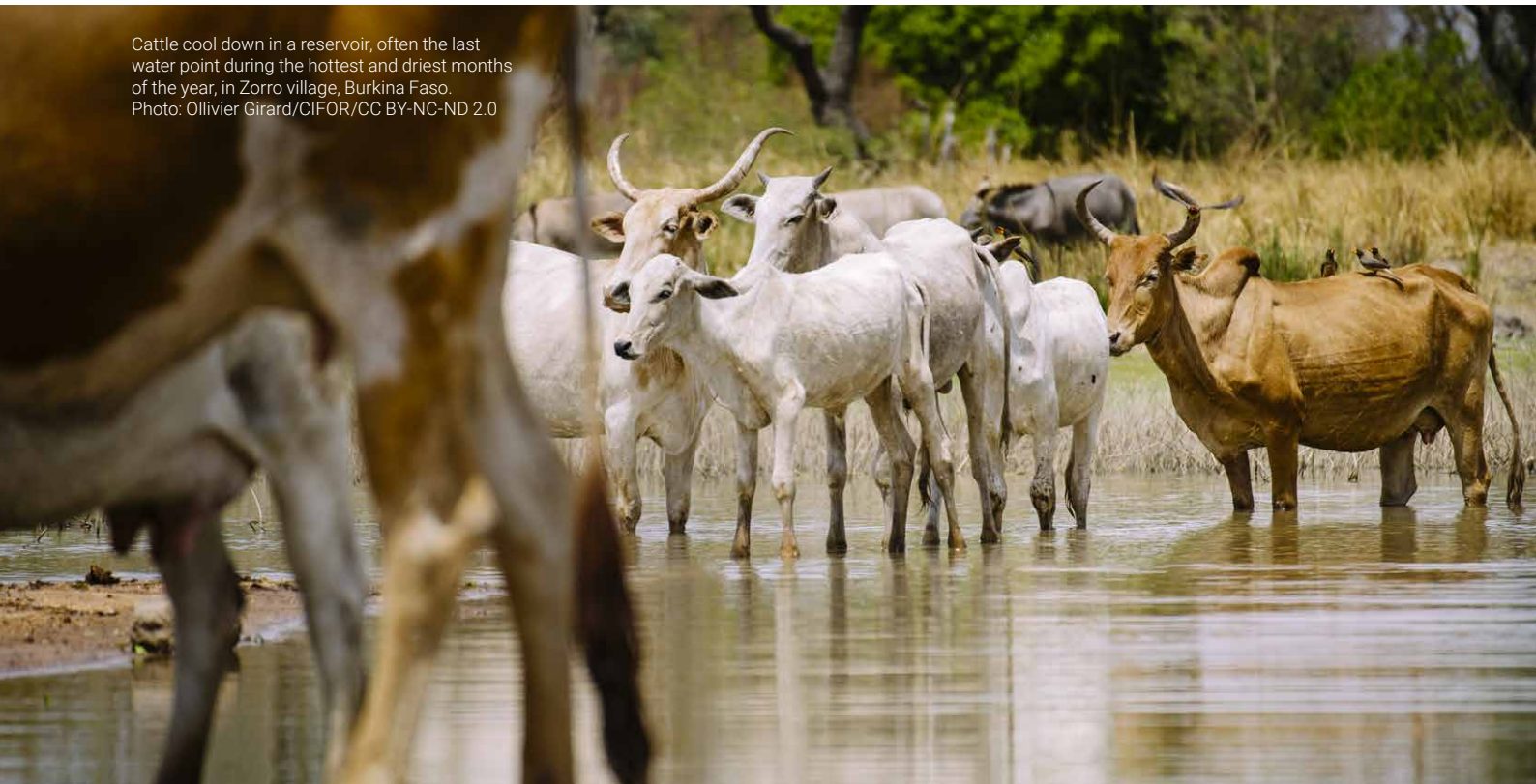
STABILISING THE SAHEL

Livestock as a driver of regional integration

Catherine Simonet and Elizabeth Carabine

Key findings

- **The Sahel region is a growing focus for the international community,** concerned to address the root causes of instability, violent extremism and forced displacement in countries including Mali, Niger and Burkina Faso.
- **Regional integration is key to economic development and political stability in the Sahel.** Livestock mobility and trade strengthen regional integration and are the basis of resilience to climate and conflict-related crises.
- **Livestock markets are well integrated at national and regional levels.** Production areas in Mali and Niger are essential to the regional market, which overall is relatively resilient to conflict dynamics. But climate and conflict do affect livestock prices, and shocks can negatively affect communities and national economies.
- **Strengthening the regional livestock sector and enabling environment can deliver sustainable outcomes for food security, economic development and stability.** There are several feasible options to achieve this, including upgraded infrastructure, improved marketing, production of fodder and tailored financial services such as insurance.



Cattle cool down in a reservoir, often the last water point during the hottest and driest months of the year, in Zorro village, Burkina Faso.
Photo: Ollivier Girard/CIFOR/CC BY-NC-ND 2.0

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Sahel in crisis?

As a region where climate and security risks converge, West Africa is receiving renewed policy attention from the international community. In intensified efforts to combine diplomacy, defence and development objectives (termed the '3Ds'), the Sahel Alliance of donors and multilateral organisations has committed to investing €11.6 billion in over 800 projects in the G5 Sahel countries, including Burkina Faso, Chad, Mali, Mauritania and Niger, by 2022.[1] Other donor commitments are flowing to the region, testing innovative approaches to address the complex challenges that have only been exacerbated by the Covid-19 pandemic. Nonetheless, some incoherence in policy objectives is having unexpected consequences. For example, recent European Union (EU) policies have negatively affected mobility and regional integration, both important elements for the Economic Community of West African States (ECOWAS), of which the EU is a major supporter (Clingendael, 2019).

This policy brief argues that, to avoid unintended outcomes and maximise positive and sustainable impact, there are two fundamental characteristics of the region that must be understood and taken into account when planning and implementing interventions. First, regional integration is key to economic development and political stability. Second, pastoralism and agro-pastoralism are major livelihoods and economic activities that strengthen regional integration through the movement and trade of livestock. Policies and investments that reinforce these related processes can positively contribute to resilience and stability in the Sahel and West Africa.

At the same time, there is a growing discourse around herder–farmer conflict as a primary cause of insecurity in the Sahel. In reality, the interactions between inter-communal, natural-resource-based conflict on the one hand, and state insecurity and extremism on the other, are difficult to untangle. What is more clear is the importance of agro-pastoralism for economic development in the region, with several initiatives focusing specifically on livestock, including the Regional Sahel Pastoralism Support Project (PRAPS), the Regional Investment Programme for Livestock and Pastoral Development in Coastal Countries (PRIDEC) and Pathways to Resilience in Semi-arid Economies (PRISE). ECOWAS and its member states have policies and plans in place to protect the free movement of goods and people (transhumance) and support livestock development. This policy brief presents evidence-based and practical recommendations to support these efforts.

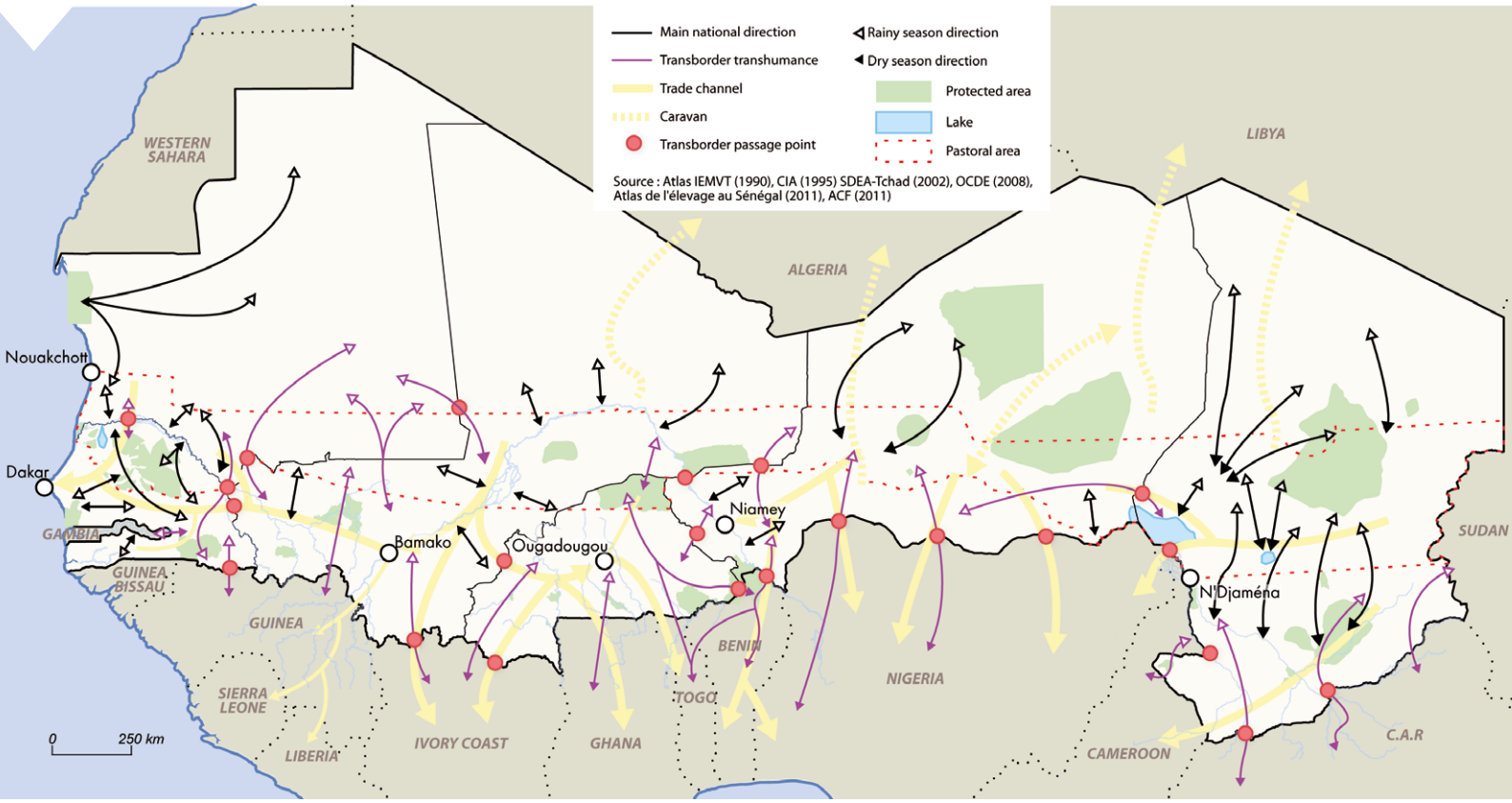

Herding cattle over the bridge. Mali.
Photo: Curt Carnemark/World Bank/CC BY-NC-ND 2.0

The livestock sector and pastoral economy

Sahel countries are net exporters of livestock products, supplying the coastal countries of West Africa in a highly integrated and valuable regional market worth an average 40% of agricultural GDP (de Haan, 2016). Agriculture, and particularly the livestock sector, supports around 50% of jobs in West Africa (SWAC/OECD, 2008). As well as having potential to deliver sectoral growth in the order of 6% annually (de Haan, 2016), extensive production of livestock in the Sahel's rangelands features a favourable carbon balance in terms of minimal greenhouse gas emissions and potential for carbon sequestration, when compared to other land uses (Assouma et al., 2019; FAO, 2017). This is also a system that offers economic development that is low carbon and climate resilient (Carabine and Simonet, 2018). Key to unlocking potential for climate-resilient economic transformation[2] through livestock are the free movement of pastoralists and regional integration of trade[3] within the Sahel and between Sahel and coastal countries in West Africa (Figure 1).

Although transhumance is enshrined in regional frameworks, agro-pastoralism has changed in recent years, with intensified competition for scarce resources between herders and farmers, new actors entering the system, and commercialisation of land (IOM, 2019). Added to this, the pastoral economy is threatened by increasing severity and frequency of climate extremes[4] and conflict.[5] Mali's ongoing crisis is a perfect storm of successive years of rainfall deficits driving earlier and longer movements of people and livestock through the region, in turn contributing to inter-communal violence as groups fight to access crucial resources, and livestock price shocks that have reduced pastoralists' income and terms of trade (ODI/BRACED, 2015). Vulnerabilities have been further compounded by political instability and the rise of extremism, leading to direct and indirect impacts on human and food security in the Sahel, a pattern that appears to be repeating through eastern Burkina Faso, northern Nigeria, Niger and Chad. It is critical to the stability of the Sahel to find solutions that protect livestock mobility, preserve market integration and support transformation of the sector. In order to achieve this, governments, regional institutions and technical and financial partners need more information about the complex dynamics currently taking place in the Sahel.

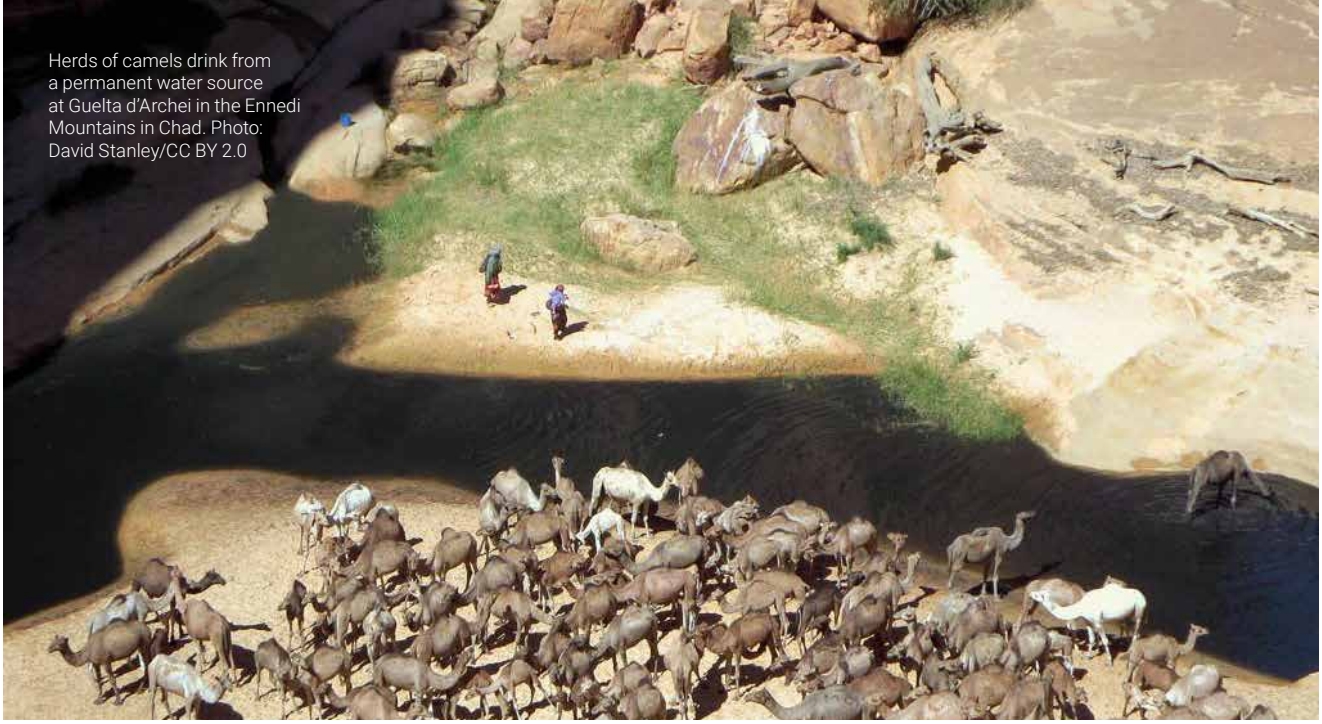
FIGURE 1 LIVESTOCK MOBILITY IN THE SAHEL



Livestock market integration

New analysis of livestock prices in markets of Mali, Burkina Faso and Niger between 2008 and 2016 (CILSS, 2016) highlights critical key trends and characteristics of the livestock sector in the Sahel. Over the past 10 years, the difference between prices within these three national markets has been reduced. This indicates a trend of increasing integration at the national and regional levels, explained by an intensification of the trade.

Of the three countries, Mali has had the strongest price dispersion[6] between markets. These differences have reduced considerably over the 2014–2016 period, possibly due to variation in the Nigerian currency, the naira.[7] Also, transaction costs associated with informal barriers to livestock trade and transhumance between Sahelian countries may have been overcome thanks to concomitant events such as the Nouakchott Declaration on Pastoralism 2013 and arrival of the ECOWAS peacekeeping mission in January 2013. Moreover, cost at the border and marketing costs related to the distance between markets located in different countries have decreased over the period 1990–2011 (Araujo-Bonjean



Herds of camels drink from a permanent water source at Guelta d'Archei in the Ennedi Mountains in Chad. Photo: David Stanley/CC BY 2.0

and Brunelin, 2013). The Sahel and West Africa region is recognised as relatively well integrated even across currency zones, especially when informal networks are strong (Aker, 2010), which is often the case in the livestock sector.

The price dispersion between Burkina Faso and Niger is not much higher than the price variation within each country, which indicates a good level of integration at the regional level whereby goods, animals and people are free to move freely. This is further evidence that transhumance is well embedded within the ECOWAS zone and should be preserved.

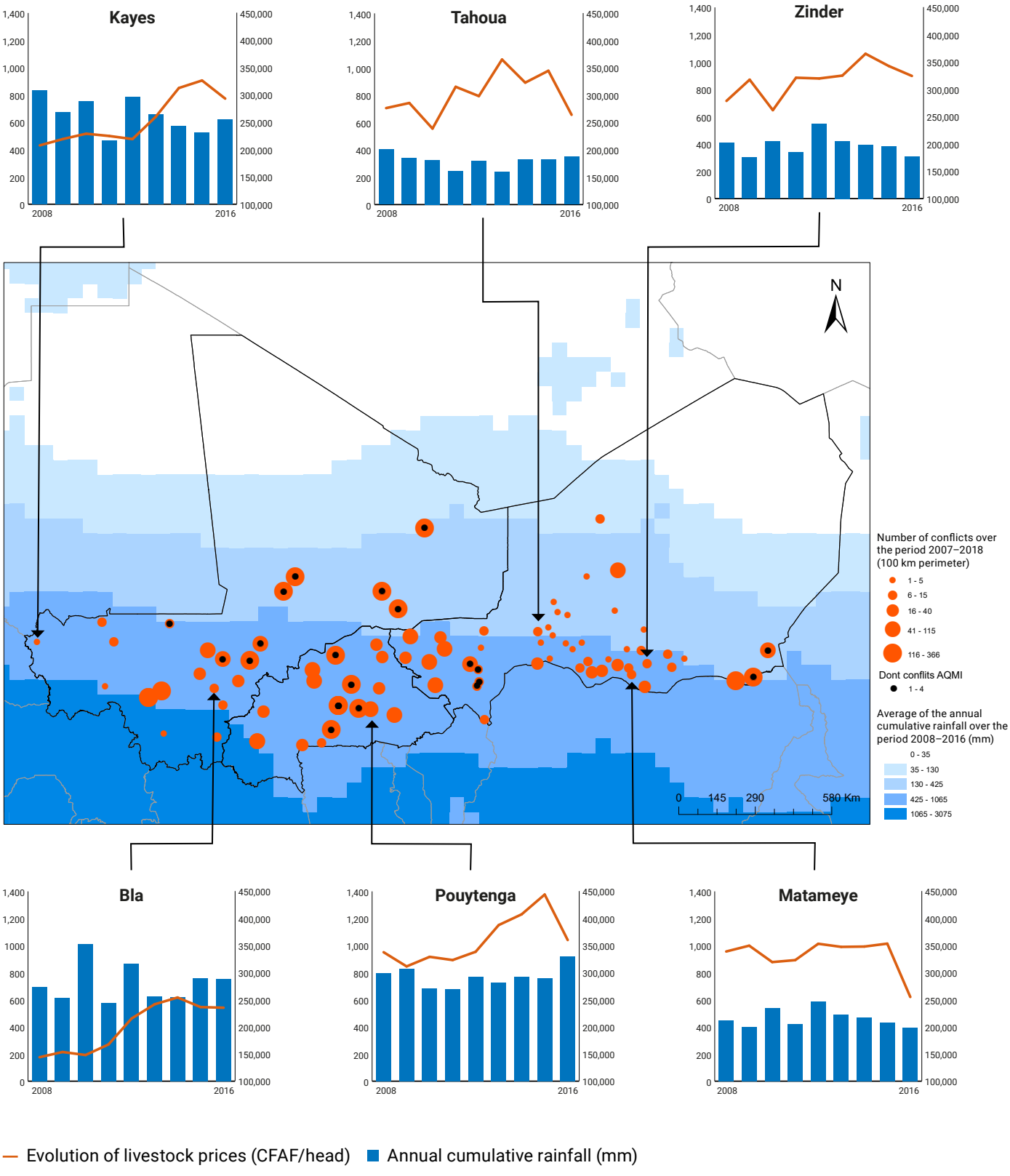
Analysis at the regional level highlights the role of Malian markets in influencing prices in Burkina Faso's markets. The Malian markets, on the other hand, have a moderate influence on prices in Niger. The leading Burkinabé markets at the national level do not appear to be leaders at the regional level, suggesting these are intermediate markets linking production areas in Mali and Niger with consumption in the urban markets of coastal countries. The smooth functioning of the Malian market is key to price stability in the region, which is important to recognise in a context of deteriorating security in the country.

In Niger, the national leading markets of Zinder, Tahoua and Matameye are located far from the Burkina Faso border areas (Figure 2). This suggests the important role of production areas in Niger. These markets are located on important trade routes to Nigeria, suggesting trade flows are also important. The country is the big trade player of the region, representing an important share of both regional production and regional consumption of livestock. In general, more 'conflicts of terrorist origin'[8] occur in producer markets (encompassing markets defined as production and 'grouping' markets), compared to trader markets, suggesting that important trading and consumption hubs are avoided. These findings suggest the market is responsive, and to some degree resilient, to conflict dynamics in the region.

Climate and conflict variables play important roles in explaining price dynamics (Figure 2). Annual rainfall has a significant negative effect on prices, meaning that a year (June to May) with higher total rainfall will lead to lower monthly livestock prices during the same year. Conflicts of terrorist origin that take place on the periphery of markets significantly influence price. The distance from conflicts to the market is a strong factor in this, with conflicts 70–150 km away having an impact on prices. It has been documented how rebel groups in Mali in 2012 controlled main transport routes in the north, hindering livestock mobility and trade, and leading to increased theft and losses (D'Errico et al., 2017). At the national level, conflicts hindered economic activities during the Malian crisis. In 2012, the country was in recession, presenting a real gross domestic product (GDP) growth of –1.5%. Livestock-sector growth was initially forecast at 4.4% but reduced to 0% due to the crisis (IMF, 2013).

The results for 2008–2016 demonstrate that livestock markets are well integrated at national and regional levels. This integration is most certainly supported by mobility and trade within and between countries, favouring the exchanges of goods, people and information. Livestock production areas in Mali and Niger are essential to the functioning of the Sahel region's markets and the regional market is relatively resilient to conflict dynamics. However, climate and conflict do play key roles in livestock prices, and shocks can negatively influence the incomes and terms of trade of pastoralists. These effects can be smoothed through market integration, which is therefore a key factor for a resilient pastoral economy. The next section examines how this could happen in practice.

FIGURE 2 WHEN CLIMATE AND CONFLICT CONVERGE: LIVESTOCK PRICE SHOCKS IN THE SAHEL



Notes: CILSS data is not publicly available (Simonet et al., 2020). To date, the databases used here and available immediately are those of Burkina Faso, Mali and Niger. Other countries in the zone, such as Senegal, have cereal and livestock price collection systems. However, this manually collected data is not systematically digitised. Also due to lack of data, the coastal countries are crucially missing from this analysis. As the major consumers of beef, it is important to include these markets in the analysis of regional integration.

Sources: Authors' calculation based on the combination of three databases. Prices data: CILSS database. Conflict data: Raleigh et al. (2010), ACLED (2017). Climate data: Harris et al. (2014).

Policy recommendations

The livestock sector and pastoral economy are undoubtedly on the agenda of the region, but a better understanding of the current crisis is essential to addressing the complex challenges facing the region. This analysis confirms that this is possible using existing information. Recommendations from a diverse range of stakeholders (Box 1) point to specific evidence-based actions and investments that can improve the resilience of livestock markets in the region to climate and conflict shocks, consequently improving their contribution to livelihoods, food security and the regional economy. These can be summarised as:

1. Strengthening regional early warning systems
2. Development of public–private partnerships for livestock insurance
3. Application of transhumance regulations
4. Climate-resilient livestock transformation
5. Expanding initiatives to harmonise data collection and market monitoring systems

BOX 1 REGIONAL POLICY DIALOGUE TOWARDS LIVESTOCK TRANSFORMATION IN AFRICA

The IDRC-funded Regional Policy Dialogue towards Livestock Transformation in Africa was convened by the authors and brought together national and regional stakeholders from the Sahel and Horn of Africa in a series of meetings. The aim was for pastoralist organisations, the private sector, national government officials and regional bodies to share experiences and recommendations for implementation of the African Union's Livestock Development Strategy for Africa (AU LiDESA). These meetings included:

- Pôle Pastoralisme et Zones Sèches (PPZS) Conference in Dakar, Senegal, November 2017, in a session co-hosted by ODI and CILSS PRAPS
- Pathways to Resilience in Semi-arid Economies (PRISE) Workshop in Nairobi, Kenya, April 2018, co-hosted by ODI and Kenya Markets Trust
- UN Framework Convention on Climate Change (UNFCCC) Conference of Parties in Katowice, Poland, December 2018, hosted by ODI.

The main themes identified by participants as important to regional and national livestock sector transformation included:

- Climate-resilient economic transformation of the livestock sector, including value addition through improved animal health, diversification of livestock value chains into related sectors, e.g. tourism, extension services provision and particularly the role of financial services and national strategies on trade and quality labelling.
- Regional integration to support the pastoral economy and adapt to climate change, including discussion of the challenges and opportunities for developing and implementing policy frameworks at regional level (i.e. the Nouakchott Declaration in the Sahel and the IGAD IDDRSI in Horn of Africa) that support the pastoral economy via mobility and trade.
- Early warning information for pastoralists, including how climate and prices information systems can be integrated into early warning systems in which the generation and communication of information is tailored specifically for pastoralists who are mobile, challenged with market access and already managing significant variability in weather and market conditions.

Source: Authors.

1. Strengthening regional early warning systems

To encourage effective risk management, regional early warning systems, like Famine Early Warning Systems Network (FEWSNET) or Cadre Harmonisé, must integrate the critical indicators identified in this analysis. As with grain prices, livestock prices or the livestock/grain exchange rate could be used as a basis for creating a regional pastoral warning system. This work, currently underway at the PRAPS level, should aim to identify 'leader' markets, such as those identified in this study, that can act as sentinels in a regional early warning system.

The definition of agricultural activities must include pastoral livelihoods, with suitable indicators, including climate, conflict and price information, triggers and information products. Standard operating procedures based on these products must include actions that support the smooth functioning of the market. For example, the role of the public sector to absorb livestock and incorporate these into the market system has been highlighted as a key early action by regional stakeholders. An example to draw on is FEWSNET, which uses relevant livestock data when available and should be scaled up. To be an efficient course of information for early warning, this database must be consolidated over the longest possible period, recorded at high frequency (i.e. monthly) and covering relevant national markets. To date, such information is available for only Somalia (more than 20 markets monitored monthly for livestock prices in 2019) and Chad (around 10 markets with monthly data in 2019). These countries benefit from specific initiatives that support the collection of this data. The effort should be scaled to Sahel countries on a more sustainable basis.

Total monthly rainfall, distance from conflict of terrorist origin, and livestock prices in leader markets would appear essential to early action. Most national market information systems collect other types of market data (e.g. number of animals, state of animal form, price of feed or fodder). Price analysis, supplemented by volumes and flows, will provide a better understanding of the role played by transhumance in market integration. Added to this, innovative technologies could be employed to monitor transhumance indicators themselves, including herd concentrations and fraction of herders that initiate or end transhumance in any given zone (FAO and CIRAD, 2012).

The Inter-State Committee for Drought Control in the Sahel (CILSS) and the AGRHYMET research centre have the expertise and mandate to manage such a system, but national governments remain largely missing middle actors in crisis management and must be integrated into a regional approach. Many existing climate services are implemented by non-governmental organisations or international entities and do not serve to build technical capacity of national and regional bodies. Business cases for public–private partnerships to provide climate information services should be developed. Finally, it cannot be ignored that the observational network is poor, and hydroclimatic and market information data collection remains a costly and significant logistical challenge. The growing military presence in the Sahel region can potentially provide opportunities for strengthening such information systems.

2. Development of public–private partnerships for livestock insurance

Public–private partnerships (PPPs) constitute an effective way to incentivise investment and drive transformation of a sector. The feasibility of regional and national index-based livestock insurance should be assessed, and PPPs developed to establish these products. These should be targeted and piloted in places where this product is identified to be effective and of interest to stakeholders. Insurance mechanisms should complement, rather than replace, social safety nets. This is to say that, to be commercially viable, insurance products should be targeted to more commercially active pastoralists to protect their business, rather than focusing solely on the most vulnerable who will continue to struggle to pay for the service. Experiences from East Africa have demonstrated the critical role of national government in providing the enabling legal and financial conditions to support private companies in developing tailored products. The efficient institutional arrangement between public sector and private financial institutions has not been defined yet, and should be explored through a regional and sectoral approach.

3. Application of transhumance regulations

Market integration and transhumance are two essential factors of pastoral resilience. There are a number of frameworks to support and regulate transhumance, including the ECOWAS Protocol on Transhumance and the 2013 Nouakchott Declaration on Pastoralism. These frameworks should be reviewed and implemented in light of the current situation. It has been recommended elsewhere that local community committees should be established and supported for conflict resolution, that existing transhumance routes should be reviewed and enforced, national transhumance commissions should be established at member state level, along with inter-state transhumance committees, and international transhumance certificates should be operationalised (ECOWAS, 2018). The evidence presented here supports these recommendations. Implementation of the ECOWAS Convention on Small Arms and Light Weapons and cross-border security services should be sensitive to the requirement for well-managed and regulated transhumance (UNOWAS, 2018). Free circulation between markets must be enabled to guarantee the proper integration of markets and price stability.

Mauritania. Photo: Vix Morá, 2018/CC BY-NC 2.0

4. Climate-resilient livestock transformation

There are many opportunities for livestock transformation along the value chain from production to marketing (Carabine and Simonet, 2018). These include upgrading infrastructure, especially at cross-border areas and markets, improving inputs and veterinary services, investing in fodder production and introducing branding, labelling of origin and quality standards. Rural development and livelihoods programmes in pastoral and agro-pastoral areas should focus on supporting both crop and livestock production, and aim to smooth production across seasons. The United Nations Office for West Africa and the Sahel (UNOWAS) recommends that ECOWAS member states allocate 3% of the 10% agricultural spending agreed under the Malabo Declaration to the livestock sector (UNOWAS, 2018). AU LiDeSA provides a regional framework for livestock transformation that is a basis for national livestock development policies. Donors should support national governments to develop these sectors for both economic growth and stability. The AU can bring the regional perspective in terms of trade and market development, particularly in light of the African Continental Free Trade Area (AfCFTA) agreement. In particular, competition between countries should be fair and support regionally effective transformation of the sector with a coherent export strategy.

The climate policy instruments of the Paris Agreement offer opportunities to divert domestic and international resources to livestock transformation. The nationally determined contributions of Mali, Niger and Burkina Faso between them identify sustainable pasture management, fodder storage and improved livestock management as priority adaptation actions, as well as aiming to reduce greenhouse gas emissions from the agriculture sector. All three countries are beginning to have success in accessing multilateral climate funds, including the Green Climate Fund, the Adaptation Fund, the Least Developed Countries Fund and Climate Investment Funds. With support from the African Development Bank, in 2019 the Sahel Commission of Heads of State validated the Climate Investment Plan for Sahel Region (CIP-RS) with a Regional Priority Programme estimated at $13 billion. Investments that support climate-resilient livestock transformation are therefore clearly in line with regional and national climate priorities.

5. Expanding initiatives to harmonise data collection and market monitoring

This analysis would not have been possible without the collection work carried out for more than ten years by CILSS and national institutions in charge of monitoring the markets. To date, PRAPS has committed to greater harmonisation of livestock market information collection systems. This step, already completed for cereals and applied as standard in food security analyses and early warning, is essential to provide accurate, actionable information. However, these adjustments can be expensive and time consuming. They must be accompanied by capacity building for investigators to harmonise collection and digitisation

practices. This significant data collection, carried out mainly within PRAPS, will have to be continued beyond the programme and extended to the coastal countries in order to provide a regional vision of the situation of livestock markets. The current increasing tensions between coastal and Sahelian countries on transhumance, whereby the movement of 57,000 pastoralists and approximately 1.5 million cattle was blocked in January 2021 alone (RPCA, 2021), most recently especially at the border between Benin and Nigeria (CILSS PRAPS, 2020; 2021), must be addressed in light of objective information produced by market monitoring systems implemented at national level. It is important that coastal countries, supported by the region and donors, take inspiration from Sahelian countries on this subject and mobilise their technical and financial capacities to improve monitoring of livestock markets.

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Endnotes

1 The Sahel Alliance is a group of development partners and international organisations including France, Germany, European Union, World Bank, African Development Bank, European Investment Bank, United Nations Development Programme, Italy, Spain, United Kingdom, Luxembourg, Denmark, Netherlands and Norway. Figures are according to 2020 estimates (www.alliance-sahel.org/en/sahel-alliance/).

2 Defined as the full range of evolutions undertaken by the economy and society towards sustainable development. This is characterised by a shift towards sectors that boost inclusive and adaptive growth and gains of productivity within sectors. This increase in productivity must be attained without putting extensive pressure on natural resources and without generating negative environmental spill-overs that cannot be internalised (Carabine and Simonet, 2018).

3 According to the World Bank, regional integration helps countries to overcome divisions that impede the flow of goods, services, capital, people and ideas. These divisions are a constraint to economic growth, especially in developing countries (see www.worldbank.org/en/topic/regional-integration/overview).

4 Observed as increases in number of warm days/nights and decreases number of cold days/nights, overall reduction in cumulative rainfall by 8–15%, average temperature increases of 0.6–0.8°C 1970–2010, lengthening of the dry season and increase in frequency and severity of extreme rainfall events and flooding (USAID, 2017).

5 According to the Armed Conflict & Event Location Dataset (ACLED), jihadists' attacks increased four-fold in Burkina Faso between 2017 and 2018. In Western Sahel, there were more reported fatalities from political violence in the first half of 2019 than during any full year since 2012. Throughout the Sahel (particularly Central Sahel), conflict and demonstration events have increased significantly. Even if this trend can be partially attributed to better reporting and recording of conflict information, the increase is significant over the period 2008–2016 (www.acleddata.com/2019/08/07/mid-year-update-ten-conflicts-to-worry-about-in-2019/#unique-identifier, consulted September 2019).

6 Price dispersion refers to the variations of price of the same product from one geographical area to another.

7 In June 2016, the naira was devalued, affecting imports and exports with trading countries such as Burkina Faso and Niger. The import of live animals from Nigeria, into Niger and Burkina Faso, was cheaper than before the devaluation, leading to a decrease in these countries' national prices.

8 In Simonet et al. (2020), the authors define the conflicts of terrorist origin as those events for which the terms 'Al Qaeda in the Maghreb' (AQMI), 'Al Qaïda' or 'terrorism/terrorists' figure in the description of the event in ACLED.

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