FEWS NET

FAMINE EARLY WARNING SYSTEMS NETWORK

WEST AFRICA

ENHANCED MARKET ANALYSIS

SEPTEMBER 2017

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About FEWS NET

Created in response to the 1984 famines in East and West Africa, the Famine Early Warning Systems Network (FEWS NET) provides early warning and integrated, forward-looking analysis of the many factors that contribute to food insecurity. FEWS NET aims to inform decision makers and contribute to their emergency response planning; support partners in conducting early warning analysis and forecasting; and provide technical assistance to partner-led initiatives.

To learn more about the FEWS NET project, please visit www.fews.net.

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Acronyms and Abbreviations

3N	Nigeriens Feed Nigeriens
ACDI/VOCA	Agricultural Cooperative Development International/Volunteers in Overseas Cooperative Assistance
AfDB	African Development Bank
AGED	*Association pour la Gestion de l'Environnement et le Développement*
AGIR	Global Alliance for Resilience in the Sahel
ATAD	*AllianceTechnique d'Assistance au Développement*
BRACED	Building Resilience and Adaptation to Climate Extremes and Disasters
CAADP	Comprehensive Africa Agriculture Development Programme
CaLP	Cash Learning Partnership
CC/SAP/PC	Coordination Unit for the Early Warning and Disaster Prevention System
CCA/GC	Food Crisis and Disaster Management Unit
CDF	Community Development Fund
CDP	Central distribution point
CFA	*Communauté Financière d'Afrique*
CFA	Cash-for-assets
CFW	Cash-for-work
CILSS	Permanent Interstate Committee for Drought Control in the Sahel
CLD	Local Development Council (Niger)
CNSA	National Food Security Council
COMDECO	Communes of Convergence
CONASUR	National Council for Emergency Relief and Rehabilitation
CVD	Village Development Council
DGESS	Sector Studies and Statistical Service (Burkina Faso)
DFID	UK Department for International Development
DLCA	Digital Logistics Capacity Assessments
DNPGCCA	National Plan for Disaster and Food Crisis and Prevention and Management
ECHO	European Commission Humanitarian Aid
ECOWAP	Economic Community of West African States Agricultural Policy
ECOWAS	Economic Community of West African States
EDP	End distribution points
EMA	Enhanced Market Analysis
EPA	Permanent Agricultural Survey
EROS	Earth Resources Observation and Science Center
FAO	Food and Agriculture Organization of the United Nations
FASO	Families Achieving Sustainable Outcomes
FCS	Food Consumption Score
FEWS NET	Famine Early Warning Systems Network
FFA	Food-for-assets
FFP	Food for Peace
FRDA	Regional Fund for Agricultural Development
GAM	Global acute malnutrition
GDP	Gross domestic product
GoBF	Government of Burkina Faso
GoN	Government of Niger
Ha	Hectare
HC3N	High Commission for the 3N Initiative
ICT	Information and communications technology
INERA	*Institut de l'Environnement et de Recherches Agricoles (Burkina Faso)*
INRAN	*Institut National de Recherche Agronomique du Niger (Niger)*
INS	*Institut National de la Statistique (Niger)*
IPC	Integrated Food Security Phase Classification
IZF	*Investire en Zone Franc*
LAHIA	Livelihoods, Agriculture and Health Interventions in Africa

LG	Local governments
LRP	Local and regional procurement
LZ	Livelihood Zone
MAAH	Ministry of Agriculture and Hydro-Agricultural Development (Burkina Faso)
MFI	Microfinance institution
MFR	Market Fundamentals Report
MT	Metric ton
NAIP	National Agricultural Investment Programmes
NCA	Nutritional Causal Analysis
NEPAD	New Partnership for Africa's Development
NGO	Nongovernmental organization
OCADES	*Organisation Catholique pour le Développement et la Solidarité*
ONATEL	*Office National des Télécommunications*
OPA	*Observatoire des Pratiques Anormales*
OPVN	*Office des Produits Vivriers du Niger*
PAA	Purchase from Africans for Africa
PASAM-TAI	*Programme d'Appui à la Sécurité Alimentaire des Ménages-Tanadin Abincin Iyali*
PCD	Communal Development Plan (Burkina Faso)
PCD-TASAN	Ten-Year Agricultural Transformation Program
PDC	Communal Development Plan (Niger)
PDR	Regional Development Plan (Niger)
PNSAN	National Food and Nutrition Security Policy
PROGRES/PRORESI	*Renforcement de la résilience des populations pauvres et très pauvres et amélioration de la sécurité alimentaire et nutritionnelle*
PPAO	*Programme de Productivité Agricole en Afrique de l'Ouest*
PRD	Regional Development Plan (Burkina Faso)
PRP	Country Resilience Priorities
RAIP	Regional Agricultural Investment Programme
REGIS-AG	Resilience and Economic Growth in the Sahel–Accelerated Growth
REGIS-ER	Resilience and Economic Growth in the Sahel–Enhanced Resilience
RESOGEST	Network of Structures for the Management of National Food Security Stocks
RISE	Resilience in the Sahel Enhanced initiative
RNIE	*Route Nationale*
RRA	Rapid Rural Appraisal
SAP	Early Warning System
SAREL	Sahel Resilience Learning
SIM	Market Information System (Burkina Faso)
SIMA	Agricultural Markets Information System (Niger)
SMART	Standard Monitoring and Assessment of Relief and Transitions
SONAGESS	*Société Nationale de Gestion du Stock de Sécurité Alimentaire*
TEC	*Tarif extérieur commun*
TLU	Tropical Livestock Units
UEMOA	*Union Économique et Monétaire Ouest-Africaine*
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USGS	United States Geological Survey
VAT	Value-added tax
ViM	Victory against Malnutrition
WAEMU	West African Economic and Monetary Union
WATH	West Africa Trade Hub
WFP	World Food Programme
WHO	World Health Organization
XOF	CFA Franc

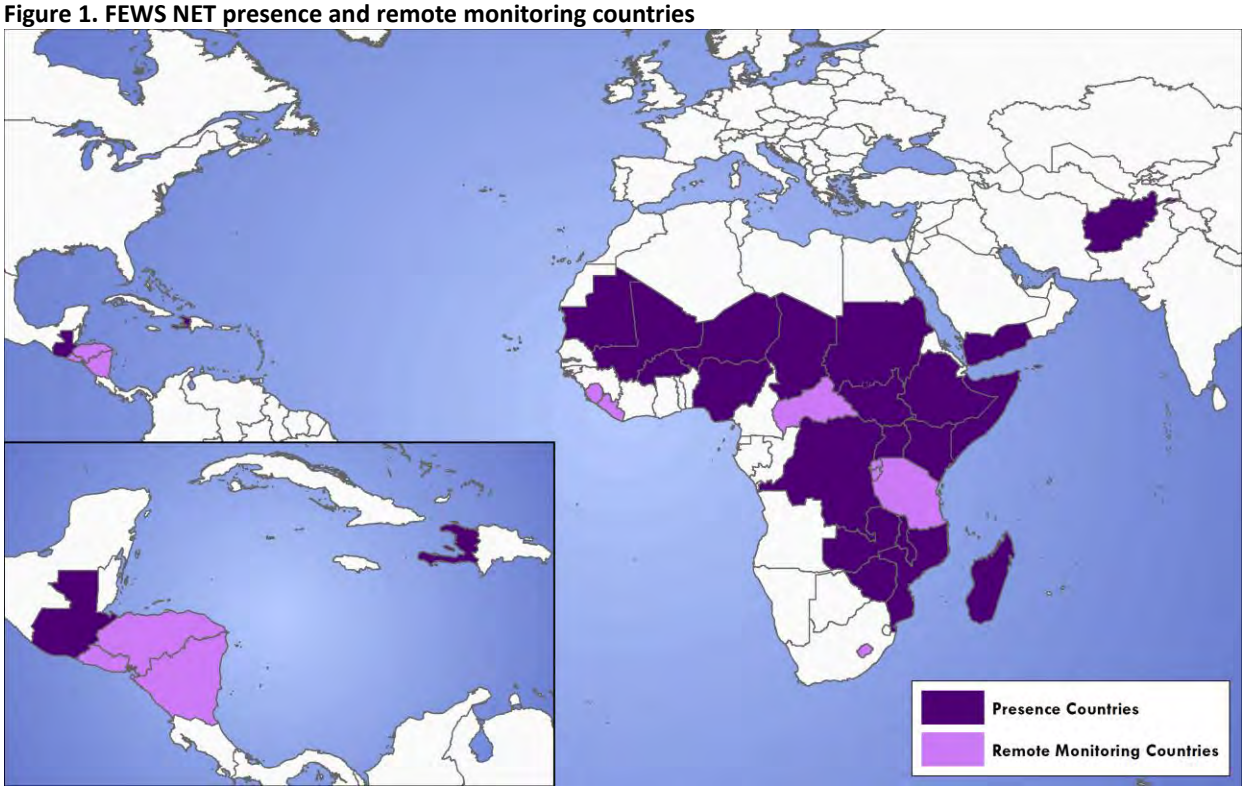
Preface

The Famine Early Warning Systems Network (FEWS NET) is a leading provider of objective, evidence-based food security analysis. Based on in-depth understanding of local livelihoods, FEWS NET analysts monitor information and data related to weather and climate, crops, pasture conditions, markets and trade, nutrition, and other factors that influence acute and chronic food insecurity in several countries (Figure 1). Along with monthly reports and alerts, FEWS NET produces specialized research products on food security drivers and cross-cutting issues such as climate change and resilience.

In an effort to understand current and to foresee future market anomalies, FEWS NET relies on a broadly defined markets and trade knowledge base that includes Market Fundamentals reports (or context documents), special reports, and databases of historical market information including production, food balance sheets, and prices. The markets and trade knowledge base largely serves as baselines for the assessment of existence and extent of market-based anomalies that could contribute to food insecurity. The Market Fundamentals reports likewise serve as starting points for providing efficient and effective market-based response decision support for groups developing both emergency, including cash and voucher interventions as well as local and regional procurement (LRP), and development programs, including support to food security and nutrition through improving the availability of and access to food and value chain development.

In 2016, FEWS NET's core analytical activities were augmented to include Enhanced Market Analysis (EMA). Under EMA, FEWS NET provides market-based response decision support, including but not limited to assessing the feasibility and potential impacts of food assistance programs (emergency and development) on a given country's local economy through Congressionally-mandated analyses, often referred to as a Bellmon analysis. EMA reporting is progressive in nature, and, when possible, builds off FEWS NET's existing in-depth knowledge agroclimatology, livelihoods, markets, nutrition, and institutions and networks in support of food security monitoring and analysis in presence and remote monitoring countries.

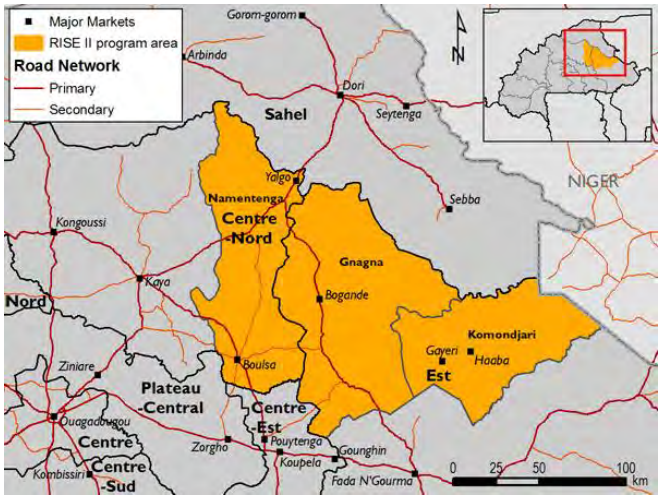
Figure 1. FEWS NET presence and remote monitoring countries



Executive Summary

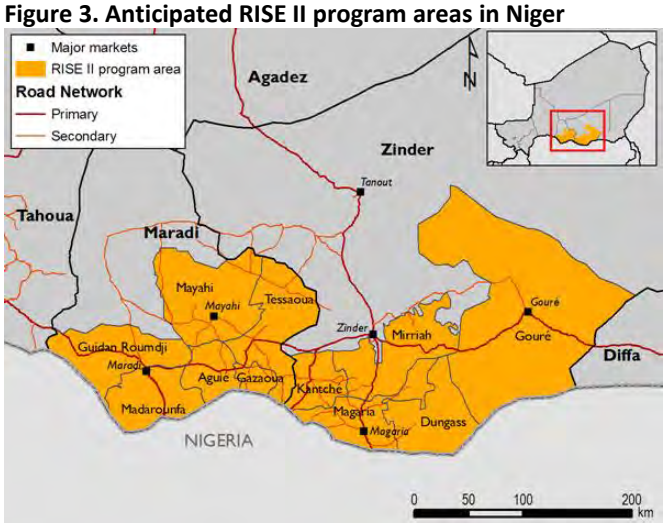
- This FEWS NET Enhanced Market Analysis (EMA) report presents findings to inform regular market monitoring and analysis in the Centre-Nord and Est Regions of Burkina Faso and the Maradi and Zinder Regions of Niger. This report was prepared concurrently with national Market Fundamentals Reports for Burkina Faso and Niger. Among other uses, the information presented jointly in these three reports can be used to support the design of food security and resilience programs, including but not limited to informing a United States Agency for International Development (USAID) Bellmon determination in advance of FY 2018 USAID Title II or Community Development Fund (CDF) supported development food assistance programs in either or both countries.
- This study provides evidence in support of decision making for a range of assistance and transfer modalities (from in-kind Title II commodity transfers to mobile phone-enabled cash transfers) and is based on (1) desk research and (2) fieldwork between April 25 and May 14, 2017, using rapid rural appraisal (RRA) techniques covering anticipated Resilience in the Sahel Enhanced initiative (RISE) II program areas of Burkina Faso and Niger, as well as neighboring communes (municipalities or districts) that are essential to trade and the distribution of humanitarian assistance (Figure 2 and Figure 3).[1]
- During an average year, the RISE II program areas of both Niger and Burkina Faso are generally self-sufficient in locally preferred cereals (millet for Niger and sorghum for Burkina Faso), export cash crops (cowpeas), and ruminant livestock (small ruminants). Imports of edible oil (mostly sourced internationally) cover the majority of edible oil requirements. Strong trade linkages with neighboring Nigeria make for seasonal variations in the direction and magnitude of trade flows into and out of Niger's Maradi and Zinder Regions.

Figure 2. Anticipated RISE II program areas in Burkina Faso



Source: *FEWS NET.*

Figure 3. Anticipated RISE II program areas in Niger



Source: *FEWS NET.*

- By many measures, the chronic food security conditions in the RISE II program areas are among the worst in both countries. Access to and usage of basic infrastructure and services are limited, although of the areas under study, Komanjoari (Burkina Faso) appears to be the most isolated and least developed. Two main livelihood systems are present – agricultural and agropastoral. Periodic food shortages can be especially severe in Maradi and Zinder Regions of Niger, where local agroclimatolgoy and economic conditions in Nigeria drive local food availability, diversity, and access. Food assistance in some form (including food-for-work and school feeding, among others) plays an important role in meeting local food requirements for much of the population, especially in Niger. However, the size of the annual food gap (expressed in grain equivalent terms) varies considerably from one livelihood zone to the next.
- By many measures, markets perform well in the RISE II program areas. An analysis of trade flow patterns and price co-movement suggests that local markets are well integrated with neighboring areas of the country (especially for Burkina Faso) and the region (especially for Niger). Prices are typically responsive and traders report being able to respond quickly

[1] Please see Annex 1. Communes Visited for more information about the specific communes visited.

to increased demand. Physical market access is not a major constraint, with the exception of Est Region in Burkina Faso. The possibility of exogenous market shocks emanating from Nigeria presents unique challenges, especially in the southernmost border areas of Maradi and Zinder Regions.

- The RISE II programs areas span several agroeocological zones, with varying environmental conditions, making some areas better suited for agricultural production and livestock rearing than others. All areas share one common agricultural season due to unimodal rainfall patterns, which run from approximately April through October. The peak of the lean season is between July and August, depending on the specific zone. Landcover is largely a mix of cropland and grassland, with pervasive Normalized Difference Vegetation Index anomalies. Droughts, flooding, pest/disease infestation (locusts, birds), and livestock disease are the most prevalent threats to agricultural and livestock production within the region. Gold is heavily present in the soils of Centre-Nord and Est Regions of Burkina Faso and is extracted by local populations using both artisanal and industrial methods.

- Despite predominantly agriculture-based livelihoods systems, revenues earned through casual labor activities rank among the most important sources of cash income among poor and very poor households in the RISE II program areas of both Niger and Burkina Faso. In Burkina Faso, households engage with the gold mining sector as both casual laborers (earning wages for tasks completed for mine owners) and as artisanal miners (earning income through sales of gold). Crop and livestock sales are secondary sources of income in many instances. Staple food purchases rank among the top two annual expenses across the livelihood zones studied. Agropastoralists rely on livestock rearing as a source of livelihoods, savings, and cash income. Poor households sell livestock at critical periods of the year when household expenditures are greatest (lean season and when school fees are due).

- The RISE II program areas in both Burkina Faso and Niger occupy space within separate but well-defined marketing basins. The marketing basin serving Centre-Nord and Est Regions of Burkina Faso is linked to the major wholesale markets of Fada N'Gourma, Pouytenga, and Ouagadougou (the capital city). The marketing basin serving Maradi and Zinder Regions of Niger is linked to markets in northern Nigeria (Kano, among others), as well as Niamey (the capital city). The degree of integration of marketing within and between the RISE II program areas and their broader marketing basins is generally higher between areas with better road access. Transactions are based on cash, although banks, mobile money operators, and microfinance institutions exist.

- Prices for locally produced staple foods are highly seasonal across West Africa, including the RISE II program areas. These trends are driven in part by producer marketing behavior (selling stocks to pay off debts or fees), but also difficulties associated with household and community post-harvest handling and storage practices. Prices of locally produced crops are highly responsive to supply and demand conditions, typically peaking during the June to August period, and then declining with the progression of harvests between September and December, depending on the harvesting level. Imported edible oil and rice prices are far more stable across time and space.

- The main types of markets operating in the RISE II program areas of Niger are: large wholesale markets (such as those located in the regional capitals of Maradi and Zinder), smaller wholesale markets that also double as collection and/or assembly markets, and rural retail markets, which also serve collection or assembly roles, depending on the time of year. In Burkina Faso, the main wholesale markets serving the RISE II program areas are located in neighboring provinces, while collection/assembly and retail markets dominate within the zone. Many actors are present at each level of the marketing system, and prices are determined through (and responsive to changes in) the forces of supply and demand, making for relatively competitive markets.

- Among traders interviewed in the RISE II program areas, the most frequent barriers to trade cited were fees and taxes and access to financing. While wholesaler taxes and fees vary based on the scale of operations, fees paid by retailers are limited to commune-level fees assessed on market days. Fees associated with livestock trade are usually based on the number of units bought or sold. Households in the RISE II program areas participate in markets primarily as buyers, but also as sellers. Interviewees cited a lack of capital (and of access to credit) as the main obstacle preventing them from playing a more active role as sellers on local markets. In Maradi Region (Dakoro and Guidan Roumdji Departments) of Niger and Est Region of Burkina Faso, households also cited the distance to and isolation from markets as a further barrier to market participation. The travel time to a market can reach up to four hours by foot in some areas. Women's productive and marketing activities are often determined by male family members, who are also in charge of transport and commercialization activities.

- The macroeconomic crisis in Nigeria is of particular concern in Niger due to the deep and longstanding economic ties between the two countries. This includes, but is not limited to, the RISE II program areas. According to interviewees, the

economic crisis has affected activities in all markets visited in Niger, for cereals, livestock, and cash crops. Both imports and exports have been disturbed by reduced cross-border activity, as well as attempts by the Nigerian government to curb exports, such as increases in the number of check points and establishment of additional taxes to be paid.

- A range of assistance modalities have been implemented in the RISE II program areas of both Burkina Faso and Niger. National food security and disaster management organizations along with the World Food Programme (WFP) have extensive experience with local procurement (via open and closed calls for tenders and direct/strategic purchases from producer organizations). WFP is among the most experienced with direct cash transfers, particularly in Niger. Variants of mobile money have presented challenges in the RISE II program areas, as financial institutions are often not adequately supplied with hard currency for disbursement. Vouchers (paper) have been used successfully used in a number of contexts to meet both emergency food security needs (staple food) and longer-term development and resilience-building objectives (staple food, livestock, and seeds). Information gathered via interviews with various stakeholders suggest little or no structural difficulty procuring required quantities of staple foods from within the country or broader region for direct in-kind distributions or voucher programs. There is no evidence to suggest recent generalized inflationary impacts arising from those purchases, as they are often planned well ahead of time and are anticipated by vendors to occur during well-defined periods of the year. However, the region does have a history of poorly timed and distributed purchases putting upward pressure on prices during crisis years (e.g., the 2011/12 marketing year). During the current round of Title II and RISE programming, several nongovernmental organizations (NGOs) have rolled out seed and livestock voucher programs targeted at participants in producer groups.
- Overall, the evidence suggests that in a scenario of increased demand, about half of the traders interviewed are able to increase their stock/supply within a period of two weeks. The main factor influencing traders' ability to respond to increased demand is their capacity to mobilize financial resources for their operations. The importance of financial liquidity is evident given the fact that all traders interviewed rely on their own resources as the main source of financing. Storage capacity and availability of products in the source markets were cited as the second most important factors for vendors who previously participated in voucher (Burkina Faso) and local purchase programs (Niger). Therefore, improved access to financing and sufficient storage can facilitate a faster or larger supply response. Vendors highlighted several positive effects of market-based response activities including (1) noticeable increases in sales during the program periods, (2) a reported increase in professionalism among market actors, and (3) the reported interest among vendors to potentially take part in future activities, should the opportunity arise. This applies for cereals, cash crops, and livestock, as well as for seeds.
- The greatest challenge reported across all participating programs and beneficiary communities is the inevitability of sharing and redistributing food commodities among household members, among neighbors, within communities, and, at times, with traditionally respected leaders. Sharing practices historically played a role in food assistance programming, with documented research demonstrating household tendencies to distribute resources received through assistance programs. This practice is perceived as strengthening the social capital of the household, which can be returned at a later point in time. However, these practices can also dilute the desired impact of assistance for a specific set of beneficiaries, even children. Redistribution and sharing also occurs at the community level and beneficiaries across program areas suggested that oversight of traditional village authorities (*chefs de village)* is important to assure less graft and mismanagement of commodities.
- Market-based modality feasibility is largely determined by the local enabling environment. In the RISE II program areas, agricultural trade is hindered in some areas by poor road conditions and high transport costs. This is especially problematic in the easternmost areas of Burkina Faso, where road access is very poor during the rainy season. Mobile phone coverage is more or less ubiquitous, with service provided in many areas by multiple companies. The adoption and use of mobile phone technology and services is far more intensive among traders than among poor households. Microfinance institutions and mobile money providers are often inadequately supplied in hard currency to support cash transfer programs. Exogenous market forces (such as shocks to market supply and demand from Nigeria) have the potential to greatly affect market prices for food, cash crops, and livestock in the RISE II program areas.

1. Introduction to the West Africa Enhanced Market Analysis Assessment

Since 2014, USAID has funded the Resilience in the Sahel Enhanced (RISE) initiative, which brings together humanitarian and development assistance to address the root causes of persistent vulnerability in targeted zones in Niger and Burkina Faso. RISE leverages existing US assistance in new ways—together with USAID-funded development partners, civil society, local governments, and the Global Alliance for Resilience in the Sahel (AGIR)—to advance resilience-building efforts across the region. Three main components to the RISE initiative work closely together and complement one another:

- Resilience and Economic Growth in the Sahel–Accelerated Growth (REGIS-AG) seeks to develop innovative "pull" strategies linking smallholders to cash markets.
- Resilience and Economic Growth in the Sahel–Enhanced Resilience (REGIS-ER) supports production-level "push" strategies to propel vulnerable households from subsistence to food security and surplus.
- Sahel Resilience Learning (SAREL) supports monitoring, evaluation, and training for all RISE programs.

USAID likewise currently supports both emergency (Food for Peace, FFP) and development (FFP and Feed the Future) food security activities in Burkina Faso and Niger. Some overlap occurs between RISE and FFP program sites for both REGIS-ER and REGIS-AG, reinforcing the need to collaborate, harmonize, and consolidate strategies and interventions.

In recognition of the importance of basing transfer modalities on program objectives and contextual realities, and of increasingly flexible resource streams, USAID programs have diversified beyond the direct distribution of in-kind US-sourced commodities toward the use of market-based food assistance response modalities, including local and regional procurement, cash transfers, and food vouchers. The ongoing first phase of RISE uses a combination of livestock and input vouchers and some Title II in-kind transfers to meet program objectives. These types of programs require detailed and up-to-date evidence to support analysis of the feasibility and appropriateness of different market-based response options. To this end, USAID/FFP requested the Famine Early Warning Systems Network (FEWS NET) to carry out a series of market assessments to provide this contextual information under FEWS NET's expanded Enhanced Market Analysis (EMA) capacity to inform the design of RISE II programs.

Over the previous three phases of the FEWS NET project, the FEWS NET team developed a rich knowledge of markets and trade dynamics in Burkina Faso and Niger, culminating in Market Fundamentals Reports (MFR) for both countries. This national-level market context serves as useful background information for the present EMA Assessment Report, which focuses specifically on the scope of opportunities for market-based response options in the potential RISE II program areas of Centre-Nord and Est Regions of Burkina Faso and Maradi and Zinder Regions of Niger (Table 1).

1.1 USAID Core research questions

Through this activity, USAID seeks answers to a number of core research questions that include:

1. What is the broader food security and assistance landscape in RISE II program areas?
2. What is the size of the food gap (food assistance needs) among poor and very poor households in RISE II program areas?
3. What are the main sources of food and cash income as well as cash expenditure patterns among poor and very poor households in RISE II program areas?
4. What is the degree of market integration of key commodities traded in RISE II program areas in Burkina Faso and Niger with source domestic and regional markets, including trade flow volumes of cereals commodities into and out of Burkina Faso and Niger and annual aggregates and seasonal variations?
5. Do staple food, cash crop, and livestock operate in a competitive manner across the marketing basins relevant for RISE II program areas in Burkina Faso and Niger?
6. What are the profiles of markets in RISE II program areas, including number of markets/vendors broken down by category along with a typology of market size/type, market days/schedule, contacts, and any localized gender dynamics related to purchasing and selling?
7. What are the observed impacts to date of the macroeconomic context in Nigeria and Ghana on incomes, livelihoods, and staple food access within RISE II program areas, including but not limited to impacts on remittance flows, livestock, and cash crop marketing opportunities and staple food access?

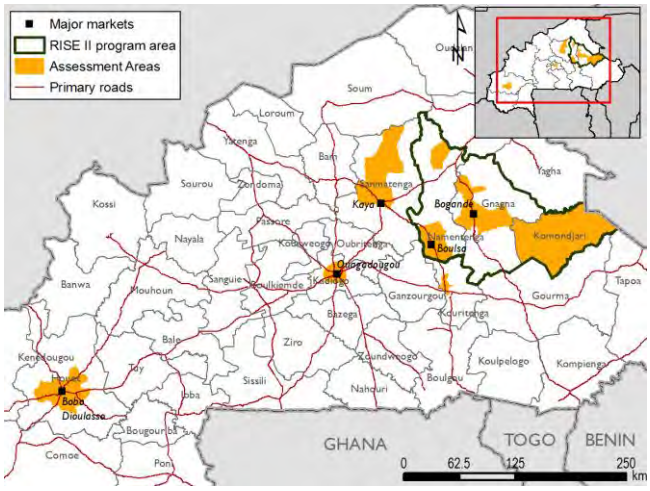
8. What market-based response options (including local and regional procurement, cash transfers, and vouchers) are feasible and appropriate food assistance response modalities?
9. What are specific risks associated with market-based response modalities in RISE II program areas?
10. What storage and logistics capacity exists in RISE II program areas?
11. What are constraints to increasing very poor and poor households' participation in and income from agricultural value chains (staple food, livestock, and cash crops) in RISE II program areas?

1.2 Study methods

This study was carried out in four phases between March and June of 2017.[2] The report was drafted in June 2017.

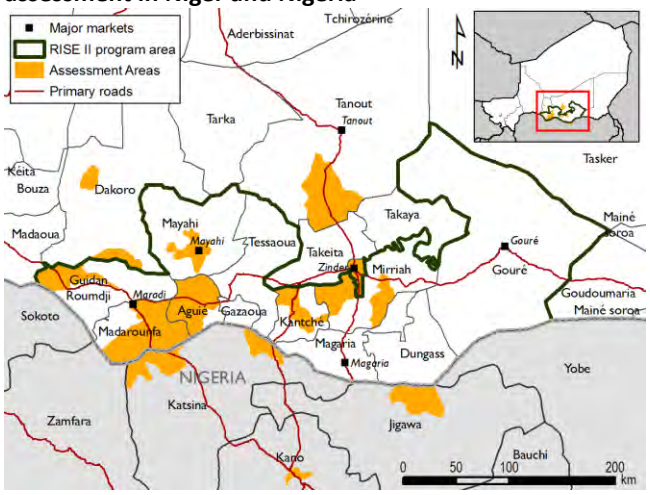
1. In March 2017, FEWS NET staff carried out a series of consultations with USAID/FFP Washington and West Africa Mission staff to better understand their information needs.
2. From March to May 2017, FEWS NET conducted a review of existing literature and resources on the local policy context, livelihoods, markets, food security outcomes, experience with previous food assistance programs, local infrastructure, and other aspects of the enabling environment relevant for market-based food assistance program design in Burkina Faso and Niger.
3. In early to mid-April 2017, FEWS NET designed the assessment approach and hired a team of local and international consultants and staff to support the research. During this time, the assessment questionnaires, checklists, and team itineraries were developed. Within Burkina Faso, Niger, and Nigeria, the study areas were purposively selected to include all RISE II program areas, as well as key reference markets serving these areas (Figure 4 and Figure 5). The markets and communities visited included a mix of relatively large and well-connected (physically) town markets as well as relatively small and less well-connected (physically) town markets. This sampling approach allowed for explicit comparison of market structure, conduct, and performance in large and easily accessible areas versus relatively smaller markets in more isolated areas.
4. Between April 24 and May 18, 2017, the research team conducted a field assessment to fill information gaps and triangulate existing evidence and information. The assessment team divided into seven groups, led by the FEWS NET National Technical Managers and Assistant Technical Managers and supported by a team of local partners and facilitators. In Burkina Faso, two teams traveled simultaneously to Est and Centre-Nord Regions, and also conducted interviews with traders in Ouagadougou and Bobo-Dioulasso. In Niger, four teams traveled simultaneously to Maradi and Zinder Regions, and also conducted interviews in Niamey and Tahoua. In Nigeria, one team traveled to northern Katsina, Jigawa,

Figure 4. Areas visited during FEWS NET field assessment in Burkina Faso



Source: *FEWS NET (2017a).*

Figure 5. Areas visited during FEWS NET field assessment in Niger and Nigeria



Source: *FEWS NET (2017c, 2017h).*

[2] Please see Annex 2 to learn more about FEWS NET's approach to Enhanced Market Analysis research methods.

Katsina, and Kano States. The study included structured key informant interviews with local government and extension agents, nongovernmental organization (NGO) staff, traders, market administrators, farmers, millers, and transporters (Table 2). The assessment team also conducted focus group discussions with beneficiaries of current RISE programs in selected program intervention areas. The full list of questionnaires administered by key informant and location can be found in Annex 3. Overview of Primary Data Collected during the Field Assessment. As with other rapid appraisals conducted by FEWS NET, the assessment findings were triangulated with other research and secondary data to support and complete the analysis.

Table 1. Areas of geographic and thematic focus in Burkina Faso and Niger to meet RISE II market-based response decision support needs

Regions	Livelihood Zone or Region/ Department of Focus	Core USAID information needs
Burkina Faso: Est and Centre-Nord Regions Niger: Maradi and Zinder Regions	Agricultural and agropastoral livelihood zones in RISE II program areas Burkina Faso: Provinces of Gnagna and Komandjari (Est Region); and Namentenga Province (Centre-Nord Region) Niger: Groumdji, Madarounfa, Aguie, Tessaoua, and Mayahi (Maradi Region) and Magaria, Matameye, Mirriah, and Goure (Zinder Region)	Market context
		Feasibility and appropriateness of market-based assistance programs
		Opportunities for increased participation in agricultural markets for poor and very poor households to meet food security, as well as agricultural development and resilience programming objective
		Development and humanitarian assistance landscape and context

Note (1): This table outlines current USAID information needs for subregional geographic and thematic focuses within the RISE II-targeted program areas within Burkina Faso and Niger.

Note (2): Given current USAID priorities, this activity will focus most heavily on RISE II program areas in Niger. This prioritization will be reflected both in the intensity of field work and the depth of Tier 2 reporting, with more emphasis on Niger and less emphasis on Burkina Faso.

Note (3): Given the strong market linkages between Maradi and Zinder Regions of Niger and northern Nigeria, a market assessment was carried out in key relevant reference markets in northern Nigeria, including Katsina, Jigawa, Katsina, and Kano States.

Table 2. Markets visited

Country	Region	Province/Department	Commune	Market
Burkina Faso	Centre	Ouagadougou	Ouagadougou	Sankariare
	Centre-Est	Kouritenga	Pouytenga	Pouytenga
	Centre-Nord	Namentenga	Bouroum	Rietkolga
			Nagbingou	Nagbingou
		Sanmentenga	Barsalogho	Foubé
			Kaya	Kaya
	Est	Gnagna	Bogandé	Bogandé
			Manni	Manni
		Gourma	Fada N'gourma	Fada N'gourma
		Komondjari	Bartiébougou	Haaba
			Gayéri	Gayéri
	Hauts Bassins	Houet	Bobo Dioulasso	Nieneta
Niger	Maradi	Dakoro	Sabon Machi	Sabon Machi
			Dakoro	Dakoro
		Guidan Roumdji	Guidan Roumdji	Guidan Roumdji

Country	Region	Province/Department	Commune	Market
		Madarounfa	Maradi	Kadro Maradi
				Gabi
				Dan Issa
		Mayahi	Mayahi	Mayahi
				Tchadoua
	Zinder	Magaria	Bande	Bande
			Magaria	Magaria
			Zinder	Zinder
		Kantché	Matameye	Kantche
				Matameye
				Ollelewa
		Mirriah	Droum	Droum
			Mirriah	Mirriah
Nigeria	North	Jigawa	Jigawa	Maigatari
		Kano	Dawanu	Dawanu
		Katsina	Mai Adua	Mai Adua
			Jibia	Jibia

Source: *FEWS NET.*

1.3 Organization of the report

The remainder of the report is organized as follows: Chapter 2. Context provides some of the basic context of the RISE II program areas of Burkina Faso and Niger. This context addresses a number of cross-cutting issues, including the local agroclimatology and suitability for different economic activities, physical accessibility, prevalence of poverty and malnutrition, and literacy rates. This chapter describes selected elements of the local enabling environment for market-based response efforts, including local information and communication technology (ICT) infrastructure, availability of local financial services, and standard procedures and documentation required for local and regional commodity procurement.

Chapter 3. Livelihood Systems discusses the local livelihoods context, including key sources of cash income and food preferences, as well an estimation of local structural food gaps among poor and very poor households. This chapter also discusses the diverse non-agricultural sources of income among local populations and potential implications for purchasing power and market performance. With respect to markets, Chapter 4. The Agricultural Market Context in Burkina Faso and Niger describes the local market structure, conduct, and performance, including key source markets for goods flowing into the RISE II program areas and the level of integration and price transmission with those external markets. A brief mention regarding important barriers to entry to staple food and livestock marketing activities among smallholders is also included.

Chapter 5. Food Security and Assistance Context in RISE II Program Areas describes the local policy and food assistance context, including lessons learned from current implementing partners and program participants (vendors and beneficiaries). Lastly, Chapter 6. Considerations for Program Design in RISE II Program Areas summarizes the key opportunities and challenges for market-based response program design in the RISE II program areas that emerged from the study.

2. Context

Centre-Nord and Est Regions of Burkina Faso and Maradi and Zinder Regions of Niger are potential program areas for Phase II of the Resilience in the Sahel Enhanced (RISE) initiative. These areas are located within the agropastoral and marginal agriculture livelihood zones of the Sahel, and experience high population growth, recurrent climatic shocks, and high levels of chronic poverty and food insecurity (Feed the Future FEEDBACK 2016).

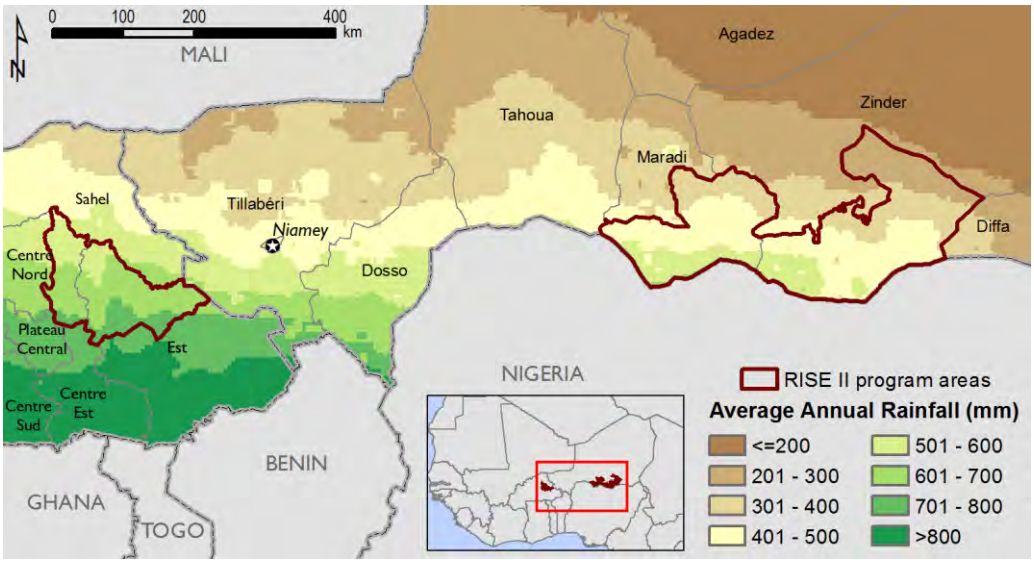
The characteristics of the local context present challenges and opportunities for any type of development and/or humanitarian assistance initiative. In general terms, these characteristics can be grouped into environmental conditions, sociocultural dynamics, availability of and access to infrastructure, and the policy environment at both the national and regional level. The following sections provide an overview of these aspects, based on information gathered from secondary sources and FEWS NET's field assessments carried out in Burkina Faso and Niger.

2.1 Environmental conditions

2.1.1 Agroclimatology

For the most part, the RISE II program areas are located in the Sahelian and Sudano-Sahelian agroclimatic zones, with annual rainfall ranging between 300 mm and 800 mm (Figure 6). While in Niger the program areas are among those with higher rainfall levels, these areas are on the drier end of the scale in Burkina Faso. The occurrence of rains varies across the program areas, generally starting around May and ending in October (FEWS NET 2010, 2011) (Table 3 and Table 4).

Figure 6. Average annual rainfall, 2000–2014, Burkina Faso and Niger RISE II program areas



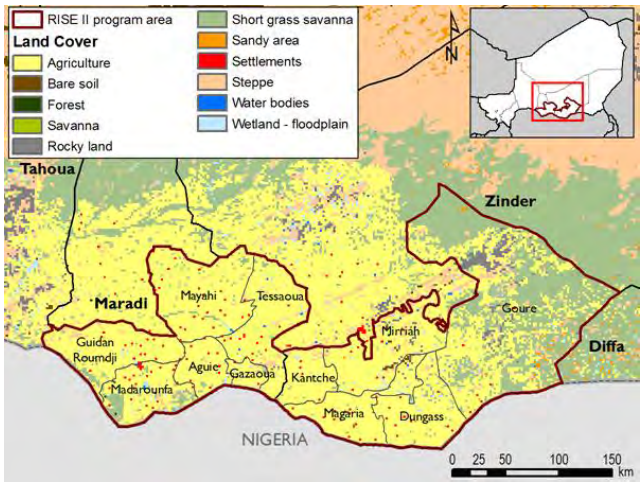
Source: *US Geological Survey/Earth Resources Observation and Science Center (USGS/EROS, 2016).*

Rainfall variability is notable, particularly in Niger. The coefficient of variation in annual rainfall in the RISE II program areas ranges between 7 percent and 15 percent in Burkina Faso and between 11 percent and 20 percent in Niger (USGS/EROS 2016). The occurrence of only one rainy season coupled with low precipitation levels and interannual and spatial-temporal anomalies limit agricultural prospects in both countries, and influence the operation and supply of staple food markets. Droughts, floods, locust invasions, and livestock diseases also threaten agricultural production (FEWS NET 2010, 2011).

2.1.2 Land cover

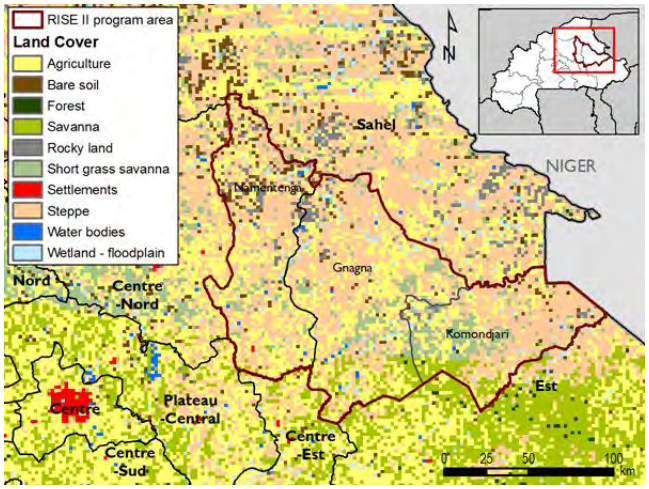
RISE II program areas in both countries are predominantly covered by a mix of cropland, steppes, grassland, and natural vegetation (Figure 7 and Figure 8). Agricultural land is mainly dedicated to the production of millet, sorghum, cowpeas, and peanuts. Goats, sheep, and cattle are the main types of livestock kept (FEWS NET 2010; Institut National de la Statistique 2015c, 2015g).

Figure 7. Land cover, Niger



Source: *USGS/EROS (2015b).*

Figure 8. Land cover, Burkina Faso



Source: *USGS/EROS (2015a).*

2.1.3 Soil conditions and mineral resources

According to the US Department of Agriculture soil taxonomy, the alfisol soil type dominates in the RISE II program areas. Alfisols tend to have low fertility and low water retention capacity, and are susceptible to crusting, compaction, and erosion (USDA 1999). Overall, soils in the area of interest are rocky and/or marginal, constraining agricultural productivity (USGS/EROS 2015a, 2015b).

Burkina Faso is rich with gold resources and gold mines are present in different parts of the country, including the RISE II program areas. Seasonal work in the gold mines is a common income-generating activity (FEWS NET 2010). The local population also engages in small-scale artisanal gold extraction on a regular basis.

2.1.4 Seasonality

RISE II program areas in both countries have fairly similar seasonal calendars (Table 3 and Table 4). The rainy season extends from May until October. Cropping activities for cereals and pulses start between March and April with land preparation. Planting takes place between May and June and harvests between September and November. Staple food purchases are most intensive during the during the lean season, throughout the land preparation and growing cycle, until harvest time.

Local agricultural labor is important year-round, but migratory work takes place mainly when agricultural activities are at their seasonal low, between harvest and the next cycle's planting. In Burkina Faso, this same period corresponds to participation ingold mining activities. Malaria is common in the RISE II program areas. Infections occur predominantly during the rainy season.

Table 3. Seasonal calendar, RISE II program areas, Niger

Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Rainy season												
Lean season												
Cropping activities (cereals and pulses)						Pr		P				H
Staple purchases												
Agricultural labor												
Work migration												
Livestock migration												
Livestock sales												
Malaria												

Note: Pr = preparation, P = planting, H = harvest.

Source: *Authors' elaboration based on FEWS NET (2011, 2013b)*

Table 4. Seasonal calendar, RISE II program areas, Burkina Faso

Activity	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Rainy season												
Lean season												
Cropping activities (cereals and pulses)							Pr		P			H
Staple purchases												
Agricultural labor												
Work migration												
Livestock sales												
Work in gold mines												
Malaria												

Note: Pr = preparation, P = planting, H = harvest.

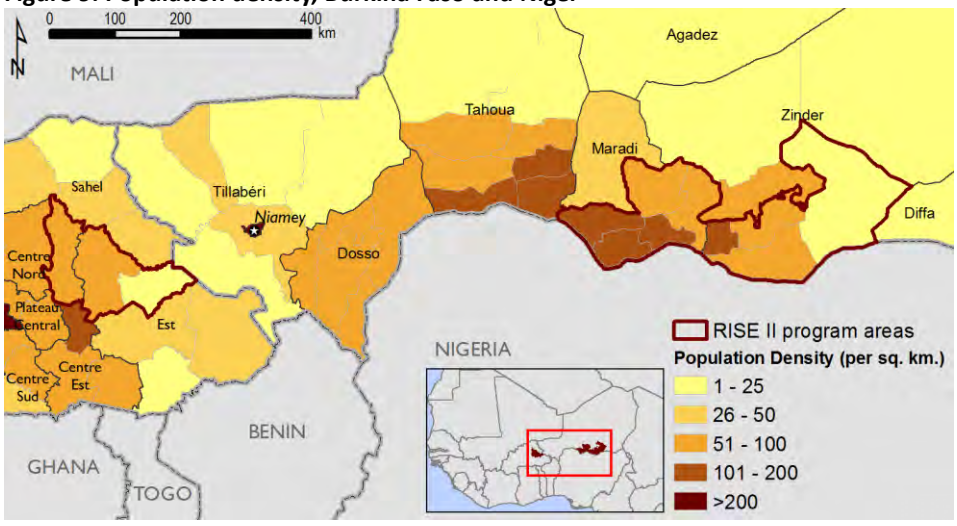
Source: *Authors' elaboration based on FEWS NET (2010, 2013a).*

2.2 Social context

2.2.1 Demographics

While both countries are largely rural, important demographic nuances of note arise within Burkina Faso and Niger. Niger has a spatially uneven population distribution, with most of its population concentrated in the southernmost part of the country. Maradi and Zinder Regions of Niger, though small in area, contain 40 percent of the country's population (Figure 9). Similar to national trends, 87 percent of Maradi Region's population and 89 percent of Zinder Region's population live in rural areas (Table 5) (Institut National de la Statistique 2016a). Overall, population density in Maradi and Zinder Regions is higher than in Centre-Nord and Est Regions (Figure 9) (Table 5). Only about 17 percent of Burkina Faso's population lives in Centre-Nord or Est Regions, of which more than 90 percent live in rural areas (Institute National de la Statistique et de la Démographie 2009). Est Region is the most rural, with 93 percent of its population living in rural areas (Institute National de la Statistique et de la Démographie 2016b).

Figure 9. Population density, Burkina Faso and Niger



Source*: Authors' calculations based on: Institut National de la Statistique (2015a, 2015c, 2015g, 2015e, 2015d, 2015f, 2015b) and DGESS/MAAH (2016).*

The fertility rates in both countries are high, resulting in very young populations. In all four RISE II regions fertility rates are even higher than the respective national averages (Table 5). In Niger, 49.8 percent of the population is under the age of 15. Maradi and Zinder Regions are slightly younger overall, with 54.7 percent and 54.1 percent of their populations under 15, respectively (Institut National de la Statistique 2015c, 2015g). Similarly, 47 percent of the population in Burkina Faso is under

the age of 15. The rate is slightly higher in both Centre-Nord and Est Regions, where the under-15 population comprises just over 50 percent of the population (Institute National de la Statistique et de la Démographie 2009). Both countries have high population growth rates (Table 6) and dependency ratios of just over 1:1 at the national and regional levels, meaning the active segment of the population slightly outnumbers the non-active segment.

Table 5. Population and fertility rates, Burkina Faso and Niger, 2016

Country	Total (persons)	Urban* (%)	Rural* (%)	Fertility Rate	Population Density
Burkina Faso	19,034,397	23	77	6.0	51.4
Centre-Nord	1,593,214	8	92	6.7	60.6
Est	1,668,520	7	93	7.5	26.2
Niger	19,865,066	16	84	7.6	15.7
Maradi	3,969,479	13	87	8.4	95.4
Zinder	4,119,874	11	89	8.5	26.5

Note: Projections for 2016 * shares based on 2006 data. Fertility rates for Burkina Faso: 2010, Niger: 2012.

Source: *Institut National de la Statistique (2016a); Institute National de la Statistique et de la Démographie (2009); and Institut National de la Statistique et de la Démographie (2016)*

Both countries are home to dozens of ethnic groups. The most populous ethnic group in Burkina Faso is the Mossi (Ministère de l'Economie et du Developpment 2005) and just over half of Niger's population is Hausa. It is of note that in the RISE II program areas of Niger, Hausa comprise a significantly higher proportion of the population: 87.8 percent in Maradi and 68.6 percent in Zinder (Républic du Niger Ministère de la Justice 2012). Hausa have strong trade ties between Niger and Nigeria, and belonging to the group or speaking the language can be an economic advantage (Coste 2014).

2.2.2 Poverty

Poverty is widespread in Burkina Faso and Niger, especially in the RISE II program areas (Table 7). In Burkina Faso, the incidence of poverty, defined as the percentage of households with income below the poverty line, has decreased at the national level and in Est Region since 2008 (Institute National de la Statistique et de la Démographie 2016b). The incidence of poverty in Centre-Nord Region, however, increased over the same period (Institute National de la Statistique et de la Démographie 2016a). The national incidence of poverty in Niger also decreased as did the rates in Maradi and Zinder Regions, but they remain 21.8 and 7.5 percentage points higher, respectively, than the national average. In fact, Maradi and Zinder are two of the three poorest regions in Niger (Institut National de la Statistique 2016a).

Table 6. Population growth rate, 2012–2016*

Country	Growth rate (%)
Burkina Faso	3.3
Centre-Nord	3.1
Est	3.4
Niger	3.9
Maradi	4.1
Zinder	4.1

Note: *Projections for 2016 based on 2006 data.

Source: *Institut National de la Statistique (2016a) and Institute National de la Statistique et de la Démographie (2009)*

Table 7. Incidence of poverty, Burkina Faso and Niger (% poor)

Country	2008/2009	2014
Burkina Faso	46.7	40.1
Centre-Nord	39.1	47.0
Est	62.1	50.1
Niger	52.6	45.4
Maradi	73.4	67.2
Zinder	53.8	52.9

Sources: *Institut National de la Statistique (2016a); Institute National de la Statistique et de la Démographie (INSD) (2015); Institute National de la Statistique et de la Démographie (2016b); and Institut National de la Statistique (2014)*

In both countries, rural populations have a higher incidence of poverty than urban populations. While the Centre-Nord and Est Regions of Burkina Faso rely on livestock rearing for income generation, poor and very poor households typically have only small livestock holdings and depend heavily on gold-mining, labor migration, and remittances (FEWS NET 2010). The situation is similar in Maradi and Zinder Regions of Niger, where better-off households depend on livestock rearing and poor and very poor populations tend to rely on local and migrant employment and firewood sales as main sources of income (FEWS

NET 2011). A thorough discussion of local livelihoods, including income and food sources, can be found in Chapter 3. Livelihood Systems.

2.2.3 Literacy and education

Literacy and educational attainment are low in Burkina Faso and Niger. Adult literacy rates, defined as the percentage of individuals over 15 years old able to read and write, are below 35 percent in both countries (Institut National de la Statistique and World Bank 2013). RISE II program areas in both countries have adult literacy rates below the national averages, with Est Region ranked 11 out of 13 (Table 8). Low literacy rates can be accounted for in part by low historical school enrollment rates, resulting in limited education among adults (Institute National de la Statistique et de la Démographie 2016b).

Niger and Burkina Faso experienced increases in primary school enrollment over the past 25 years but both still fall short of true universal enrollment (Table 9) (African Development Bank Group 2011). Children from poor and very poor households typically receive only a basic primary education, sometimes not completing all six years of primary school. It is even less likely that children from poor households will continue to secondary and tertiary education because of the associated fees and household budget constraints (FEWS NET 2010).

Table 8. Adult literacy rates (%), 2014

Country	Literacy rates (%)
Burkina Faso	34.5
Centre-Nord	24.8
Est	23.8
Niger	28.4
Maradi	28.2
Zinder	27.5

Source: *Institut National de la Statistique and World Bank (2013), and Institute National de la Statistique et de la Démographie (2016b).*

Table 9. Primary school enrollment rates (%), 2014

Country	School enrollment rates (%)
Burkina Faso	83.7
Centre-Nord	74.5
Est	56.1
Niger	74.2
Maradi	78.7
Zinder	56.4

Source: *Institute National de la Statistique et de la Démographie (2016b) and Institut National de la Statistique (2016a)*

2.2.4 Household structure and other cultural considerations

Niger and Burkina Faso share similar demographic characteristics in terms of family size and structure. Niger continues to maintain one of the world's fastest population growth rates, with an average Nigerien woman bearing 7–8 children; households in Burkina Faso are also relatively large, with an average number of 5.7 children. Household and intrahousehold dynamics are important considerations for assistance programming, especially in terms of individual and collective consumption practices, resource management and distribution, and hierarchies that determine access to assistance. Implementing agencies often rely on surveys and exit interviews to determine how resources provided through transfer modalities were used in the absence of specific information pertaining to household consumption, relationships, and behaviors that may be impacted by gender, age, social standing, and a variety of other factors specific to an ethnic group or wealth category. NGOs often assume that increased food consumption will benefit everyone, although this may not be true: cash resources may disproportionately benefit the household head, or be used for investments and temptation goods rather than increased food consumption (Kaboré et al. 2014). Understanding local cultural characteristics and household dynamics is therefore an important aspect of resilience-oriented initiatives, particularly in the RISE II program areas, where the structure and interaction of household members can strongly influence the impact of resource transfers.

Community and village culture are also important considerations. There is a "rentier culture" across rural Niger, where strategies for capturing "development resources" are highly developed at all levels (farmers and chiefs, voters and mayors, investigators and project workers, etc.). Resource transfers, particularly of cash, are vulnerable to diversion and may also exacerbate underlying feelings of suspicion and mistrust within a village community (de Sardan 2013).

Polygamy is widely practiced and has obvious influence over family structures and cultural practices relating to livelihood maintenance and food consumption. Polygamy is common in Burkina Faso, where approximately 58 percent of households are polygamous. A survey carried out in Burkina Faso and Niger found that 39 percent of the men surveyed in Sanmatenga Province in Burkina Faso had two wives, 11.4 percent had three wives, and 7.6 percent had four wives. In contrast, in Niger (Ouallam, Tillabéri Region), monogamous households made up roughly 52 percent of the population. The larger family size and complexity of interhousehold dynamics complicate the distribution of available food resources in some cases, and may be associated with higher risk of food insecurity. In Niger, community informants associated monogamy and smaller family sizes with less vulnerability overall (Doka, Madougou, and Diouf 2014). Guilbert and Pierotti (2016) note that in the Sahel, the

high degree of gender segregation of resources and responsibilities has considerable implications for the design of social protection programs. This dynamic appears to be more apparent in larger households.

Polygamous households,[3] in particular, display consistent dynamics regarding the management and control of resources in the home. For example, production and consumption of the staple crops are pooled and are managed by the (male) head of household (Guilbert and Pierottie 2016). The male head of household also manages the central food stock, although the head female in the household may manage her own stock of supplementary foods for use in condiments and sauces, often procured from a household garden. Within polygamous households, Guilbert and Pierotti explain that individualized control over income and assets translates to each individual family unit making decisions and managing its resources independently. Importantly, the study describes that women in these households maintain ownership over income and food that they procure, and are not expected to share gifts with other wives and their families; the exception to this is any food gifts. Women have some additional responsibilities for childcare and maintenance. For example, male heads of household and individual wives are responsible, jointly, for costs associated with child education (Guilbert and Pierottie 2016). de Sardan (2013) points out that in Niger in general (not necessarily specific to polygamous households), the local normative context for household management of resources, which are often not considered in resource-transfer programs, is that women manage their own resources autonomously, but it is the husband's responsibility to buy food and clothes and to cover medical expenses.

Beyond intrahousehold dynamics, other factors such as community-based influence or political hierarchies, religious or cultural perceptions of social responsibility, and ethnic or livelihoods-based divisions of labor at a micro and mezzo level have an impact on the social and economic status of potential program beneficiaries. Anecdotal evidence reported by Title II DFAP partners in Maradi and Zinder Regions suggests that women (pregnant or lactating women, PLW) are reportedly pressured by their families or choose themselves to maintain access to supplementary foods, sometimes at the expense of children's nutritional status. While this assertion has not been formally or empirically verified, the example highlights how social pressures can impact the lives of potential beneficiaries in the expectation of resource transfers.

According to de Sardan (2013), community perceptions of vulnerability and eligibility for program benefits (particularly cash transfers) in Niger may not be consistent with external assessments of vulnerability and/or need. External beneficiary selection and targeting practices can introduce a threshold effect viewed as highly arbitrary by the community in question, leading to suspicion and mistrust among the targeted population. The FEWS NET assessment in Burkina Faso and Niger revealed that communities are often not clear on who is targeted and why, with agencies reporting that targeting strategies frequently were revised and adjusted to account for errors or miscalculations; this was particularly the case among Title II partners distributing in-kind rations to PLW. In Burkina Faso specifically, FEWS NET assessment teams noted that households within a village expected that if they were not selected in a targeting activity, they would likely be presented as eligible recipients by community leadership for the next selection process. In this context, FEWS NET assessment teams reported that community leadership may independently revise a targeting strategy presented by an external agency based on perceptions of fairness, nepotism, or other guiding principle. In addition, the assessments found a consistent lack of understanding or appreciation of program goals and objectives by key stakeholders in the community, a likely barrier to accurate targeting and assessment of need among community members.

2.2.5 Gender considerations

Women in Burkina Faso and Niger face many social and economic challenges. A high percentage of women report no education and female literacy rates are low compared to male literacy rates (Table 10). Compared to national averages, rates of education and literacy are even lower among women in the four regions of interest.

In Niger, 75 percent of women have begun bearing children by the age of 19. The country has the highest fertility rate in the world at 7.6 and the average fertility rate in Maradi and Zinder Regions is even higher at 8.45 (Table 5). Centre-Nord and Est Regions of Burkina Faso have an average fertility rate of 7.1, and 57.5 percent of women have begun childbearing by the age of 19 (Food and Nutrition Technical Assistance III Project 2017b, 2017a). High rates of adolescent pregnancy negatively affect nutrition and health outcomes for women and children.

Access to land and tenure are important dynamics to understand considering their implications for food security in Niger and Burkina Faso. In general, men's property rights include real estate and productive assets such and land, houses, and large animals. Though religion does not forbid female land ownership, customary practices prevent women from inheriting or

[3] The author notes that the study was conducted on a small and not representative population within the Mossi ethnic group. Observations made in this study should be considered indicative rather than universally applied across the country and in all communities.

owning land or houses. Women generally gain access to land through their husbands, who are expected to provide a portion of agricultural land upon marriage (Doka, Madougou, and Diouf 2014). Women who are not allocated land by a husband are left to either borrow land from a brother or rent land. In a survey, one female respondent explained that as renters, they avoid fertilizing the fields for fear that a more productive or fertile field may be taken back by the owner. Keeping their fields in a state of mediocre productivity enables them to have access to farmland for as long as possible (Doka, Madougou, and Diouf 2014).

Table 10. Gender and education indicators, 2014

Country	% women who report no education	Female literacy rates (%)	Male literacy rates (%)
Burkina Faso	69.8	22.5	35.5
Centre-Nord	78.6	13	21.1
Est	82.5	12.3	28.4
Niger	72.6	14	39.4
Maradi	75.8	9.6	39.4
Zinder	76.5	10.9	34.5

Source: *Food and Nutrition Technical Assistance III Project (2017b, 2017a); Republique du Niger (2013); and Institut National de la Statistique et de la Démographie (INSD) (2012).*

In Burkina Faso, as women cannot inherit land or bequeath it to their children, they rely on men for access to land, capital, and inputs. From a young age, women are involved in farming, first on their family's farm and then on their husband's farm. Women have less control over planting decisions than men and typically grow millet, sorghum, groundnuts, beans, or other legumes. Some women raise small ruminants and poultry, and harvest fruits, nuts, or shea nuts/butter from community or family land. Women do not interact with traders to sell crops or livestock as it is considered disrespectful to their husbands (Food and Nutrition Technical Assistance III Project 2017a).

The situation for women is similar in Niger, where women typically only access land through marriage and lack decision-making ability in determining crop planning and harvest use. However, women contribute to cereals and pulses planting, collecting and transporting manure, weeding, harvesting; processing of groundnuts, cowpeas, and millet; milking, processing, and selling milk; raising poultry and shoats, and small-scale trading of animal products. Men are responsible for transport, storage, and commercialization of produce as those are considered culturally unacceptable tasks for women, though variations arise among ethnic groups. Non-agricultural economic activities for women include small-scale trade, hair braiding, sale of animal byproducts, sale of prepared food, and unpaid household work (Food and Nutrition Technical Assistance III Project 2017b).

Responsibilities alter during times of food insecurity. In general, food security is a man's responsibility, but women are expected to contribute during the "hungry season" to absorb crisis-related shocks (Doka, Madougou, and Diouf 2014). The burden to manage shortages falls on women even more so given the increasing trend of male migration during times of crisis. In recent years, it has become increasingly common for women to perform labor outside of the house to earn income for their family. Vulnerable women will work in fields, pound grain, wash clothes, and iron and cook for wealthier people, typically civil servants (Doka, Madougou, and Diouf 2014).

2.2.6 Governance

Concerted government efforts have been made in both Niger and Burkina Faso to transfer the authority and resources from the central government to local governments (LGs). To this end, both countries established a Ministry of Decentralization and a Local Government Association at each level of local authority (CRS 2014). Other government ministries provide support to this process, including but not limited to providing technical and management support to the LGs. In Burkina Faso, the region serves as an economic space with appropriate legal frameworks outlining land use, planning, and coordination of development activities. In both Niger and Burkina Faso, the commune (third administrative layer in Niger and the fourth administrative layer in Burkina Faso) serves as the center of accountability and participation in local governance. Despite these efforts, the transfer of authority has been slow, a situation made worse by LGs' overall weak capacity to carry out their newly acquired duties. In addition to governance by democratically elected local leaders, traditional leaders play central social, religious, and economic roles.

- In Niger, communes are headed by an elected mayor. Alongside this modern local administrative power is a traditional local power relying on elders and lineage succession, and managing the community longer than the elected official. This structure may cover one or more municipalities. This duality of power has sometimes been the source of tension at the LG level, though state efforts to clarify the role of the various actors in commune administration have proven fruitful (Aboubacar 2013).

- Since the return of democratic multipartyism in 1991, Burkinabé chieftain leaders have made a remarkable entry into politics. They participate in most votes and are present in Parliament and in the various municipal councils. With several democratically elected representatives from the traditional chiefdoms, there is a risk of confusion between the systems of governance of the chiefdoms and that of democratic governance. The engagement of the chieftainship into politics has led to the public questioning their role as social mediators. Traditional leaders' involvement in partisan politics is also further complicated by the fact that they usually have an ethnic or religious base (Baro 2015).

2.2.7 Conflict and security

The rise of violent extremism in West Africa has led to increased insecurity in the region, thereby making security and conflict management a high priority. In 2014, the leaders of Burkina Faso, Chad, Mali, Mauritania, and Niger agreed to establish the G5 Sahel, a new organization focused on strengthening development and security in the region. Conflicts related to land and rural assets are prevalent in both countries. However, attacks on busy markets or along major trade corridors are not common in the RISE II program areas, although they do create threats in neighboring countries and regions.

Niger

The escalation of the Boko Haram-related conflict in northeast Nigeria has spread to bordering areas, including Diffa Region in southeastern Niger. The organized recruitment efforts of regional extremist groups and violent attacks in northern Nigeria have impacted security in Niger, where Tuaregs have rebelled in the past. As a result of the increase in violent incidents and attacks on foreign nationals, the international community heightened security measures (Loada and Romaniuk 2014). In Diffa Region, the Boko Haram-related conflict has impacted marketing activities through reduced market activity, higher transport costs (following the use of alternative transport routes), and reduced exports towards Nigeria. Some markets in proximity to Lake Chad have been closed.

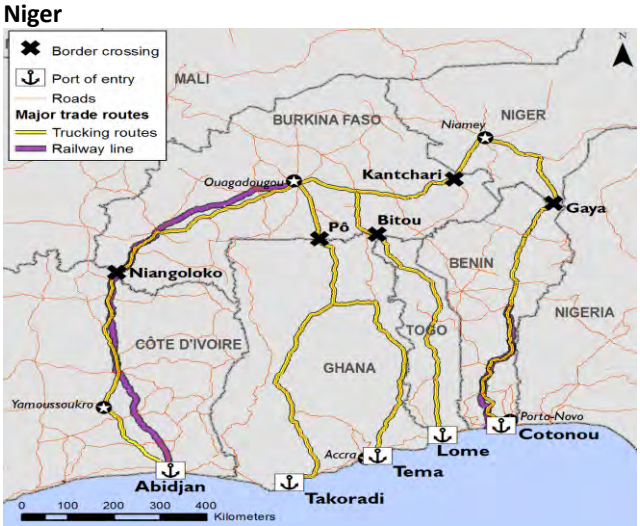
More generally, Maradi and Zinder Regions face localized violent incidents including armed attacks, road attacks, cattle theft, and the threat of Al-Qaeda in the Islamic Maghreb. In Zinder Region, intercommunity incidents in the north of the region resulting from livestock theft, watering hole disputes, and farmer-herder conflicts have been reported.

Burkina Faso

Burkina Faso is known to be relatively more peaceful compared to its neighbors, though making it all the more important to maintain its stability amidst an insecure region. Multiple mechanisms exist at the community level, formal and informal, through which the risk of violent extremism has been managed. Inter- and intracommunal tension, including conflict between farmers and herders, and land disputes, especially involving mines, are prevalent and far-reaching (Loada and Romaniuk 2014). With regard to farmer-herder conflicts where the former views the latter as landless and demands priority in access to land, government interventions in resolving partly ethnic-fueled conflicts have often been deficient. Burkina Faso's gold mining boom has also had a negative impact at the communal level, where human rights concerns have emerged due to lack of access to food, water, housing, poor environmental quality, and limited education and employment opportunities near mines. In villages where state legal services are scarce, chiefs play a leading role in resolving various disputes based on customary law. For some issues, such as ethnic and land disputes, the state often resorts to the mediation of local chiefs to resolve conflicts. In border areas to Mali and Niger, the security situation is of serious concern due to the cross-border activity of terrorist groups.

Overall, insecurity is a problem in the RISE II program areas. The Est Region of Burkina Faso is considered an insecure area, with organized armed attacks posing a regular threat to the movement of people and goods, particularly after nightfall; to places of congregation, such as markets or health facilities; and to isolated communities. In spite of the efforts made by defense and security forces to restore order, insecurity

Figure 10. Regional ports serving Burkina Faso and Niger



Source: *Authors' elaboration based on DLCA Logistics Cluster (2016b), Hartmann (2010), and Bontianti and Yonlihinza (2008).*

remains a problem in the region. The Centre-Nord Region is generally deemed to more secure; however it is not exempt from incidents..

2.3 Infrastructure

2.3.1 Road infrastructure

The ports of Cotonou (Benin), Lomé (Togo), Abidjan (Côte d'Ivoire), and Tema (Ghana) are the main regional access points for Niger and Burkina Faso (Figure 10) (DLCA Logistics Cluster 2016a, 2016b).

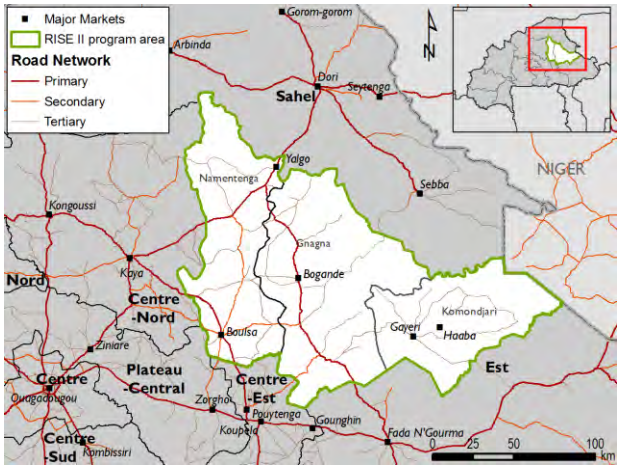
For Burkina Faso, the ports of Abidjan and Lomé are the most relevant, with goods transiting toward Ouagadougou via Niangoloko and Bitou border crossings (DLCA Logistics Cluster 2016a). By 2013, the road network in the country totaled about 15,300 km, of which 23 percent (3,642 km) were paved. Centre-Nord Region has 200 km of paved road and 915 km of unpaved roads (Figure 11), while in Est Region the corresponding lengths are 412 km and 1,456 km (Ministère des Infrastructures, du Desenclavement et des Transports 2015).

The port of Cotonou handles 81 percent of Niger's cargo traffic (Ohlsen 2017). From Cotonou, goods transit toward Niamey through RNIE2, clearing customs at Malanville (Benin) and Gaya (Niger). Approximately 21 percent of the 20,000-km road infrastructure is classified as primary paved roads. These are mostly located in the Niamey-Maradi-Diffa corridor and the Agadez-Zinder-Tahoua triangle, both relevant for transport and trade in the RISE II program areas (Figure 12).

According to INS (Niger's *Institut National de la Statistique*) information, Maradi Region has 526 km of paved roads and 939 km of unpaved/dirt roads (Institut National de la Statistique 2015c). No information is available for Zinder Region.

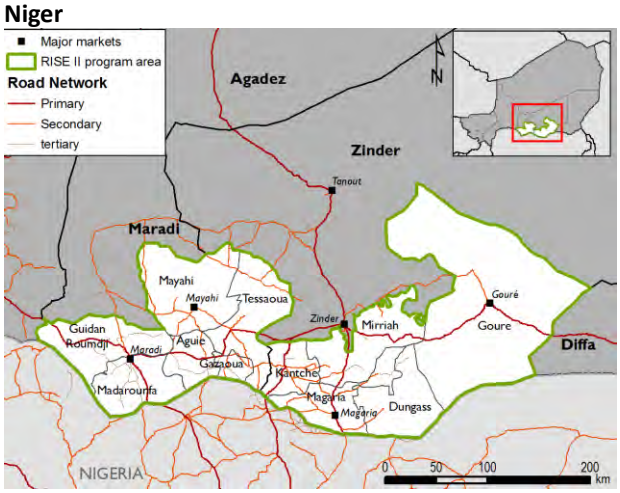
Overall, unpaved roads dominate in the RISE II program areas, affecting accessibility and time needed for transit between locations.

Figure 11. Road network in RISE II program areas, Burkina Faso



Source: *Authors' elaboration based on OpenStreetMap (2017).*

Figure 12. Road network in RISE II program areas, Niger



Source: *Authors' elaboration based on OpenStreetMap (2017).*

2.3.2 Availability and access to basic services

Housing conditions in Niger and Burkina Faso are rather unimproved, characterized by the prevalence of dirt floors, lack of improved toilet facilities, and overcrowding. Households' living conditions are further challenged by limited access to basic services such as drinking water, electricity, and waste disposal (drainage and trash). While urban areas tend to have easier access to these services, their general coverage is still low (Table 11). Generally, the access to basic services is lower in the RISE II program areas compared with the national level.

The relationship between inadequate living conditions and poor health outcomes (particularly for women and children) is well understood by the governments in both countries. In Niger the 2003 Rural Development Strategy, the 2006 National Strategy for Access to Modern Energy Services, as well as the 2012 Economic and Social Development Plan incorporated measures to improve the population's access to basic services as key elements for protecting health and nutrition and for achieving overall social development (Republique du Niger 2003; Ministère du Plan de l'Aménagement du Territoire et du

Développement Communautaire 2012). In Burkina Faso, the National Plan for Economic and Social Development includes access to basic services as key priorities for the development of human capital (Gouvernement du Burkina Faso 2016).

2.3.3 Storage

The availability of storage located in the RISE II program areas varies considerably. However, the availability of storage with the RISE II program areas or the marketing basins serving them has not been indicated as a major limiting constraint to assistance programming.

According to the 2014 Logistics Capacity Assessment (LCA) of Niger, the southeastern regions of Maradi and Zinder possess significant storage capacity. Zinder's 26,200 MT of capacity is split almost evenly between privately held and publicly held organizations, while in Maradi private actors hold more than twice the amount of the region's 58,400 MT of capacity than do public actors, with a small proportion (less than 10 percent) held by humanitarian organizations.

The publicly held storage facilities in Niger are almost exclusively under the management of OPVN (*L'Office des Produits Vivriers du Niger*), the government agency charged with maintaining the national security stock of food and with distributing or subsidizing food during times of crisis. The storage facilities owned and operated by humanitarian organizations are mostly held by WFP, with a small amount (one 500 MT facility) held by the Red Cross. Much of WFP's storage capacity is composed of Rubb-halls, whose mobility allows the organization to be flexible in its response to shifting storage demand. It should also be noted that there exists a comparatively immense amount of commercial storage capacity (several hundreds of thousands of MT) in the northern states of Nigeria bordering Maradi and Zinder Regoins (FEWS NET 2017c, 2017h) (Figure 13).

The Centre-Nord and Est Regions of Burkina Faso, meanwhile, possess significantly less storage capacity than do the regions of Niger mentioned above, according to the 2013 LCA of Burkina Faso. Of the 17,020 MT of storage capacity accounted for in the two regions, 16,520 MT are owned and operated by the government, namely SONAGESS (*La Société Nationale de Gestion du Stock de Sécurité Alimentaire*). A single, 500 MT facility owned by WFP represents the only humanitarian storage presence in the two regions.

While the Burkina Faso LCA does not indicate the presence of any privately-held storage capacity in Centre-Nord and Est Regions, the recent FEWS NET assessment indicates otherwise (Figure 12). The discrepancy may be explained by the fact that there is no official list, government record, or formal registry containing this information.

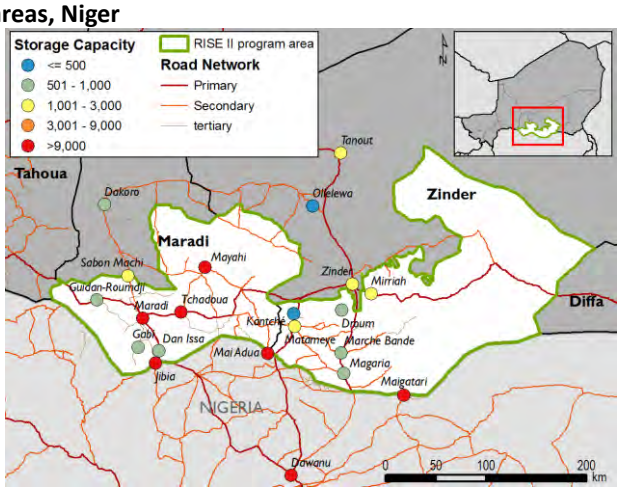
Table 11. Access to basic services (proportion of households)

Country	Access to electricity (%)	Access to drinking water (%)	Access to sanitation** (%)
Burkina Faso	24.4	76.3	8.1
Centre-Nord	8.3	86.3	5.3
Est	7.1	68.4	1.4
Niger	15.4	50*	5.2
Maradi	6.4	50.1	1.6
Zinder	9.3	44.9	0.7

Note: *Proportions based on households living in the rural areas; **Refers to improved latrines.

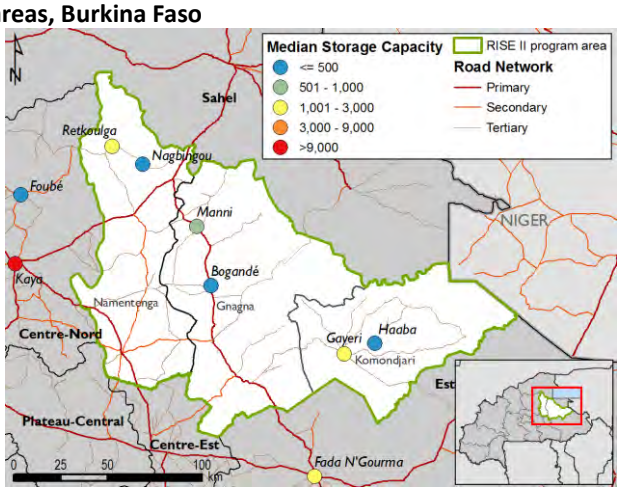
Source: *Institut National de la Statistique (2016a); and Institut National de la Statistique et de la Démographie (2016).*

Figure 13 Estimated commercial storage in selected market centers within and serving the RISE II program areas, Niger



Source: *FEWS NET (2017c).*

Figure 14. Estimated commercial storage in selected market centers within and serving the RISE II program areas, Burkina Faso



Source: *FEWS NET (2017a).*

2.3.4 ICT/Connectivity

Mobile phone connectivity has increased dramatically in both Burkina Faso and Niger since the early 2000s, when the main operators started activities. In each country, the mobile phone market is served by a few private network providers and one state-owned provider. While in Niger most of the market share is captured by private companies, this share drops to about half in Burkina Faso (Table 12). Airtel, Orange, and Moov in Niger provide services of mobile cash transfers. In Burkina Faso, Airtel (recently absorbed by Orange) and Telmob (ONATEL, *L'Office National des Télécommunications*) facilitate transfers.

At the national level, access to mobile phone technology in Burkina Faso and Niger increased during the past years following the expansion in network coverage. By 2014 about 64 percent of persons over 15 years of age in Burkina Faso owned a mobile phone, compared to 40 percent in Niger (Table 13). Among RISE II program areas, Maradi Region in Niger and Est Region in Burkina Faso register the lowest rates of mobile phone ownership. Actual use of mobile phones is reported to be slightly larger than mobile phone ownership in both countries as individuals (for instance, within a household) share the equipment (Ministère de l'Economie et des Finances 2016; Institut National de la Statistique et de la Démographie 2015), but no comparable data were available to verify this.

Subnational-level information on mobile phone ownership by location (urban/rural) or gender is not available. However, there are large disparities observed at the national level. In Burkina Faso, 56 percent of persons aged 15 or older living in the rural areas owned a phone, compared with 87 percent of those living in urban areas. About 80 percent of men owned a mobile phone, against 52 percent of women (Institut National de la Statistique et de la Démographie 2015). In Niger, the rate of phone ownership in the rural areas was about half of the rate registered in urban areas (33 vs 72 percent, respectively) by 2014. Similarly, more men than women own a mobile phone (59 vs 25 percent, respectively) (Ministère de l'Economie et des Finances 2016). It is likely that these trends are also present in the RISE II program areas.

Table 12. Major mobile phone operators in Burkina Faso and Niger

Provider	Market share (%)
Burkina Faso (2015)	
Telmob (ONATEL, state-owned)	47
Telecel	17
Airtel (Orange)	36
Niger (2016)	
Airtel	56
Orange	24
Moov	15
Sahel Com (Niger Telecom, state-owned)	5

Source: *ARCEP (2016); and Deloitte (2017)*

Table 13. Mobile phone ownership, Burkina Faso and Niger, 2014

Country	Proportion of persons over 15 years of age (%)
Burkina Faso	64.3
Centre-Nord	61.4
Est	47.8
Niger	40.8
Maradi	27.4
Zinder	32.9

Source: *Institut National de la Statistique et de la Démographie (2015); and Ministère de l'Economie et des Finances (2016).*

Table 14. Use of mobile phones in surveyed villages in RISE II program areas

Country	Calls	Money transfer	SMS	Main operators
Burkina Faso	16/16*	9/16	5/16	Telmob (11/16)
Niger	16/16	3/16	9/16	Orange (14/16)

**Note: numbers shown refer to the number of villages out of 16 villages with access to mobile phone technology*

Source: *FEWS NET (2017a, 2017c).*

The majority of the villages visited during the assessment in both countries has access to mobile phone technology (32 out of 36 villages, or 16 villages in each country). In all cases, the main use of the phone is for making phone calls (Table 14). In Burkina Faso, the second most frequent use is money transfers, and the third is text messaging (SMS). In Niger, texting is the second most frequent use of the phone and transfers are rather uncommon. Telmob and Orange are the main operators used, and were often identified as the only network available in the assessment areas.

Among the main constraints hindering a more widespread use of mobile phones are: affordability of mobile services and of the phone itself, insufficient network infrastructure (particularly in rural areas), and high sector-specific taxes and fees. An example of high costs is the cost of the typical monthly subscription to voice and SMS services, which in 2014 amounted to XOF 7,700 (US$13) in Niger. This level is equivalent to most of the monthly income for the poorer households at the time (Deloitte 2017).

The limited economic capacity of most mobile phone users has resulted in the preference for pre-paid accounts over monthly subscriptions (Hahn and Kibora 2008).

2.3.5 Financial services coverage and access

Financial inclusion is determined by the combination of access to and usage of financial services, as well as the availability of quality financial products that meet clients' needs. West Africa as a region is characterized by an underdeveloped financial system that is unable to meet the needs of financial services in the broader population ("Financial Inclusion in Africa" 2013). Overall, financial inclusion is low in both countries, but lower in Niger than in Burkina Faso (Table 15). Women, the poor, and rural populations have the most limited access to financial services.

Table 15. Financial activities of persons older than 15 years of age, 2014

Proportion who have:	Burkina Faso (%)	Niger (%)
Account at a bank or other type of financial institution	14.3	6.7
Women	12.6	4.3
Poorest 40 percent	8.8	6.0
Rural	13.0	7.0
Borrowed money in the past year	46.6	70.7
From a financial institution	5.0	1.3
From a private informal lender	2.4	1.4
From a store for buying on credit	6.1	3.1
From family and friends	30.4	55.9
From others	2.6	8.7
Debit card in own name	3.3	0.3
Poorest 40 percent	1.3	0.4
Rural	2.7	0.1

Note: "Account" includes mobile-based accounts.

Source: *World Bank (2014).*

Among the major constraints from the financial services supply side are: limited operational and financial capacity of financial institutions; limited coverage of rural areas; incomplete legal framework regulating financial service activities and lack of adherence to it; inadequate infrastructure; governance challenges; lack of products designed for the broader population; and high costs of banking. On the other hand, low income levels, high illiteracy rates, cultural barriers for women, lack of identity cards, high transaction costs, lack of access to electricity, and distance to points of service stand among the major factors influencing access to and use of financial services (Ministère des Finances 2014; "Financial Inclusion in Africa" 2013). Table 16 and Table 17 present an overview of the main actors providing financial services in Niger and Burkina Faso, respectively.

Table 16. Overview of financial service providers, Niger, 2014–2015

Service provider	Number	Names of most important
Commercial banks	11	SONIBANK, BIA Niger, Bank of Africa, Ecobank, Banque Atlantique, Banque commerciale du Niger, BSIC, BRS, BINCI, Crédit du Niger
Decentralized financial service providers	53	ASUSU SA, Taanadi, Capital Finance, MECREF, Kokari, Yarda Tarka Maggia.
Informal financial service providers	Many	Family and friends, money lenders, saving groups ("tontines")
Money transfer operators / national	6	BNIF AFOWA, AL Izza transfert, Niger Poste, Bata Nour, Amana transfert
Money transfer operators / international	4	Western Union, Money Gram, Quick Cash, Money Express
Mobile phone operators with financial services (person-to-person transfers)	3	Airtel, Orange, Moov

Source: *Hoton and Hubert (2013); Ministère des Finances (2014); and Vasudevan et al. (2016).*

Table 17. Overview of financial service providers, Burkina Faso, 2015

Service provider	Number	Names of most important
Commercial banks	13	Ecobank, Bank of Africa, Coris Bank
Decentralized financial service providers	82	RCPB, FAARF, PAMF - BFA, URC - Nazinon, SOFIPE, GRAINE SARL, CVECA BM, APFI - Burkina, Micro Start, URCCOM
Informal financial service providers	Many	Family and friends, purchases on credit, saving groups (“tontines”)
Money transfer operators / national		SONAPOST
Money transfer operators / international		Western Union, Quick Cash
Mobile phone operators with financial services (person-to-person transfers)	2	Airtel (Orange), Telmob ("Mobicash")

Note: Réseau des Caisses Populaires du Burkina (RCPB), Fonds d’Appui aux Activités Rémunératrices des Femmes (FAARF), Première Agence de Microfinance au Burkina Faso (PAMF), Union Régionale des Coopératives d’Épargne et de Crédit du Nazinon (URC), Societé de Financement de la Petite Enterprise (SOFIPE), Caisses Villageoises d’Epargne et de Crédit Autogérées (CVECA), Association de Promotion de la Finance Inclusive du Burkina (APFI), Union Régionale des Coopératives du Centre-Ouest et du Mouhoun (URCCOM).

Source: *Vasudevan et al. (2016).*

With respect to the availability of and/or access to financial service providers in the RISE II program areas, large differences were observed within each country (Table 18). Zinder Region (Niger) appears to have less availability and accessibility to financial services than the other regions visited.

Table 18. Availability of financial service providers in surveyed villages in RISE II program areas (number of villages)

Location	Availability (# of villages*)	Type of service providers	Useof services (average % households)	Most frequent locations cited	Distance (min, max) if location outside village, in km	Average time to reach if location outside village, minutes	Average cost if location outside village, XOF
Burkina Faso							
Centre-Nord	7/8	Caisse populaire, mobile transfer (Mobicash, Orange)	4	Village, commune	16 to 59	68	1,338
Est	10/10	Caisse populaire, mutuel de credit (i.e., GRAIN SAR), bank, mobile transfer (Mobicash, Orange), post office (SONAPOSTE)	21	Commune, Province	4 to 85	75	1,890
Niger							
Maradi	7/10	Mutuel de crédit, caisse populaire (ASUSU, Kishin Zoutchi, Kokari, Anfani Talka), money transfer operators (AL Izza, BNIF AFOWA), mobile	38	Department, Region	5 to 40	56	732

Location	Availability (# of villages*)	Type of service providers	Useof services (average % households)	Most frequent locations cited	Distance (min, max) if location outside village, in km	Average time to reach if location outside village, minutes	Average cost if location outside village, XOF
		transfer (Airtel), bank (Ecobank, BOA, BAGRI, SONIBANK)					
Zinder	2/8	Money transfer operators (AL Izza, BNIF AFOUA), mobile transfers (Airtel), mutuel de credit (ASUSU)	27	Village	--	--	--

*Note: Number of villages reporting having access to financial service providers out of the total number of villages visited, per region.

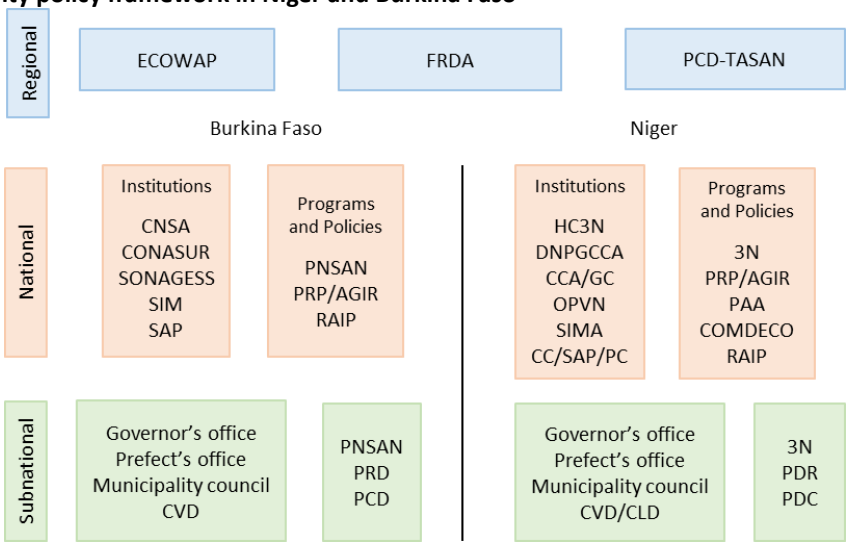
Source: *FEWS NET (2017a, 2017c).*

A previous study documented the microfinance institutions present in Maradi and Zinder Regions in Niger, as follows: Kokari, ASUSU SA, Caisse Populaire d'Épargne et de Crédit (CPEC) Ci Gaba d'Aguié, Kaani, Mutuelle d'Épargne et de Crédit des Femmes (MECREF), Yarda Zinder, Zarda Tarka Maggia de Madaoua, and Banque Agricole (BAGRI) (Hoton and Hubert 2013).

2.4 Food security policy context

Burkina Faso and Niger are members of several continental and regional organizations and agreements, including the African Union, the New Partnership for Africa's Development (NEPAD), the Economic Community of West African States (ECOWAS), the West African Economic and Monetary Union (WAEMU), the Permanent Interstate Committee for Drought Control in the Sahel (CILSS), G5 Sahel, and the Community of Sahel-Saharan States. All have a food security component in their mandates, which is a priority for their member states, and all either explicitly or implicitly promote resilience programs. Several initiatives are in place in both countries at both national and subnational levels, focusing on (1) promotion of increased agricultural productivity and trade, and (2) response efforts focusing on food security early warning and market information systems. Those initiatives are guided by regional initiatives and efforts and implemented by national institutions in partnership with different international organizations, regional networks, and NGOs (Figure 15).

Figure 15. Food security policy framework in Niger and Burkina Faso



Note: Nigeriens Feed Nigeriens (3N), Coordination Unit for the Early Warning and Disaster Prevention System (CC/SAP/PC), Food Crisis and Disaster Management Unit (CCA/GC), Local Development Council (Niger, CLD), National Food Security Council (CNSA), Communes of Convergence (COMDECO), National Council for Emergency Relief and Rehabilitation (CONASUR), Village Development Council (CVD), National Plan for Disaster and Food Crisis and Prevention and Management (DNPGCCA), ECOWAS Agricultural Policy (ECOWAP), Economic Community of West African States (ECOWAS), Regional Fund

for Agricultural Development (FRDA), High Commission for the 3N Initiative (HC3N), Information and communications technology (ICT), Institut de l'Environnement et de Recherches Agricoles (Burkina Faso, INERA), Institut National de Recherche Agronomique du Niger (INRAN), National Agricultural Investment Programmes (NAIP), Office des Produits Vivriers du Niger (OPVN), Purchase from Africans for Africa (PAA), Ten-Year Agricultural Transformation Program (PCD-TASAN), Regional Development Plan (Niger, PDR), National Food and Nutrition Security Policy (PNSAN), Regional Development Plan (Burkina Faso, PRD), Country Resilience Priorities/Global Alliance for Resilience in the Sahel (PRP/AGIR), Regional Agricultural Investment Programme (RAIP), Network of Structures for the Management of National Food Security Stocks (RESOGEST), Early Warning System (SAP), Market Information System (Burkina Faso, SIM), Agricultural Markets Information System (Niger, SIMA), Société Nationale de Gestion du Stock de Sécurité Alimentaire (SONAGESS).

Source: *Authors' elaboration.*

2.4.1 Regional-level policies, programs and institutions

The ECOWAS Agricultural Policy (ECOWAP) was adopted in 2005, with a general objective to "contribute in a sustainable way to meeting the food needs of the population, to economic and social development, to the reduction of poverty in the member States, and thus to reduce existing inequalities among territories, zones and nations." The three major themes of ECOWAP are: (1) increasing the productivity and competitiveness of West African agriculture; (2) implementing a trade regime within West Africa; and (3) adapting the trade regime vis-à-vis countries outside the region (Economic Community of West African States (ECOWAS n.d.)

ECOWAP was adopted as an instrument for the coordination of the Comprehensive Africa Agriculture Development Programme (CAADP) and the agricultural component of NEPAD within the region. The implementation of ECOWAS/CAADP is based on National Agricultural Investment Programmes (NAIP) and the Regional Agricultural Investment Programme (RAIP). RAIP has six components: improved water management, improved management of shared natural resources, sustainable, development of farms, development of agricultural value chains and the promotion of markets, prevention and management of food crises and other natural catastrophes, and institutional strengthening (ECOWAS n.d.).

The implementation of ECOWAP/CAADP and RAIP aims to reduce food insecurity and the structural vulnerability of populations through social safety nets. The defined objective is to establish regional instruments to support national capacity to prevent and manage food crises and reduce the vulnerability of poor populations (in both rural and urban settings) by strengthening existing national food security stocks and also building up a regional food reserve. To accelerate implementation, ECOWAS established a Task Force with the main stakeholders involved with the regional security reserve. They include regional institutions (ECOWAS, WAEMU, CILSS, RESOGEST), relevant national structures, actors from the private sector and civil society, and international organizations such as WFP and the Food and Agriculture Organization of the United Nations (FAO) or bilateral or multilateral cooperation agencies (ECOWAS 2012). Its work involves national capacity building in terms of security stocks, strengthening cooperation between countries, putting in place a network of national companies and agencies responsible for the management of security stocks (RESOGEST), and progressively establishing a regional food security stock (ECOWAS 2012).

The size (MT) of the regional security reserve was determined following a historical analysis of the food needs of the ECOWAS populations affected by a political crisis, a "natural" shock (flood, drought, etc.), or a "price" shock like the one of 2008, and for which an emergency intervention was necessary. The estimated quantities are calibrated to the biggest shock so that the reserve is able to deal with most situations; they also take population growth into account (Table 19, ECOWAS 2013).

Table 19. Sequential approach to establishing the target regional security reserve volume

Component	Year 1–4	Year 5–7	Year 8 +
Physical stock (MT)	60,000	100,000	140,000
Financial reserve (MT)	116,000	194,000	271,000
Total reserve (MT)	176,000	294,000	411,000

Source: *ECOWAS (2013).*

The commodity composition of the physical reserve was defined on the basis of the regional food systems in line with the major production basins as well as the storage suitability of commodities. The commodities that were recommended first are cereals (millet, sorghum, maize, rice) and tubers (gari). The supply comes primarily from regional production, which could contribute to market opportunities. Other modalities include tenders and purchase options. The selected storage sites are: northern Nigeria/Niger (East); southern Mali, Burkina Faso, northern Ghana (Center); Senegal (Atlantic West); and Guinea/ Liberia/ Sierra Leone (Atlantic Gulf). The quantities stored at the different sites are correlated with the projected needs. The East and Center areas – which Niger and Burkina Faso belong to – account for 96 percent of the physical reserve, given the magnitude of the needs of landlocked Sahelian countries (ECOWAS 2013).

The mobilization of the reserve is triggered by decision of a Management Committee, based on vulnerability analyses provided by the Cadre Harmonisé forecasting food insecurity of at least Integrated Food Security Phase Classification (IPC) Phase 3 (Crisis) in a given country. Donor support is focused on the physical component of the reserve. The financial reserve is to be funded by ECOWAS Commission's own community levy (ECOWAS 2013).

Another initiative implemented at the regional level is the Regional Fund for Agricultural Development (FRDA), which is intended to support national governments in the implementation of national resilience priority activities (Country Resilience Priorities/Global Alliance for Resilience in the Sahel, PRP-AGIR) and the priorities of the WAEMU Ten-Year Agricultural Transformation Program (PCD-TASAN).[4]

2.4.2 Institutions, policies, and programs in Burkina Faso and Niger

The following tables summarize the main food security and key development policies and programs being implemented at both national and subnational levels in Burkina Faso and in Niger by both government and civil societies as well as key partner organizations. In Burkina Faso (Table 20), the National Food and Nutrition Security Policy (PNSAN), under the direction of the National Food Security Council (CNSA), is the policy framework for food and nutrition security interventions in the country. The SONAGESS is responsible for stocks, and the market information system, while the Early Warning System (SAP) manages the food security information and data. Regional and provincial officials, elected authorities and civil society are involved with the implementation and monitoring of subnational-level activities. There are also partners' programs and projects implemented by international organizations and/or NGOs, including the Burkina Faso PRP-AGIR. The Burkina Faso RAIP (2016–2019) is also being implemented.

Table 20. Burkina Faso's specific food security institutions, policies, and programs

Level	Institutions, policies and programs	Description
National	National Food and Nutrition Security Policy (PNSAN)	- Policy framework for food and nutrition security interventions in Burkina Faso, with the overall objective of ensuring food and nutritional security by 2025 - Its five strategic objectives are: i) increasing food availability to meet needs in a sustainable manner ii) strengthening capacity and response to food and nutrition crises iii) improving physical and financial accessibility to food iv) improving the nutritional status of the population v) strengthening the governance for food and nutrition security (Government of Burkina Faso 2013)
	National Food Security Council (CNSA)	- Steering committee of public and private actors with a common interest in and focus on food security which brings together the government, technical and financial partners, and NGOs, chaired by the Prime Minister - Decision making is typically informed by specialized and commissioned studies and analysis
	National Council for Emergency Relief and Rehabilitation (CONASUR)	- Responsible for national-level coordination of emergency and rehabilitation assistance[5]
	Société Nationale de Gestion du Stock de Sécurité Alimentaire (SONAGESS)	- Responsible for the management of food security stocks, in-kind food assistance provided by the government, and the market information system (SIM) - SIM seeks to ensure the transparency of market actors, and to provide timely and relevant information to decision makers interested

[4] Burkina Faso and Niger are among the 10 countries in the region that have validated their national resilience priorities.

[5] CONASUR also has subnational structures, but they are not perceived as being fully functional.

Level	Institutions, policies and programs	Description
		in food crisis prevention and management
	Early Warning System (SAP)	Responsible for collecting, processing and disseminating information on food and nutrition crises
Subnational	Regional governorates	- Coordinate the various food security and development interventions, supported by prefects at provincial levels - Their mission is to ensure that actions are in line with national guidelines in terms of food security and resilience - Adopted a Regional Development Plan (PRD)
	Municipality councils	- Informed of actions that are undertaken, but do not seem to be involved in decision making and have limited capacity in their Municpality councils to monitor activities - Adopted Communal Development Plans (PCD)
	Village Development Councils (CVDs)	- Work under the authority of Munipality councils - Responsible for: targeting assistance beneficiaries, mobilizing the population for community work, managing shops (inputs and agricultural products), and providing agricultural equipment
Partnerships	Burkina Faso Country Resilience Priorities (PRP)	- A key food security assistance and resilience program underway (Global Alliance for Resilience (AGIR) 2017)
	Burkina Faso Regional Agricultural Investment Programme (RAIP)	- Covers 27 communes in Est Region and 18 communes in Centre-Nord Region - Key project activities underway in both RISE II program areas include warrantage, support for livestock replenishment for poor households, support for cowpea production and marketing among women, and infrastructure construction (e.g., shops, livestock markets, pastoral drilling) (FEWS NET 2017a)

Source: *Authors' elaboration.*

In Niger (Table 21), the 3N Initiative, known as "Nigeriens Feed Nigeriens," has been the reference framework for all interventions since 2011, through the Sustainable Food and Nutrition and Food Security Strategy and the Socio-Economic Development Program. The implementation 3N Initiative lies with the High Commission for the 3N Initiative (HC3N). Other key food security institutions and steering committees include the National Plan for Disaster and Food Crisis and Prevention and Management (DNPGCCA), the Niger Staple Food Agency (OPVN), the Cellule Crise Alimentaire et Gestion des Catastrophes (CCA/GC), the Agricultural Markets Information System (SIMA), and the Coordination Unit for Early Warning and Disaster Prevention System (CC/SAP/PC). As in Burkina Faso, respective subnational officials, elected authorities, and other local actors are also heavily involved in programs and projects. There are important assistance and partner-supported programs, such as the Purchase from Africans for Africa (PAA) and the "communes of convergence" (COMDECO) approach. The Niger RAIP is also underway.

Table 21. Niger's key food security institutions, policies, and programs

Level	Institutions, policies and programs	Description
National	Nigeriens Feed Nigeriens (3N Initiative)	- A program to protect people of Niger from hunger and guarantee them the conditions for full participation in national production and the improvement of their incomes - Reference framework for all interventions, through the Sustainable Food and Nutrition and Food Security Strategy and the Socio-Economic Development Program - The 3N Initiative has five strategic axes:

Level	Institutions, policies and programs	Description
		i) increasing and diversifying agro-sylvo-pastoral and fisheries production ii) regularly supplying rural and urban markets with food and agri-food products iii) improving resilience of vulnerable groups to climate change, crises, and disasters iv) improving nutritional status of Niger citizens v) ensuring facilitation, coordination of the 3N Initiative and the impetus for reforms (Haut Commissariat à l'Initiative 3N, 2015) - The main stakeholders are the government, the National Assembly and local governments (regions and communes), the private sector, civil society, farmers' organizations, technical and financial partners, and regional cooperation institutions
	High Commission for the 3N Initiative (HC3N)	- Responsible for directing, coordinating, and monitoring and evaluating the 3N initiative
	National Plan for Disaster and Food Crisis and Prevention and Management (DNPGCCA)	- Key element for policy orientations and decisions, coordination, monitoring and evaluation, and a multi-stakeholder steering committee - Main stakeholders are the government, the National Assembly and local governments (regions and communes), the private sector, civil society, farmers' organizations, technical and financial partners, and regional cooperation institutions
	Niger Staple Food Agency (OPVN)	- A pillar of government support to producers and assistance to vulnerable groups, as it purchases cereals and ensures their distribution, or sells cereals at a lower price than the market price
	Food Crisis and Disaster Management Unit (CCA/GC)	- In charge of assessing food aid needs, preparing and implementing plans to support vulnerable populations, and coordinating the implementation of responses to food disasters and crises
	Agricultural Markets Information System (SIMA)	- The primary and specialized government-funded MIS, housed within the Ministry of Commerce - As part of the DNPGCCA, seeks to provide information for market transparency and efficient food security policy actions
	Coordination Unit for Early Warning and Disaster Prevention System (CC/SAP/PC)	- In charge of monitoring food-, nutrition-, health-, and pastoral-related information and data in order to provide alerts for vulnerable populations and those in risky areas
Subnational	Governors	- Lead actors of 3N Initiative implementation, prefects complement efforts at departmental level - Each region, including Maradi and Zinder, has a regional 3N Initiative coordination committee - Validated Regional Development Plans (PDRs)
	Municipality Councils	- Actor in 3N implementation at commune level - Involved along with technical services in various NGO-supported activities - Validated Communal Development Plans (PDCs)
	Local Development	- In charge of canton- and village-level socio-economic development

Level	Institutions, policies and programs	Description
	Councils (CLDs) and Village Development Councils (CVDs)	activities
Partnership	WFP, FAO, the Brazilian government, and the UK Department for International Development (DFID)	- Jointly implementing the Purchase from Africans for Africa (PAA) initiative, seeking to promote food and nutrition security and income generation for smallholder farmers through local food purchase initiatives in five African countries south of the Sahara, including Niger ("Purchase from Africans for Africa (PAA)" 2017)
	United Nations (UN)	- Supporting HC3N in the "communes of convergence" (COMDECO) approach, designed around the concept of building community resilience in an innovative and multisectoral way based on geographic, programmatic, and operational convergence, which promotes complementarity between interventions and the transition from emergency to sustainable development activities - A pilot program launched in 2013 targeted 35 communes of convergence, many overlapping with the RISE II program areas (see 6. Considerations for Program Design in RISE II Program Areas for map details) (Haut Commissariat a l'Initiative 3N 2013)
	Niger Regional Agricultural Investment Programme (RAIP)	- Supported the implementation and/or finalization of production intensification projects as well as the improvement of vulnerable populations' access to food
	Country Resilience Priorities/Global Alliance for Resilience in the Sahel (PRP/AGIR)	- Enhances 3N Initiative efforts through four priority areas validated in 2015: i) improving social protection for the most vulnerable communities and households ii) strengthening nutrition for vulnerable households iii) sustainably strengthening agricultural and food productivity and incomes of vulnerable households iv) strengthening the governance of food and nutrition security

Source: *Authors' elaboration*

2.5 Regional trade policy context

Burkina Faso and Niger are both members of ECOWAS, a regional economic union of 15 countries located in West Africa, as well as WAEMU, a currency and customs union (Figure 16). ECOWAS aims to create a single trading bloc through economic cooperation. The economic activities to be integrated into this trading bloc include industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial issues, and social as well as cultural matters (ECOWAS 2017a). On the other hand, WAEMU is comprised of eight-member States (Figure 16) of predominantly Francophone countries that also share the CFA Franc currency (XOF). WAEMU seeks, among other things, to create a common market based on the free movement of persons, goods, services, and capital (WAEMU 2003). These regional agreements frame the policy context in both Niger and Burkina Faso for importing commodities from international or regional markets for use in in-kind distributions.

2.5.1 Taxes and fees

ECOWAS has an applicable value-added tax (VAT) on goods and services aiming at generating tax revenues for the community. To finance its institutions and raise funds for projects and programs, ECOWAS established a regional levy of 0.5 percent on goods from non-ECOWAS member States, but the measure has yet to be properly implemented by all member States. Niger has had so many late payments that it has to temporarily apply the community levy at 1 percent (Réseau National des Chambres d'Agriculture du Niger 2010). As for Burkina Faso, the issue has been administrative delays between recoveries

and remittances to ECOWAS account according to a Parliamentary report. Also, ECOWAS recently noted that some products (unspecified in the report) included in the scope of the community levy were erroneously exempted (Sakande et al. 2017). ECOWAS's future mechanisms to be designed and/or implemented include a regional customs system (ECOWAS 2017b).

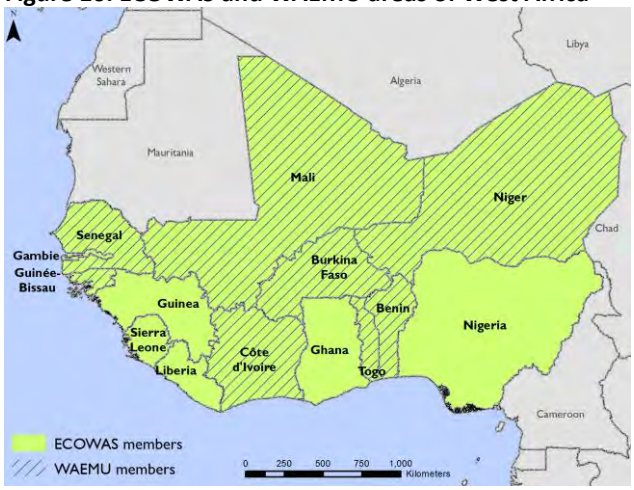
Trade regulation within WAEMU is defined since 1996 by a transitional preferential tariff regime that ensures a full exemption of import duties and taxes on domestic products, traditional arts and crafts, and industrial products of origin (WAEMU 1999). The regulation of trade with all third countries, irrespective of their entry point into the WAEMU zone, has been defined by the *Tarif Extérieur Commun*, the common external tariff (TEC), since 2000. The scheme of the TEC is categorization, permanent duties and taxes, and temporary duties and taxes. Categorization is organized along essential social goods in an exhaustive list: basic goods, raw materials, capital goods, and specific inputs; inputs and intermediate products; and staples and other products not included. The rates of the permanent duties and taxes go from 0 percent to 20 percent, along with a community levy for solidarity of 1 percent and a 1 percent statistical fee. And finally, temporary duties and taxes are the Degressive Protection Tax and the Conjunctural Import Tax. Both are determined at the request of a member state following high-level expert meetings (WAEMU 1999).

Since most countries in West Africa, including Burkina Faso and Niger, are net rice importers, it should be noted that the TEC ranges from 5 percent to 45 percent for rice, depending on the type and VAT application in each country. Rice imports in WAEMU countries attract a maximum customs duty rate of 10 percent plus the 1 percent statistics fee and 1 percent solidarity tax. Registered humanitarian organizations face no import customs duties in Burkina Faso, though VAT taxes of 18 percent are applied in the retail market. On the other hand, the harmonized and lower duties on rice imports by WAEMU countries also create incentives for smuggling in neighboring non-WAEMU countries such as Nigeria (Fintrac 2009). As for Niger, tax exemptions for commercial imported food commodities can be authorized by the government exemption service (housed within the

Customs Directorate General) only in special cases, otherwise food commodities are subjected to internal VAT of 19 percent (Fintrac 2011) and other customs-applied taxes as mandated by the 2013–2014 finance law.

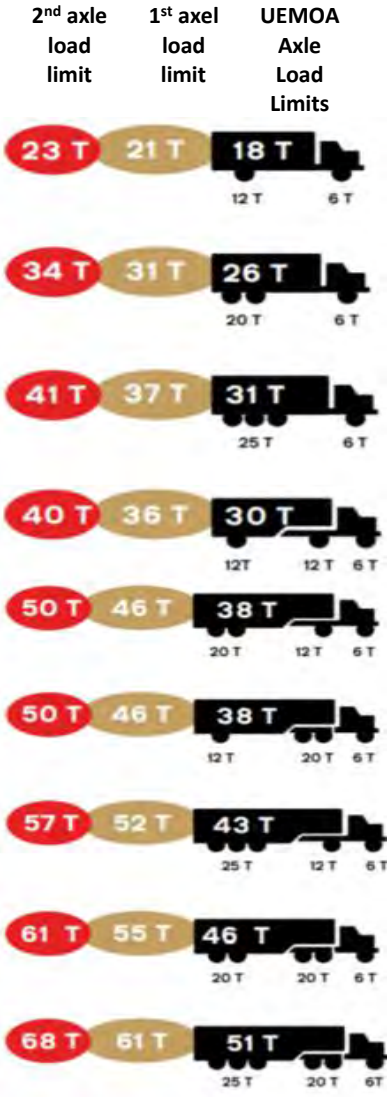
Looking at recent practical project examples from various implementing partners, commodities procured abroad (either US Title II commodities or otherwise) were shipped to Burkina Faso through the ports of Togo, Ghana, Benin, and Côte d'Ivoire, and moved by road from there to a central

Figure 16. ECOWAS and WAEMU areas of West Africa



Source: *ECOWAS (2017a) and WAEMU (2017).*

Figure 17. WAEMU axle load limits



Note: Up to limit 1: No fine. Up to limit 2: Fine to be paid, but it is not required to unload the excess cargo.

Source: *West Africa Trade Hub (WATH) (2010).*

distribution point (CDP) in Ouagadougou before being transported to end distribution points (EDPs). Customs requirements in Burkina Faso were reported to be considerably tightened, with a phytosanitary tax and fees for provisional quality assurance certificates (WFP 2016a). For Niger, internationally and regionally procured commodities mainly come through the ports of Benin and Lomé before transiting via road to Dosso and then on to regional and department-level EDPs (Figure 10). Cases of food arriving late are reported due to congestion of ports or long road times (WFP 2016b).

Some of the major challenges to regional trade are harassment and illegal fees along the roads, causing substantial additional costs. A recent analysis of various abnormal practices (*observatoire des pratiques anormales/*OPA) reports by the African Development Bank over the period 2008 to 2013 found elevated numbers per trip of checkpoints, average illicit payments, and control times and travel delays (though these are slightly declining) (African Development Bank (AfDB) 2015).

2.5.2 Axle load limits

Like most African countries, Burkina Faso and Niger are faced with high transport costs due to poor road infrastructure, long distances and travel times, and expensive and poor-quality road freight transport services. In addition, axle load limits are not very well respected by transport actors, who load their trucks as much as possible to reduce their costs per trip, leading to frequent and rapid degradation of the few roads (La Commission de l'UEMOA 2014). Hence for all axle loads, WAEMU regulated in 2009 a limit of 11.5 metric tons (MT) per single axle and 4 meters in height above the road surface, in line with its 2005 regulation (Le Conseil des Ministres de l'UEMOA 2005), which states that ECOWAS members should adopt common standards and procedures for control of the gauge, weight, and axle load of every vehicle (Fintrac 2009). The limits of axle load quantities for different sized trucks and semi-trucks are detailed in Figure 17.

To monitor the implementation of axle load limits on the region's main corridors, WAEMU put in place an OPA. The key OPA-monitored corridors involving Burkina are Tema-Ouagadougou, Ouagadougou-Bamako, Lomé-Ouagadougou, and Abidjan-Ouagadougou. In addition, a partnership between WAEMU and CILSS covers agri-food products on four other corridors involving both Burkina Faso and Niger: Bouaké-Niamey, Ouagadougou-Ashaiman, Parakou-Niamey, and Pouytenga-Parakou (La Commission de l'UEMOA 2014).

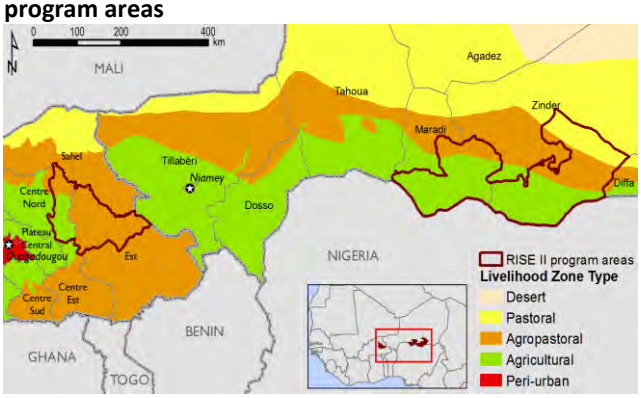
2.5.3 Import procedures and processes

From WAEMU accounts, the procedure for importing goods from Burkina Faso involves mainly the following steps: (1) a prior import request or declaration required in all customs regimes; (2) a national compliance certificate issued at both the Ministry of Trade and the National Public Health Laboratory to certify the weight, quality, quantity, packing, and labelling of goods based on the technical standards and regulations enforced; (3) a certificate of origin of the goods from the supplier accompanying the imported goods to the Customs Services to have WAEMU export duties and taxes exemption; (4) compulsory inspection before shipment; and (5) the payment proceeds domiciliation with an approved intermediary bank and its payment subjected to the signing off of an import certificate or a business contract (Investire en Zone Franc (IZF), n.d.). Similarly, for Niger there are four steps: (1) import intention; (2) certificate of origin; (3) compulsory quality inspection; and (4) domiciliation of imports payment (Investire en Zone Franc (IZF), n.d.). For specific import documents needed for international trade, according to the World Bank's Doing Business report (2017), in Burkina Faso they are: commercial invoice, packing list, pre-import declaration, electronic cargo tracking note, acquis de passage, declaration of release for consumption, and the certificate of conformity (World Bank Group 2016a). For Niger: commercial invoice, insurance certificate, certificate of origin, bill of lading, cargo tracking note, customs import declaration, packing list, and the certificate of conformity (World Bank Group 2016b).

3. Livelihood Systems

This chapter provides an overview of the livelihood systems and main sources of income and food in the livelihood zones present within the RISE II program areas in Burkina Faso and Niger. The review is based on secondary data complemented by primary data gathered during the field assessments.

Figure 18. Map of livelihood systems in RISE II program areas



Source: *Authors' elaboration based on FEWS NET (2011, 2010).*

The RISE II program areas, specifically Centre-Nord and Est Regions of Burkina Faso and Zinder and Maradi Regions of Niger, have much in common in terms of the fragility of agriculture-based subsistence strategies and ever-present exposure to chronic and acute shocks, including natural hazards, economic disruptions (especially, price volatility), and the looming risk of food insecurity, particularly among a largely poor and rural population. Livelihood patterns reflect important shared characteristics (Figure 18): both countries are landlocked and share a unimodal climate and subsequent dependence on rainfed agriculture, and accordingly, sufficient and consistent rainfall. Both countries consume the same basic staple foods (millet, sorghum, cowpeas), and pastoralism remains a variable but important aspect of household wealth and food access. Livelihood systems and food security in both Niger and Burkina Faso are directly shaped by climate and rainfall. Shared borders and a mutual economic interest in food and livestock flows from one zone to another, and across important regional borders, remain important considerations for food access and availability among local populations. Predominantly reliant on subsistence agriculture, poorer rural populations across the RISE II program areas in Niger and Burkina are also predictably dependent on market forces and purchasing power to meet basic food needs.

Rainfall and climate patterns wield considerable influence over primary livelihood strategies across both countries, presenting variations in the proportion of household livelihoods derived from agriculture-, livestock-, and income-based strategies. Other factors that influence the proportional relevance of particular livelihood activities, specifically in Burkina Faso, include the presence of mineral wealth in the country, specifically gold, which presents both formal and informal income-generating opportunity on a nearly year-round basis, driving an increasingly apparent structural shift in the relative importance of crop production and livestock raising in nearby areas (FEWS NET 2015). A study (Sow 2009) notes the fluid nature of livelihood zones across Burkina Faso, between which individuals and communities interact with each other and adjust in dynamic ways to the changing environment, seasonal performance, and opportunities for commerce and income earning, such as migrant labor and cross-border trade. As in Niger, trade in Burkina Faso occurs between zones and across borders, as does livestock migration as herders search for suitable grazing space on a seasonal basis.

Regardless of livelihood strategy, households across the RISE II program areas are dependent on markets to meet a significant portion of their food needs. In the northern and more arid zones of Burkina Faso, crop production is limited by rainfall amount and distribution such that in most years even wealthier groups are unable to meet more than two-thirds of their food needs from staple crop production (FEWS NET 2010). However, bordering zones may experience substantial and reliable enough rainfall to produce significant staple foods and provide surplus supply to structurally deficit regions. Climate change has a noteworthy impact on household livelihood strategies and adaptive techniques undertaken to assure that basic needs are met in the face of climate uncertainty. To absorb the impact of climate hazards such as drought, communities in higher-risk zones in northern Burkina Faso and agropastoral Niger are adopting coping and adaptive practices (Snorek, Stark, and Terasawa 2014). In Burkina Faso, these include the selection of new varieties of staple crops, land restoration efforts, selective livestock breeding for better-adapted varieties (particularly small ruminants), and the use of woody forage and crop residues for animal feed where water and pasture are scarce (AGED 2014). In Niger, government-managed social safety net programs provide an additional buffer against interannual variations in food availability and instable food prices.

3.1 Dominant livelihood systems of RISE II program areas

RISE and Title II program initiatives are largely concentrated in Est and Centre-Nord Regions of Burkina Faso and in Maradi and Zinder Regions of Niger. These regions extend over several designated livelihood zones, specifically BF05 Central Plateau Cereals and Market Gardening and BF07 North and East Livestock and Cereals in Burkina Faso; and Agropastoral Belt (NE04), Rainfed Millet and Sorghum Belt (NE05) and the Southern Irrigated Cash Crops (NE07) in Niger. In addition to multiple

similarities reflected in the overall pursuit of household food security, these zones exhibit differences in the primary strategies used to obtain basic food needs across wealth levels (Table 22).

Table 22. Key RISE II rural livelihood zone cash income sources and food consumed, Niger and Burkina Faso

Country	Livelihood zone	Dominant system	Main cash income sources	Main foods consumed	Population residing in RISE II program areas
Burkina Faso	BF05 Central Plateau Cereals And Market Gardening	Agricultural	Casual labor, gold mining, livestock sales, remittances	Sorghum, millet, maize, cowpeas	309,049
Burkina Faso	BF07 North and East Livestock and Cereals	Agropastoral	Gold mining, casual labor, livestock sales, crop sales	Sorghum, millet, cowpeas	783,394
Niger	NE04 Agropastoral Belt	Agropastoral	Casual labor and remittances, livestock sales, crop sales, self-employment	Millet	1,067,877
Niger	NE05 Rainfed Millet and Sorghum Belt	Agricultural	Casual labor and remittances, self-employment, livestock sales, crop sales	Millet	1,058,766
Niger	NE07 Southern Irrigated Cash Crops	Agricultural	Casual labor and remittances, crop sales, self-employment, petty trade, livestock sales	Millet	1,480,648

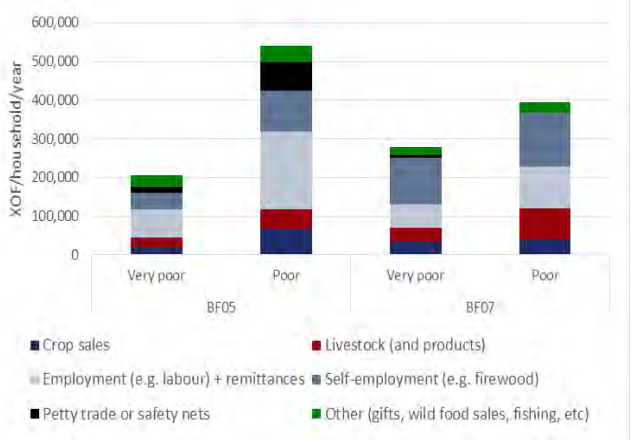
Note: The main income sources and foods consumed apply to poor and very poor households. Households across livelihood zones and wealth groups also consume purchased edible oil, salt, and sugar.

Source: *Authors' calculations based on FEWS NET (2010) and FEWS NET (2011).*

3.1.1 Burkina Faso livelihoods systems

Central Plateau Cereals and Market Gardening (BF05): Comprising a significant portion of Centre-Nord Region, this zone extends over a significant portion of Sanmantenga Department, the southern half of Namatenga Department, and most of Bam Department. The BF05 zone also includes parts of Nord Region (Passore, Yatenga, and Zondoma), Centre-Sud Region (Bazega and Zoundweogo) as well as areas in Plateau Central Region (Ganzourgou, Kourweogo and Oubritenga) , Centre-Ouest (Boulkiemde) and Centre-Est (Kouritenga) Regions (FEWS NET 2010). Despite receiving more consistent annual rainfall than its more productive neighbors, the Central Plateau Cereals and Market Gardening zone is among the most food-insecure areas of the country, due largely to structural factors resulting in food production deficits. These include small-scale, subsistence-level household production, which is an outcome of population density and limited arable land assets, and degraded land, which is less productive overall. The centralized location of this zone, and an active market

Figure 19. Cash income sources, poor and very poor households, RISE II livelihood zones of Burkina Faso (XOF/household/year)



Source: *Authors' calculations based on FEWS NET (2015).*

network that includes primary markets of Pouytenga and Ouahigouya, enhance the strategic importance of non-agriculture-based income-earning strategies such as mining and gold sales. Poultry marketing and the production and sale of market-garden crops are also indicative of strong market integration in this area.

Typically, households across all wealth groups rely heavily on their own crop production, as well as market purchase, to meet basic food needs. To meet food needs through market purchase, households rely on an unusually diverse selection of cash-earning activities (Figure 19). Wealthy households can generate income through animal sales, while poorer households rely more heavily on the sale of natural products and agriculture-based labor. Income derived from gold-mining activities is significant across all wealth groups, a unique feature of the zone's economy. Roughly 98 percent of all artisanal mining activities in the country take place within BF05 (FEWS NET 2015). Increasingly competitive wages in the gold-mining sector have drawn workers from agricultural areas, resulting in an observed decrease in farm-based labor availability.[6] The sustainability and longer-term impacts of any associated livelihoods transition from agriculture to wage labor in the mining sector are unclear and merit further analysis.

North and East Livestock and Cereals (BF07): This zone expands across the northern half of Burkina Faso, touching the key program areas for current USAID-funded resilience programing. Specifically, BF07 includes parts of Sahel Region (Soum, Séno, and Yagha) and Est Region (Gnagna and Komondjari) as well as areas in Centre-Nord (Bam, Namentenga, and Sanmatenga) and Nord (Loroum and Yatenga) Regions (FEWS NET 2010). Rainfall variations across the zone correspond with variations in livelihood patterns, specifically the degree of reliance on agriculture to meet household food needs. Rainfall in the southeast part of the zone (Yagha and Komondjari) is typically more plentiful and reliable (500–700 mm annually) than in the west (Soum and Séno), which receives 400–500 mm per year. As a result, millet is the main cereal in the western part of the zone, and sorghum in the east (FEWS NET 2010).

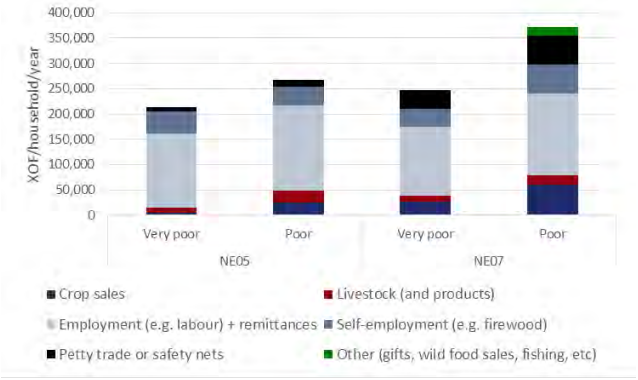
Livestock and landholdings reflect the degree of household wealth in this zone. Wealthier households tend to retain bigger herds and larger plots of arable land, whereas poorer households value the number of able-bodied workers who can bring in additional income. In a typical year, income factors importantly in food access strategies; poor and very poor households obtain about 50 percent of their food needs from the market. This level of market dependence imports a considerable level of vulnerability to price fluctuations of local staple grains, which occur with some frequency.

Gold mining features prominently as an income-earning opportunity for all wealth groups. The zone hosts multiple industrial mines (Inata, Taparko, and Essakane) that provide formal employment. Smaller sites in the zone attract more artisanal mining and traditional prospecting activities, especially in Solhan, Gangoal, Gaigou, GoulGountou, and Silmadjo. Activities associated with mining, including remittances and labor migration, comprise roughly 50 percent of income for poorer households.

3.1.2 Niger livelihood systems

Rainfed Millet and Sorghum Belt (NE05): Encompassing southern Tillaberi, Dosso, southern Tahoua, southern Maradi, southern Zinder, and southern Diffa, this area is characterized by concentrated rainfall deficits, and a generally high dependence on subsistence and local production to meet household food needs. High population density and overcrowding of arable land is an important consideration in understanding food security drivers; despite being one of the more productive areas of Niger, this zone is chronically at risk of food insecurity and historically presents some of the most consistent and alarming food security indicators, particularly malnutrition. Interaction with Nigerian markets is very important for marketing of food and agricultural production, particularly staple cereals, livestock, labor, and cash crops. The relationship between Nigerien and Nigerian markets can be described as interdependent and migrant labor is a key pillar of livelihood stability and food access for poor households, particularly across the border in Nigeria (FEWS NET 2014).

Figure 20. Cash income sources, poor and very poor households, RISE II program areas of Niger (XOF/household/year)



Source: *Authors' calculations based on FEWS NET (2015).*

[6] Corroborated by FEWS NET unpublished Gold Mining Sector Study, field observation, and Food Economy Group consultation.

Even without a major crop failure in their specific area, dependence on market purchase means that food price hikes on the national market can lead to food shortages and increased risk of food insecurity (FEWS NET 2011). While livestock offer wealthier households increased income and assurance against future food and income shortages, the lack of livestock among the poor contributes heavily to the fact that their cash income even in a good year is one-fifth to one-tenth of that of the better-off (FEWS NET 2011), demonstrating significant economic disparity among wealth groups. Humanitarian and safety net-based food assistance is a common supplement to annual food needs among chronically food insecure households, who are reliant on market purchase, which is often influenced by price drivers originating in Nigerian market systems.

Southern Irrigated Cash Crops (NE07): This zone is somewhat dispersed in smaller pockets across several geographic areas, particularly southeast Tahoua, southwest Maradi, and southern Zinder. The population residing in this zone tends to be wealthier than in other zones, with more specialized agricultural production in the cultivation and sale of onions, fruits and vegetables, and groundnuts. In Maradi, households in this zone produce sesame in addition to garden vegetables, as well as sugarcane and peppers in Matameye and Magaria. Increased and specialized crop production is enhanced by irrigation and the presence of basins in the zone, as well as by more reliable and sustained seasonal rainfall. The intensity of agricultural production in this zone is supported by a high demand for labor. High demand for agriculture-based labor all year provides stable and consistent income and food access for poorer households, who can access sufficient local employment opportunities without much difficulty. Subsequently, the need for cross-border or outward labor migration is much less frequent than in other zones, even across the border to Nigeria (FEWS NET 2014).

3.2 Income sources in RISE II program areas

Most of the population residing in the selected livelihood zones depends on a combination of income-generating activities (Figure 19 and Figure 20). Historically, agriculture provided the vast majority of the population with an important revenue stream, with pastoralism playing an important role in assuring household financial stability and income. The rate of animal ownership is highest among households already practicing agriculture or agropastoralism, nearly 90 percent of the population in Burkina Faso (WFP 2014). Poorer households tend to rely on payment (in-kind and cash) for labor performed, as well as increasing personal debt to supplement food needs in any given year, and especially during difficult years; this strategy is consistently observed across much of the RISE II program areas. The rates paid vary considerable geographically and by task performed (Table 23). At a national level, roughly 86 percent of households in Burkina Faso derive some income from livestock production and trade. In fact, there has been a trend toward increased engagement in pastoralism due to improved access to vaccinations, the availability of heartier breeds, and expansion of institutional support programs (World Food Programme (WFP) 2014).

Table 23. Wages commonly paid to casual laborers in RISE II program areas

Sand cleaning (mining sector) in Burkina Faso	XOF 75,000/month
Construction work in Nigeria	NGN 1,000-1,500/day
Agricultural labor in Niger	XOF 1,300-3,000/day

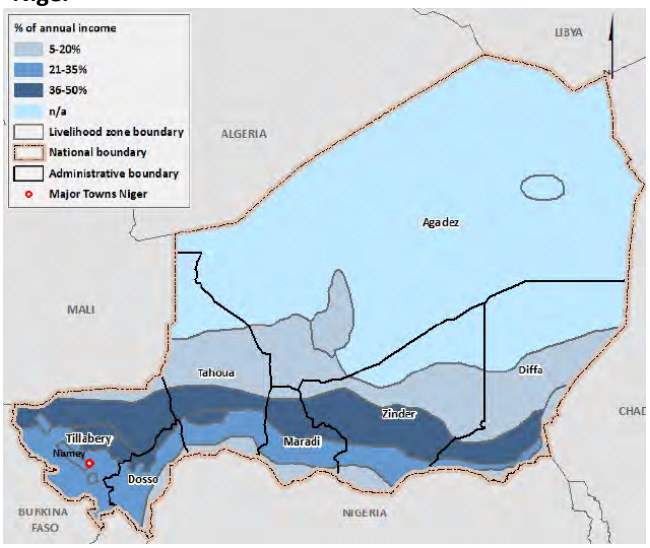
Source: *FEWS NET (2017a, 2017b, 2017c).*

Table 24. Annual average household transfer totals from remittances, Niger (XOF)

Region	Year	
	2014	2015
Maradi	69,451	80,403
Zinder	58,955	87,045
Tahoua	86,902	134,760
Dosso	84,017	96,345
Tillabery	74,857	132,041
Agadez	100,455	151,320
Diffa	51,303	108,864
Rural Average	75,645	115,544

Source: *Institut National de la Statistique (2016b).*

Figure 21. Remittances as a percent of annual income, Niger



Source: *FEWS NET (2014).*

The familiar factors of climate and seasonality are highly influential in terms of labor migration, both internal and external, and how income is derived in both country contexts. For example, in drier zones in northern Burkina Faso (such as BF07), households migrate for work, sometimes to Côte d'Ivoire, and frequently to gold-mining sites (FEWS NET 2010). WFP (2014) notes an observable trend in more diversified income sources, as the proportion of households engaged primarily in agriculture-based livelihood strategies shifted from 52 percent in 2008 to 27 percent in 2012.[7] WFP credits this shift to an increased level of participation in pastoral activities, petty trade (including mining, artisanal crafts, and day labor), and cash crop production. In Niger, labor migration is also an important source of income, with Libya and Nigeria as likely destinations for the pursuit of unskilled labor opportunities (Table 24 and Figure 21). In Zinder Region, nearly 30 percent of households reported that able-bodied laborers migrate for 3–6 months (Institut National de la Statistique 2016b).

Recipients access remittances through a variety of channels. As shown in section 2.3.5 Financial services coverage and access, in the RISE II program areas there are a number of formal channels for transfers such as banks and money transfer operators with national and international links. In addition, mobile phone operators offer person-to-person transfers within the country. As indicated in section 2.3.4, money transfers are the second-most frequent use of mobile phones in RISE II program areas of Burkina Faso. However, a number of factors support the continued use of informal channels, particularly for domestic transfers directed to rural areas. These factors include: low literacy levels and the difficulties associated with accessing money transfer operators in rural areas; transaction costs for both sender and receiver; and the difficulty of ensuring smooth operations of transfer offices in a context of lack of electricity and computer/internet access and literacy. The transport sector is often the backbone of the informal money transfer system in rural areas, as transporters (bus companies, for example) often offer reliable money transfer services at lower fees. Seasonal migrants may not send money and instead bring it home upon return ("Remittance Markets in Africa" 2011).

Table 25. Main income sources in RISE II program areas

Country	Main sources of income
Burkina Faso	
Centre-Nord	Mining, sale of animals or livestock products, sale of agricultural products, small-scale trade of non-food products
Est	Sale of animals or livestock products*, sale of agricultural products, trade of food products (produced elsewhere), mining
Niger	
Maradi	Sale of agricultural products, small-scale trade of non-food products, sale of animals or livestock products, casual labor
Zinder	Casual labor, sale of agricultural products, other non-farm activities, sale of animals or livestock products

Note: *Includes fishery products in some locations.

Source: *FEWS NET (2017a, 2017b, 2017c).*

Beyond agricultural activities and migration (including associated remittances), gold mining is also an important source of income in Burkina Faso (see 3.2.1 Mineral wealth and income generation). Other sources of income play a minor role in total household income in RISE II program areas (Figure 19 and Figure 20). Secondary and primary data sources indicate that humanitarian assistance and safety-net programming are not among the most important sources of income for the populations living in the RISE II program areas in both countries (Table 25).

3.2.1 Mineral wealth and income generation

A significant difference in the overall livelihoods context between Burkina Faso and Niger is the presence of gold reserves in Burkina Faso, particularly in the targeted livelihood zones; this opportunity is not prominent in the livelihoods profile of the RISE II program areas within Zinder and Maradi Regions. The significance of gold mining and associated activities cannot be understated in the selected livelihood zones in the Centre-Nord and Est Regions of Burkina Faso, and to the greater national economy. Gold mining is a critically important income source across the selected zones; income is derived from informal prospecting and manual labor as well as formal sector employment and gold sales; this zone provides income-earning opportunities to poor households in other zones, whose members cross provincial borders to engage in potentially lucrative mining activities. FEWS NET (2015) notes that the income earned from gold extraction-related labor and sales is an important source of remittances as well as earned income for direct household use. Nearly half of miners send roughly 25–75 percent of revenues to their village, primarily to facilitate food purchases for household members (FEWS NET 2015). This amount fluctuates depending on food prices at the time of the transfer. The role of gold mining in labor migration throughout the selected livelihood zones is also important; the FEWS NET study results indicate that Yatenga and Sanmatenga Provinces

[7] Refers to the period during which data for the 2014 report were collected and observed. Additional shifts and changes in income-sourcing strategies may have evolved since the time of data collection and analysis.

provide the most labor to the mining industry, followed by Oudalan and Soum in Nord Region and Bam and Ganzourgou. The FEWS NET study also asserts that income from gold mining and related activities shifted households' dependence on various income-earning activities. For example, revenues from agricultural activities such as staple crop production, cash crop sales, market gardening, and the sale of wild foods have decreased. The field assessment revealed a significant disparity in the wages (in May 2017) paid to laborers engaged in low-skilled mining labor such as cleaning sand (XOF 75,000 per month), compared to daily wages paid for agency-driven cash-for-work (XOF 32,500 per month). Households earning additional income from gold-mining activities are observed to fatten more livestock and accelerate household revenue from the sale of livestock and associated products in the north of the country. [8] While the gold industry in Burkina Faso has expanded rapidly since 2007 and increased individual household economies, systemic changes in poverty levels have not been observed, suggesting a problematic or skewed distribution of wealth from the gold-mining industry as a whole (Zabsonré et al. 2015). Regardless, the role of gold mining in household economies appears to continue to influence the evolution of household and community livelihood strategies throughout the selected zones and merits additional evaluation.

Though endowed with some natural mineral wealth, the mining sector in Niger does not support household economies to the same degree as in Burkina Faso's Centre-Nord and Est Regions. At a national level, various mining opportunities across multiple industries (including oil, cement, coal, gold, gypsum, limestone, salt, silver, tin, and uranium) provide limited employment broadly (Food and Nutrition Technical Assistance III Project 2017b), and for the zones in question.

3.3 Income earned through regional trade

Cross-border economic interdependence, in terms of commercial activity and associated incomes in RISE II program areas, exists in Burkina Faso, but is particularly evident in Niger. Zinder and Maradi Regions share an expansive, critical border with Nigeria, which facilitates the significant exchange of commercial trade, food, animals, and income-earning opportunities. While a more detailed review of the complex relationship between markets and commercial channels in Niger and Nigeria is presented in Chapter 4, the contribution of economic exchange between these two countries and income-earning opportunities in bordering livelihood zones in Niger is important to highlight. In the targeted RISE II program areas, proximity to Nigerian markets is a key factor for the marketing of staple cereals, cash crops, labor, and especially livestock, reinforcing the interdependence of Nigerien markets with cross-border counterparts. Nigerian markets sustain demand for livestock, staple crops, cash crops, and vegetables, which in turn generates income for farmers and agricultural labor needed to produce food commodities for sale across the border. Trade in agro-based commodities generates significant income down the supply chain, from traders to local producers and laborers who support the production of highly valued staple foods and other cash crops, such as cowpeas and onions. Similarly, migrant labor is a key pillar of livelihood stability and food access for poor households, particularly across the border in Nigeria (FEWS NET 2014). In NE07, livestock play a lesser role in the day-to-day household economy of poorer households, but high demand for all animals from Nigerian markets creates a significant revenue source for wealthier households (FEWS NET 2014). The importance of this interdependence cannot be understated, as shocks experienced in Nigeria can be quickly transmitted to many facets of economic life in Niger, as discussed in Chapter 6 in the context of the ongoing macroeconomic crisis in Nigeria.

As in most developing nations, remittance income plays a key role in the household economy in the RISE II program areas of Burkina Faso and Niger. The literature points to outward labor migration, specifically to Côte d'Ivoire, as the primary source of remittance income among the Burkinabe. Niger, Libya, and Nigeria are other common destination zones for seasonal migrant labor. Remittances in Burkina Faso have a significant impact on household economies, and as supplemental income, reducing the headcount poverty of rural and urban populations by 7.2 percent and 3.2 percent, respectively (Bambio 2011). Yaméogo (2014) suggests that in Burkina Faso, most remittance income (69 percent) is spent on food across all wealth groups; poor recipients spend about 72 percent on food, while rich households spend 66 percent. While universal conclusions regarding the proportional contribution of remittances to household economies are not feasible for the purpose of this document, the contribution of remittance income to household food security in high-risk areas has a clear benefit, particularly in difficult years or in the face of unexpected shocks to food and income sources. Overall, remittance income is less significant in macroeconomic terms in Niger than in Burkina Faso (World Bank 2017) but still serves as a critical income supplement, particularly among poor households. Populations in Maradi and Zinder Regions receive a moderate level of remittance transfers compared to other regions, particularly Agadez, Tahoua, and Dosso (Figure 21). Nonetheless, remittances are an important supplement to household income for food purchase; in Zinder, 26 percent of remittance income is used by households to obtain food, the second highest regional allocation of remittance income for this purpose (ONAPAD 2009). In

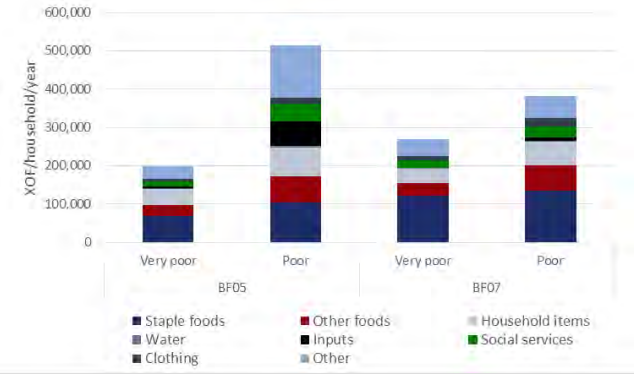
[8] For example, West (2013) describes the feedback from young, able-bodied men in a research study in Bam. These men noted that they periodically earned large sums of money in the gold fields and immediately purchased cattle to store this wealth and start herds.

Maradi, roughly 20 percent of the poorest households receive about 40 percent of all transfers, emphasizing the importance of remittances for household food access in zones where poverty rates are highest (ONAPAD 2009).

3.4 Expenditure patterns in RISE II program areas

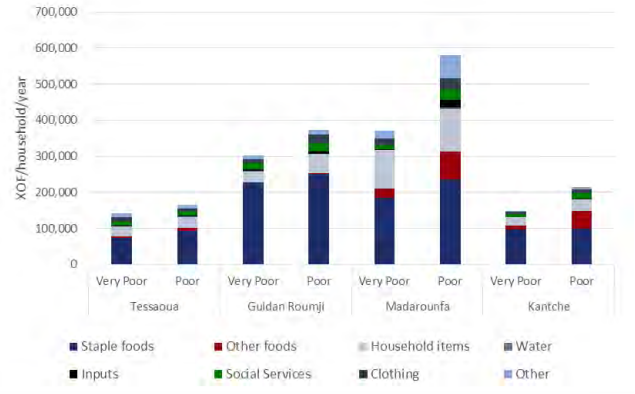
Poor households in the region typically spend the bulk of their income on food purchases throughout the selected program areas. Market dependence is high, if not variable, among livelihood zones; however, cyclical intensification of market purchase is accentuated in less agriculturally productive zones, particularly those in proximity to Sahelien ecosystems. In Niger, poor households spend the greatest portion of their expenses on food (Figure 22 and Figure 23). Between 61–64 percent of total household expenditures are for food, with cereals accounting for approximately 50 percent of household food expenses (Aker et al. 2009). The higher the risk of food insecurity, the more household resources are allocated for food purchase; for example, 70 percent of total household spending in higher-risk populations is for food, and nearly 60 percent of all cash spent is for direct food purchase (Institut National de la Statistique 2016b). Household expenditure patterns correlate with seasonal availability of staple crops. In Burkina Faso, food purchase typically increases once household reserves are exhausted, usually in March, when market purchase becomes more important. In Niger, small-scale producers may balance cash needs by selling some of their harvest to enable nonfood purchases, such as medical care, debt, taxes, or school fees, and keeping a portion of their own crops for household food needs while exploiting the advantage of low post-harvest prices to build up their stocks for the rest of the year (FEWS NET 2014).

Figure 22. Expenditure patterns, poor and very poor households, RISE II livelihood zones of Burkina Faso (XOF/household/year)



Source: *Authors' calculations based on FEWS NET (2015).*

Figure 23. Expenditure patterns, poor and very poor households, RISE II livelihood zones of Niger (XOF/household/year)



Source: *Authors' calculations based on FEWS NET (2011).*

3.5 Staple foods

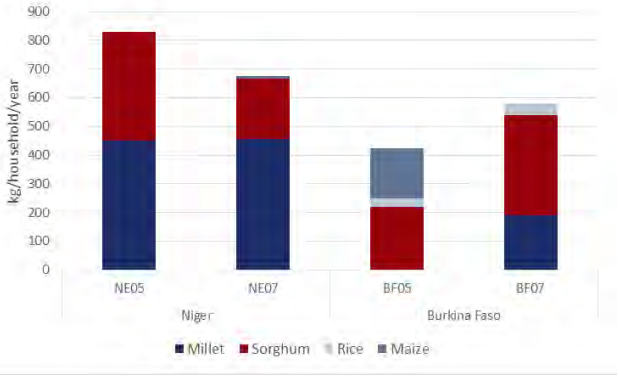
Millet and sorghum are dominant in terms of staple food consumption throughout the selected RISE II program areas in Burkina Faso and Niger. In Burkina Faso BF07, very poor and poor households rely more on their own production to meet food needs than in BF05 (Figure 24). Sorghum, millet, and cowpeas are the most important crops in terms of consumption, while cowpeas, crops from market gardening, millet, and *voandzou* (a local legume, similar to a groundnut) bring in the most revenue in BF05. Rice cultivation, more prominent in BF05, is very localized to the areas around dams and *bas-fonds*—depressions that retain moisture into the dry season. Maize is also commonly consumed and sold in some parts of BF05. Differences are observed between zones. For example, in BF07, wealthy households are more likely to consume rice and proteins. In Niger, households consume an average of 200 kg/per capita/year of millet and sorghum, equivalent to over 1,500 daily calories per capita (FEWS NET 2017i). Almost all households in the RISE II program areas consume foods made from cereal grains such as wheat, maize, rice, sorghum, and/or millet, with less than 20 percent consuming meat or poultry and minimal consumption of eggs and other proteins, such as fish (ICF International 2014). Households produce cash crops, including peanuts, groundnuts, and pulses for sale, using profits for nonfood expenses such as clothing, taxes, and water. Vegetable consumption in Niger's Title II program areas includes some household cultivation of potatoes, peppers, and tomatoes, although households also collect vegetables from local ecosystems (ICF International 2014).

3.6 Food sources

Though subsistence agriculture plays a prominent role in household food consumption of staple cereals, the small-scale and relatively informal nature of household production, and vulnerability to climate shocks, particularly drought and seasonal rainfall anomalies, render agricultural production a potentially high-risk food access strategy from year to year. Poor soils, limited access to quality seeds, fertilizer, and tools, low technology use, and population density are limiting factors that impact production, even in years when seasonal rainfall and climatic conditions are ideal. Households across the RISE II program areas cultivate staple cereals – primarily sorghum and millet, as well as cowpeas, which are consumed and sold – and other cash crops such as peanuts and sesame. Still, buying food at the market is a primary sourcing strategy for poor and very poor households across the RISE II program areas of Niger and Burkina Faso (Figure 25). In Burkina Faso, more than 70 percent of households nationwide rely on market purchase as a primary food source, even though subsistence-level crop production is a consistent sourcing strategy for both food and income (World Food Programme (WFP) 2014).

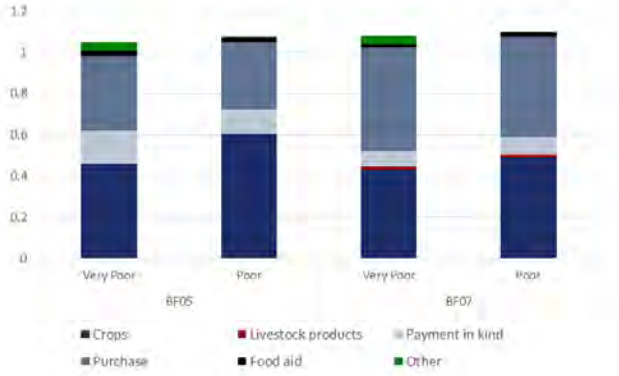
While this statistic masks important variations among livelihood zones and wealth groups, overall, market purchase plays a critical role in household access to food, particularly among the less well-off (Figure 25 and Figure 26). In Burkina Faso RISE II program areas, the poor and very poor demonstrate a particularly high level of dependence on the market to meet their food needs, as well as on a variety of other sourcing strategies such as loans and credit, gifts and donations, and in-kind payment. Obtaining income to purchase food may take a variety of forms, most commonly labor migration and casual/seasonal labor, small-business ventures, cash crop marketing, and animal sales. Households in the selected livelihood zones also obtain food through the sale of livestock and, in the case of poorer households, through the management of herds and animals of wealthier families, for which remuneration may be offered in milk.

Figure 24. Annual cereal purchase, very poor households, Burkina Faso and Niger (kg/household/year)



Source: *Authors' calculations based on FEWS NET (2015).*

Figure 25. Primary food sources for poor and very poor households, RISE II program areas of Burkina Faso



Source: *Authors' calculations based on FEWS NET (2015).*

Figure 26. Primary food sources for poor and very poor households, RISE II program areas of Niger

Source: *Authors' calculations based on FEWS NET (2015).*

4. The Agricultural Market Context in Burkina Faso and Niger

This chapter offers an overview of the structure, conduct, and performance of agricultural markets in the RISE II program areas of Burkina Faso and Niger. The data used for the analysis stem from a variety of secondary data sources, as well as from primary data collected during the field assessments.

4.1 National and regional market context

Agriculture is the cornerstone of the economies of both Burkina Faso and Niger, contributing to 30 percent of gross domestic product (GDP) in Burkina Faso and 50 percent in Niger. In both countries, agriculture employs a large percent of the working population (MAFAP 2013). Cereals (mainly millet and sorghum, maize, and rice) are the primary staple crops, and cowpeas are important cash crops. Cereals and cowpea production increased substantially over the past years throughout West Africa. Nevertheless, national cereal availability does not cover the domestic demand (including that of a rapidly growing and increasingly urban population). Burkina Faso is self-sufficient in coarse grains and cowpeas, but dependent on imported rice and edible oil. Niger is nearly self-sufficient in millet and sorghum and produces a large surplus of cowpeas, but imports maize, rice and edible oil from regional and international markets to meet demand.

Burkina Faso is located in the Central Trade Basin of West Africa (**Error! Reference source not found.**), and is an i mportant hub for cereals, cash crops, and livestock trade. Niger is located in West Africa's East Trade Basin. Its national food system depends heavily on markets in neighboring Nigeria, its largest and most important trade partner. However, and quite frequently, Niger can turn to countries in the Central Basin (Ghana, Ivory Coast, Burkina, Togo, Burkina Faso and Mali) to obtain supplies of cereals such as maize, sorghum, and even millet when the exchange rate or prices in Nigeria are unfavorable. This is the case in 2016–2017 following market disruptions in Nigeria that led to increasing coarse grain prices and trade linkages between southwestern Niger and the Central Basin (particularly Burkina Faso).

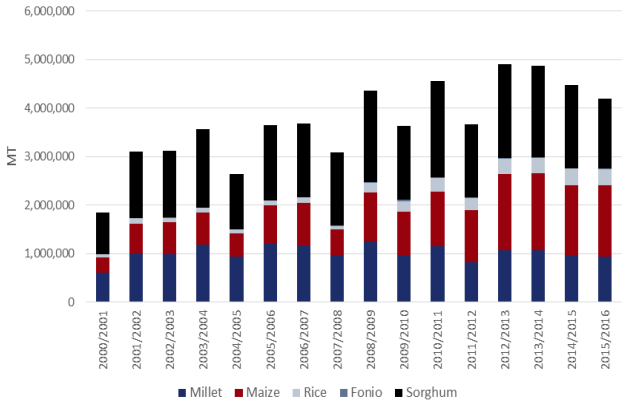
4.1.1 Production

Burkina Faso's total cereal production averaged above 4.3 million MT over the past five years, with sorghum playing a dominant role (**Error! Reference source not found.**). C owpea production is substantial thanks to favorable agroclimatic conditions and existing market incentives. Burkina Faso also has a livestock surplus, which is exported to regional coastal countries, including Nigeria. In Niger, the past five-year average cereal production was above 4.7 million MT. In Niger, production of millet and sorghum is the highest among the cereals, followed by rice and maize (**Error! Reference source not found.**). Cowpeas are a widely p roduced cash crop destined for regional export. Niger also possesses one of the most important livestock herds in the region, the most prevalent of which are ruminants (cattle, sheep, and goats) and poultry.

Figure 27. Marketing basins in West Africa

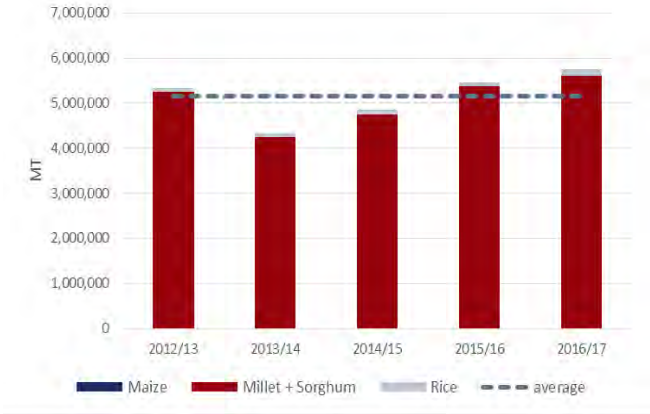
Source: *FEWS NET (2015).*

Figure 28. Cereal production (MT) in Burkina Faso, 2000/01–2015/16



Source: *Authors' calculations based on DGESS/MAAH (2016) data.*

Figure 29. Cereal production (MT) in Niger, 2012/13–2016/17



Source: *Authors' calculations based on MDA (2016) data.*

Crop production in both Burkina Faso and Niger is largely based on rainfed farming systems, and thus remains vulnerable to agroclimatic conditions. Yields are relatively higher in Burkina Faso (Figure 30). Irrigation and other controlled growing systems are mainly used for local rice production.

National seed production, multiplication, and distribution systems are poorly developed in both countries. In Burkina Faso, these three activities are performed by either farmers through seed companies or producers organized in unions. A large part of seed production in the country is purchased and distributed through government channels, although the government has less and less capacity to absorb the fast-growing production. In Niger, the government's role is also predominant, but more in terms of research and extension supports and less in distribution. The latter is increasingly dominated by farmers, seed farms and multipliers, agroenterprises, and partner international organizations (e.g., FAO) and local NGOs.

Furthermore, inadequate crop management and poor post-harvest practices result in high levels of losses. This significantly decreases the production available for consumption, putting additional pressure on local food supplies (FEWS NET 2017c).

4.1.2 Demand

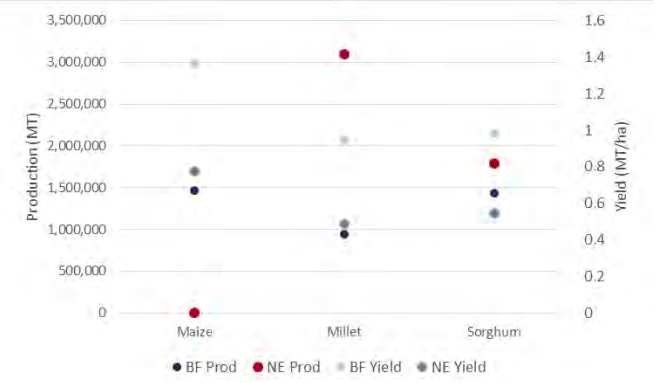
Cereals are the most widely consumed staple foods in Burkina Faso and Niger. Annual cereal consumption in Burkina Faso is estimated at 190 kg per person.

In Niger cereal consumption is estimated between 125–225 kg per person per year, which is among the highest in the region (INS 2014; CILSS 2016; ReSAKSS 2011). Between 50–90 percent of daily calories for Nigeriens come from cereals. Edible oil accounts for less than 5 percent of daily calories, and its consumption is among

the lowest in the region. Households in Niger depend largely on market purchases to meet their staple food needs. Market dependence is most intensive among poor and very poor households in pastoral and urban areas. Purchases vary seasonally, peaking during the lean season.

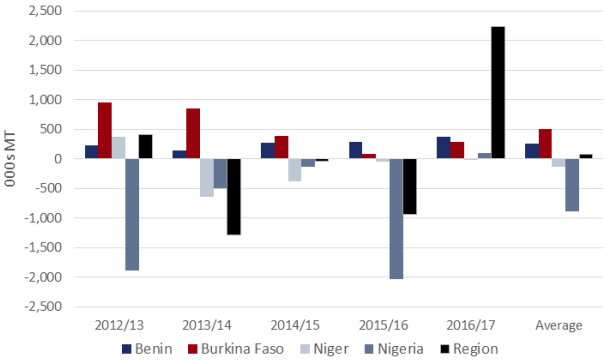
Though Niger is not a surplus producer, it still exports, with flows driven by relative prices and purchasing power in neighboring countries. This happens especially during the post-harvest period, when Nigerian traders often buy from Niger, only to sell back during the lean season (DGESS/MAAH 2016). This is also favored by the low level of diversification of production and income sources in Niger, which forces many poor small farmers to sell their production at low prices at the time of harvest.

Figure 30. Coarse grain production (MT) and yield (MT/ha) in Burkina Faso and Niger



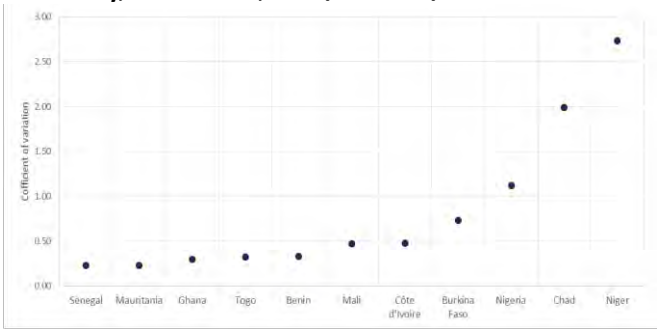
Source: *Authors' calculations based on (DGESS/MAAH 2016) data.*

Figure 31. Interannual cereal balance (000 MT), 2012/13–2016/17



Source: *Authors' calculations based on CILSS (2016) data.*

Figure 32. Interannual variation in cereal self-sufficiency, West Africa, 2012/13–2016/17



Source: Authors' calculations based on CILSS (2016) data.

4.1.3 Trade flows

On average for the past five years, Burkina Faso has had a marketable cereal surplus of over 500,000 MT, while Niger has had a deficit of about 141,000 MT (Figure 31). Niger has the second most important cereal balance deficit following Nigeria (by far the largest cereal producer and consumer in the region) and the highest interannual variations in cereal self-sufficiency (Figure 32).

At the subnational level, Boucle de Mouhoun and the Hauts-Bassins provide the bulk of Burkina Faso's cereal surpluses, while the "bread basket" of Niger is located in the agricultural and agorpastoral areas of southern Maradi and Zinder Regions (Figure 33 and Figure 34). Hence, their markets play an important role in the distribution of locally produced cereals and in regional trade.

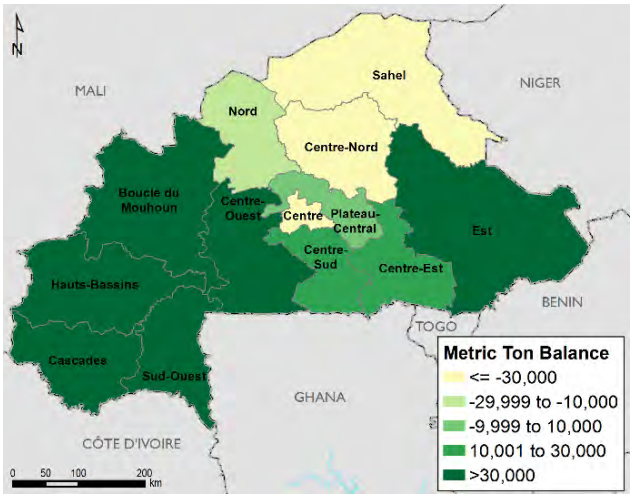
4.2 Food availability in RISE II program areas

The quantity and source of available inputs, staple foods, livestock, and edible oils vary considerably across the RISE II program areas (Table 26). These differences reflect the variations in agroecological conditions discussed in Chapter 2, among other factors.

Sorghum and millet are by far the most widely produced and consumed cereals. Between 2010 and 2015, the RISE II program areas in Centre-Nord and Est Regions of Burkina Faso produced an average of 209,934 MT and 336,050 MT of cereals every year, respectively (DGESS/MAAH 2016). In Niger, Maradi Region produced 1,151,562 MT and Zinder Region produced 818,601 MT over the same period (Direction des Statistiques and Ministère de l'Agriculture 2016). On average, each program area is self-sufficient in grain production or produces a surplus (Figure 35 and Figure 36). The exception is in Namentenga in Burkina Faso, which only meets 80–85 percent of requirements through local production. However, given the strong integration with national and regional markets (particularly between Niger and Nigeria), with local incentives to sell during the post-harvest period, and with challenges producers face with storage and warehousing, few areas depend entirely on local supplies to meet requirements over the course of the marketing year (Table 26). Cowpeas are sourced primarily from local production year-round, although they are not consumed heavily in any of the RISE II program areas of Burkina Faso.

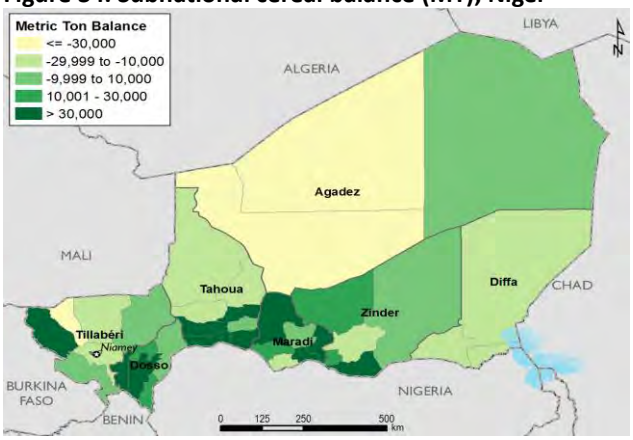
Local seed supply systems largely reflect national trends, with national research institutions (the Institut de l'Environnement et de Recherches Agricoles de *Burkina Faso*, INERA, in Burkina Faso and l'Institut National de *Recherche* Agronomique du *Niger*, INRAN, in Niger) playing an important role in developing new varieties. Private firms, producers, and producers' organizations also engage in seed production and dissemination. However, while only a limited number of local seed producers operate in the RISE II program areas of Burkina Faso and seeds are instead incorporated into the broader network of agricultural input suppliers (Table 27), seed producers (at different levels) are present in Niger, particularly in Maradi Region (Table 28). Given the recent rise in the number of seed producers in Niger, the national seed directory was expanded in 2017. Seeds are typically sold at the start of the rainy season, which coincides with the lean

Figure 33. Subnational cereal balance ('000 MT), Burkina Faso



Source: *Adaptation by FEWS NET from DGESS/MASA data for 2000–2016.*

Figure 34. Subnational cereal balance (MT), Niger



Source: *Authors' calculations based on Direction des Statistiques and Ministère de l'Agriculture (2016) and Ministère de l'Agriculture (2015) data.*

Table 26. Dominant sources of supply in RISE II program areas

Commodity	Season	Burkina Faso	Niger
Sorghum/ millet	Post-harvest	Local	Local
	Lean	National	Regional
Cowpea	Post-harvest	Local	Local
	Lean	National	Local
Edible oil	Post-harvest	National	National
	Lean	National	National
Small ruminants	Post-harvest	Local	Local
	Lean	Local	Local

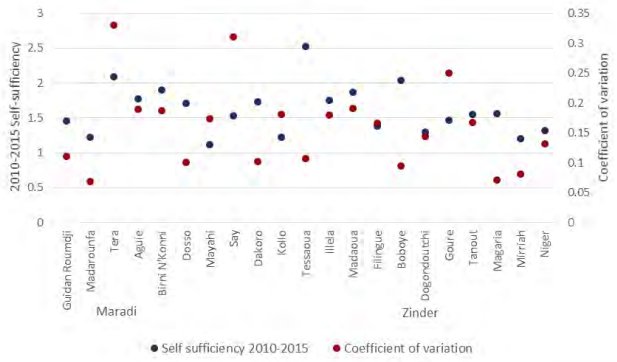
Source: *FEWS NET (2017a, 2017b, 2017c).*

season when poor agricultural households typically have the least amount of cash on hand.

Small ruminants available on markets are derived from local herds. In Burkina Faso, local livestock populations are complemented with those of pastoralists and agropastoralists residing in Nord Region of Burkina Faso, who also transit through the RISE II program areas on their way to more lucrative end markets in the coastal urban centers of West Africa. In Niger, a breed of goat from Maradi Region known as "*chèvre rousse*" is particularly appreciated by local populations in both Maradi and Zinder Regions for its body conditions and the quality of its hide (Moussa 2011; Programme de Productivité Agricole en Afrique de l'Ouest (PPAO) 2017). The assessment team noted that because of preferences for this breed, some have attempted to cross-breed the *chèvre rousse* and sell the hybrid as a pure breed (FEWS NET 2017b). Commonly accepted local minimum viability thresholds are 3–5 TLU (Tropical Livestock Units) per household in pastoral areas and 1–2 TLU per household in agricultural and agropastoral areas. Below these thresholds, livestock herd sizes cannot be maintained in the long run (FEWS NET 2017a, 2017c).

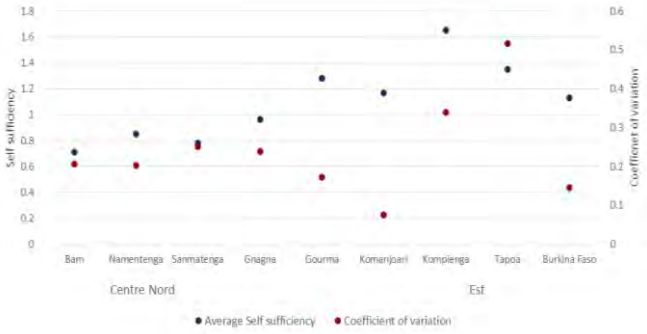
Both Niger and Burkina Faso are structurally deficit in edible oil, and Niger's per capita edible oil consumption is among the lowest in the world (FEWS NET 2017d, 2017e). Edible oil available in RISE II program areas is sourced primarily from national and regional suppliers (although a large component of those supplies originate internationally), transiting through the capital cities of Niamey and Ouagadougou (or via key cross-border trade points between Nigeria and adjacent areas of Niger). However, in Niger, Maradi and Zinder Regions collectively produce nearly 75 percent of national oilseed production (including groundnuts, Bambara groundnuts, sesame seeds, and Tiger nuts). The only industrial oilseed processing facility in Niger, OLGA, is located in Maradi Region. However, production is limited and is insufficient to meet local demand (FEWS NET 2017e). The RISE II program areas of Burkina Faso jointly produce less than 10 percent of national oilseed production (DGESS/MAAH 2016).

Figure 35: Average cereal self-sufficiency (%) in RISE II program areas of Niger



Source: *Authors' calculations based on Direction des Statistiques and Ministère de l'Agriculture (2016).*

Figure 36: Average cereal self-sufficiency (%) in RISE II program areas of Burkina Faso



Source: *Authors' calculations based on DGESS/MAAH (2016) data.*

Table 27. Agricultural inputs, animal feeds, and PICS bags suppliers in RISE II program areas of Burkina Faso

Region	Agricultural inputs (#)	Livestock and poultry feeds (#)	PICS* bags (#)
Centre-Nord	69	49	12
Est	51	51	11

Note: *Purdue University Improved Crop Storage (PICS)

Source: *REGIS-AG (2016).*

Table 28. Input suppliers present in RISE II program areas

Country	Farmers/ seed producers (#)	Seed suppliers (#)
Maradi	159	103
Zinder	42	4
Niger	402	394

Source: *Ministere de l'Agriculture et de l'Elevage (2017).*

4.3 Market structure in RISE II program areas

Generally, food and livestock markets in the RISE II program areas in Niger and Burkina Faso serve varying functions over the course of the year, following commodites' supply and demand dynamics. Markets visited operate as collection and/or aggregation, wholesale, and retail markets. Similar variations are present regarding the number and type of actors participating in the marketing system at different points of time. For the case of Niger, the proximity of the RISE II program areas to northern Nigeria results in intense commercial activity between the countries that leads to the existence of cross-border marketing basins for the main staples, cash crops (cowpeas), and livestock.

Table 29. Livestock population present in RISE II program areas

Country	Head (#)	Tropical Livestock Units (TLU)
Burkina Faso	32,260,000	8,681,000
Centre-Nord	2,819,000	589,000
Est	3,454,000	966,000
Niger	34,924,050	9,685,166
Maradi	6,148,943	1,629,151
Zinder	8,763,357	2,185,586

Note: Values for Niger consider the 2010–2014 average while values for Burkina Faso reflect 2014 only.

Note: Considers cattle, sheep, and goats. TLUs consider a conversion rate of 0.7 for cattle, 0.1 for sheep, and 0.1 for goats.

Sources: *Ministere des Ressources Animales (MRA) 2015; and Direction des Statistiques and Ministère de l'Elevage (2015).*

4.3.1 Types of markets present in the RISE II program areas

Several types of markets are present in the RISE II program areas of Niger. About half of the markets visited are considered wholesale. Given the relative self-sufficiency of the zone in terms of most staple foods, many of those retail markets also serve collection and/or aggregation functions, especially during the post-harvest period. Most markets operate on a weekly basis and handle cereals (sorghum and millet), pulses (cowpeas), livestock, and edible oil. Other commodities like pasta/spaghetti, tubers, and groundnuts are also present, but do not figure among the dominant foodstuffs consumed (Annex 4. Overview of Markets Visited).

Niger

Among the markets visited in Niger, Maradi and Zinder markets are the most important, playing a key role in the wholesale of all commodities. Of the two markets, Maradi handles larger volumes. A smaller number of markets handle tubers. Among cereals, most markets handle millet, sorghum, maize, and imported rice. For pulses, cowpeas and groundnuts are the main products offered, but they are not available in all markets. All markets except Dan Issa in Maradi Region handle livestock, mainly small ruminants and cattle (see Annex 4. Overview of Markets Visited). A number of cross-border markets facilitate trade flows between Niger and Nigeria. Dan Issa (Maradi), Magaria (Zinder), and Maiadua (Nigeria) are key cross-border markets for the RISE II program area in Niger.

Burkina Faso

Several types of markets are present in the RISE II program areas of Burkina Faso. Among those visited, Pouytenga, Fada N'Gourma, and Kaya are the key wholesale markets serving the area, although supplies are also sourced from Ougadadougou and Bobo Dioulasso (which are all located outside of the RISE II program areas of Burkina Faso). The main trading centers all host both food and livestock markets, however they are often located in separate areas within the same market town, utilizing specialized market infrastructure and local technical services (phytosanitary versus veterinary, for example). Otherwise, the main livestock trading markets are located in Sahel Region, just north of the RISE II program areas, where pastoralism and agropastoralism are more prevalent.

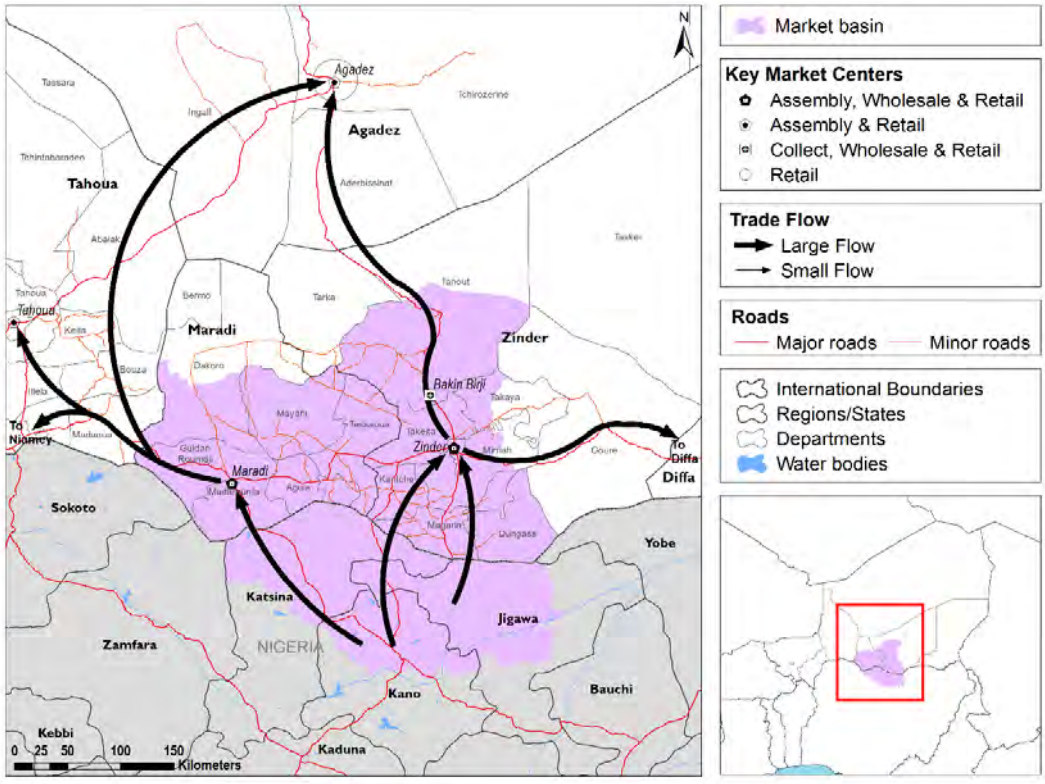
4.3.2 Marketing basins serving RISE II program areas

This section describes the key staple foods (millet, sorghum, maize, cowpeas) and livestock (small ruminants) marketing basins serving the RISE II program areas of Niger and Burkina Faso.

Niger

The Maradi and Zinder markets facilitate commodity flows within the RISE II program areas in Niger and with the rest of the country and play a central role in the marketing basins. Southern Niger and northern Nigeria are deeply connected. For cereals, this connection is evidenced by the extension of the marketing basin on both sides of the Niger/Nigeria border. In the cowpea and livestock basins, the connection is evidenced by the interdependence of each side of the border on the other as a source of supply or demand.

Figure 37. Marketing basin serving Niger RISE II program areas in millet



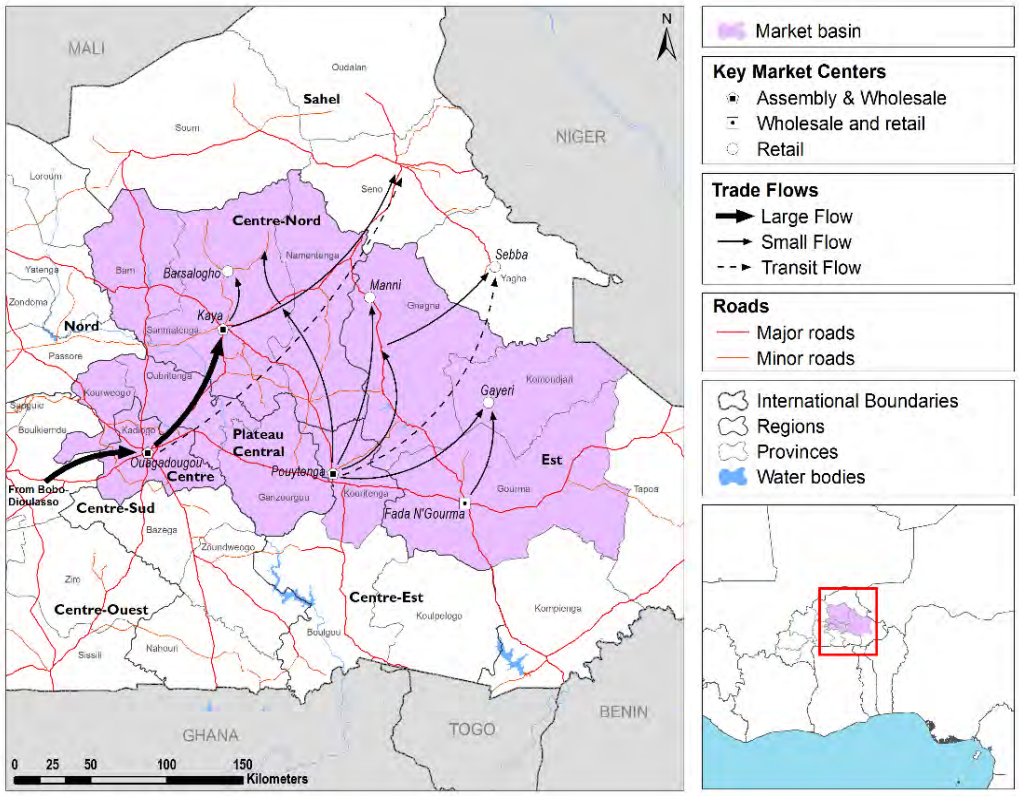
Source: *FEWS NET (2017b).*

- **Cereals Marketing Basins (millet, sorghum, and maize):** The cereals marketing basins serving the RISE II program areas extend from Dakoro in northern Maradi and Tanout in northwestern Zinder down to the northern part of Katsina, Jigawa, and Kano States in northern Nigeria. Flows can extend further south up to Bauchi State, which is south of Jigawa State. The millet (Figure 37) and sorghum (Annex 5. Marketing Basin Maps) marketing basins serving the RISE II program areas in Niger are supplied by local production and imports from Nigeria. Given that local maize production is limited in Niger, the maize marketing basin (Annex 5. Marketing Basin Maps) is entirely supplied by large flows from Nigeria, Diffa (Niger), and Benin. The markets of Dan Issa (Maradi), Matameye (Zinder), and Magaria (Zinder) are the entry points for Nigerian grains. The markets of Maradi and Zinder channel local and imported products toward other markets within the basin and the rest of the country, principally Niamey, Tahoua, Agadez, and Diffa. Flows within the basin are driven by supply, demand, and price differentials observed across markets.
- **Cowpeas Marketing Basin:** The cowpea basin extends from Dakoro in northern Maradi and Tanout in northwestern Zinder down to the Niger/Nigeria border (Annex 5. Marketing Basin Maps). The basin is entirely supplied by local production since Maradi and Zinder Regions are among the top producers of cowpeas nationally. Large flows of cowpeas within the basin and neighboring areas are directed toward the markets of Maradi and Zinder, from where cowpeas are distributed to domestic markets (Niamey, Tahoua, Agadez) or exported to Nigeria. At the national level, exports represent the main source of demand.
- **Small Ruminants Marketing Basin:** This basin extends from Dakoro in northern Maradi and Tanout in northwestern Zinder down to the Niger/Nigeria border (Annex 5. Marketing Basin Maps). The basin shares the characteristics of the cowpea basin since Maradi and Zinder are among the main producers of livestock at the national and local levels. The basin is supplied by livestock flows from within the basin and neighboring areas. Within Niger, there are minor flows of livestock to Agadez, Tahoua, and Niamey, mainly for the purpose of breeding. However, the largest and most important flows are directed toward Nigeria, where Yankama (Katsina), Wudil (Kano), Charanchi and Jibia (Katsina), and Maigatari (Jigawa) markets are the most important livestock markets in the northern part of the country near the RISE II program areas in Niger.

Burkina Faso

The national reference markets of Pouytenga, Fada N'Gourma, and Ougadougou are important, either as a source of supply (for cereals) or as a source of demand (for livestock and cowpeas) for the marketing basins serving the RISE II program areas. The geographic scope of the marketing basins for each commodity (sorghum/millet, cowpeas, livestock) are similar, and extend from the northern borders of Centre-Nord and Est Regions, down to the road linking Pouytenga, Fada N'Gourma, and Ougadougou, and over to the Niger border (Figure 38, Annex 5. Marketing Basin Maps). The dominant reference markets within the RISE II program areas include Gayéri (Komondjari) and Manni (Gnagna). The main distinguishing factors between the marketing basins are the direction of trade flows and whether goods transit via the RISE II program areas en route to consumption markets in other areas of the country or region.

Figure 38. Marketing basin serving Burkina Faso RISE II program areas in sorghum and millet



Source: *FEWS NET (2017a).*

- **Cereals Marketing Basin (sorghum and millet):** The RISE II program areas of Burkina Faso depend on supplies of sorghum (and, to a lesser extent, millet) from Pouytenga and Fada N'Gourma. Supplies also transit through Centre-Nord and Est Regions on their way to the northernmost areas of the country, bordering Niger and Mali. Areas there are also loosely linked through trade with Kaya, an urban area that is heavily dependent on trade flows from Ouagadougou and Bobo Dioulasso. Maize and rice are minor commodities in these areas of the country, and are largely supplied through domestic and international supplies that transit into the area through Ouagadougou and Bobo Dioulasso.
- **Cowpea Marketing Basin:** The basin is entirely supplied by local production (Annex 5. Marketing Basin Maps), since Namentenga and Gnagna are among the top producers of cowpeas at the national level. Cowpeas are exported out of the area's collection and assembly markets, and destined for the intermediary markets of Ouagadougou, Pouytenga, and Fada N'Gourma, on their way to consumption centers in neighboring coastal countries. Some trade flows occur between Kaya and neighboring Mali. At the national level, cowpea exports represent an important (though likely underestimated) source of demand.
- **Small Ruminant Marketing Basin:** The basin is supplied by locally produced and reared sheep and goats (Annex 5. Marketing Basin Maps). Livestock are exported out of Centre-Nord and Est Regions toward the main livestock

markets of Ouagadougou and Pouytenga. There are also small ruminants that originate in Sahel Region, and, through the marketing system, transit through these RISE II program areas. However, the largest and most important small ruminant exports are oriented toward neighboring Côte d'Ivoire and Ghana, with Pouytenga and Ouagadougou playing essential intermediary roles.

4.3.3 Physical market access

Niger

Market access and connectivity in Niger's basins is facilitated by the availability of a primary road (N1) crossing in the west–east direction through the towns of Maradi and Zinder Regions (2.3.1 Road infrastructure). This road facilitates flows of goods from distant locations such as Niamey and Diffa and facilitates movement between some of the largely populated areas in the southern part of Maradi and Zinder Regions. In the north–south direction a primary road (N11) connects Zinder to the north with Agadez and to the south with Nigeria. A primary road (A9) also runs from Maradi toward Nigeria. Beyond these roads, transit within the basins occurs through a network of secondary and tertiary roads, mostly unpaved and often impassable during certain times of the year.

Generally, households in the Niger RISE II program areas have access to weekly markets in or not far away from their villages. Consequently, market purchases occur on a weekly basis. The markets typically visited by households are accessed mainly by foot. While in Maradi it usually takes households less than one hour to access these markets, in Zinder it can take up to two hours (Table 30).

Table 30. Accessibility of markets typically used by households interviewed during the field assessment in RISE II program areas, Niger

Market characteristic	Maradi	Zinder
Time to reach	Most markets accessible in less than 1 hour	Most markets accessible between 1 and 2 hours
Mode of transport	Mostly by foot, but also by shared transport	Mostly by foot, but also by cart and motorbike
Cost of transport if other than foot	XOF 150–650 per trip	XOF 150–500 per trip
Accessibility issues	Most are always accessible	Always accessible

Source: *FEWS NET (2017b).*

Burkina Faso

Market access and connectivity within the marketing basins vary considerably, depending largely on the local penetration of the national road network. In particular, the national road 18 (N18) linking Fada N'Gourma with Manni is particularly important in Gnagna Province and the presence of various roads in Namentenga facilitates physical market access there. Physical market access in Komondjari is negatively influenced by the noticeable lack of national roads. In addition to poor and badly maintained roads, some departments become inaccessible during the rainy season, which runs from mid-May through the end of September. Limited market access during the rainy season has been a longstanding problem in all RISE II program areas but is especially restrictive in BF07 (FEWS NET 2010a).

Table 31. Accessibility of markets typically used by households interviewed during the field assessment in RISE II program areas, Burkina Faso

Market characteristic	Centre-Nord	Est
Time to reach	Most markets accessible in less than 1 hour	Few markets accessible in less than 1 hour
Mode of transport	Mostly by foot, but also by bicycle, cart, motorbike	Bicycle, cart, motorbike, foot
Cost of transport if other than foot	XOF 250-2000 per trip	XOF 250-2100 per trip
Accessibility issues	Most are always accessible	Most markets are not accessible at some points during the marketing year or often.

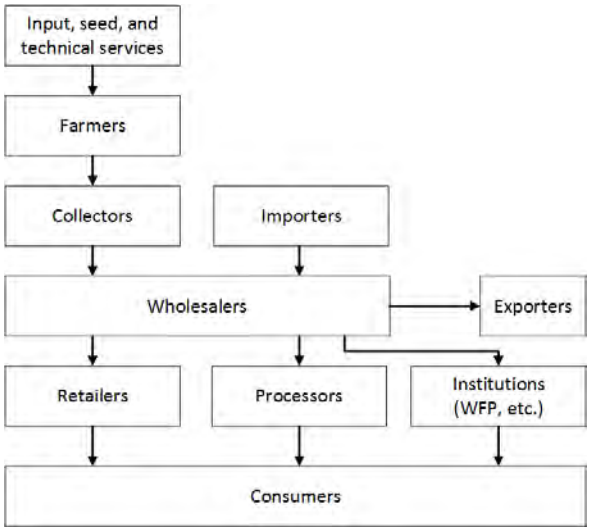
Source: *FEWS NET (2017a).*

Generally, households in the RISE II program areas have access to weekly markets in or not far away from their villages. Consequently, market purchases occur on a weekly basis. The markets typically visited by households are accessed mainly by foot in Centre-Nord Region, while bicycles and other means of transportation are required in Est Region. While in Centre-Nord Region it usually takes households less than one hour to access these markets and they are accessible year-round, in Est Region very few households visited during the assessment are able to access markets in less than one hour and most markets are inaccessible at some point during the year; some households are frequently unable to access markets (Table 31).

4.3.4 Marketing actors in RISE II program areas

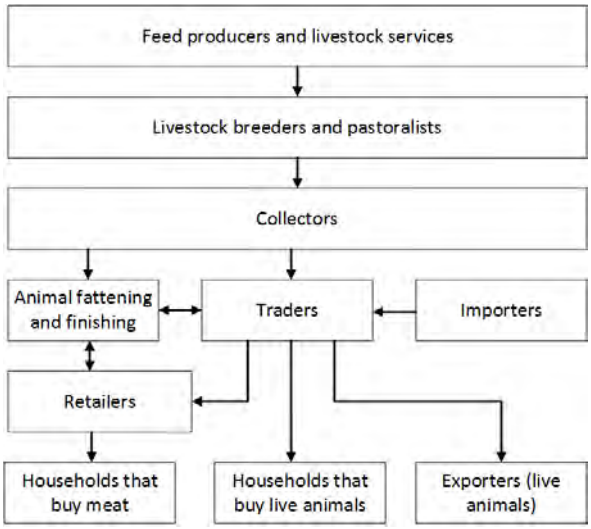
Generally, a large number of actors participate in the staple food and livestock marketing systems in the RISE II program areas (Figure 39 and Figure 40). Farmers and livestock producers sell to collectors or intermediaries who further sell to wholesalers. Wholesalers sell to smaller wholesalers, processors, institutional buyers, and to retailers. These last sell to final consumers (Dardel and Populin 2013). At the individual market level it is possible to identify the presence of wholesalers of varying sizes, retailers, processors, intermediaries, brokers, storage providers, and a range of general service providers such as transporters (by truck or cart), animal escorts/transporters, loaders and handlers of product, rickshaw operators, food vendors, etc. The approximate number of wholesalers and retailers present in the markets visited during the field assessment varies considerably. Input suppliers are also present in the RISE II program areas, with some specializing in the production of improved seeds and livestock breeds. Exporters and importers are more relevant for the case of Niger RISE II program areas, given their strong connection to the Nigerian market. Lastly, a number of groups (producer associations, unions, and federations) support production and marketing activities.

Figure 39 Marketing channels for millet and sorghum in RISE II program areas in Burkina Faso and Niger



Source: *Authors' elaboration.*

Figure 40 Marketing channels for small ruminants in RISE II program areas in Burkina Faso and Niger



Source: *Authors' elaboration.*

Women are active in trade in RISE II program areas. They are also active in processing, but to a lesser degree, and play a role in market management activities in only a few of the markets (from market surveys). In Burkina Faso, women are typically involved in the fattening and sale of small ruminants, as well as marketing of hens (FEWS NET 2010a). Most rice paddy production (52 percent) is purchased and processed by organized groups of businesswomen using traditional and artisanal methods to process the paddy rice, with or without parboiling (FEWS NET 2017i). Women in better-off households often supplement their incomes in bad years with market gardening (FEWS NET 2010a). In Niger, women have a predominant role in small-scale processing, trade, and marketing of local parboiled rice. They operate locally, at the village level (FEWS NET 2017k).

Niger

The FEWS NET assessment found that, overall, markets in Maradi tend to be of larger size, based on the number of traders participating in them, than markets in Zinder. Women participate in trade and processing activities in most markets, but women engage in market management activities in only six of the markets visited in Niger. According to interviewees, market actors are predominantly local (from the same commune). By region, the largest markets are Mayahi, Kadro Maradi, and

Sabon Machi in Maradi, and Mirriah, Magaria, and Matameye in Zinder. In addition to traders involved in the regular marketing of commodities, a group of opportunistic/circumstantial traders engage in staples or livestock trade to respond to institutional calls for supply. These actors have gained experience in trade through their operations with institutional purchases and have the financial capacity to mobilize large volumes. They are only active as long as the program activities require.

Table 32 to Table 34 present the approximate number of wholesalers and retailers present in Maradi and Zinder markets, for millet (as main cereal), cowpeas, and small ruminants. Information for other markets is available in Annex 6. Number of Traders Engaged in Marketing Activities at the Time of the Market Visit). For cereals and cowpeas, the number and size of wholesalers and retailers participating in the markets are fairly similar, as actors usually trade multiple commodities. With respect to small ruminants, the Maradi market also hosts the largest number of traders, however, the Zinder market gathers a larger number of middle- and large-scale wholesalers.

Table 32. Number of traders, by size, participating in the millet market, Niger

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Maradi	Kadro Maradi	300	80	20	500
Zinder	Zinder	15	5	7	30

Source: *FEWS NET (2017c).*

Table 33. Number of traders participating in the cowpea market, Niger

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Maradi	Kadro Maradi	300	80	20	500
Zinder	Zinder	5	4	2	40

Source: *FEWS NET (2017c).*

Table 34. Number of traders participating in the small ruminants market, Niger

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 animals	Between 100 and 500 animals	More than 500 animals	
Maradi	Kadro Maradi	130	0	0	200
Zinder	Zinder	45	12	0	300

Source: *FEWS NET (2017c).*

In relation to seed production, the number of local (improved) seed producers and multipliers has expanded, motivated by the occurrence of seed fairs set up by different organizations. The quality of seeds is variable, as is the degree of professionalism at which these seed producers operate. A similar situation was reported with respect to the increasing number of livestock breeders.

Burkina Faso

Overall, the markets in the RISE II program areas of Burkina Faso located in Est Region tend to be smaller in size, based on the number of traders participating in them, than the markets in Centre-Nord Region (Table 35 to Table 37). The wholesale market in Pouytenga is more dynamic than that of both Kaya and Gayéri.

Some local actors take on different roles depending on the scale of operations at a given time. For instance, traders from Kaya and Pouytenga that participation in trading activities in Gnagna, Komodjari, Sanmatenga, and Namentenga Provinces often act as subcontractors of regional large scale wholesalers in operations requiring large volumes. They are well connected to local markets since their local operations are usually family-managed.

Table 35. Number of traders participating in the sorghum market, Burkina Faso

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Centre-Nord	Kaya	80	40		100
Centre-Est	Pouytenga	160	20		
Est	Gayéri	20	2		60

Source: *FEWS NET (2017a).*

Table 36. Number of traders participating in the cowpea market, Burkina Faso

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Centre-Nord	Kaya	35			30
Centere-Est	Pouytenga	160	20		
Est	Gayéri	5			4

Source: *FEWS NET (2017a).*

Table 37. Number of traders participating in the small ruminants market, Burkina Faso

Region	Market	Number of Wholesalers			Number of Retailers
		Less than 100 animals	Between 100 and 500 animals	More than 500 animals	
Centre-Nord	Kaya	TBD	TBD	TBD	TBD
Centere-Est	Pouytenga	TBD	TBD	TBD	TBD
Est	Gayéri	6			60

Source: *FEWS NET (2017a).*

4.3.5 Barriers to entry for trading activities

Traders

Among traders (wholesalers and retailers) interviewed, the most frequent barriers to trade cited in both RISE II program areas of Burkina Faso and Niger were fees and taxes and access to financing. Generally, at the wholesale level the amount of fees and taxes charged depends on the scale of the traders' operations (FEWS NET 2017a, 2017b). Fees paid by retailers are limited to commune-level fees, which are charged on market days and vary depending on the frequency with which the market operates (daily, weekly). Fees paid by livestock traders vary widely across markets but are usually based on animal units bought or sold (fees per head) (Table 38).

Table 38. Sample of fees paid by interviewed traders in RISE II program areas (XOF, annual ranges)

Country	Wholesalers	Retailers	Livestock traders
Burkina Faso	26,000 - 5,000,000	5,000 - 60,000	100 - 600 per head, per market, per transaction
Niger	30,000 - 50,000	6,000 - 13,500	500 - 13,000

Source: *FEWS NET (2017a, 2017c).*

Field assessment information in Niger indicates that in Maradi and Zinder Regions a select group of wholesalers, who enjoy large financial capacity and liquidity, hold a large share of the wholesale trade of staples and cowpeas. The financial capacity of these actors allows them to keep large stocks and mobilize products in short notice. Access to capital is a key factor that can facilitate or hinder engagement in trading activities and the competitiveness of the sector.

A further constraint to marketing activities mentioned in one-fifth of the markets visited relates to disruptions in the availability of staple foods and livestock. In most cases, these disruptions occur during the lean and rainy season, in the period of July to September. While physical accessibility to the market is the main problem in Burkina Faso, in Niger it is the insufficiency of stocks (Table 39).

Table 39. Periods of disrupted supply in the markets

Location	Timing	Reason
Burkina Faso	July - September (lean and rainy season)	Lack of accessibility due to road conditions and rains
	October - December (harvest)	Lack of accessibility
Niger	July - September (lean and rainy season)	Insufficient stocks available, renewal of livestock

Source: *FEWS NET (2017a, 2017c).*

Households

Households in the RISE II program areas of both Niger and Burkina Faso participate in markets both as buyers and sellers. Overall, households indicated that the main role they play in markets is that of buyers. All expressed their interest in having a more active role as sellers, but lack of capital (and of access to credit) prevents them from doing so.

- In Maradi Region (Dakoro and Guidan Roumdji Departments) of Niger and Est Region of Burkina Faso. long distance to market and/or isolation is a further barrier to market participation. According to information gathered during the field assessment, the travel time to a market can reach up to four hours by foot (Table 41 and Table 40).

Table 40. Longest distance and time needed for reaching a market in RISE II program areas, Niger

Region	Longest distance to a market is below 5 km		Longest distance to a market is over 5 km	
	Number of villages*	Time (minutes) to reach market by foot (max)	Number of villages	Time (minutes) to reach market by foot (min, max)
Maradi	4/10	Up to 60	6/10	45 to 240
Zinder	4/8	Up to 30	4/8	60 to 240

*Note: Number of villages reporting having access to financial service providers out of the total number of villages visited, per region.

Source: *FEWS NET (2017c).*

As discussed in 2.2.5 Gender considerations, cultural practices influence the extent and type of engagement of men and women in the marketing system. Women's productive and marketing activities are often determined by male family members, who are also in charge of transport and commercialization activities.

Table 41. Longest distance and time needed for reaching a market in RISE II areas of interest, Burkina Faso

Region	Longest distance to a market is below 5 km		Longest distance to a market is over 5 km	
	Number of villages*	Time (minutes) to reach market by foot (min, max)	Number of villages	Time (minutes) to reach market by foot (min, max)
Centere-Nord	5/8	Up to 75	3/8	60 to 120
Est	4/10	Up to 60	6/10	60 to 240

*Note: Number of villages reporting having access to financial service providers out of the total number of villages visited, per region.

Source: *FEWS NET (2017a).*

4.4 Market conduct

4.4.1 Price setting and discovery

Overall, commodity prices in the RISE II program areas are determined by the forces of supply and demand. Most of the transactions are spot transactions, with bargaining among the parties. Only in the case of processed imported commodities characterized as being "first necessities", such as edible oil and other imported commodities (e.g. powdered milk)did traders report that wholesalers and importers have a determinant role in price setting.In some markets in Maradi (Mayahi, Kadro Maradi, Dan Issa), wholesalers and importers were reported to fix prices and/or to engage in agreements within their network of business partners. In a couple of locations in Burkina Faso, the government is considered to have an important role in price setting for these commodities, as well as for imported rice.

Locally produced staples are most often sold after harvest. Prices at that moment are usually low, given the large supply. Wholesalers and large-scale traders with sufficient capacity for storage/stocking hold the produce until prices become attractive, up to three months after harvest. In Maradi and Zinder Regions of Niger, commercial networks operating in the trade of cereals have been reported to be strongly based on family ties and operate at different levels (from small/local trader and collectors or intermediaries up to large wholesalers). These commercial relationships interplay with family obligations and solidarity, which facilitates the access to resources and information for those participating in such chains. Collectors and intermediaries receive as compensation either a share of the value of the merchandise procured or the revenue they can make when purchasing the product (through the purchase price). Given the large number of competitors participating in a given moment, these actors cannot exercise much power over their sellers, as they face the risk of being left without merchandise (Dardel and Populin 2013).

Table 42. Measures used at the wholesale and retail level in the RISE II program areas, Niger

Product	Wholesale	Retail
Cereals and pulses	Tonne, 100 kg bag, 50 kg bag, 25 kg bag	*Tia* (2.5- 3 kg), 1 kg
Edible oil	*Bidon* (25 liter)	Liter, 25 – 50 cl containers
Pasta/noodles	10 kg	500 g
Livestock	Head	Head

Source: *FEWS NET (2017c).*

Table 43. Measures used at the wholesale and retail level in the RISE II program areas, Burkina Faso

Product	Wholesale	Retail
Cereals and pulses	Bag (100 kg)	*Boite* (2 kg), *Yoruba* (2.6-3kg)
Edible oil	Jerrican (20 liter)	Liter, sachet (10-50 cl)
Pasta/noodles	Carton (10 kg)	Sachet (125g)
Livestock	Head	Head

Source: *FEWS NET (2017a).*

4.4.2 Grades, quality standards, and units of measure

Traders in the RISE II program areas reported the lack of official grades or quality standards for the sale of cereals, pulses, edible oil, and livestock. Only for the markets of Mayahi and Kadro Maradi in Maradi Region did traders report the existence of hygienic/sanitary norms as well as the use of the tonne as a measurement unit across commodities. With respect to consumer preferences, traders in the markets visited pointed to hygiene and quality as main aspects relevant to consumers across commodities. Origin of the product is often considered as a quality trait since locally produced cereals are regarded as of better quality than imported products. With respect to small ruminants, the Balami sheep and the Maradi red goat are considered superior to other breeds due to their productivity and yield (meat).

The units of measure practiced on markets for cereals and pulses are the tonne, or bags ranging between 25 kg and 100 kg at the wholesale level in both Burkina Faso and Niger (Table 42 and Table 43). Cereals and pulses are sold at the retail level by the kilogram or the *tia* (about 3 kg) in Niger and by the *boite* (about 2 kgs) and the *Yoruba* (roughly 3 kgs) in Burkina Faso. Edible oil is traded by the jerican (*bidon*), by the liter, and by sachet, ranging from 10 to 50 cl).

4.4.3 Market information and participation in group activities

Market information is available to the different market actors through a variety of channels: mobile phones, radios, private networks, groups or associations, and the market information system are the most used.

- For households (producers), access to market information through these channels is considered to be between weak and good and the reliability of the information is considered as medium-good.
- For traders and importers, access to information using the same channels is regarded between medium and excellent and the reliability of the information is assessed between medium and excellent.

While the participation of market actors in groups or associations is rather limited according to interviewed persons, several organizations support producers and/or traders in commercial and/or union-related activities. Some of these groups have the capacity to mobilize and stock large volumes and have experience with local purchases programs and with institutional purchases. Examples of these organizations in Niger are shown in Table 44.

Table 44. Examples of organizations involved in the trade of staples, Niger

Region	Organizations	Function
Zinder	Wadata 2, SA'A, Tchigaba, Union Fassali de Zermou 2	Sale of millet, sorghum, cowpeas, and/or seeds (millet and cowpeas) to WFP and other institutional buyers
Maradi	SA'A, FIMA	Provide linkages between producer unions and WFP

Source: *FEWS NET (2017c).*

4.5 Market Performance in RISE II Program Areas

4.5.1 Variability in local food availability and prices

Prices of locally produced commodities such as millet, sorghum, and cowpeas display seasonal patterns, and are highest during the peak of the lean season (July–August) and lowest during post-harvest time (Table 45 and Table 46). Small ruminants' prices likewise vary seasonally, reaching their peak toward the end of the calendar year. Edible oil available on markets in the RISE II program areas is largely imported, and marketed through fairly narrow marketing channels involving importers located in the capital cities of Ouagadougou (Burkina Faso) and Niamey (Niger). Edible oils displays the lowest levels of inter- and intrannual price variation, as they are regularly supplied throughout the year and also are among the government-regulated commodities, along with imported rice (which is considered a luxury good and consumed in relatively small quantities by poor and very poor households in the RISE II program areas).[9]

Table 45. Seasonal patterns in the marketing of key food items in the RISE II program areas, Burkina Faso

Seasonality		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Production	Crop harvests	■	■										■
	Livestock sales		■	■	■			■	■	■	■	■	
	Lean season									■	■	■	■
Price of crops	Highest prices									■	■	■	
	Lowest prices		■	■	■	■							
Price of livestock	Highest prices	■										■	■
	Lowest prices									■	■		

Source: *Authors' elaboration based on FEWS NET (2010); and SONAGESS (2017) data.*

Table 46. Seasonal patterns in the marketing of key food items in RISE II program areas, Niger

Seasonality		Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Production	Crop harvests	■	■										■
	Livestock sales		■	■			■						
	Lean season								■	■	■	■	■
Price of crops	Highest prices						■	■	■	■	■	■	■
	Lowest prices	■	■	■	■	■							
Price of livestock	Highest prices	■	■	■	■							■	■
	Lowest prices					■	■	■	■	■	■		

Source: *Authors' elaboration based on FEWS NET (2011); and SIMA (2017) data.*

Niger price trends

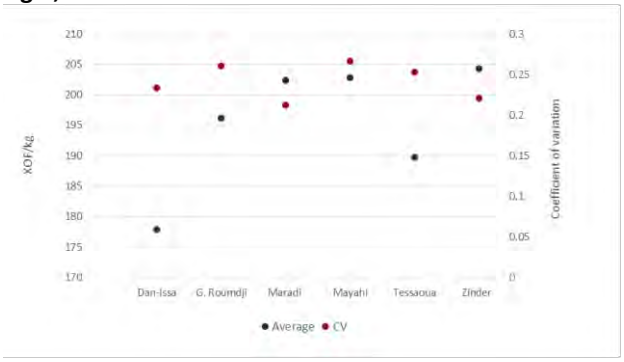
- Prices in Niger vary across markets and seasons, reflecting the timing and location of supply (see Annex 7. Price Series and Seasonal Index in Reference Markets in Niger for commodity specific information). For millet and sorghum, prices tend to peak in July–August, before the initiation of harvesting activities. For both commodities the markets of Maradi, Zinder, and Maiadua, Nigeria (cross-border) register lower retail prices (and lower variation in prices) than other reference markets in the country (Figure 41). Wholesale prices in Kano, Nigeria follow a similar trend. Over the course of the year, sorghum prices show less variation than millet prices (Annex 7).
- Among imported cereals, rice prices show less variation than maize prices. In fact, imported rice prices are fairly constant in Niger and tend not to mirror variability observed in the international market. This is notable given the large amount of imports, particularly from Thailand which accounts for 49 percent of Niger's rice imports (5% and 25% broken). Rice prices in Maradi and Zinder markets display even less variation than prices in Niamey. Maize prices

[9] For more information on prices in Niger and Burkina Faso, please refer to the Market Fundamentals Reports of these countries.

are lower in Maradi and Zinder markets, when compared to other markets within the basin area (Annex 7. Price Series and Seasonal Index in Reference Markets in Niger).

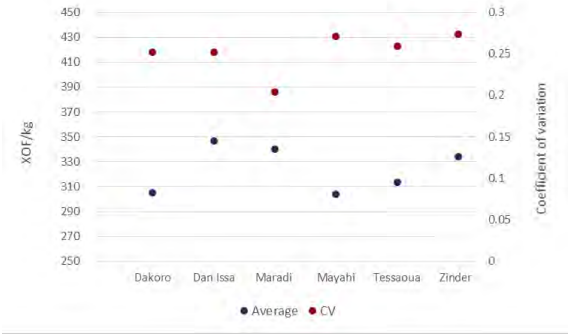
- With respect to pulses, cowpea prices have an increasing trend starting in January up to July/August when harvests start. September–December is a period of relatively lower prices (Annex 7. Price Series and Seasonal Index in Reference Markets in Niger). Cowpea prices display the largest variability in all markets explored (Figure 42).
- Vegetable oil production takes place in Maradi and Zinder Regions, though based on artisanal methods (FEWS NET 2017c). With a limited domestic output, vegetable oil imports from other West African and Asian countries supply more than half of the total demand. Imported refined vegetable oil prices show little variation overall (Figure 43) (Annex 7. Price Series and Seasonal Index in Reference Markets in Niger).
- For small ruminants, sheep prices increase toward the end of the year, coinciding with the onset of harvests and the occurrence of important celebrations (*tabaski*). At this time, purchases are possible given the increased household revenues after the sale of crops (Annex 7. Price Series and Seasonal Index in Reference Markets in Niger). Goat prices show a similar pattern. Within the RISE II program areas, prices for goats tend to be lower in Maradi, Zinder, and Mayahi markets. Sheep prices are lower in Maradi and in Dakoro markets. The markets of Maradi, Tanout, and Zinder register the highest variability in prices (Figure 44).

Figure 41. Average retail millet prices (XOF/kg) and variation in markets serving RISE II program areas of Niger, 2012–2016



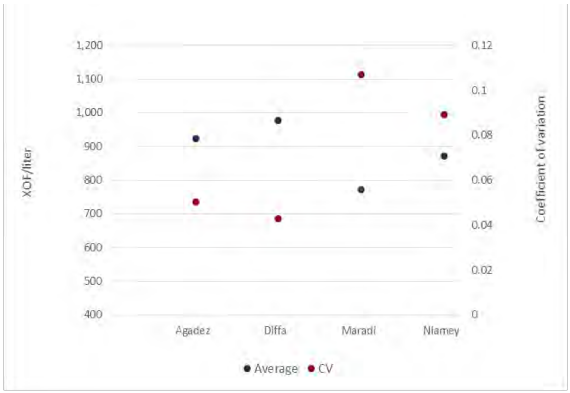
Source: *Authors' calculations based on SIMA (2017) data.*

Figure 42. Average retail cowpea prices (XOF/kg) and variation in markets serving RISE II program areas of Niger, 2012–2016



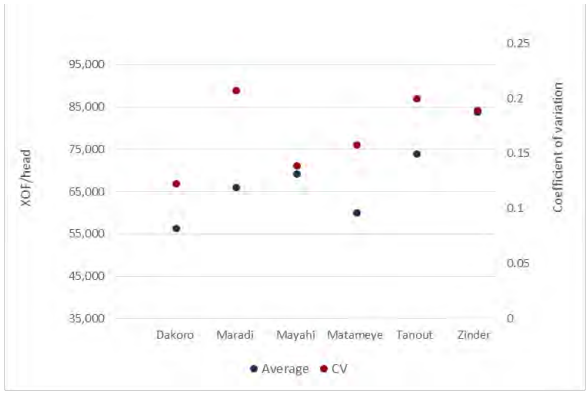
Source: *Authors' calculations based on SIMA (2017) data.*

Figure 43. Average retail edible oil prices (XOF/liter) and variation in markets serving RISE II program areas of Niger, 2012–2016



Source: *Authors' calculations based on SIMA (2017) data.*

Figure 44. Average retail sheep prices (XOF/head) and variation in markets serving RISE II program areas of Niger, 2012–2016



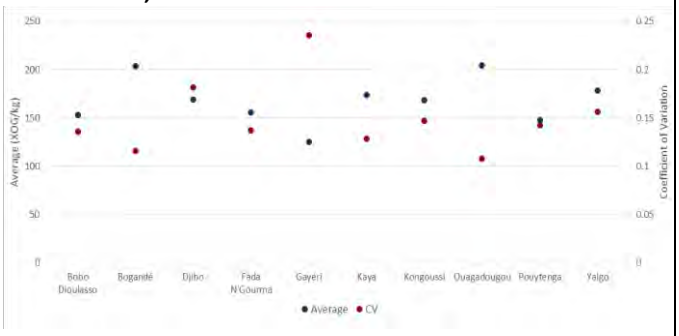
Source: *Authors' calculations based on SIMA (2017) data.*

Burkina Faso price trends

Average price levels and variation differ across commodities and across markets in the markets serving the RISE II areas of Burkina Faso.

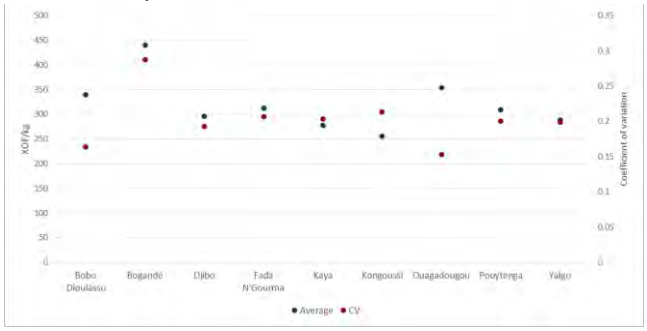
- As in Niger, imported commodities such as edible oil and rice are the most stable across time and space (Figure 47). This reflects the structure of the national marketing system for these commodities (see Burkina Faso Market Fundamentals Report 2017).
- Conversely, cowpeas have the most variable prices in the marketing basin serving the RISE II program areas of Burkina Faso (Figure 46). Prices peak during the lean season and then decline quickly during the harvest and post-harvest period when, due to the relatively perishable nature of the product, producers sell their stocks as quickly as possible.
- Sorghum and millet prices in Gayéri, one of the more isolated markets in Est Region, are among the lowest (on average), but also the most variable (Figure 45).
- Average sheep prices are the lowest in Bogandé market. Lower variability is observed in Dijiba, Dori, and Gorom-gorom markets (Figure 48).

Figure 45. Average retail sorghum prices (XOF/kg) and variation in markets serving RISE II program areas of Burkina Faso, 2010–2016



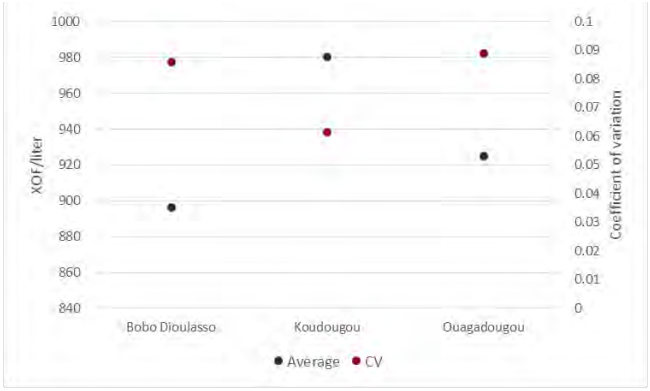
Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 46. Average retail cowpea prices (XOF/kg) and variation in markets serving RISE II program areas of Burkina Faso, 2010–2016



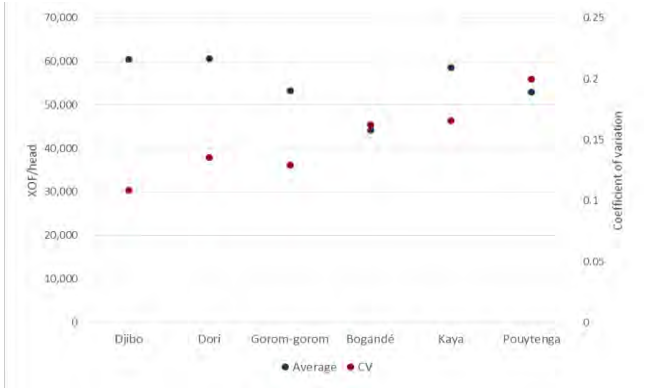
Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 47. Average retail edible oil prices (XOF/liter) and variation in markets serving RISE II program areas of Burkina Faso, 2010–2016



Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 48. Average retail sheep prices (XOF/head) and variation in markets serving RISE II program areas of Burkina Faso, 2010–2016



Source: *Authors' calculations based on SONAGESS (2017) data.*

4.5.2 Market Integration and Price Transmission

The marketing basins serving the RISE II program areas are generally well integrated, as measured by the strong degree of price co-movement (correlation, Annex 8. Price Series and Seasonal Index in Reference Markets in Burkina Faso) and the strong year-round trade linkages that emerged from interviews with traders and other market actors during the assessment (4.3.2 Marketing basins serving RISE II program areas and Annex 5. Marketing Basin Maps). Price correlation is highest among proximate markets, as well as between the markets in the RISE II program areas and other markets elsewhere that have well-established commercial links to the basins (i.e., Agadez, Niamey in Niger and Ouagadougou and Pouytenga in Burkina Faso).

- Market prices in the RISE II program areas of Niger display strong correlation with prices in northern Nigerian markets for the different commodities. The strength of the co-movement is larger (and also its significance in some cases) when considering the parallel exchange rate for the Naira (Annex 9. Price Correlation Tables). Wholesale millet prices

in Kano, Nigeria (Dawanau market) expressed in XOF using the parallel exchange rate reflect more closely the price trends observed in Maradi (retail), the reference market in the RISE II program area in Niger (Annex 7. Price Series and Seasonal Index in Reference Markets in Niger).

- In Burkina Faso, the market of Gayéri displays the lowest degree of price correlation among the markets studied. This is likely due to its relatively self-sufficient and isolated nature. In Burkina Faso, the degree of price correlation for livestock (sheep) is much lower than for cereals and cowpeas. Rather than an indication of less well integrated (or performing) markets, this situation may arise due to challenges with standardizing price data for live animals with many varying characteristics and the predominant use of animals as households assets rather than marketable products (Annex 8. Price Series and Seasonal Index in Reference Markets in Burkina Faso).

4.5.3 Factors that affect market performance

Variability in local agricultural production, driven largely by rainfall variation, affects local food availability, import demand, and commodity prices. Grain prices in Niger are very responsive to external market signals, particularly those related to key trading partners such as Nigeria, Burkina Faso, Benin, Mali, Togo, and Vietnam. Prices of millet, sorghum, maize, and rice in these countries transmit rapidly to Niger's prices, hence shocks to supply and/or demand occurring there have an effect on food price levels (and their volatility) observed in Niger (Nkunzimana and Kayitakire 2013; Zakari, Ying, and Song 2014). Given Niger's dependence on external markets for satisfying domestic demand for several main staples, this situation can further compromise the population's ability to access food.

The macroeconomic crisis in Nigeria is of particular concern to Niger and to the RISE II program areas, particularly, due to the large and longstanding level of economic interaction between the areas. Low global fuel prices have impacted Nigeria's demand for Nigerien goods (agricultural and livestock), which in turn has damaged economic prospects in Niger. The depreciation of the Naira has impacted the availability of millet, sorghum, and maize in the markets, and consumers' purchasing power (FEWS NET 2017c). According to interviewees, the economic crisis has affected market activities in all markets visited in Niger. Both imports and exports have been disturbed by reduced cross-border activity, the increase in the number of check points, and the establishment of additional taxes to be paid. Niger's exports to Nigeria, particularly of cowpeas and livestock, have been especially affected. In fact, reverse trade flows have increased (FEWS NET 2017e).

The depreciation of the Ghanian cedi, coupled with grain deficits registered in recent times, has had little impact on West African regional trade flows (FEWS NET 2017f). According to field assessment findings, there are no noticeable impacts of the macroeconomic situation in Ghana on local trade dynamics in the RISE II program areas (FEWS NET 2017a, 2017c).

4.5.4 Capacity of market to respond to increased demand

The scale of operations, level of professionalism, and access to financial resources are the main factors allowing, or preventing, traders and other market actors in the RISE II program areas to quickly respond to market signals. Reported increases in business activity resulting from participation in food assistance programs can incentivize actors to engage in this type of activity and to contribute to a steady food supply.

Capacities and roles of key actors

As discussed in section Generally, households in the RISE II program areas have access to weekly markets in or not far away from their villages. Consequently, market purchases occur on a weekly basis. The markets typically visited by households are accessed mainly by foot in Centre-Nord Region, while bicycles and other means of transportation are required in Est Region. While in Centre-Nord Region it usually takes households less than one hour to access these markets and they are accessible year-round, in Est Region very few households visited during the assessment are able to access markets in less than one hour and most markets are inaccessible at some point during the year; some households are frequently unable to access markets (Table 31).

4.3.4 Marketing actors in RISE II program areas, traders operating within the RISE II program areas vary considerably in the size and scale of their operations. While local wholesalers regularly participate in trade and commodity flows associated with the marketing basins, they are usually inactive in direct operations related to food assistance programs or may only participate as subcontractors of large external wholesalers. Large wholesalers (and circumstantial traders) operating at the broader national or regional level have the capacity to mobilize financial and logistical resources and commodities in a few days.

In addition to their limited financial means and scale of operations, local traders have difficulties in complying with the documentation required by the implementing organization (such as the business registry, etc.), do not have bank accounts

and/or cannot provide a guarantee issued by a bank, cannot afford payment delays, and/or have neither the stock nor the storage capacity to preposition a large volume of product prior to delivery.

In the framework of large-scale purchases, local wholesalers in the RISE II program areas are unlikely to have the capacity to play central roles in related program activities. Large-scale wholesalers and circumstantial traders located outside of the RISE II program areas are likely to be best positioned to respond to and fulfill program calls/requests. According to insights from the field assessment teams, local vendors who are larger and operate with a higher degree of professionalism tend not to participate in voucher programs, instead focusing their efforts and businesses on a different consumer base.

Local traders' experiences as vendors for assistance programs

This section summarizes the assessment's findings related to the experiences of traders participating as vendors in calls for tenders for local purchases and voucher programs in both Burkina Faso and Niger. The local experiences of vendors are a reflection of the transfer modalities used (section 5.4 Food assistance programs in RISE II program areas).

Table 47. Vendor experience across modality types for traders interviewed

Modality	Burkina Faso	Niger
Vouchers	12	3
Local purchases	12	18
Vouchers and local purchases	2	5
Total	26	26

Source: *FEWS NET (2017a, 2017c).*

Table 48. Lead time needed to prepare for food assistance delivery

Time frame	Vouchers	Local purchases
Less than 1 week	1	6
1–2 weeks	10	9
3–4 weeks	4	9
1–2 months	3	10
More than 2 months	0	2
No information	4	1
Total	22	37

Source: *FEWS NET (2017a, 2017c).*

- In Burkina Faso, traders with experience as vendors in voucher programs are mostly located in Est Region, while traders with experience in local purchases are mostly located in Centre-Nord Region (Table 47). In Niger, the use of vouchers by implementing organizations is limited, so vendor experience is mainly in the context of local purchases.
- All traders interviewed indicated that they were always able to supply quantities demanded during the timeframe of the programs. Only very few cases reported engaging in alternative sourcing practices such as borrowing, subcontracting, or reducing their market stocks to unusually low levels to meet the increased demand.
- About half of the traders participating in voucher programs are able to initiate delivery within two weeks of program start, compared with 41 percent of those participating in local purchases programs (Table 48). One-third of those who previously participated in local purchases programs required more than one month to prepare. Traders participating in local purchases in Burkina Faso reported being faster to respond to calls for tenders than traders in Niger. Within Niger, traders in Maradi Region tend to require less preparation time than traders in Zinder Region. These trends are likely a reflection in differences in the quantities procured by modality (smaller quantities for vouchers/fairs, larger quantities for LRP). Few traders interviewed indicated that the lead time required to prepare for the program is a limiting factor.[10]
- Overall, the main factor influencing traders' capacity to respond to increased demand is their capacity to mobilize financial resources for their operations. For those participating in voucher programs, storage capacity and availability of products in the source markets were equally assessed as the second most important factors. For traders
- participating in local purchases, storage capacity was more relevant than the availability of product in the source and/or local markets. The importance of financial liquidity is evident given the fact that all traders rely on their own resources as the main source of financing. The use of other sources of financing such as family, professional networks, or financial institutions is very limited.

Changes in market activity

In both countries, traders participating as vendors in assistance programs reported increased sales during the timeframe of the programs.Table 49 to Table 52present the degree of sales increase attributable to program participation for cereals, cowpeas, small ruminants, and edible oil, by type of program (vouchers, local procurement) in Burkina Faso and Niger. For voucher programs, changes in cereals' sales are attributable mainly to sales of sorghum in Burkina Faso. For local purchases,

[10] Traders who reported facing constraints related to the lead time were among those reporting the shortest preparation times (less than 2 weeks), suggesting potential pressure by implementing organizations to initiate activitieson fast/short notice.

most changes are attributable to sales of millet in Niger. Overall, the most prevalent level of increase in sales across commodities is the range between 10–50 percent.

Table 49. Extent of increased sales by voucher participants, Burkina Faso

Extent of increase	Cereals	Cowpeas	Small ruminants	Edible oil
Less than 10% increase				
10–50% increase	6	2		2
50–75% increase		1		
75–100% increase	1			1
More than 100% increase	1		1	1

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cerzeals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

Table 50. Extent of increased sales by voucher participants, Niger

Extent of increase	Cereals	Cowpeas	Small ruminants	Edible oil
Less than 10% increase				
10–50% increase	1	1		
50–75% increase	1	1		
75–100% increase				
More than 100% increase			1	

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cereals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

Table 51. Extent of increased sales by local-purchase participants, Burkina Faso

Extent of increase	Cereals	Cowpeas	Small ruminants	Edible oil
Less than 10% increase				
10–50% increase	1			
50–75% increase				
75–100% increase				
More than 100% increase				

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cereals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

Table 52. Extent of increased sales by local-purchase participants, Niger

Extent of increase	Cereals	Cowpeas	Small ruminants	Edible oil
Less than 10% increase				
10–50% increase	3	3	1	2
50–75% increase				
75–100% increase				
More than 100% increase			1	

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cereals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

The assessment team found that traders felt that participation as vendors for assistance programs supports the expansion and/or consolidation of business opportunities. The share of traders' sales attributed to vouchers' program participation was

generally over 50 percent for key commodities in the RISE II program areas in both Burkina Faso and Niger. Results for local purchases are rather mixed. (Table 53 and Table 54).

Table 53. Average share of sales by client during periods of participation in food assistance programs, Burkina Faso

Commodity	Voucher		Local purchases	
	Program	Other clients	Program	Other clients
Millet	70	30	15	85
Sorghum	56	44	52	48
Maize	70	30	47	53
Cowpeas	59	41	-	-
Small ruminants	-	-	-	-
Edible oil	73	27	33	67

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cereals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

Table 54. Average share of sales by client during periods of participation in food assistance programs, Niger

Commodity	Voucher		Local purchases	
	Program	Other clients	Program	Other clients
Millet	30	70	-	-
Sorghum	50	50	-	-
Maize	-	-	-	-
Cowpeas	78	22	-	-
Small ruminants	100	0	100	0
Edible oil	-	-	-	-

Note: Numbers are based on in-person interviews with traders reporting increased sales for each specific commodity. Cereals include millet, sorghum, and maize. Responses are based on completed projects that took place from 2012 to 2016.

Source: *FEWS NET (2017a, 2017c).*

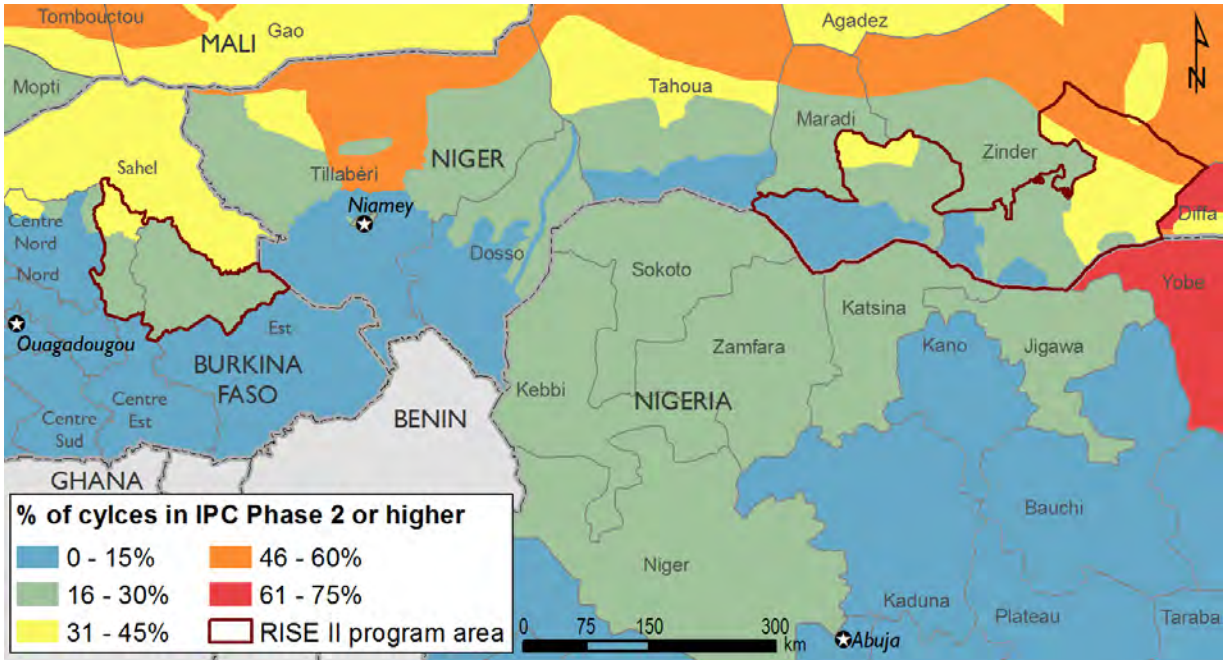
According to traders' perceptions, the main impacts of the participation as vendors for assistance programs are an increased professionalism of market actors, increased business opportunities, and the entry of new actors. With respect to prices, only three actors interviewed during the FEWS NET field assessment indicated a change in prices as a result of food assistance programs. One case in Burkina Faso (Est Region, associated with vouchers) reported a reduction in both wholesale and retail prices. In Maradi Region of Niger, one case knowledgeable about local purchases reported decreased wholesale and retail prices, while another case reported increased wholesale and retail prices attributed to vouchers and local purchases. The main challenges identified by traders with regard to their participation in the voucher program were beneficiaries requesting different products or products of different quality and delays in payment from the implementing organization. Payment delays were also reported by vendors participating in local purchases.

5. Food Security and Assistance Context in RISE II Program Areas

This chapter presents an overview of the broader food assistance context in the RISE II program areas of Burkina Faso and Niger. The data used for the analysis stem from a variety of secondary data sources, as well as from primary data collected during the field assessments.

The RISE II program area livelihood zones face constant vulnerability to chronic food insecurity. Niger is structurally and chronically food insecure, with over 2 million classified as chronically food insecure, and 4.5 million at risk of food insecurity. Food insecure populations increase during the lean season (Institut National de la Statistique 2016b), being greatly affected by the severity and length of the lean season, the limited casual labor opportunities, and increasing prices. The Joint Assessment of Food Insecurity conducted by INS, FEWS NET, WFP, FAO, and other partners (Institut National de la Statistique 2016b) suggests that overall, the size of rural populations experiencing acute food insecurity has steadily decreased, although the total number of people at risk of food insecurity has increased (World Food Programme (WFP) 2014). The households at greatest risk of food insecurity in Burkina Faso are those for which agriculture is the primary revenue source (26 percent); dependence on informal/petty trade (21 percent) is also linked to food insecurity, as is pastoralism (19 percent) (WFP 2016b). Acute food insecurity (defined by the IPC scale) is noticeably less prevalent in the southern most RISE II program areas (Figure 49). However, as discussed at length below, indicators of chronic food insecurity such as GAM, household dietary diversity, and food consumption scores are more prevelant .

Figure 49. Historical IPC phase classification, West Africa, 2012–2016



Source: *FEWS NET (2017b).*

5.1 Food Gap

The size of the annual food gap varies across the RISE II program areas, from 4 percent to 13 percent of annual calories, equivalent to 69 kg per household per year to over 240 kg (Table 55). Variations in the household food gap are exacerbated in years when the agriculture sector underperforms, particularly in Niger.

Table 55. Estimated size of annual household-level food gap as a percentage of requirements and in grain equivalent (kg), Niger and Burkina Faso

Country	Livelihood system	Livelihood baseline	Annual food gap for very poor and poor households			
			Very poor		Poor	
			% calories	Grain equivalent (kg)	% calories	Grain equivalent (kg)
Burkina	Agricultural	BF05	8	103	6	129

Faso	Agropastoral	BF07	6	78	4	69
Niger	Agropastoral	NE04, Tessaoua Nord	13	196	6	103
		NE04, Dakoro	13	168	11	190
		NE04 Mayahi	12	181	8	138
	Agricultural	NE05, Guidan Roumdji	12	207	11	237
		NE05, Tessaoua Sud	9	136	7	121
		NE05, Magaria	7	90	5	75
	Agricultural	NE07, Madarounfa	11	190	9	194
		NE07, Kantche	9	116	9	136

Note: For the purpose of non-emergency, multiyear interventions response planning, calorie requirements are set at 2,400 kcal/per person/per day. This contrasts with emergency planning, which typically considers 2,100 kcal/per person/per day.

Note: Assumes a household of seven members.

Source: *Authors' calculations based on HEA data.*

5.2 Food security indicators in Niger

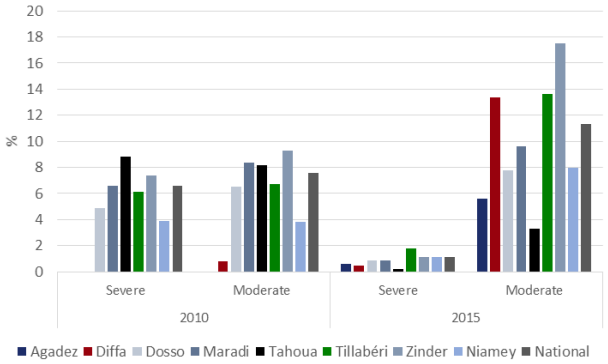
At a national level, the prevalence of acute malnutrition consistently ranges from severe (≥ 10 percent) to critical (≥15 percent), even in the most agriculturally productive Maradi Region, and in Zinder Region (Club du Sahel et de l'Afrique de l'Ouest 2008) (Figure 50). Persistently high prevalence of acute malnutrition in the RISE II program areas is typically associated with multiple factors, including: insufficient caloric intake, large household size, poor dietary diversity and quality of consumption, poor care and feeding practices, a high prevalence of disease (especially malaria and respiratory illness), and substandard sanitation practices (FEWS NET 2014).

By 2014, 29 percent of households in the RISE II program areas were found to suffer from moderate or severe hunger, based on results from the Household Hunger Scale, and to have poor dietary diversity, with only 3.4 food groups (out of 12) consumed on average in a 24-hour recall period. The food groups consumed are cereals, pulses, and milk products. Consumption of any other product is rather limited (ICF International 2014).

The prevalence of global acute malnutrition (GAM) in Maradi and Zinder Regions is historically high, and hovers around the critical level even in normal or good years, typically ranging from 10–12 percent between the lean season and the post-harvest season (Figure 51). The prevalence of chronic malnutrition ranges from 40–50 percent, indicating abnormally high levels of malnutrition in both Maradi and Zinder Regions.

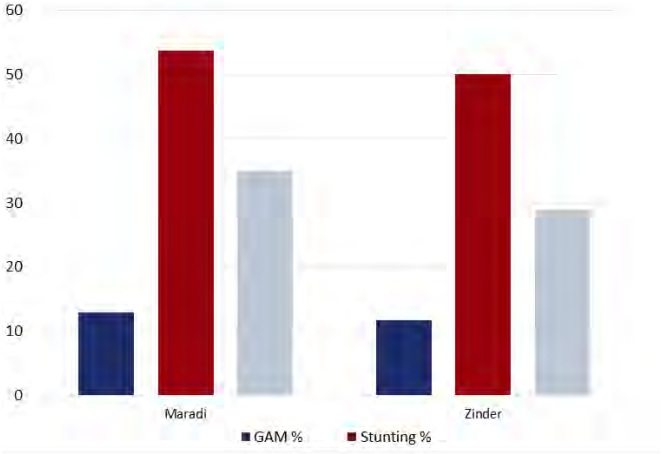
The results of the SMART nutritional survey carried out in August 2016 reveal a prevalence of GAM greater than 11 percent in both regions, corresponding to the "serious"

Figure 50. Proportion (%) of rural population in severe and moderate food insecurity, 2010–2015



Source: *Institut National de la Statistique (2016b).*

Figure 51. GAM, stunting, and underweight rates, Niger



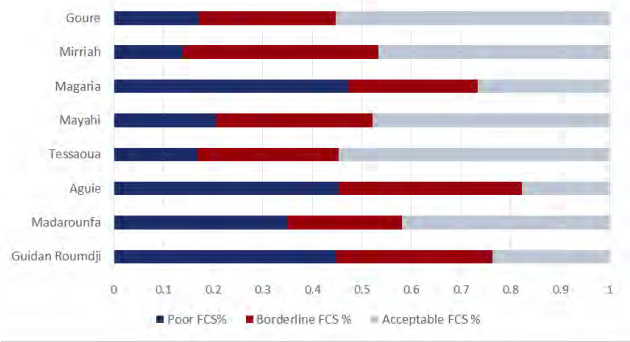
Source: *Nutrition Department of Ministry of Health (2016).*

threshold defined by the World Health Organization (WHO). The prevalence of chronic malnutrition remains well above the 40 percent emergency threshold defined by WHO in Maradi and Zinder Regions.

The prevalence of wasting in Niger is very high: the estimated prevalence of wasting and severe wasting is 18 percent and 6 percent, respectively, according to the most recent Government of Niger Demographic Health Survey (République du Niger 2013). Maradi and Zinder consistently rank among the regions with the highest levels of wasting and stunting. In 2016, FEWS NET conducted a causal analysis to determine the factors driving the perpetually high burden of acute malnutrition in Maradi and Zinder Regions. The analysis concluded that several factors, including recent occurrence of diarrhea, lack of handwashing by caregivers prior to eating, lack of maternal education, and younger child age, were independently associated with an increased likelihood of child wasting during the post-harvest season. During the lean season, recent occurrence of diarrhea, residence in an agropastoral livelihood zone, younger child age, and recent fever were independent correlates of wasting. The report emphasized that household food insecurity was not independently associated with child wasting in these regions and may not be a reliable correlate of a food crisis (FEWS NET 2017d). Finally, the FEWS NET Nutrition Causal Analysis (NCA) asserted that common childhood maladies, specifically diarrhea and fever, are independent correlates of wasting, pointing to further need for skilled caregivers and education regarding prevention strategies and treatment options.

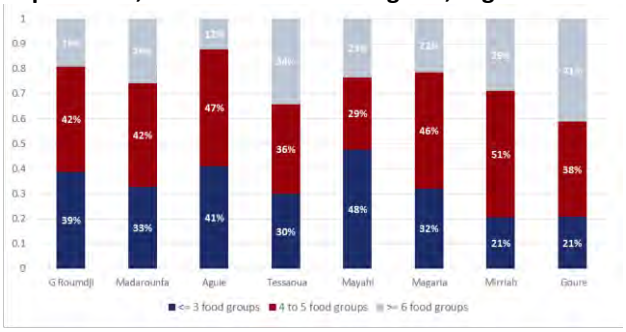
According to the results of the Cadre Harmonisé analysis conducted in March 2017, Phase 2 (Stress) and Phase 3 (Crisis) levels of food insecurity have been observed across the majority of departments in Maradi and Zinder Regions. The results of the sentinel site survey conducted in February 2017 indicate that the overall Food Consumption Score (FCS) in Maradi and Zinder Regions remains a concern, with a high proportion of households with a poor or limited FCS (Figure 52 and Figure 53). FCS analysis at the department level indicates that the highest proportion of households with a poor FCS reside in several areas of Maradi Region, specifically Aguie (45 percent), Guidan Roumdji (45 percent), and Madarounfa (36 percent); and in Magaria (47 percent) in Zinder Region. The current status of poor food insecurity and poor FCS in these regions can be attributed to depleted household stocks and poor access to markets, high prices of staple food, low income, and moderate coping strategies.

Figure 52. Food Consumption Scores, Maradi and Zinder Regions, Niger



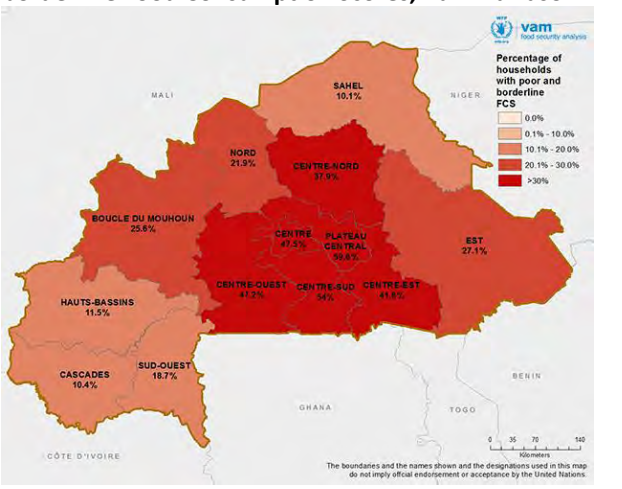
Source: *National Early Warning System (2017).*

Figure 53. Household Dietary Diversity Score by department, Maradi and Zinder Regions, Niger



Source: *National Early Warning System (2017).*

Figure 54. Proportion (%) of households with borderline Food Consumption Scores, Burkina Faso



Source: *World Food Programme (WFP) (2014).*

5.3 Food security indicators in Burkina Faso

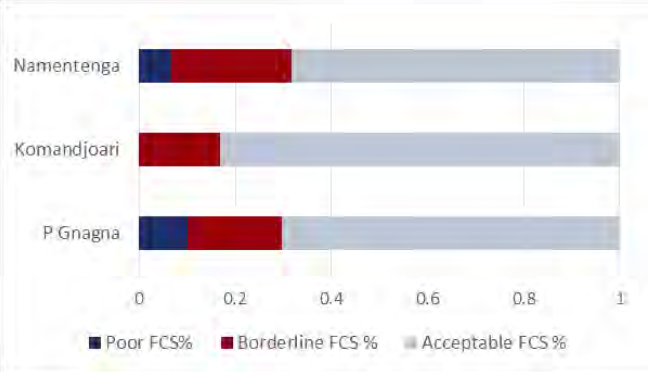
The endemic nature of chronic food insecurity in Burkina Faso shares many similarities with Niger's food insecurity context; namely, structural poverty and chronic instability of food supply linked to high dependence on often fluctuating or inconsistent production from rainfed agriculture.

The food security situation resulting from the current 2016/17 agricultural season remains satisfactory in several provinces of Burkina Faso. Availability of and access to food is generally good for most regions. The preliminary results from the most recent Permanent Agricultural Survey (EPA) carried out in December 2016 show an acceptable FCS for more than 80 percent of households with food diversity reported to to be average or above average in Gnagna, Namentenga, and Komandjoari Provinces (Figure 55 and Figure 56). The results of the Cadre Harmonisé analysis from March 2017 show that 44 provinces are in food security in Phase 1 IPC classification, while only one province is in food insecurity in Phase 2 IPC classification for the current period from March to May 2017. The food situation will deteriorate slightly from June to August 2017, with an increase in food insecure provinces in Phase 2 IPC classification to 13 provinces out of a total of 44 provinces. Gnagna, Namentenga, and Komandjoari Provinces will be in food insecure Phase 2 IPC classification from June to August 2017, given a likely slight deterioration in household FCS followed by a slight increase in the GAM rate. Countrywide, a total of 257,238 people are at-risk for severe food insecurity (251,685 Phase 3-Crisis and 5,552 Phase 4-Emergency) during the 2017 lean season.

Overall, malnutrition in Burkina Faso is characterized by a high prevalence of chronic and acute malnutrition, as well as pervasive micronutrient deficiencies. According to the WFP, at a national level, GAM is 7.6 percent and chronic malnutrition is 27.3 percent (Nutrition Department of Ministry of Health 2016). At the national level, the prevalence of GAM, chronic malnutrition, and underweight declined over the past 10 years. For example, the prevalence of GAM increased from 10.4 percent in 2015 to 7.6 percent in 2016, while the prevalence of chronic malnutrition declined from 30.2 percent in 2015 to 27.3 percent in 2016. According to the results of the national SMART survey carried out in September 2016, the prevalence of acute malnutrition, chronic malnutrition, and underweight are 7.6 percent, 27.3 percent, and 19.2 percent, respectively. Est Region is among the four regions (Est, Sahel, Cascades, and Centre-Est) with a prevalence of global chronic malnutrition above the WHO critical threshold of 30 percent. The prevalence of underweight children decreased from 23 percent in 2015 to 19.2 percent in 2016 (Figure 57 andFigure 58).

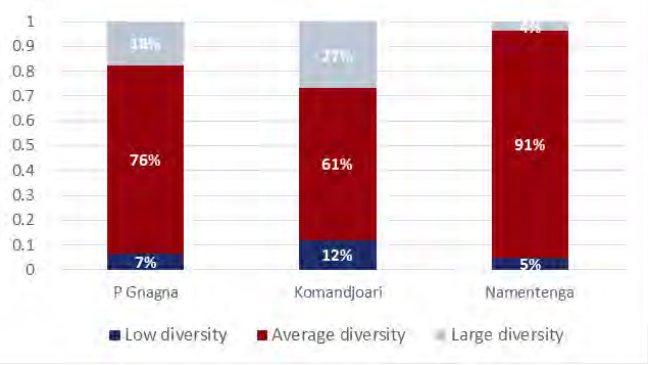
Infant and young child feeding practices promote good nutrition in Centre-Est and Centre-Nord Regions. According to the September 2016 national SMART survey, 46.6 percent of children nationwide received early breastfeeding and Est Region had the highest proportion of children breastfed within one hour of birth (62.9 percent). The proportion of children aged 0 to 5 months who were fed breast milk exclusively is 55 percent nationwide. Centre-Est and Centre-Nord Regions recorded very high proportions of 64.1

Figure 55. Food Consumption Score in Gnagna, Namentenga, and Komandjoari Provinces, Burkina Faso, December 2016



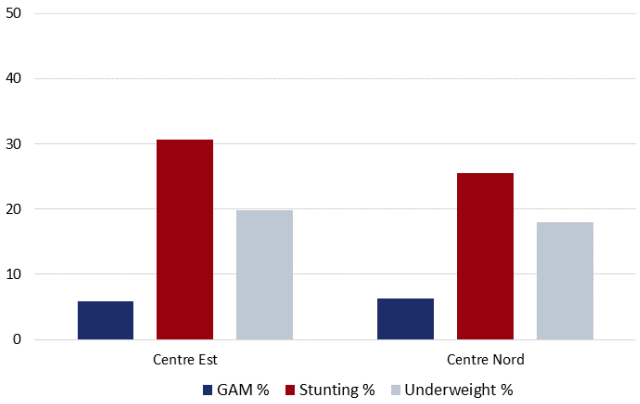
Source: *SAP/DGESS/MAAH: Direction Generale des Etudes et Statistiques Sectorielles du Ministere de l'Agriculture et des Amenagements Hydrauliques (2016).*

Figure 56. Household Dietary Diversity Score in Gnagna, Namentenga, and Komandjoari Provinces, Burkina Faso, December 2016



Source: *SAP/DGESS/MAAH: Direction Generale des Etudes et Statistiques Sectorielles du Ministere de l'Agriculture et des Amenagements Hydrauliques (2016).*

Figure 57. Prevalence of GAM, stunting, and underweight among children 6–59 months by region, Burkina Faso, September 2016



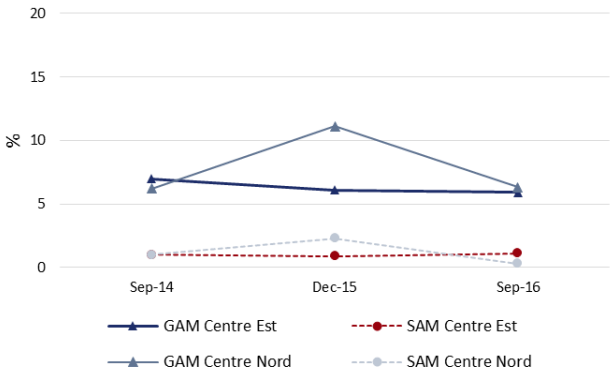
Source: *Nutrition Department of Ministry of Health (2016).*

percent and 70.3 percent, respectively. According to the results of the 2016 national SMART survey, the proportion of children benefiting from a minimum level of dietary diversity nationwide is 24.2 percent, with 28.7 percent in Centre-Est Region and 27 percent in Centre-Nord Region. The proportion of children aged 6–23 months who receive a minimum frequency of meals is 76.8 percent for Centre-Est Region and 81.9 percent for Centre-Nord Region, versus 76.5 percent nationwide.

5.4 Food assistance programs in RISE II program areas

This section provides both a retrospective and observational commentary on resource transfers as applied in the RISE II program areas to address a variety of program objectives related to food insecurity, livelihoods stability, and sustainable asset development. This broad program review considers (1) what has historically succeeded in both countries in terms of the various applications of cash, vouchers, and in-kind distributions, as well as (2) what is currently understood about the integration of these modalities in achieving positive outcomes through resilience-oriented programming. The literature regarding cash-based transfers in Burkina Faso and Niger, in particular, offers additional insight on the history of transfer modalities in the region, and most commonly, for emergency programming. This information is referenced to illustrate key points or to provide additional evidence.

Figure 58. Prevalence of GAM and stunting among children 6–59 months by livelihood zone (Round 1 January 2015, and Round 2 August 2015)



Source: *Nutrition Department of Ministry of Health (2016, 2015, 2014).*

Resource transfer strategies for longer-term resilience programs are not limited to or necessarily oriented around short-term food assistance explicitly. While research supports the use of multiple modalities for the specific purpose of food assistance, depending on the context, needs, and desired outcomes, this review describes current and ongoing experiences with selected transfer modalities that have supported programming in focus areas to-date, and most prominently. Similarly, the information presented in this section aims to offer insights about the current challenges, opportunities, and potential considerations for the use of a given transfer modality given the context and selected application for that modality; for example, the use of vouchers to support household asset development through access to small livestock. These challenges and opportunities are explored more in Chapter 6.

5.4.1 Overview of reviewed programs

A broad program review of diverse ongoing and past longer-term resilience-oriented programming and shorter term emergency programming in Niger and Burkina Faso demonstrates the utility of transfer modalities in permitting the flow of resources to households requiring various levels of support in diverse economic, geographical, and social contexts (Table 56).

While the scope and scale of the food assistance program is an important consideration, implementing agencies appear to support the use of various cash-based approaches, as well as in-kind allocations under different conditions and for different purposes, year-round in the RISE II program areas. These include conditional and unconditional cash grants andvouchers, cash-for-work (CFW) and cash-for-assets (CFA), and conditional and unconditional in-kind distribution of staple foods as well as fortified commodities sourced via local and regional procurement (LRP) and international (transoceanic) procurement.

Table 56. Programs reviewed and implementing organizations consulted during EMA field assessment

Program	Implementing Agency/Lead	Type of Assistance*	Program Location	Donor
Victory against Malnutrition (ViM)	ACDI/VOCA	Vouchers for agricultural inputs redeemed at agricultural fairs Food rations to PLW and children 6–23 months of age	Sanmatenga, Centre-Nord, Burkina Faso	USAID/Title II
Building Resilience and Adaptation to Climate Extreme and Disasters (BRACED)	Multiple agencies implementing different projects	Food distribution Improved seeds Livestock	Nord, Centre-Nord, and Est, Burkina Faso	DFID

Program	Implementing Agency/Lead	Type of Assistance*	Program Location	Donor
Renforcement de la résilience des populations pauvres et très pauvres et amélioration de la sécurité alimentaire et nutritionnelle dans les régions du Burkina Faso les plus touchées par la crise de 2012 (PROGRES/PRORESI)	Action Contre le Faim	Supplementary food to PLW and children 6–23 months of age Livestock distribution at fair Seed distribution Cash transfers	Est, Burkina Faso	Europe Aid
Families Achieving Sustainable Outcomes (FASO)	Catholic Relief Services	Voucher for agricultural inputs Food distribution Supplementary foods to malnourished children	Komandjari, Gnagna, Namentenga, Centre-Nord, and Est, Burkina Faso	USAID/Title II
EA-8-2012	OCADES/Caritas	Food distribution Supplementary foods to malnourished children Subsidized food sales Cash transfers for livestock production	10 locations across Burkina Faso	Multiple donors
Building Resilience in Burkina Faso	World Food Programme	Supplementary food to PLW and children up to five years of age for prevention or treatment of malnutrition Cash for Assets	Multiple locations across the country, Burkina Faso	Multiple donors
Programme d'Appui à la Sécurité Alimentaire des Ménages – Tanadin Abincin Iyali (PASAM TAI)	Catholic Relief Services	Supplementary foods (CSB+) and oil to PLW and children under two years of age Seed distribution Vouchers for livestock purchase at livestock fair Food for Work	Mayahi, Kantche, Maradi, and Zinder, Niger	USAID/Title II
Development Food Aid Program "SAWKI"	Mercy Corps	Supplementary food to PLW and children 6–23 months of age Food rations Vouchers for agricultural inputs Seeds/seedling distribution Food for Asset	Maradi and Zinder, Niger	USAID/Title II
Livelihoods, Agriculture and Health Interventions in Action (LAHIA)	Save the Children	Supplementary food to PLW and children 6–23 months of age. Food distribution Food for Work Livestock distribution	Aguie, Guidan Roumdji, and Maradi, Niger	USAID/Title II

Program	Implementing Agency/Lead	Type of Assistance*	Program Location	Donor
Renforcement de la Résilience des Ménages très Pauvres en Milieu Rural	World Food Programme	Food for Asset Local purchases for school meals Supplementary food to PLW and children 6–23 months of age. Food distribution Cash transfer	Country wide (variable by component), Niger	Multiple donors

Note: This table focuses only on selected types of assistance implemented in the framework of the programs in any of the program locations, as relevant for this report.Many of the programs presented included other components, such as water, sanitation, and hygiene; behavioral change; income diversification; care groups; saving groups; technical training and assistance; irrigation; and healthcare.

Source: *Authors' elaboration.*

5.4.2 Experiences and challenges associated with transfer modalities

This section consolidates feedback received directly from field consultation with stakeholders at key levels, including: community and household beneficiaries of ongoing resilience-oriented programs, implementing agency personnel, and institutional stakeholders where applicable. Field consultation is complemented by a comprehensive literature of available program documentation, including progress reporting, evaluations, and research studies regarding the various approaches, including experiences, lessons learned, and the advantages and disadvantages to using each. Field consultations reveal key learning points and challenges associated with each modality, much of which corroborates larger lessons and findings presented in the literature. Table 57 provides descriptions and clarifies the distinctions between each modality, while Table 58 presents the highlighted points and findings, organized by transfer modality.

Table 57. Transfer Modality Descriptions

Modality	Description
Cash Transfer	Assistance in the form of physical currency/cash or e-cash to individuals, households, or communities. Cash transfers as a modality are distinct from both vouchers and in-kind assistance. In the RISE II areas, cash transfers include mobile transfers (via operators) and direct cash distributions.
Cash-for-Work (CFW)	Cash payments provided on the condition of undertaking designated work. This is generally paid according to time worked (e.g., number of days, daily rate) or by outputs. FEWS NET has included CFW as a delivery mechanism under cash transfers for the purpose of consolidation.
Cash-for-Assets (CFA)	Cash payments provided to participants for taking part in projects to create community or public assets. This is a form of conditional transfer and a subset of CFW relating to those work programs that create assets. Similarly, FEWS NET has included CFA as a delivery mechanism for cash under cash transfers for the purpose of consolidation.
Food-for-Assets (FFA)	Food payments provided to participants/beneficiaries participating in projects or public assets. This is a form of conditional transfer and a subset of CFW relating to those work programs that create assets. FEWS NET has included FFA under in-kind modality for the purpose of this review.
Voucher	A paper, token, or e-voucher that can be exchanged for a set quantity or value of goods, denominated either as a cash value or predetermined commodities or services or a combination of value and commodities.
In kind Ration	A designated quantity of food items provided to a beneficiary or household for consumption.

Source: *The Cash Learning Partnership (CaLP) (n.d.)*

Table 58. Current and ongoing programs transfer modality review

Transfer Modality	Transfer Mechanism	Summary Points
Cash Transfer	General	Cash transfers as a food assistance mechanism receivemixed reviews from program beneficiaries. Cash transfers are integrated as a supplementary modality for the delivery of food assistance as needed and/or longer-term support to resilient livelihoods. Liquidity constraints by financial service providers (microfinance institutions (MFIs) and mobile money operators) have created challenges for implementing organizations, more common to do direct cash distribution (door-to-door or in a central distribution point).
	Cash transfer	Implementing agencies express some security concerns with cash distribution in remote areas of Burkina Faso.
	Mobile transfer/disbursement via financial institution	Program participants do not have consistent mastery over available technology for the purpose of cash transfers. Financial institutions and mobile money operators are not consistently able to operate in proximity to beneficiaries.
	Cash-for-work (CFW)	Some programs have encountered labor shortages for CFW due to competitive opportunities elsewhere.
	Cash-for-assets (CFA	Program beneficiaries are more likely to participate in CFA if the selected projects improve their capacity to produce additional food or income.
Vouchers	General (broadly referring to paper-based voucher systems)	Vouchers are an effective modality for transferring food and agricultural assets to program beneficiaries, and the most widely applied modality in the current operational context. Vouchers are cost-effective and allow for more oversight of resource transfers. Vouchers offer flexibility in timing and adaptation to local capacity and logistical constraints. Voucher programs are more likely to involve smaller, less professional traders and economic operators, who are willing to engage directly with program beneficiaries. Ensuring quality of inputs (seeds) and livestock is a concern.
	Electronic voucher	Electronic vouchers do not feature prominently in the current landscape of resource transfers in the RISE II program areas.
	Voucher fair	Title II programs have increasingly moved toward voucher fairs for the transfer of seeds, inputs, and small ruminants. Voucher fairs may allow more quality control and oversight and prevent confusion or graft that may occur in the organic marketplace.
In-Kind Ration	General	The distribution of in-kind rations is almost exclusively dedicated to PLW/children under the age of 2 years; rationsare typically conditional and/or seasonal in nature. Households express preference for locally produced stapled foods, as “exotic” foods (such as rice or fortified foods) due to external pressures to share and redistribute. Households demonstrate a more consistent tendency to engage in solidarity sharing and redistribution of their in-kind ration than for other modalities.

Table 58. Current and ongoing programs transfer modality review

	Food-for-assets	Food-for-assets is less emphasized as a transfer modality than cash transfers, vouchers, CFW/CFA, and in-kind rations.
Procurement Mechanism	Local source	WFP procures through local agents in Niger, incorporating local women's groups and farmers' unions to supply program commodity needs for staple foods via "Purchase for Progress" efforts. Frequent delays in the timing of contract fulfillment has created challenges for local organizations participating in these programs.
	International and/or trans=Atlantic shipment	Some fortified foods are available locally or regionally and could offset the logistical burden of international shipments where appropriate. Storage and logistics capacity are not indicated as limiting constraints in the main central distribution points for commodities. Permanent warehouses and temporary Rubb halls have been erected in more remote intermediary or end distribution points on an as-needed basis. Port delays and "tracasseries" appear unavoidable.
	Local and regional procurement (LRP)	There is a large experience with local and regional grain procurement in West Africa, particularly in Burkina Faso and Niger. LRP is more likely to benefit large traders and commercial entities (including "circumstantial actors"), rather than smaller local vendors and suppliers.

Source: *Authors' elaboration.*

Modality review

Cash Transfer Modality

The application of cash transfers in supporting access to immediate household food needs and the contribution of cash to longer-term recovery and resilience in Niger have been addressed by the literature since the first documented cash distributions were implemented in Tanout in 2005. An observable expansion of cash-based programming began in 2010, and included multiple strategic approaches funded by donors such as the World Bank and the European Commission Humanitarian Aid (ECHO) through implementing agencies, including international NGOs, and Red Cross organizations (British, French, Irish). Through funded initiatives, local organizations and institutions also became key actors in cash transfers, particularly national NGOs and selected microfinance institutions as partners in the mobilization and disbursement of cash (de Sardan 2014). WFP, in particular, has significant experience implementing cash transfers, which continue to feature in Zinder and Maradi Regions of Niger (Table 59).

Though supply and demand for staple foods may fluctuate from year to year, the literature concedes overall that strong market integration and robust supply chains are typically able to respond to and support additional stress placed on local markets via cash transfers in both Burkina Faso and Niger. According to an evaluation of ECHO modality transfer programming in Niger, just over 30 percent of all funded programs incorporated cash transfers as one of multiple transfer modalities combined to achieve the desired program result (Analysis for Economic Decisions (ADE) 2016). In Burkina Faso, documented historical experiences across the spectrum of cash transfer initiatives are less abundant..

Delivery Mechanism – Direct Cash Transfer

Direct cash transfers, primarily used for emergency programming in short (less than six month) cycles, have been adapted to a variety of longer-term initiatives to include sustainable development, safety nets (including institutional humanitarian and social support), humanitarian and disaster response, and resilience initiatives. In this context, cash originally distributed for the purpose of food assistance may also be used for a myriad of household needs, and/or diverted to other social obligations such as solidarity payments, to debt recovery, and to secure important assets such as housing or tax obligations.

Table 59. Components of illustrative direct cash transfer programs underway in RISE II program areas

Organization	Country, Region	Core components
WFP	Maradi, Niger	• Cash transfer of XOF 32,500 • Low-profile distribution strategies, such as incorporating local MFIs to go door to door or conducting distributions in a centralized village location, and in a manageable scale appropriately adjusted for the amount and frequency of each distribution. • Cash distributions occur as part of a larger lean season assistance approach that offers households food in-kind (100 kg of cereals, legumes, and oil) and unconditional cash transfers from June to September, school food vouchers from October to June, and Food-for-Asset opportunities from November to May.
Save the Children	Maradi, Niger	• Low-profile distribution strategies, incorporating local MFIs. • Pairs unconditional cash grants with in-kind rations during the lean season to benefit the food needs of participating pregnant/lactating women and children under 2 years of age.
WFP	Zinder, Niger	• Assistance provided through a combination of cash and in-kind rations, offering financial relief to households before the harvest and during the lean season.

Source: *Authors' elaboration.*

Cash transfers have been integrated as program components that support targeted food security needs, particularly during the lean season, or as a complement to other food transfers for a particularly vulnerable population. With the exception of WFP programming in Niger (Maradi), most agencies working through RISE have consolidated transfer modalities into vouchers and purposeful in-kind distributions, with varying conditionality. While this analysis does not specifically address the impact of conditionality as an element of the feasibility or impact of cash transfers, references to conditionality are

included wherever this information helps to demonstrate current and previous approaches to delivering cash as a resource transfer. Overall, where direct cash distributions are incorporated into assistance programming, beneficiaries provide mixed reviews regarding preference and utility.

In terms of challenges, program participants across the RISE II program areas indicated that cash is easier to divert toward nonfood needs, although this is not always a negative outcome depending on the goals of the program (Table 60). The latter point is widely supported by the literature, which asserts that cash is commonly used for household investment in agriculture and fungible assets. Concerns about security associated with transporting large sums of cash to relatively remote areas have been raised in parts of Est Region of Burkina Faso, but not by other implementing agencies in Centre-Nord Region or in the RISE II program areas in Niger. Finally, cash transfers on a larger scale have presented multiple logistical and administrative challenges to implementing agencies, in part due to a lack of liquidity and administrative acumen. These difficulties are discussed in more detail in the section on Mobile Cash Transfers below.

Table 60. Challenges associated with cash transfers in RISE II program areas

Challenge	Observations
Expenditure patterns	• Hoddinott, Sandstrom, and Upton (2013) assert that households participating in a WFP-funded cash transfer program in Zinder may have experienced a short-term or immediate benefit from food purchased with cash, but invested a portion of assistance funds in longer-term benefits such as repairing their homes and obtaining agricultural inputs. • A 2010 Concern program reported that households receiving unconditional cash grants spread cash across multiple food and nonfood categories; households purchased multiple items, and spent their cash on staple grains (99%), cowpeas (42%), meat (40%), oil (70%), condiments (70%), health expenses (28%), seeds (20%), school fees (7%), debt reimbursement (7.4%) and labor costs (2%) (J. C. Aker et al. 2013) [11] • WFP staff in Maradi observed that a significant portion of unconditional cash transfers is used by households to manage household debt. • Save the Children (Maradi) noted that households have been observed to use funds for nonfood expenses. • Stoeffler and Mills (2014) studied the long-term impact of cash transfers on poor households. Their findings indicate that cash enables households to increase fungible assets, particularly livestock holdings. The study found that households receiving conditional cash transfers effectively increased their livestock by half a cow on average (or equivalently, three goats or thirty chicken), corresponding to more than half of their baseline stock. [12]
Security	• A specific disadvantage to cash, observed by implementing agencies in Burkina Faso (WFP, ATAD), is security and the risk of transporting significant amounts of cash into rural communities. This concern was voiced multiple times among agencies operating in Est Region (Gayeri), where sporadic banditry and malfeasance have been observed along travel corridors into the program area.
Liquidity constraints	• Cash distributions have presented multiple logistical and administrative challenges to implementing agencies. Due to lack of liquidity and administrative acumen, microfinance institutions and mobile money operators are typically limited in their ability to reach beneficiaries in a timely and convenient manner. Moreover, implementing agencies such as Save the Children in Zinder have been compelled to pre-capitalize the partner institution, or to reconfigure a different distribution method altogether midway through the program in question.

Source: *Authors' elaboration*

[11] Households listed multiple uses for the transfer and may in some cases exceed 100%, per the study results.

[12] This study analyzed beneficiary status 18 months following the termination of a national safety net program, The Projet Pilote des Filets Sociaux par le Cash Transfert (PPFS-CT), which took place between October 2010 and March 2012, providing 2,281 households in Tahoua and Tillabéri Regions with monthly transfers of XOF 10,000 (about US$20) for 18 months.

Delivery Mechanism – Mobile Cash Transfer

RISE II partners employ a variety of strategies in an attempt to assure efficient and cost-effective cash transfers. For the purpose of this modality review, 'mobile cash transfer' includes the integration of microfinance institutions to create mobility and flexibility in payment and disbursement of cash. While the classification of MFIs as a cash agent is atypical, the programming landscape in the context of RISE II areas in Niger and Burkina has required agencies to creatively adopt mechanisms to extend mobile services; in this regard, MFIs act more as mobile operators and conduits for payment than as microfinance and/or lending institutions. Mobile cash transfers for this review also refer to the more traditional use of mobile technology to streamline cash distributions. While use of mobile phone technology has a precedent in Niger, this transfer mechanism is not widely used in the context of resilience programming.

Recent experiences indicate a lack of consensus in terms of the cost-effectiveness of this approach. For example, Aker (2013) notes that mobile cash technology in Niger provides a demonstrated advantage in terms of cost-effectiveness for both the implementing agency and the beneficiary, and in terms of household use of cash transmitted through mobile phones; in a 2013 review of a randomized evaluation of the use of mobile money in the context of an unconditional cash transfer initiative, beneficiaries who received mobile transfers through a mobile phone interface purchased more diverse food items and reflected higher dietary diversity and food consumption than households who received hard cash (Aker et al. 2014). In contrast, evaluations of ECHO programs in Niger pointed to e-transfers as more expensive than other cash-based modalities (Analysis for Economic Decisions (ADE) 2016).

Mobile cash transfers have also been delivered in the RISE II program areas through partnerships with national microfinance institutions, although most feedback from implementing agencies (including both DFAP partners and non-DFAP partners–WFP, Save the Children) regarding this approach pointed to major logistical and accountability-oriented constraints. Challenges associated with this approach in the context of the RISE II program areas of Niger and Burkina are noteworthy (Table 61).

Table 61. Challenges associated with mobile cash transfers in RISE II program areas

Challenge	Observations
Cost	• Evaluations of ECHO programs in Niger pointed to electronic cash transfers as more expensive than other cash-based modalities (Analysis for Economic Decisions (ADE) 2016).
Low network coverage	• Though technological advances are evident in the pervasive use of mobile phone technology, supportive infrastructure (networks, etc.) is not entirely reliable or available consistently across program areas.
Capacity gaps and lack of universal technology possession	• Though most households possess and regularly use mobile phones, adapting use for the purpose of external (as opposed to personal/remittance payments) has proven difficult amongst a generally illiterate population with low exposure to multi-use phone technology. • Individual beneficiaries rarely possess the necessary identifying documentation or appropriate phone technology to participate in mobile money mechanisms. • Social resistance or lack of understanding as to how to manage mobile cash transfers is a consistent finding among DFAP partners. The FEWS NET assessment found that households tend to receive personal transfers through Moneygram or the bus system (FEWS NET 2017a, 2017c). • Time and training required to enable beneficiaries to adjust mobile phone use is a barrier to widespread use of this method. ATAD in Burkina Faso expressed a preference for hard cash transfers for the short term due to the inefficiencies of assuring proper use of and management of cash received through mobile phones. • WFP in Zinder noted that households have trouble with technologies used to obtain cash through mobile transfers; beneficiaries are unable to navigate the use of cards (such as an ATM format) as cash or cash management tools due to a lack of familiarity.
Constraints of working with MFIs as	• Implementing agencies note that microfinance institutions, which would act as the conduit for channeling cash distributions from the agency to the beneficiary group in a more localized fashion, are

mobile operators	typically overwhelmed and unable to meet time and accountability requirements relating to the management of hard cash. • In Zinder, one Title II partner reported delays and insufficient responsiveness through the local microfinance institution Assoussou, which also resulted in difficulty with payment to vendors who provided seeds and livestock for beneficiary purchase at voucher fairs. • Burkina Faso informants noted that MFIs typically experience liquidity constraints, leading to delays, inability to provide all beneficiaries with required cash allocations. and poor customer service. • Some program staff reported that distributions en-masse conducted by microfinance institutions draw unnecessary attention to activity, creating potential security issues as well as feelings of jealousy and resentment in the community among nonbeneficiaries. • FEWS NET staff was informed that in a smaller village setting, nearly 300 people congregated to await cash distributions, a significant increase in the local population of a rural village or town. Similarly, some beneficiaries and program staff noted an increasing concern regarding the social stigma attached to affiliation to the level of destitution that is advertised by participating in visible, mass cash distributions. • A 2014 cash-based modality evaluation conducted by Welt Hunger Hilfe noted that the distribution of a 'cash coupon' to exchange for cash through local microfinance institutions in Burkina Faso (Sanmantenga, Bam) was obstructed by a lack of presence of 'guichets' and exchange points in proximity to the community, which resulted in a switch to direct cash distribution by the program (Welt Hunger Hilfe 2014). • Other agencies report that mobile operators, a slightly modified genre of mobile distribution, are also unreliable, and largely unavailable in the scale required for effective and timely distribution. An NGO in Niger (STC) reported that working through NIYYA and Moneygram for distributions resulted in late payments and insufficient capital and resources to channel funds appropriately and in the necessary timeframe, which has important implications for beneficiary trust, as well as the impact on use of funds.

Source: *Authors' elaboration*

Despite the logistical and financial constraints associated with mobile cash transfers, appreciation of the efficiency and lower cost of phone use is appealing to some agencies. WFP in Est Region of Burkina Faso expressed a desire to reduce the cost burden on beneficiaries by reducing the need to travel to obtain cash transfers. WFP and Save the Children in Niger are currently engaged in a pilot activity to test the use of cell phones for cash transfers. Results and learning points are not yet available but will likely yield important findings and implications for the use of this delivery mechanism.

Delivery Mechanism – Cash-for-Work and Cash-for-Assets

Increasingly, implementing agencies provide a distinction between cash-for-work (CFW) and cash-for-assets (CFA). Based on field consultation and review in the RISE II program areas, this report distinguishes between the two according to definitions provided by the Cash and Learning Partnership (CaLP n.d.), which describes CFA as a subset of CFW, an implicitly conditional and remunerative transfer of cash payment in exchange for labor days or outputs completed. In the context of the RISE II program areas, CFA often includes resilience-oriented projects such as arable land reclamation and control of invasive plants to increase land use and productivity. Program initiatives that are currently incorporating CFW/CFA include WFP in Zinder, which provides cash-earning opportunities during the lean season, namely, 15 days of work for 32,500 XOF, to restore fallow fields. Households working less than 15 days are only paid for the days that they have worked. Households are then able to meet household needs at their discretion, and according to their own priorities and choices. In Burkina Faso, WFP staff noted that an advantage of Food for Assets (FFA)/CFA is that households have much more flexibility in accessing their needs with earned wages. de Sardan (2014) asserts another advantage in community perceptions of CFW, notably, that the complex social and economic factors that shape community perceptions of cash and cash-based transfers are best addressed through CFW, which is viewed by the community as emphasizing exchange rather than donation, and is less prone to arbitrary selection criteria (de Sardan 2014). Overall, while this modality is incorporated throughout the selected areas, program staff reported that lack of participating laborers is consistently a challenge to successfully implementing this transfer modality (Table 62).

Table 62. Challenges associated with CFW/CFA in RISE II program areas

Challenge	Observations
Availability of laborers	• REGIS-ER program informants indicated that lack of willing laborers was particularly an issue in Niger program sites. In Niger, program beneficiaries indicated that CFW/CFA payments are often delayed, and that the cost-benefit analysis of labor versus remuneration (XOF 32,500/month) is perceived as unfair and unbalanced. Beneficiaries have reported that CFW/CFA payments do not consider household size, and that the greater community will often organize to 'take a share' of the cash for other purposes, leaving beneficiaries with less of a cash benefit than was expected.
Opportunity cost of laborers	• Another significant challenge to CFW/CFA is wage competition, as reported by participating households and agency observations, particularly in Burkina Faso where informal labor in gold mining operations is significantly more lucrative than the daily or monthly wages received for several days work. Households in Niger also reported earning more income from labor migration opportunities than through CFW, resulting in labor shortages and a lack of program participation.

Source: *Authors' elaboration.*

Transfer Modality – Vouchers

For the purpose of food assistance, asset multiplication, and agricultural production, vouchers have a significant role in current and past programming across the RISE II program areas. Overall, the use of vouchers as a means of connecting households to additional resources and food commodities has been reviewed favorably in the literature, and by implementing agencies and beneficiaries in the RISE II program areas. Past voucher programs demonstrated both efficiency and appropriateness in terms of facilitating timely access to key household needs. Important evidence of this is explained in an evaluation of Catholic Relief Services food assistance programs conducted in 2015 that strongly asserts that vouchers, specifically conditional vouchers, emerged as the most cost-effective means of delivering food assistance to food insecure populations in Niger compared to conditional and unconditional cash transfers and seed/voucher fairs (Catholic Relief Services 2015). [13] In another evaluation of transfer modalities in Burkina Faso (2012 in Sanmantenga, Bam), Welt Hunger Hilfe (2014) refers to the benefits of voucher programs when combined with cash transfers as a means to more holistically assist households in meeting their basic food needs, compared to cash-only initiatives, which do not always guarantee increased household access to nutritious foods.

Delivery Mechanism – Paper Vouchers

In the current programmatic landscape, DFAP/Title II and RISE programs incorporate vouchers less for direct food assistance, and more for the purpose of transferring resources, increasing household access to livestock and important agricultural assets. One exception is WFP In Niger (Maradi Region), where paper vouchers are used to support food assistance for children in school canteens, allowing students to exchange vouchers for 100 kilos each of millet, cowpea, a liter of oil, and a chicken-every trimester. DFAP partners are increasingly integrating voucher fairs as a delivery mechanism, creating a more contained forum to manage the appropriate exchange of vouchers for livestock (primarily small ruminants) and agricultural inputs, particularly seeds. Feedback from staff supporting the SAWKI program suggested that voucher fairs allow increased control over the quality of resources made available to beneficiaries, as well as more oversight of transactions and vendor participation. Almost exclusively, paper vouchers are the selected format over electronic vouchers, which are perceived as less appropriate for the same constraints that prohibit mainstreaming of and the use of mobile cash transfers. Despite the benefits of this transfer modality, some noteworthy challenges exist (Table 63).

Table 63. Challenges associated with voucher programs in RISE II program areas

Challenge	Observations
Vendor professionalism	• Vendors and traders who have the capacity to finance significant and higher-quality stocks for exchange through the voucher modality demonstrated a lack of interest in interacting with

[13] CRS notes that four programs were selected for evaluation, namely: Vouchers Offering Incentives to Communities during Emergency (VOICE); Bonbatu Plus (Bonbatu +),a follow-on from "Bonbatu" livelihoods program; Emergency Agriculture Recovery and Livelihoods Interventions in Niger (EARLI), and Assistance through the Distribution of Vouchers Aiding Nigerien Communities in Emergency (ADVANCE) projects. These projects were implemented in the Tillaberi and Ouallam Departments, of note since they are not within the scope of the RISE II geographic framework.

	program beneficiaries and are unlikely to engage at the program level due to their more macro level of involvement in the commercial supply chain. As a result, those selected are often smaller and less professional vendors who frequently lack functional or financial capacity to support program objectives without significant oversight. • OCADES/Caritas staff in Burkina Faso described that the vendor fair forum, aside from logistical and planning complexities, is compromised by vendors who do not understand quality standards, supply requirements, or administrative procedures associated with participation.
Quality and quantity of products	• Beneficiaries suggested that the voucher values for livestock are insufficient. Feedback indicated that the livestock obtained with each voucher were not enough to maintain a reproductive base (*seuil de viabilité*), which in Niger, is 3–5 TLU per household in a pastoral zone, and 1–2 TLU per household in agricultural and agropastoral zones. Beneficiaries indicated that two animals, frequently the size of the transfer, are not sufficient to improve household livestock assets in a meaningful and sustainable manner. Additionally, beneficiaries highlighted the lack of complementary resources made available to access livestock feed. • In the case of agricultural inputs, beneficiaries noted that seed fairs offered seeds that are ill-adapted to their local agricultural context. Agencies suggested that this challenge resulted from the emergence of "circumstantial" seed suppliers, who were able to respond to calls for tenders, but who may not have the best quality or best adapted seeds. Alternatively, this feedback from beneficiaries represents possible adjustments or quality assessments along the controlled supply chain, as applicable, for seeds offered in fairs.

Source: *Authors' elaboration.*

In-Kind Modality

Food distributions and in-kind allocations of both locally and internationally procured staple and fortified foods are widely used across the RISE II program areas to achieve specific health and nutrition outcomes, particularly for pregnant and lactating women, and children under two years of age (Title II programs, WFP). Food assistance for the discrete purpose of increasing food insecurity outcomes is highly targeted and generally a smaller or supplemental activity rather than a large-scale, overarching means of improving food security outcomes in Niger and Burkina Faso. Additionally, in-kind supplements are provided to bridge the food gap for food insecure households in the months leading up to and during the lean season. For example, WFP in Burkina Faso provides both blanket and targeted supplementary feeding with internationally procured commodities (Plumpy Nut, CSB, fortified oils) in March, June, September, and December.

Delivery Mechanism – In-Kind Ration

In-kind food assistance is particularly welcomed among program beneficiaries in parts of Niger, where households have demonstrated preference in some areas for food commodities over cash. The latter point is highly variable and cannot be generalized to all program areas within the RISE II program zone; context-specific considerations are important in determining beneficiary preferences, particularly in light of the preferences expressed by beneficiary groups in Maradi Region, who generally appreciated cash transfers instead of food commodities. Hoddinott et al. (2013) also suggest that intrahousehold bargaining may be a factor in household preference, and that food may be more likely to be controlled by women than cash and hence be preferred by women. In general, in-kind rations are associated with more consistent improvement in food security indicators. Results from a 2011 study of cash versus in-kind assistance for vulnerable households in Mirriah in Zinder Region found that food recipients experienced greater improvement in household dietary diversity and food consumption scores than cash recipients (Hoddinott et al. 2013). [14]

The greatest challenge reported across all participating programs and beneficiary communities is the inevitability of sharing and redistribution of food commodities among household members, among neighbors, within communities, and at times, with traditionally respected leaders. Beneficiary groups informed FEWS NET Field Assessment teams in Burkina Faso and

[14] Hoddinott et al. (2013) reviewed a three-month program comparing payment in food versus cash for public works labor. According to the evaluation, cash villages received XOF 1,000(roughly US$2) per day worked to a maximum of XOF 25,000 per month. Food payments were provided in the form of a food basket of local commodities. A day payment provided a full ration of food for the average household size of seven people, including 3.5 kg of grain, 0.72 kg of pulses (cowpeas, red beans, or lentils), 0.14 kg of vegetable oil, and 0.035 kg of salt.

Niger that sharing strengthens the social capital of the household, which can be returned at a later point in time. This reflects a certain egalitarian, as well as fatalistic, perception of who can and will benefit from assistance at any point in time (de Sardan 2014). Additionally, the perceived benefit of food assistance, even if sharing occurs, is that households reduce the amount of money spent on food in all households involved or supplement the current consumption levels, which are both acceptable to recipients. Sharing practices reflect solidarity, as well as outward social pressures, which can also dilute the desired impact of assistance for a specific set of beneficiaries, even children.

PASAM TAI program reporting points to the common practice of resource sharing as a challenge in addressing malnutrition among PLW and children. Complaints from the community suggested that the ration was insufficient, largely due to sharing among family members and community members. WFP staff in Burkina Faso report that one of the primary obstacles to in-kind assistance is sharing and redistribution among household members and community members. Sharing practices have historically played a role in food assistance programming, with documented research demonstrating household tendencies to distribute resources received through assistance programs. Results from research conducted in 2013 on food assistance program beneficiaries in Zinder Region (Mirriah) indicated that 85 percent of households receiving food commodities[15] redistributed some portion of their benefit; households reported consuming 78 percent of their ration as food, giving 20 percent of the ration to other households, and selling or exchanging the rest to obtain other food items (Hoddinott et al. 2013).

Redistribution and sharing also occur at the community level; key informants from organizations engaged in direct distribution reported that leadership figures within the community (who typically influence management and distribution of commodities) often withdraw their own share, regardless of whether they meet targeting criteria. Beneficiaries across program areas suggested that oversight of the *chefs de village* is important to assure less graft and mismanagement of commodities.

Delivery Mechanism – Food-for-Assets

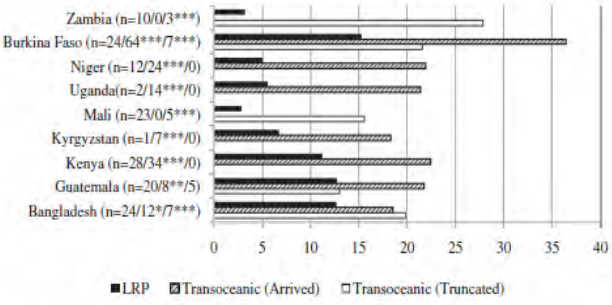
Food-for-assets has been described frequently in DFAP/Title II program reporting over the last five years, but the FEWS NET Field Assessment in Niger and Burkina Faso did not find this modality to be extensively applied in current programming in general. WFP notes that food-for-assets initiatives in Burkina Faso are generally oriented around conservation objectives, to include the construction of half-moons (*zais*), *bas-fonds*, and additional growing space. In Niger, these activities are implemented during the period immediately preceding the lean season, with geographic targeting support from the government. This modality was used extensively by WFP Niger until 2014. In 2015 and 2016 it was replaced with CFA , especially in Maradi Region, where partners ascertained a very low risk of inflationary impacts. However, during the current marketing year (2016/17), WFP reverted back to food-for-assets, especially in Dakoro and Mayahi Departments, where the adequacy of local market availability was a concern due to the local food production deficit.

Procurement Mechanisms

Local and Regional Procurement

Local procurement is the focus of government food assistance programs, which purchase thousands of MT of grain per year. Among the international community, WFP engages extensively in local purchase to support food assistance activities. WFP purchases from women's producer unions in Niger (Zinder and Maradi Regions). While this strategy is reported to benefit small producer groups and unions, particularly women's groups, and to allow for timely delivery of essential goods (Figure 59), logistical and quality control constraints are a common feature of this procurement mechanism. Incorporation of locally procured staple foods encourages local production, spurs economic exchange, and enhances livelihoods among small-scale producers, especially for those producers who

Figure 59. The timeliness of local and regional procurement of food aid



The number of observations for LRP, delivered transoceanic shipments, and truncated transoceanic shipments are shown in parentheses, in that order. ***, **, and * indicate statistically significant differences from LRP delivery times at the 1, 5, and 10 percent levels, respectively.

Source: *Lentz, Passarelli, and Barrett (2013).*

[15] Compared to 33 percent of households receiving cash in hand, per the study.

are consistently enlisted for participation in voucher fairs and LRP tenders. LRP is preferred among beneficiaries for local goods when feasible, and there are increasingly opportunities to purchase locally and regionally made nutritious foods.

Food assistance pipelines and procurement strategies are regarded as well-established among Title II partners, and by individual NGOs that are currently implementing programs in the RISE II program areas, as well as national governments. Aside from port delays and "tracasseries," which are ubiquitous throughout the region (Chapter 0), no significant concerns regarding procurement, warehousing and storage, or distribution of food commodities, including imported commodities, were reported during the 2017 FEWS NET Field Assessment in Burkina Faso and Niger. In general, higher-quality and highly nutritious foods are sourced internationally, particularly for USAID-funded programs, which supply CSB+ and fortified vegetable oil to partners supporting maternal and infant health. However, local and regional commodity procurement has an extensive history in West Africa by both national governments and the humanitarian community and has demonstrated to be an effective procurement mechanism for preferred staple cereals, and increasingly for supplementary foods (such as Plumpy Nut, which the Société de Transformation Alimentaire in Niamey supplies to various organizations). This is highly relevant to future food security programming, as beneficiaries consistently expressed a preference for local foods and familiar staple cereals and legumes, not just for taste and familiarity, but also because imported or "exotic" food varieties draw attention and social pressures to share with neighbors and the greater community. Furthermore, households in Niger expressed that rations were often poorly matched to local consumption and preparation of staple foods; the variety of foods and amount of each commodity do not always correspond to household food needs.

6. Considerations for Program Design in RISE II Program Areas

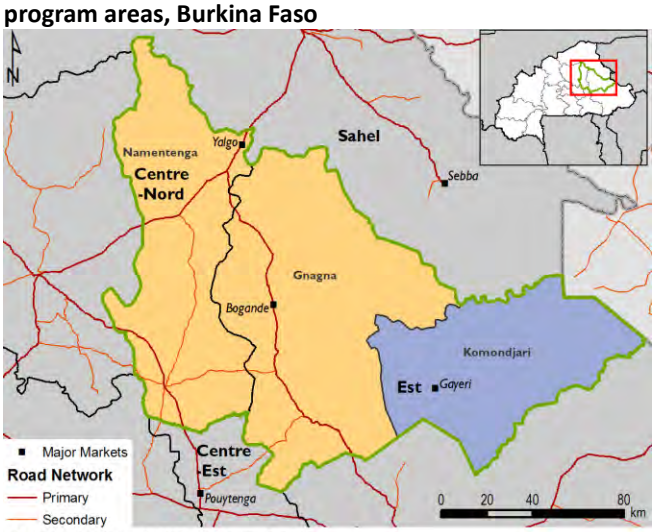
Findings from this assessment identify a number of constraints to and opportunities in support of market-based response modalities in the RISE II areas of interest in Niger and Burkina Faso.

Feasibility and appropriateness for a particular modality in terms of assistance and/or resilience are inherently linked to the desired outcome of the corresponding program. In the operating context of Niger and Burkina Faso, multiple modalities have been considered feasible and appropriate, and have achieved program goals in emergency and resilience-oriented efforts as documented by implementing organizations. Ultimately, assessing the most appropriate and feasible assistance modality in a given area includes consideration of the specific operating context, desired timeline, characteristics of the targeted population and of the implementation agency, and assistance objective.

FEWS NET's review of food assistance initiatives operating in the area chapter 5. Food Security and Assistance Context in RISE II Program Areas) identified, among others, aspects related to the preferences of beneficiaries, livelihood dynamics, the extent of use of technology, timing of assistance, partners' capacities and presence on the ground, quality of goods delivered, personal security, and actual use of assistance resources as important elements influencing the design, implementation, and/or outcomes of the assistance delivered.

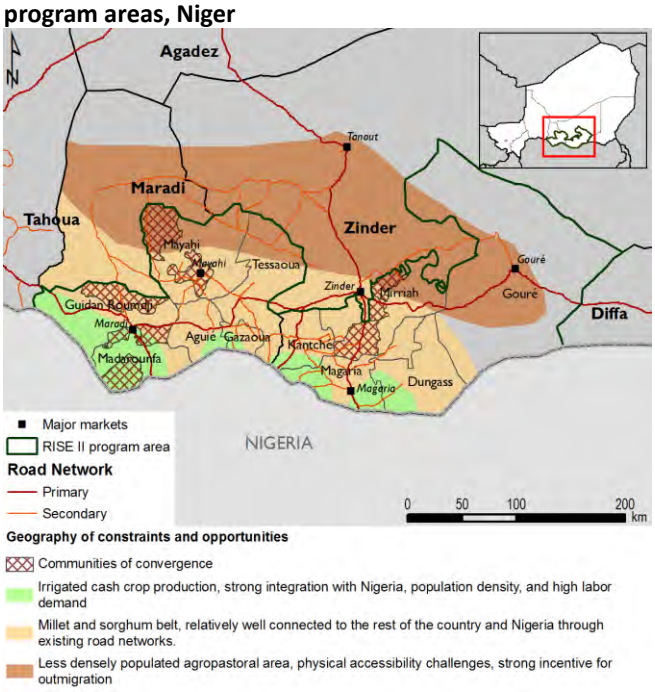
Based on the information gathered to this point, seven types of considerations for program design are identified: environmental factors, availability and access to different types of infrastructure and services, social factors and livelihood dynamics, market characteristics, the food assistance context, and the broader regional context (Table 64 to Table 70). Figure 60 and Figure 61 present the geography of constraints and opportunities for market-based response in the RISE II program areas of Burkina Faso and Niger, respectively. For each country, three broad areas with distinctive dynamics are identified.

Figure 60. Geography of constraints and opportunities in support of market-based modalities in the RISE II program areas, Burkina Faso



Source: *FEWS NET (2017a).*

Figure 61. Geography of constraints and opportunities in support of market-based modalities in the RISE II program areas, Niger



Source: *FEWS NET (2017c).*

6. 1 Environmental factors

Table 64. Key environmental considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Capacity of the natural resource base to sustain agricultural production	Insufficient and inconsistent timing and/or spatial distribution of rainfall, coupled with degraded/marginal soils, low technology, and low investment capacity, constrain agricultural productivity and local supply.	2.1.1 2.1.3
Risk of adverse climatic events to predominantly rainfed production systems	Droughts are recurrent risks to agricultural production, which in turn influence household decision making and long-term planning in the context of interannual fluctuations in staple food availability and asset management.	2.1.1

6.2 Availability of and access to different types of infrastructure and services

Table 65. Key infrastructure and service-related considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Road penetration and quality	Limited availability of improved roads places additional financial and time burden on household access to markets and services. Limited availability of improved roads leads to high transport costs and long transport times, contributing to increased commodity prices and opportunistic trader behavior.	2.3.1 4.3.2 4.5
Access to basic services	Poor hygiene and sanitation and limited access to potable water as direct correlates of malnutrition among RISE II populations in Niger, and likely, in Burkina Faso, remain an underlying driver of poor nutrition indicators despite food assistance initiatives and longer-term resilience-oriented programming.	2.3.2
Access to mobile phones	Mobile phone ownership (and access to) is lower in program areas than at the broader national level. Affordability of phone and of service costs is a major hindrance to phone access and use.	2.3.3
Mobile phone use and connectivity	Two operators (one in each country) dominate service in RISE II program areas. Household use of mobile phones is primarily for communication rather than other uses, including resource transfers through external agencies. Low literacy levels and technical skills regarding mobile phone technology limit the use of mobile phones for the purpose of a resource transfer.	2.3.3
Capacity and reach of financial institutions	High need for financial services (borrowing), but little access to formal financing (banks, micro-lenders, etc.), especially in rural areas, translate into a high dependence on informal lenders (mainly family) as a source of finance. Formal finance products fitting the needs of the rural population are lacking. Women and the poor have disproportionately less access to financial services. Illiteracy, lack of identity cards, and cultural barriers are major factors influencing demand/access to financial services.	2.3.4

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
	Financial institutions have a limited viability as a means of cash transfer by implementing agencies.	
Presence of financial services in the program area	Consistently functioning financial service providers have a limited presence in the area of interest. Long distance to points of service further limits access to financial services. Village-based mobile operators to support financial transactions are sporadic and/or poorly organized. Financial service providers (microfinance institutions and mobile transfer operators have limited operational capacity and liquidity constraints) to sustain transfer initiatives and/or household cash management.	2.3.4

6.3 Social factors

Table 66. Key social considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
High dependency ratios	High proportion of children and other dependents	2.2.1
Social and cultural practices	Well-known sharing and solidarity practices between and among households impact the appropriation of in-kind and cash resources, and add complexity to beneficiary selection and impact assessment. Solidarity practices among households and community members are more evident when 'exotic' (non-locally produced foods) are introduced. Definitions of 'household', multi-family units, and vulnerability are variable. Gender differentiation and intrahousehold resource management and division of labor impact the use and allocation of transferred resources (food and cash), as well as the perceived or functional benefit of resource transfers. Social norms that govern how women engage in and benefit from transfers and asset multiplication remain a consideration for sustainable impact.	2.2.4 2.2.5
Household and community perceptions of assistance	Inherent egalitarian perceptions exist within villages and/or a resistance to the social marginalization that accompanies an external designation of vulnerability or level of need. Thresholds of need or vulnerability designated by external entities may not be clear or justifiable among community members who fundamentally share the same food and income patterns, leading to distrust and perceptions of arbitrary selection processes.	2.2.4

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
	Social pressures to meet beneficiary criteria can influence household and community behavior in order to participate in resource transfer programming.	
Social structures and governance	A mix of customary and non-customary leadership participating in community-level decisions and processes adds complexity to resource transfer-based programming, and the ensuing behavior of communities and households. Traditional, political, and/or religious leaders can influence the selection of beneficiaries, support the facilitation of program activities, and facilitate communication with external agencies.	2.2.6 2.2.7 2.2.8
Low level of literacy	Low levels of literacy and of technological awareness limit productivity, market activity (business practices and access to information), engagement with information and communication technologies, and use of mobile-based applications (transfer mechanisms such as e-based payments, etc.). This applies to beneficiary groups at the household level as well as to market actors, particularly local vendors and traders who are most likely to engage with local populations.	2.2.3

6.4 Livelihood dynamics

Table 67. Key livelihood-related considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Limitations on productive land use	Increasing population density in a context of limited land availability and subsistence level production constrain agricultural expansion and increase pressure over the available resources Insecure land tenure and household reticence to cultivate productive land that may be reclaimed by land owners limit productive land use.	3.1.1 3.1.2
Post-harvest crop management and loss	Poor crop management and post-harvest handling (i.e., insufficient storage capacity, pest control, processing/preparation of staple foods) threaten household and local food availability, even in good production years.	4.1
Timing and mechanism for cereals-pulses intercropping	Decisions related to cowpea production depend on the timing and conditions of ongoing cereal production. Any factor influencing cereals' prospects and timing impacts cowpea production.	2.1.4
Seasonality of agricultural labor and emigration	Resource transfer initiatives occur in a setting of constant seasonal movement and transition during the seasonal calendar that relate to agricultural production, transhumance, and cyclical labor migration.	2.1.4 3.2
Extreme variability in seasonal income	Households engage in multiple income-generating activities, rather than a primary activity.	3.1 3.2

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
sources	Casual labor is the most important income source for the poor and very poor, and drives exode among able-bodied adults. Wide variations in wages reported between initiatives providing CFW and CFA assistance, compared to income earned through exode or casual labor, influence the household cost-benefit analysis for participation in assistance programming. Observable trends (Burkina Faso) in household pursuit of casual labor income (gold-mining income) over traditional agriculture-based labor have unmeasured impacts on long-term agricultural production in associated livelihood zones.	
Food expenditure as a percentage of household spending	More than 60 percent of total household expenditures are on food in RISE II program areas. Households have very limited (if any) resources available for investment, saving, or other productive uses once household basic needs are met.	3.4

6.5 Market characteristics and dynamics

Table 68. Key market-related considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Market dependence and seasonality of staple purchases	Generally, a high degree of market dependence occurs during specific times of the year. Households rely more (or entirely) on staple purchases during the lean and rainy season, the period with the highest prices. Large food purchases during the lean season prioritize staple foods over more nutritious foods in an effort to secure household food supplies. Foods of higher nutritional value are traded off due to limited household resources.	2.1.4 3.4 3.6
Food gap	The size of the structural food gap is limited, although annual variations exist. Quality and diversity of food consumed remain a major challenge.	5.1
Diversity of foods in the markets	Markets tend to offer a range of food products that accommodate local food preferences, suggesting that preferred foods are locally available and/or can be supplied through existing marketing channels.	4.3.1
Accessibility to markets	Markets are physically accessible for the most part, however access is constrained by potentially long travel times (1-2 hours), mostly on foot. Beyond price, distance (and the time required to travel) as well as carrying capacity (load size) might influence the amount of goods purchased during a market visit. Market access might be challenging for certain groups of persons (elderly, pregnant women, physically impaired persons), who typically meet selection criteria for participation in assistance programs.	4.3.2

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Price setting is done by a large number of actors based on supply and demand	Limited possibilities for collusion and/or price/stocks manipulation exist, given the large number of traders participating in the marketing system. Large wholesalers and importers have been reported to influence prices of specific commodities in certain markets in Niger.	4.3 4.4
Capital constraints limit marketing activities	Lack of capital and/or financing is the major constraint to marketing activities (current or intended) reported by current market participants. Family and friends are the main source of financing.	4.3.4
Access to market information	Phone and radio are the main sources of market information. Households and vendors are aware of relevant market information (which could include potential business opportunities) being shared through these channels.	4.4.3
Different types of traders/vendors operating in RISE II program areas	Traders and vendors vary considerably in size and level of professionalism, and subsequent ability to meet agency requirements for compliance and financial accountability. Large regional or national traders as well as wealthy "circumstantial" traders have the most experience with local and regional commodity procurement and are most likely to benefit from these procurement strategies. Vendors participating in voucher programs who engage in direct interaction with clients are smaller and less professional economic actors, as larger and more professional vendors prefer to engage with a different customer base. "Circumstantial" quality control actors are present in a largely underdeveloped seed market. Seed quality is variable as well as the technical capacities of seed producers.	4.3.3
Sources of market shocks differ between Burkina Faso and Niger RISE II program areas	Staple self-sufficient (or minor deficit) Burkina Faso RISE II program areas experience market shocks differently than structurally deficit RISE II program areas in Niger, which are heavily import-dependent and influenced by dynamics in Nigeria.	4.5.3

6.6 Food security and assistance context

Table 69. Key food security and assistance-related considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Permissive food security context	Generally, resource transfers in the RISE II program areas occur in a context of relative food security and stability of supply and access, which have created "better than average" conditions. Niger's sensitivity to the Nigerian context creates special food	5.1

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
	security dynamics in the RISE II program areas. The size of food assistance programming relative to the capacity of the local and regional market system to move and supply staple foods is minimal and permissive.	
Presence of other institutional operators and consortia implementing assistance initiatives across the RISE II area and environs	Potential for overlap and duplication of effort is high; similarly, potential for maximizing resources and consolidating efforts is high. Multiple operators/implementers in a given area may create concerns regarding inconsistent targeting and beneficiary selection strategies, messaging, and resource transfer values.	5.5
Adaptation of assistance modalities based on beneficiaries' preferences	Clear beneficiary preferences exist for different transfer modalities among otherwise comparable populations.	5.5
Implementation of food assistance programs	The timing and frequency of resource transfers are logistically prone to delay, which may mute the impact on household food access. Funds for program implementation are, on occasion, made available late in the season, compromising program objectives of supporting the population at times of largest needs.	5.5

6.7 Regional context

Table 70. Key regional-level considerations for future program design and implementation

Element/aspect	Overall assessment findings	Refer to (→ chapter/section)
Situation in Nigeria	Northern Nigeria and the Niger RISE II program areas are highly integrated, with intense formal and informal commodity and population flows between them. The ongoing economic crisis in Nigeria has affected marketing possibilities of products (cowpeas, livestock) originating in the RISE II areas of Niger, with consequent reduction in income/earnings and affected livelihoods (migration, production).	4.5.3
Situation in Ghana	There are no impacts of the depreciation of the Ghanian cedi on marketing activities in RISE II program areas.	4.5.3

Annex 1. Communes Visited

Country	Region	Department (NE) Province (BF) State (NG)	Commune/LGA	Livelihood Zone	Number of Towns/villages visited
Burkina Faso	Centre-Nord	Barsalogho	Sanmatenga	BF05	3
Burkina Faso	Est	Bartiebougou	Komandjoari	BF07	5
Burkina Faso	Hauts Bassins	Bobo Dioulasso	Houet	Source market	1
Burkina Faso	Est	Bogande	Gnagna	BF07	3
Burkina Faso	Centre-Nord	Boulsa	Namentenga	BF05	1
Burkina Faso	Centre-Nord	Bouroum	Namentenga	BF07	3
Burkina Faso	Est	Foutouri	Komandjoari	BF07	1
Burkina Faso	Est	Gayeri	Komandjoari	BF07	3
Burkina Faso	Centre-Nord	Kaya	Sanmatenga	BF05	3
Burkina Faso	Est	Manni	Gnagna	BF07	3
Burkina Faso	Centre-Nord	Nagbindou	Namentenga	BF07	2
Burkina Faso	Centre	Ouagadougou	Kadiogo	Source market	1
Burkina Faso	Centre-Est	Pouyentenga	Kouritenga	Source market	1
Njgeria	Nord	Katsina	Maiadua	Source market	1
Njgeria	Nord	Jigawa	Maigatari	Source market	1
Njgeria	Nord	Katsina	Jibia	Source market	1
Njgeria	Nord	Kano	Dawanau	Source market	1
Niger	Niger	Maradi	Guidan Roumdji	NE05	3
Niger	Niger	Maradi	Dakoro	NE04	1
Niger	Niger	Maradi	Dakoro	NE04	3
Niger	Niger	Maradi	Mayahi	NE04	3
Niger	Niger	Maradi	Aguié	NE05	1
Niger	Niger	Maradi	Aguié	NE05	3
Niger	Niger	Maradi	Madarounfa	NE07	1
Niger	Niger	Maradi	Madarounfa	NE07	3
Niger	Niger	Maradi	Madarounfa	NE07	1
Niger	Niger	Maradi	Madarounfa	NE07	1
Niger	Maradi	Dakoro	Dakoro	NE04	1
Niger	Maradi	Dakoro	Sabon Machi	NE04	3
Niger	Maradi	Mayahi	Mayahi	NE04	3
Niger	Maradi	Aguié	Aguié	NE05	1
Niger	Maradi	Aguié	Tchadoua	NE05	3
Niger	Maradi	Madarounfa	Madarounfa	NE07	1
Niger	Maradi	Madarounfa	Jiratawa	NE07	3
Niger	Maradi	Madarounfa	Dan Issa	NE07	1
Niger	Maradi	Madarounfa	Gabi	NE07	1

Source: *FEWS NET (2017a,2017c, 2017h).*

Annex 2. Annex Methodology

FEWS NET Enhanced Market Analysis Methodology[16]

The Bellmon Amendment requires assurance that a proposed food assistance program will not result in a significant disincentive to or interference with food production or marketing.[17] [18] Historically, the Bellmon Amendment was mostly applicable to in-kind US food aid that was either distributed or monetized as part of Food for Peace (FFP) Title II programs. Since 2016, with the increased flexibility in terms of the modality options available using US government funds via the 2014 Farm Bill and Food Aid Reform process, FFP has extended this application to include other assistance modalities including local, regional, and international commodity procurement, as well as cash transfer and voucher programs (USAID 2015).

The objective of FEWS NET Enhanced Market Analysis (EMA) is to provide sufficient evidence to relevant USAID policy decision makers and program managers on a range of topics to allow a determination of whether the design of a proposed food assistance program (Emergency or Development) is appropriate and feasible given the local context (Table 71). Local context includes but is not limited to the underlying livelihood and market systems and resulting food security outcomes, government policies and programs, local infrastructure and supporting services, and relevant food assistance experience in focus areas.

Each food assistance modality has the potential to negatively affect production and/or market incentives. An assessment of the likelihood of those negative impacts must therefore be completed to successfully determine the appropriateness of a given proposed modality and transfer distribution mechanisms.

FEWS NET analysts use a livelihoods-based convergence of evidence approach that typically draws on a range of primary and secondary data sources to provide the necessary evidence to inform the decision-making process. The sources, extent/detail, and quality of secondary data available for analysis vary widely from country to country. To this end, FEWS NET EMA builds from existing national-level FEWS NET Market Fundamentals Reports and market databases (production, prices, trade flows, commodity balances), livelihood reporting, agroclimatology information, and food security reporting and analysis with secondary data sources (food security and market reports, poverty mapping reports, income and expenditure studies, among others) and data gathered from stakeholders via a field assessment and stakeholder workshop.

Table 71. Key EMA study questions

	Study focus area, typically a subnational geographic area targeted by FFP for future assistance programming	Other areas (national, regional, or international) where commodity procurement might take place for in-kind distributions or transfers
Appropriate	What are local livelihood systems, including key foods consumed, and food and income sources	
	What is the estimated food gap among poor and very poor households?	
	What is the size of local markets (quantities traded), who are the actors, and do they behave competitively?	What is the size of the market (quantities traded), who are the actors, and do they behave competitively?
	What are seasonal variations in supply, demand, and prices?	
	How well are local markets integrated with broader national, regional, and international marketing systems?	What is the size of markets and size of exportable surpluses?

[16] This section is informed by several key references including "Malawi Best Report 2013, Annex 6 "Methodology for Determining Impact of Distributed Food Aid," Barrett and Maxwell 2009, "Food for Peace Modality Decision Tool" 2016, ECHO "The Use of Cash and Vouchers in Humanitarian Crises" 2013.

[17] Bellmon Amendment.

[18] The language in the Bellmon Amendment refers to "food aid" rather than "food assistance." The language used in this report was updated to reflect the new and increased flexibility in terms of USAID FFP funding use, which now allows for a much wider range of procurement and distribution options.

	What are key constraints to expanding supply to local markets?	
Feasible	What existing food assistance programs are underway and what have been their experiences, including key challenges and successes?	What existing procurement efforts are underway and what have been their experiences, including key challenges and successes?
	What is the status of the local enabling environment for the food assistance modalities and transfer distribution mechanisms under consideration (for example, private and NGO storage and transportation capacity)?	What are constraints to the effective and timely procurement and distribution of commodities (for example, physical constraints, policies, storage, and transportation network capacity)?

Source: *Authors and USAID/FFP (2016).*

FEWS NET EMA Analytical Approach

Step 1 CONSULTATION

Carry out consultations with USAID/FFP to understand and elaborate on their preliminary research questions, future program objectives (including geographic targeting and expected outcomes), and initial range of modalities and transfer distribution mechanisms under consideration. This consultative step is repeated in an iterative fashion, as necessary, as USAID's understanding of the study area and context improves and as its priorities are further refined. These consultations take place with key stakeholders within FFP Washington (country backstop officers and the FFP Markets Team) and in the field as well as with other relevant USAID staff (for example, Feed the Future).

Step 2 REVIEW OF EXISTING RESOURCES

The specific resources reviewed will be informed by the results of the consultation process (Step 1) and the depth and scope of existing FEWS NET resources and expert knowledge. In general though, the secondary resources reviewed fall under a number of essential themes (Table 72). The review of secondary sources likewise usually takes an iterative approach that is flexible to changing information needs (Step 1) and the evolving nature of FEWS NET's understanding of key issues and topics.

Table 72. Key resources reviewed over the course of EMA studies

Theme	Key information	Useful resources
Livelihoods	Food and cash income sources, preferred foods, size and seasonality of food gap.	Livelihood zone descriptions, profiles, and baseline study reports by FEWS NET, Food Economy Group, Evidence for Development, Save the Children, and others).
Markets	Market structure, conduct, and performance (SCP) in study focus areas including: determinants and level of food availability, market actors and their behavior, price levels and trends (seasonal and interannual) in key reference markets, degree of market integration within broader national or regional context.	FEWS NET Market Fundamentals Reports FAO Crop and Food Security Assessment Mission (CFSAM) reports WFP Market assessments FAO Food Balance Sheets Cash and voucher feasibility studies Other market baseline reports
Food security outcomes	Food security assessment findings (CFSAM, Comprehensive Food Security and Vulnerability Analysis/CSFVA, Vulnerability Assessment Committe reports) and national Demographic and Health Surveys (DHS) and income and expenditure study results (ILO, World Bank, among others).	Demographic and Health Surveys (DHS) Income and expenditure study results (ILO, World Bank, among others)
Policy context	Existing government, United Nations Development Programme (UNDP), World Bank, and other development policies and programs.	National Poverty Reduction Strategy Papers UN Strategy papers

Theme	Key information	Useful resources
Food assistance program experience	The inventory includes, I/NGO or government agency, location (as specific as possible), modality, expected duration of activity, transfer composition and size.	Current FFP awardee annual reports, Development Experience Clearinghouse (DEC) and partner annual and evaluation reports
Infrastructure	Existing road networks, port capacity (if relevant), storage and transportation systems and capacity, availability of information technology (IT)	Previous Bellmon reports and analyses, Digital Logistics Capacity Assessments (DLCA), and National Ministry of Transportation Strategy Documents and Annual reports
Enabling environment	Availability of banking and mobile money services in focus areas.	Cell Mapper

Source: *Authors'elaboration.*

Step 3 FIELD ASSESSMENT DESIGN AND PLANNING

The field assessment design and planning process is informed by Steps 1 and 2, which jointly orient the team to USAID priority research questions and geographic focus areas and reveal information gaps and inconsistencies in existing literature and reports that require clarification and triangulation. Each assessment is different, but nevertheless includes common elements implemented in the context of a rapid assessment that includes in-depth interviews with selected key stakeholders (Table 73).

Table 73. Essential elements of FEWS NET EMA field assessment design and planning

Assessment planning element	Notes
Determine assessment team structure	This is informed by expertise required to successfully respond to USAID decision support needs and may include a combination of skills sets, including economists, livelihood specialists, logistics and supply chain analysts, food assistance programming experts, food security experts, and local specialists who are familiar with the study focus area and can help orient the team to local dynamics and facilitate meetings between the assessment team and stakeholders.
Identify markets to visit	This includes the commodity markets, and the physical markets, ports, and border points.
Identify stakeholders to interview	This should be as specific as possible, including stakeholders' institution, geographic location, and function.
Identify potential logistical issues and strategies	This includes but is not limited to security concerns to be discussed with local staff, partners, and hired facilitators/translators.
Design field assessment checklist	Checklists of key topics and questions to discuss are developed for each stakeholder group: private traders, food processors, transporters, implementing partners, farmers, food assistance beneficiaries, warehouse managers, local government officials, and extension agents.
Draft assessment roadmap	This includes a detailed itinerary, a daily agenda of planned interviews, and travel itinerary.
Plan stakeholder workshop	If the assessment includes a consultation workshop, this event (one to three days) must be planned.

Source: *Authors' elaboration.*

Step 4 CONDUCT FIELD ASSESSMENT

The FEWS NET EMA field assessments involve filling in data gaps, triangulating secondary data, and holding discussions with identified key stakeholders to ensure a convergence of evidence. While in the field, the assessment team may split into separate groups to maximize geographic or thematic coverage. In principle, the division of responsibilities should happen as early as possible during the design and planning phase.

In some instances, inviting a cadre of stakeholders to a central location to discuss key assessment issues is deemed useful by FEWS NET staff. In those cases, the workshop typically follows the field assessment and serves an additional check on the accuracy of field assessment findings, particularly as they relate to market structure, conduct, and performance, and the experience with specific assistance modalities in a given geographic area.

Likewise, instances arise when physical field visits are not possible due to conflict or other constraints. While not ideal, in this case, FEWS NET staff may still be able to speak with key informants via phone calls to obtain relevant information to meet EMA decision support needs. FEWS NET staff may also hold the stakeholder workshop in a safe location rather than physically entering areas deemed unsafe.

Step 5 REPORT WRITING

FEWS NET reports assessment findings according to an outline agreed upon with inputs from FFP staff. The first complete draft is typically submitted within six weeks of completing the field assessment, as outlined in the original activity Scope of Work. FFP staff typically reply with comments, questions, and requests for clarification within two to three weeks of receipt of the initial draft. A final 508-compliant report must be submitted according to an agreed-upon timeline.

Annex 3. Overview of Primary Data Collected during the Field Assessment

Table 74. Number of interviews and/or focus groups held during the field assessment, by type of market actor, Burkina Faso and Niger

Country	Region	Number and Type of Interview				
		Departments	Markets	Household	Traders	Administration
Burkina Faso	Centre	1	1	0	1	0
	Centre-Est	1	1	0	2	0
	Centre-Nord	2	4	8	11	7
	Est	3	5	10	9	6
	Hauts Bassins	1	1	0	3	0
Niger	Maradi	4	8	10	17	8
	Zinder	3	9	8	9	9
Nigeria	North	3	4	0	0	0
Total		18	33	36	52	30

Source: *FEWS NET (2017a, 2017c, 2017h).*

Annex 4. Overview of Markets Visited

Table 75. Overview of markets visited by type and commodities traded, Burkina Faso

Location	Market	Type	Frequency	Commodities				
				Cereals	Pulses	Livestock	Edible oil	Tubers
Centre-Nord	Rietkolga	Ag	Every 3 days	X	X	X	X	X
	Kaya	.	Daily	X	X		X	X
	Foubé	R	Every 3 days	X		X	X	
	Nagbingou	R	Every 3 days	X	X		X	X
Centre	Sankariare	Wh	Daily	X	X			
Centre-Est	Pouytenga	Ag	Every 3 days	X	X	X		
Hauts Bassins	Nieneta	R	Daily	X	X			
Est	Bogandé	C	Weekly	X	X	X	X	X
	Mani	C	Every 3 days	X	X	X	X	X
	Haaba	C	Weekly	X	X	X	X	X
	Gayeri	R	Every 3 days	X	X	X	X	
	Fada N'Gourma	R	Daily	X	X	X	X	X

Source: *FEWS NET (2017a).*

Table 76. Overview of markets visited by type and commodities traded, Niger

Location	Market	Type	Frequency	Commodities				
				Cereals	Pulses	Livestock	Edible oil	Tubers
Maradi	Mayahi	WR	Weekly	X	x	x	x	X
	Kadro Maradi	AWR	Every 3 days	X	x	x	x	X
	Gabi	WR	Weekly	X	x	x	X	X
	Dan Issa	AWR	Weekly	X	x		X	X
	Tchadoua	WR	Weekly	X	x	x	X	X
	Guidan Roumdji	ACW	Weekly	X	x	x	X	X
	Sabon Machi	ACW	Weekly	X	x	x	X	X
	Dakoro	WR	Weekly	X	x	x	X	X
Zinder	Droum	WR	Weekly	X	x	x	X	
	Mirriah	AWR	Weekly	X	x	x	X	
	Matameye	ACW	Weekly	X	x	x	X	
	Tanout	AWR	Weekly	X		x	X	
	Ollelewa	WR	Daily	X	x	x	X	
	Marché Bandé	WR	Weekly	X	x	x	X	X
	Magaria	ACW	Weekly	X	x	x	X	X
	Kantché	WR	Weekly	X	x	x	X	X
	Zinder	AWR	Daily	X	x	x	X	

Source: *FEWS NET (2017c).*

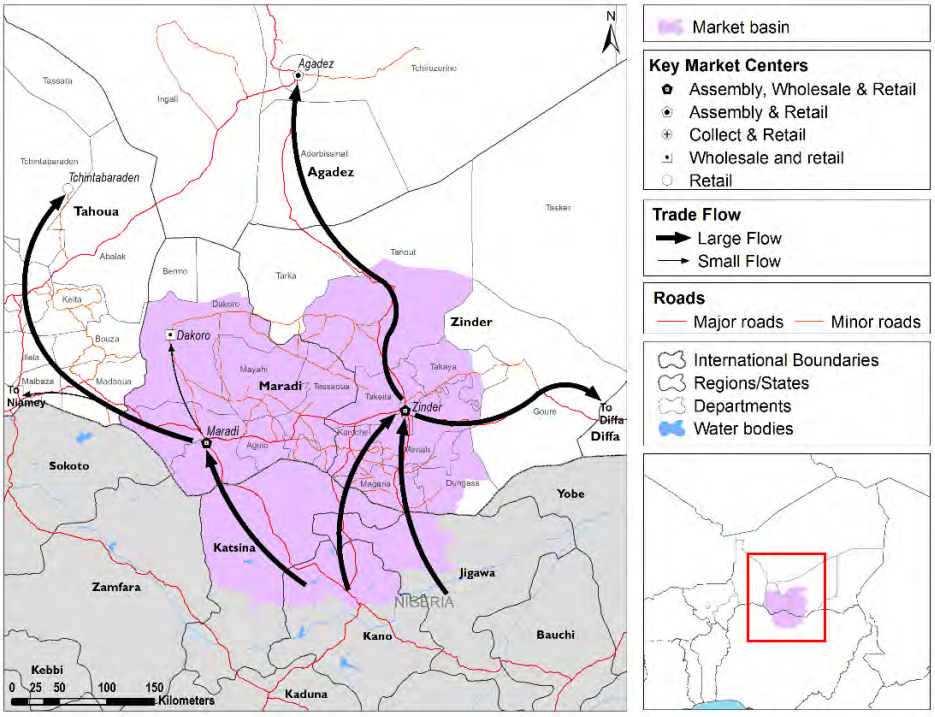
Table 77. Overview of markets by type and commodities traded, Nigeria

Location	Market	Type	Frequency	Commodities				
				Cereals	Pulses	Livestock	Edible oil	Tubers
Nigeria	Mai Adwa	Wh	Weekly	X	x			x
	Maigatari	Wh	Weekly	X	x			x
	Jibia	Wh	Weekly	X	x			x
	Dawanau	Wh	Daily	X	x			x

Source: *FEWS NET (2017h).*

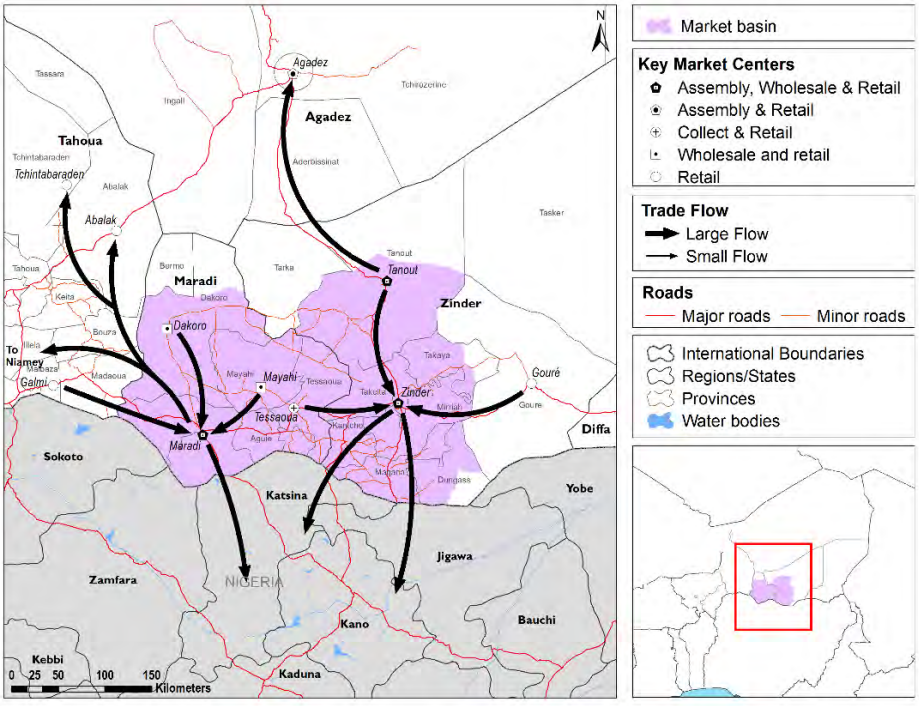
Annex 5. Marketing Basin Maps

Figure 62. Marketing basin serving Niger RISE II program areas in sorghum



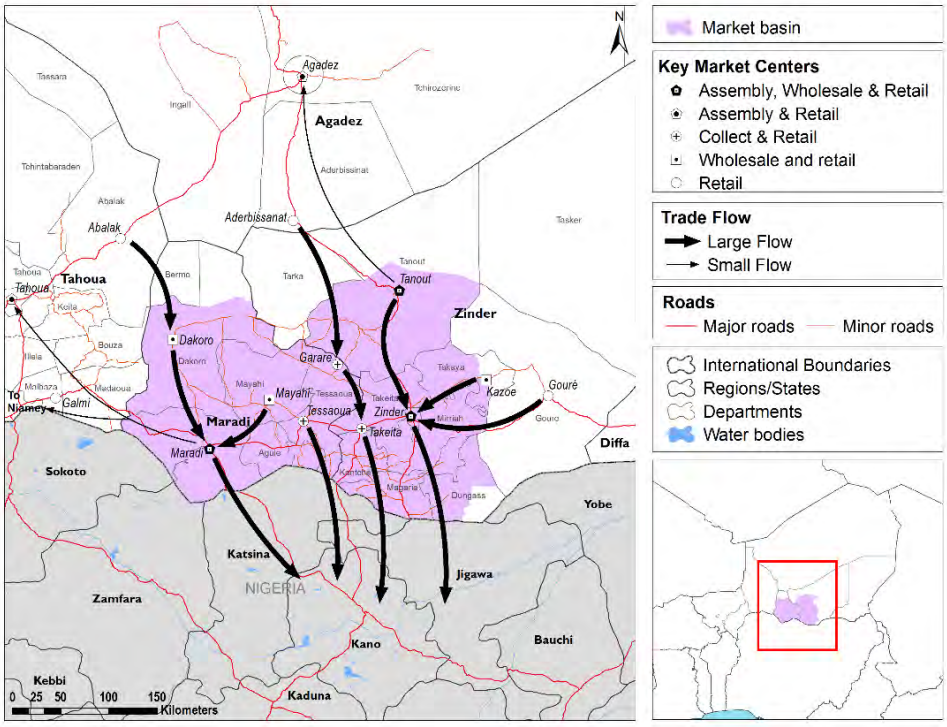
Source: *FEWS NET (2017c, 2017h).*

Figure 63. Marketing basin serving Niger RISE II program areas in cowpeas



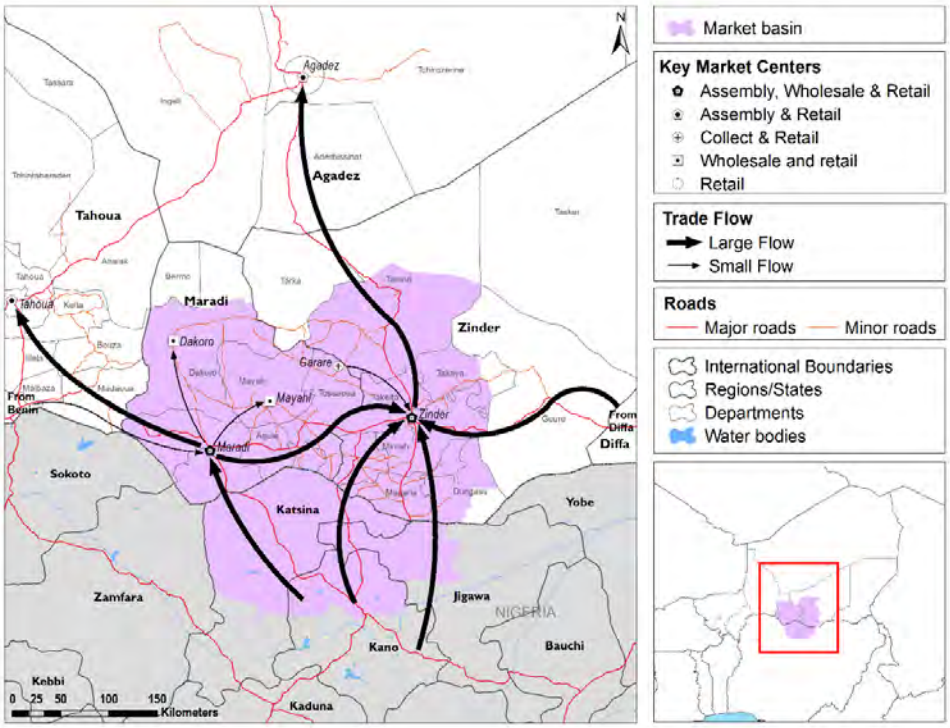
Source: *FEWS NET (2017c, 2017h).*

Figure 64. Marketing basin serving Niger RISE II program areas in small ruminants



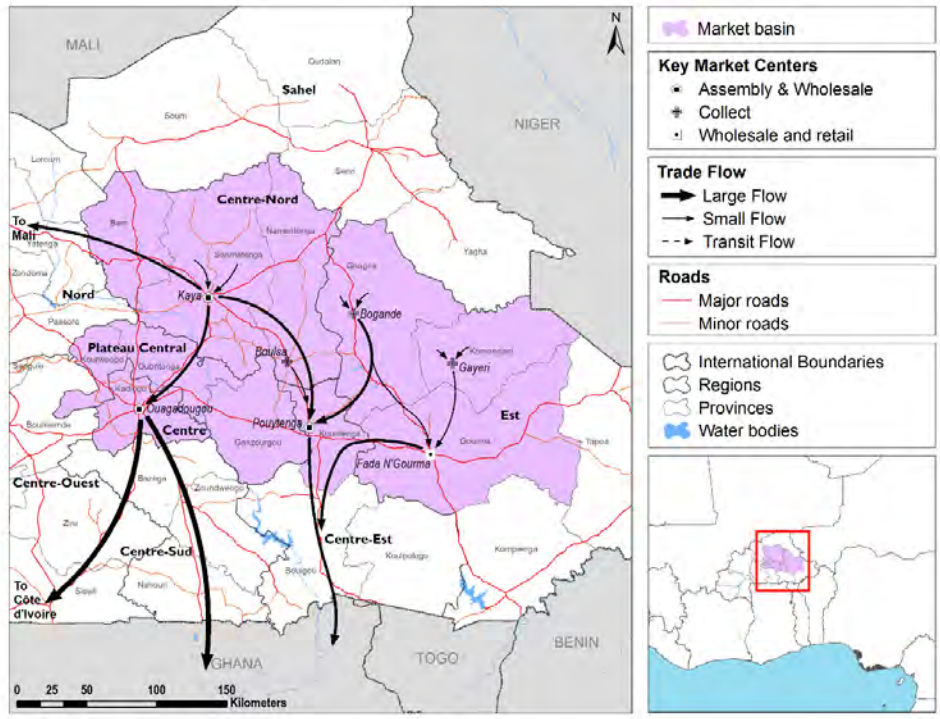
Source: FEWS NET (2017c, 2017h).

Figure 65. Marketing basin serving Niger RISE II program areas in maize



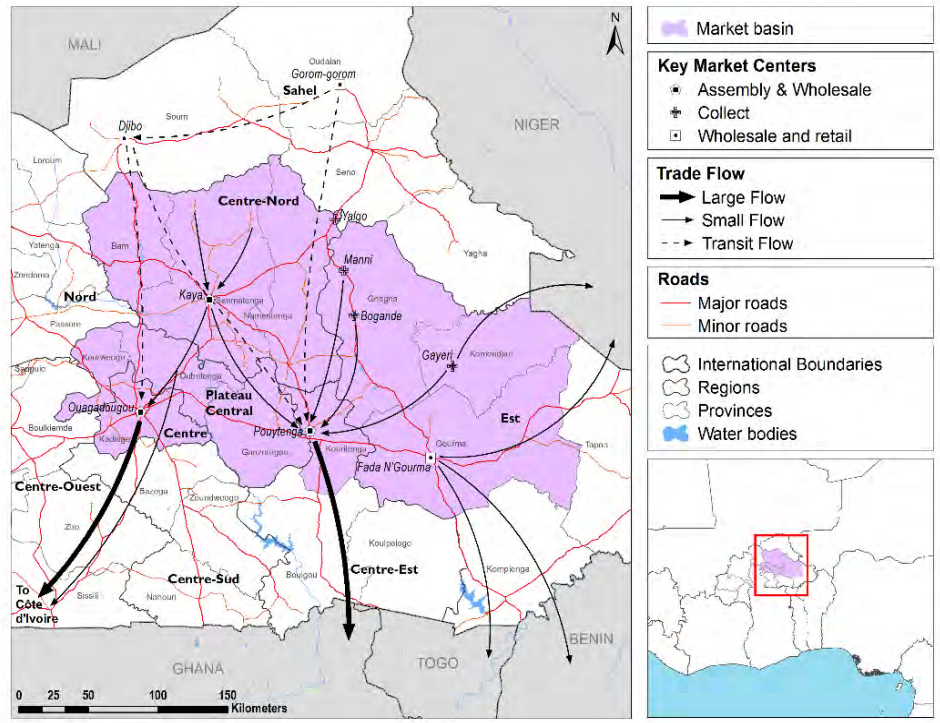
Source: *FEWS NET (2017c, 2017h).*

Figure 66. Marketing basin serving Burkina Faso RISE II program areas in cowpeas



Source: *FEWS NET (2017a).*

Figure 67. Marketing basin serving Burkina Faso RISE II program areas in small ruminants



Source: *FEWS NET (2017a).*

Annex 6. Number of Traders Engaged in Marketing Activities at the Time of the Market Visit

Table 78. Number of traders participating in the millet markets serving the RISE II program area of Burkina Faso

Location	Market	Wholesalers			Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Centre-Nord	Kaya				
Centre-Est	Pouytenga	160	20		100
Est	Gayéri	19			50

Source: *FEWS NET (2017a).*

Table 79. Number of traders participating in the edible oil markets serving the RISE II program area of Burkina Faso

Location	Market	Wholesalers			Retailers
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Centre-Nord	Kaya	50			50
Centre-Est	Pouytenga				
Est	Gayéri	50			100

Source: *FEWS NET (2017a).*

Table 80. Number of traders participating in the millet market, Niger

Region	Market	Wholesalers (#)			Retailers (#)
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Maradi	Mayahi	500	24	0	1000
	Kadro Maradi	300	80	20	500
	Gabi	10	0	0	50
	Dan Issa	0	0	0	10
	Tchadoua	5	4	2	100
	Guidan Roumdji	15	3	1	500
	Sabon Machi	200	50	10	800
	Dakoro	110	8	5	400
Zinder	Droum	15	3	1	100
	Mirriah	35	6	3	200
	Matameye	13	10	0	200
	Tanout	14	5	3	100
	Ollelewa	10	0	0	30
	Marché Bandé	15	8	3	100
	Magaria	23	8	1	20
	Kantché	2	0	0	200
	Zinder	15	5	7	30

Source: *FEWS NET (2017c).*

Table 81. Number of traders participating in the cowpea market, Niger

Region	Market	Wholesalers (#)			Retailers (#)
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Maradi	Mayahi	500	24	0	1000
	Kadro Maradi	300	80	20	500
	Gabi	10	0	0	0
	Dan Issa	0	0	0	10
	Tchadoua	5	4	2	100
	Guidan Roumdji	15	3	1	500
	Sabon Machi	200	70	10	500
	Dakoro	110	8	5	400
Zinder	Droum	15	3	1	100
	Mirriah	110	20	10	200
	Matameye	13	10	0	100
	Tanout	3	3	0	100
	Ollelewa	10	0	0	30
	Marché Bandé	70	8	2	100
	Magaria	25	15	5	30
	Kantché	2	0	0	100
	Zinder	5	4	2	40

Source:*FEWS NET (2017c).*

Table 82. Number of traders participating in the small ruminants market, Niger

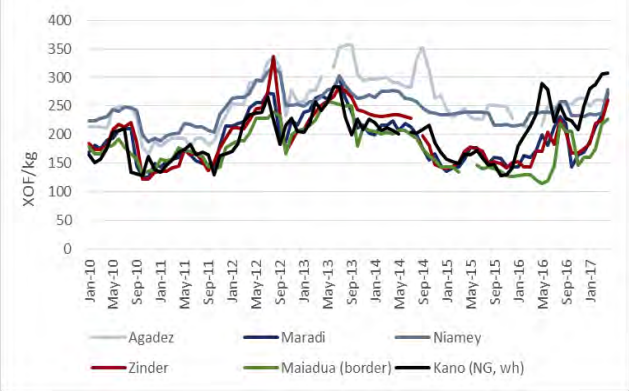
Region	Market	Wholesalers (#)			Retailers (#)
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
Maradi	Mayahi	205	0	0	200
	Kadro Maradi	130	0	0	200
	Gabi	10	0	0	0
	Dan Issa	0	0	0	0
	Tchadoua	90	0	0	80
	Guidan Roumdji	203	3	1	300
	Sabon Machi	250	0	0	500
	Dakoro	140	50	15	1000
Zinder	Droum	30	7	1	150
	Mirriah	60	20	10	NA
	Matameye	25	25	5	20
	Tanout	72	0	0	60
	Ollelewa	5	0	0	10

Region	Market	Wholesalers (#)			Retailers (#)
		Less than 100 MT	Between 100 and 500 MT	More than 500 MT	
	Marché Bandé	45	0	0	30
	Magaria	30	17	5	50
	Kantché	10	0	0	20
	Zinder	45	12	0	300

Source: *FEWS NET (2017c).*

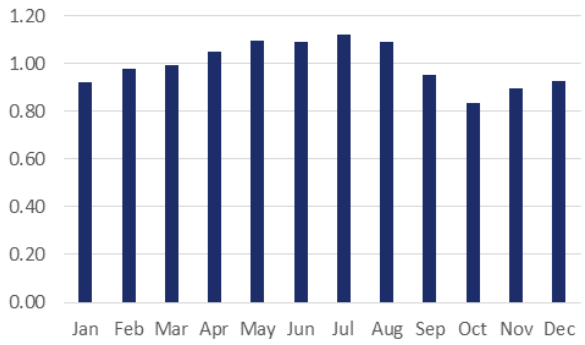
Annex 7. Price Series and Seasonal Index in Reference Markets in Niger

Figure 68. Retail millet (pearl) prices in RISE II program areas' relevant markets (XOF/kg), Niger, 2010–2017



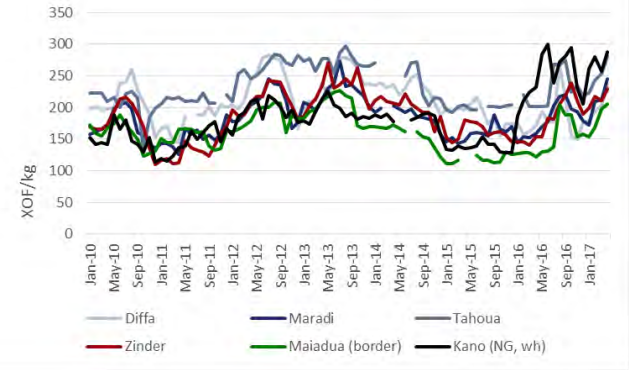
Source: *Authors' calculations based on SIMA (2017).*

Figure 69. Seasonal index for Maradi millet retail prices



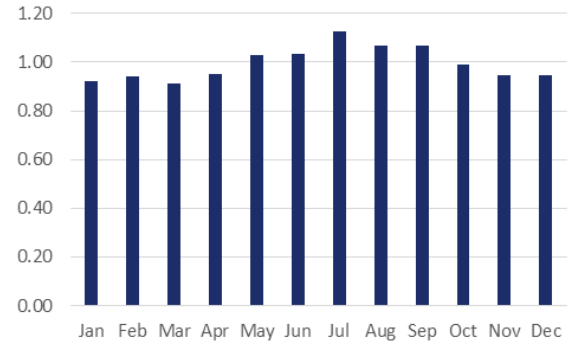
Source: *Authors' calculations based on SIMA (2017).*

Figure 70. Retail sorghum prices in RISE II program areas' relevant markets (XOF/kg), Niger, 2010–2017



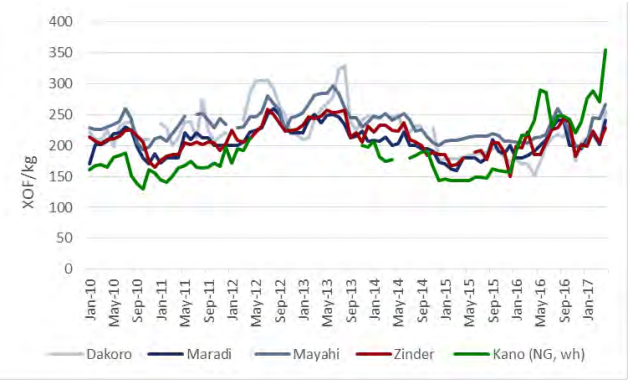
Source: *Authors' calculations based on SIMA (2017).*

Figure 71. Seasonal index for Maradi sorghum retail prices



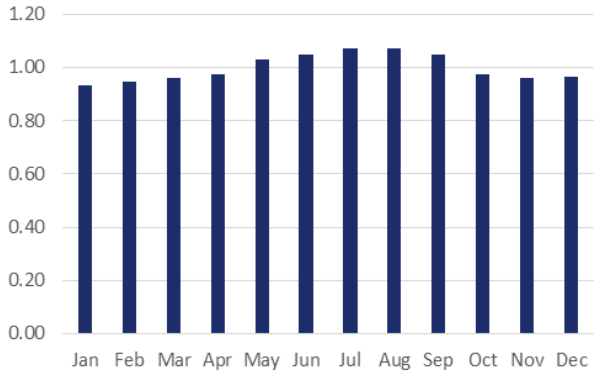
Source: *Authors' calculations based on SIMA (2017).*

Figure 72. Retail maize prices in RISE II program areas' relevant markets (XOF/kg), Niger, 2010–2017



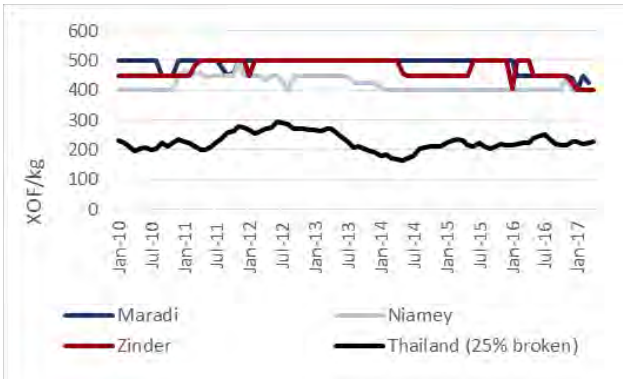
Source: *Authors' calculations based on SIMA (2017).*

Figure 73. Seasonal index for Maradi maize retail prices



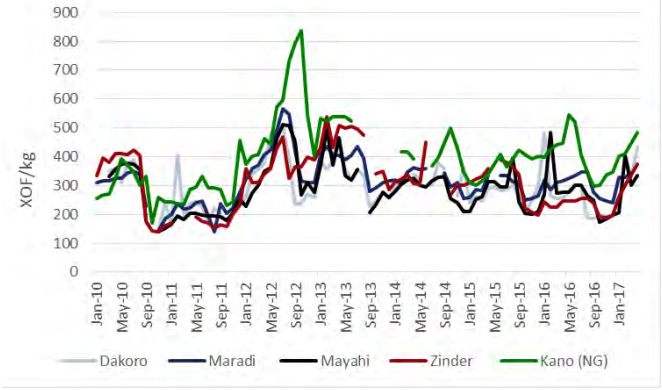
Source: *Authors' calculations based on SIMA (2017).*

Figure 74. Retail imported rice prices in Maradi, Zinder, and other relevant markets (XOF/liter), Niger, 2010–2017



Source: *Authors' calculations based on SIMA (2017); and World Bank (2017)*

Figure 75. Retail cowpea prices in RISE II program areas' relevant markets (XOF/kg), Niger, 2010 – 2017

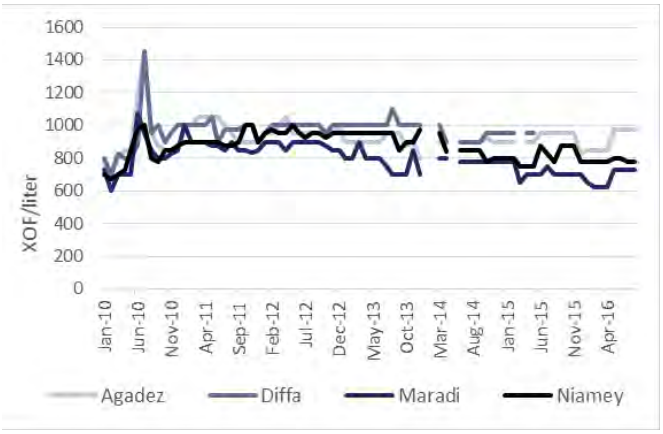


Source: *Authors' calculations based on SIMA (2017).*

Figure 76. Seasonal index for Maradi cowpea retail prices

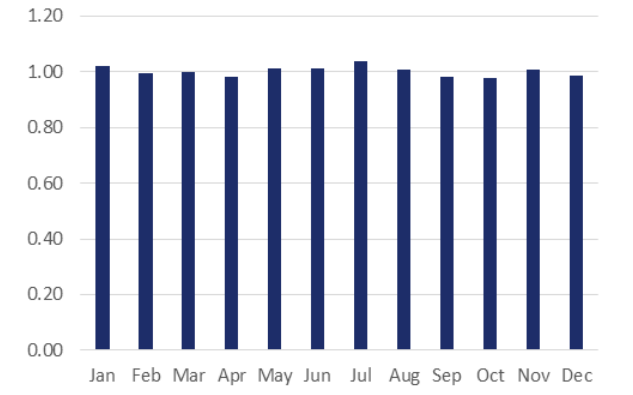
Source: *Authors' calculations based on SIMA (2017).*

Figure 77. Retail refined vegetable oil prices in Maradi and other relevant markets (XOF/liter), Niger, 2010–2017



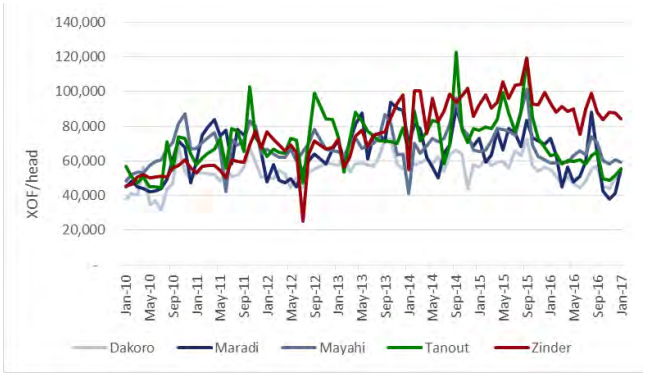
Source: *Authors' calculations based on SIMA (2017).*

Figure 78. Seasonal index for Maradi refined vegetable oil retail prices



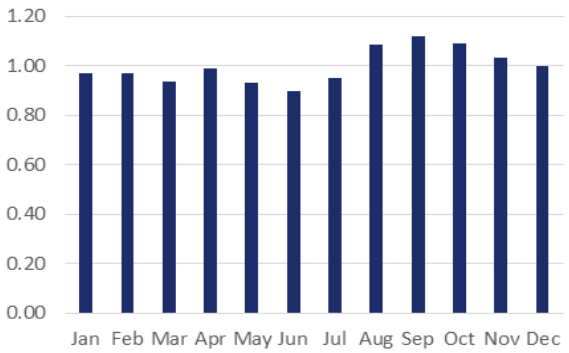
Source: *Authors' calculations based on SIMA (2017).*

Figure 79. Retail sheep prices in RISE II program areas' relevant markets (XOF/kg), Niger, 2010 –2017



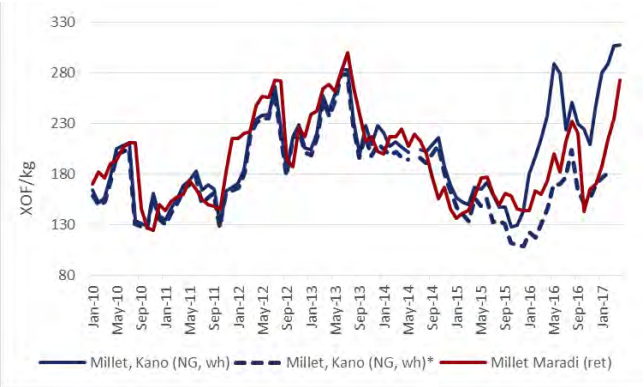
Source: *Authors' calculations based on SIMA (2017).*

Figure 80. Seasonal index for Maradi sheep retail prices



Source: *Authors' calculations based on SIMA (2017).*

Figure 81. Comparison of millet prices in Kano, Nigeria and Maradi, Niger

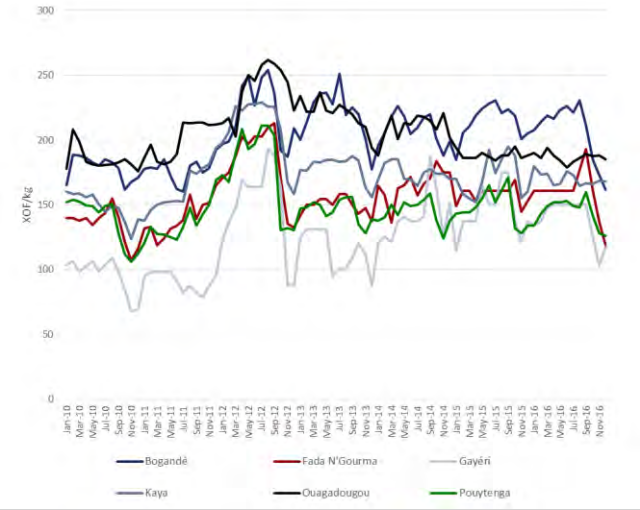


Note: * uses parallel exchange rate for the Nigerian Naira

Source: *Authors' calculations based on SIMA (2017).*

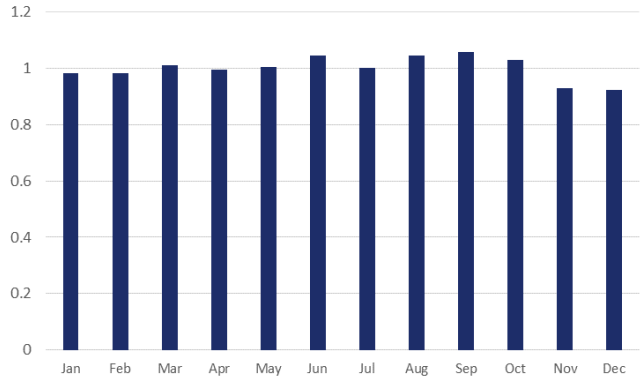
Annex 8. Price Series and Seasonal Index in Reference Markets in Burkina Faso

Figure 82. Retail sorghum prices in markets serving RISE II program areas of Burkina Faso (XOF/kg), 2010 – 2017



Source: *Authors' calculations based on SONAGESS (2017) data.*

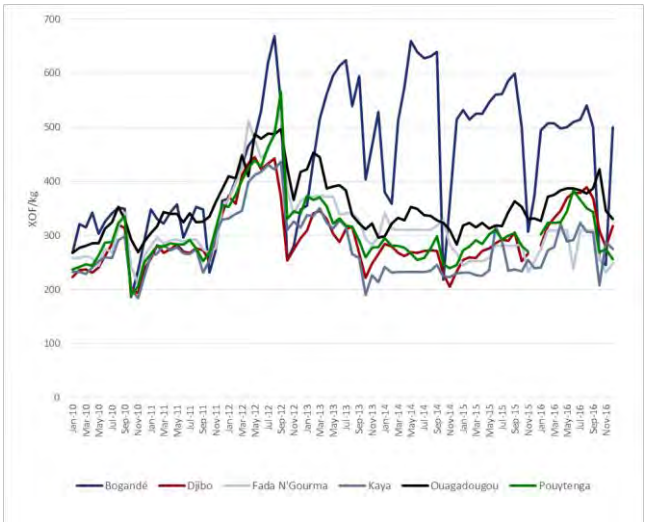
Figure 83. Seasonal index for Kaya sorghum retail prices



Notes: Based on prices from 2010 to 2016 in Kaya, Burkina *Faso*

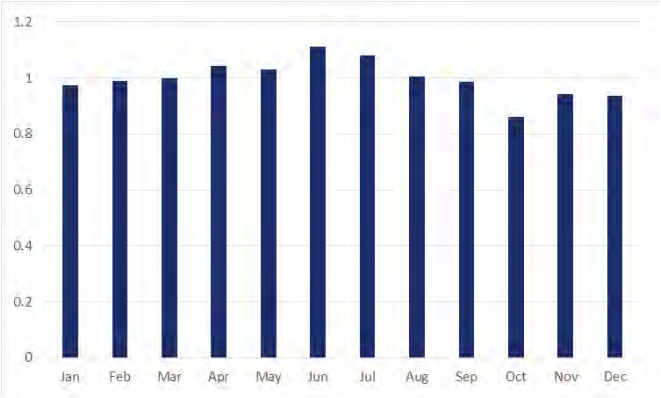
Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 84. Retail cowpea prices in markets serving RISE II program areas of Burkina Faso (XOF/kg), 2010 – 2017



Source: *Authors' calculations based on SONAGESS (2017) data.*

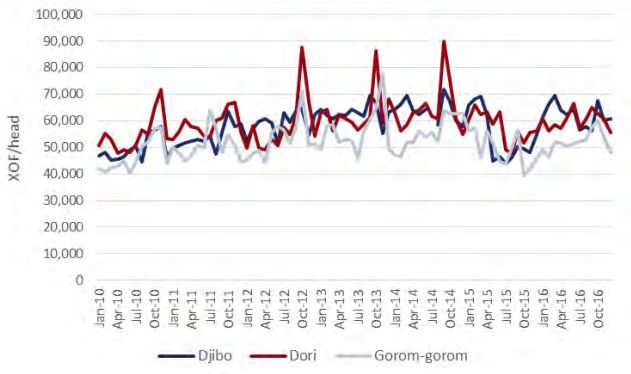
Figure 85. Seasonal index for Kaya cowpea retail prices



Notes: Based on prices from 2010 to 2016 in Kaya, Burkina Faso

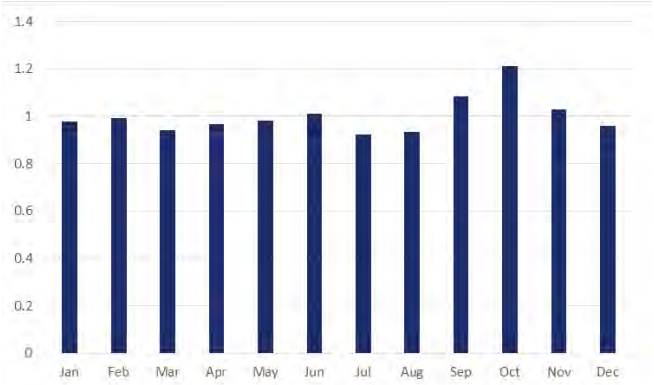
Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 86.Sheep prices in markets serving RISE II program areas of Burkina Faso (XOF/head), 2010 – 2017



Source: *Authors' calculations based on SIM/MRAH, Burkina Faso (2017) data.*

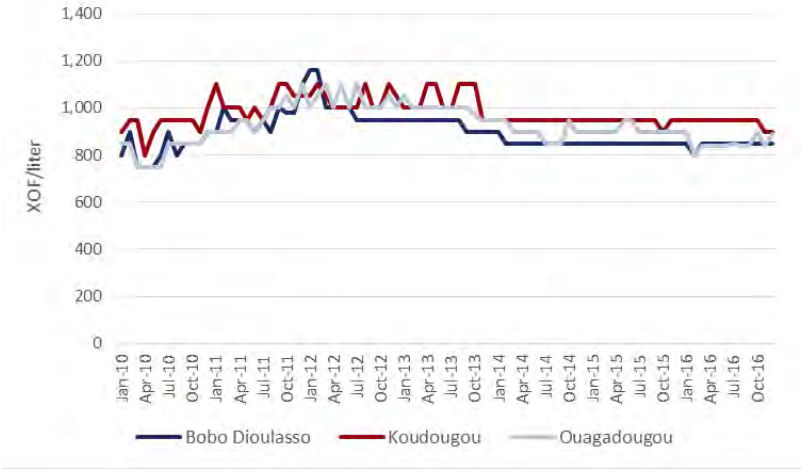
Figure 87. Seasonal index for Dori sheep prices



Notes: Based on prices from 2010 to 2016 in Dori, Burkina Faso.

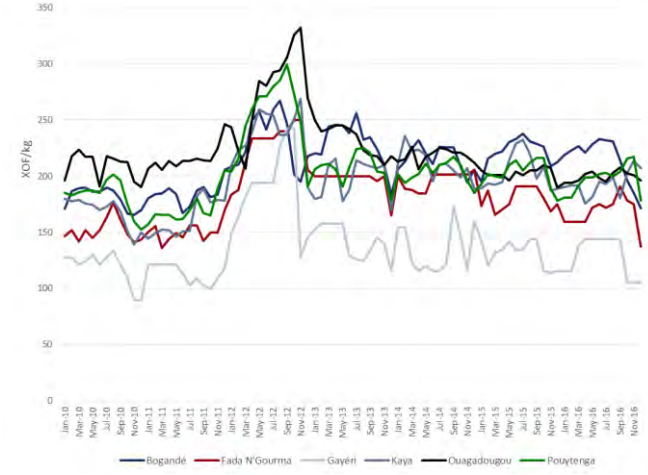
Source: *Authors' calculations based on SIM/MRAH, Burkina Faso (2017) data.*

Figure 88. Retail edible oil prices in markets serving RISE II program areas of Burkina Faso (XOF/liter), 2010 - 2017



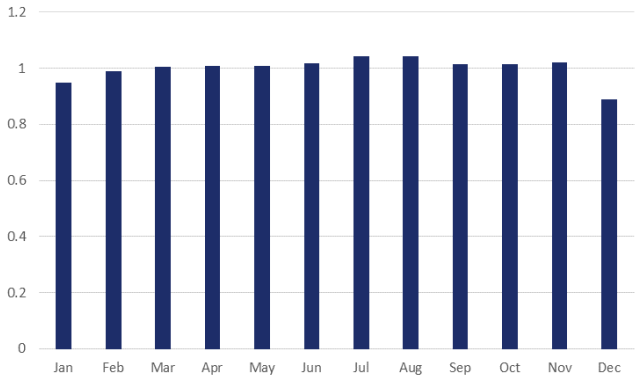
Source: *Authors' calculations based on SONAGESS (2017) data.*

Figure 89. Retail millet (pearl) prices in markets serving the RISE II program areas (XOF/kg), Burkina Faso, 2010–2017



Source: *Authors' calculations based on SONAGESS (2017).*

Figure 90. Seasonal index for Kaya millet retail prices

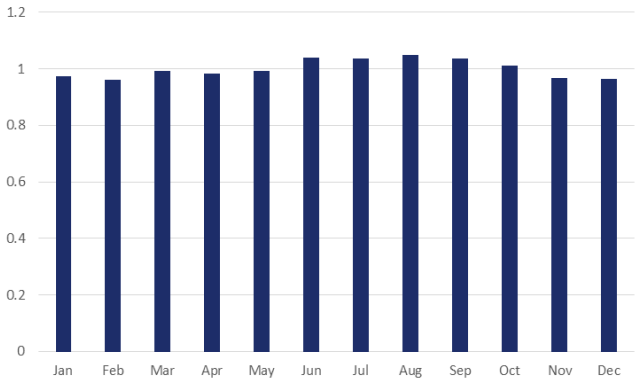


Source: *Authors' calculations based on SONAGESS (2017).*

Figure 91. Retail maize (white) prices in markets serving the RISE II program areas (XOF/kg), Burkina Faso, 2010–2017

Source: *Authors' calculations based on SONAGESS (2017).*

Figure 92. Seasonal index for Kaya maize retail prices



Source: *Authors' calculations based on SONAGESS (2017).*

Annex 9. Price Correlation Tables

Price correlations in Burkina Faso

Table 83. Sorghum price correlation markets serving RISE II program areas of Burkina Faso

Market	Bobo Dioulasso	Bogande	Djibo	Fada N'Gourma	Gayéri	Kaya	Kongoussi	Ouagadougou	Pouytenga
Bobo Dioulasso	1								
Bogande	0.8660*	1							
Djibo	0.9116*	0.8441*	1						
Fada N'Gourma	0.9173*	0.8592*	0.9163*	1					
Gayéri	0.7980*	0.7837*	0.8341*	0.8362*	1				
Kaya	0.9513*	0.8556*	0.8939*	0.9040*	0.7317*	1			
Kongoussi	0.9345*	0.8060*	0.8823*	0.8594*	0.6541*	0.9295*	1		
Ouagadougou	0.8453*	0.8022*	0.7504*	0.7979*	0.5519*	0.8840*	0.8749*	1	
Pouytenga	0.8844*	0.8403*	0.9018*	0.9011*	0.7432*	0.9106*	0.8882*	0.7954*	1

Note: * Correlation is significant at the 0.01 level.

Source: *Authors's estimates based on SONAGESS (2017)*

Table 84. Cowpea price correlation markets serving RISE II program areas of Burkina Faso

Market	Bobo Dioulasso	Bogande	Djibo	Fada N'Gourma	Kaya	Kongoussi	Ouagadougou	Pouytenga	Yalgo
Bobo Dioulasso	1								
Bogande	0.5541*	1							
Djibo	0.9320*	0.5318*	1						
Fada N'Gourma	0.9065*	0.4691*	0.8215*	1					
Kaya	0.9247*	0.4091*	0.8976*	0.8900*	1				
Kongoussi	0.9063*	0.3832*	0.9367*	0.8035*	0.9136*	1			
Ouagadougou	0.9533*	0.4852*	0.8970*	0.8748*	0.9021*	0.8927*	1		
Pouytenga	0.9568*	0.5082*	0.9169*	0.9045*	0.9424*	0.9042*	0.9194*	1	
Yalgo	0.9255*	0.4704*	0.9295*	0.8675*	0.9160*	0.9245*	0.9070*	0.9215*	1

Note: * Correlation is significant at the 0.01 level.

Source: *Authors' estimates based on SONAGESS (2017)*

Table 85. Small ruminant (sheep) price correlation markets serving RISE II program areas of Burkina Faso

Market	Djibo	Dori	Gorom Gorom	Bogande	Kaya	Pouytenga
Djibo	1					
Dori	0.4876*	1				
Gorom Gorom	0.307	0.5279*	1			
Bogande	0.108	0.0376	-0.0356	1		
Kaya	-0.1377	0.0622	-0.051	0.6143*	1	
Pouytenga	-0.0796	0.0963	-0.0144	0.5613*	0.7575*	1

*. Correlation is significant at the 0.01 level.

Source: *Authors' calculations based on SIM/MRAH, Burkina Faso (2017) data.*

Table 86. Millet price correlation markets serving RISE II program areas of Burkina Faso

Market	Bobo Dioulasso	Bogande	Djibo	Fada N'Gourma	Gayéri	Kaya	Kongoussi	Ouagadougou	Pouytenga
Bobo Dioulasso	1								
Bogande	0.7987*	1							
Djibo	0.8988*	0.8645*	1						
Fada N'Gourma	0.9313*	0.8511*	0.8717*	1					
Gayéri	0.8592*	0.7354*	0.8240*	0.8284*	1				
Kaya	0.8857*	0.8473*	0.8774*	0.9003*	0.7390*	1			
Kongoussi	0.9367*	0.8129*	0.8870*	0.8537*	0.8391*	0.8641*	1		
Ouagadougou	0.8823*	0.7256*	0.7116*	0.8658*	0.7758*	0.7862*	0.8296*	1	
Pouytenga	0.9571*	0.8554*	0.9221*	0.9311*	0.8602*	0.9171*	0.9359*	0.8644*	1

Note: * Correlation is significant at the 0.01 level.

Source: *Authors's estimates based on SONAGESS (2017).*

Table 87. Maize price correlation markets serving RISE II program areas of Burkina Faso

Market	Bobo Dioulasso	Ouagadougou	Djibo	Fada N'Gourma	Kaya	Kongoussi	Pouytenga
Bobo Dioulasso	1						
Ouagadougou	0.9077*	1					
Djibo	0.8910*	0.8734*	1				
Fada N'Gourma	0.9171*	0.8350*	0.8756*	1			
Kaya	0.9217*	0.8440*	0.8881*	0.9061*	1		
Kongoussi	0.8735*	0.8806*	0.9390*	0.8471*	0.8742*	1	
Pouytenga	0.9455*	0.9331*	0.9118*	0.9294*	0.9076*	0.8809*	1

Note: * Correlation is significant at the 0.01 level.

Source: *Authors's estimates based on SONAGESS (2017).*

Price correlations in Niger

Table 88. Millet price correlation in markets serving RISE II program area of Niger and reference markets

Market	Agadez	Maradi	Niamey	Zinder	Maiadua	Kano
Agadez	1					
Maradi	0.685**	1				
Niamey	0.838**	0.830**	1			
Zinder	0.804**	0.914**	0.900**	1		
Maiadua	0.703**	0.854**	0.781**	0.869**	1	
Kano	0.535**	0.713**	0.582**	0.647**	0.543**	1

Note: ** Correlation is significant at the 0.01 level

Source*: Authors' calculations based on SIMA (2017).*

Table 89. Sorghum price correlation in markets serving RISE II program area of Niger and reference markets

Market	Diffa	Maradi	Tahoua	Zinder	Maiadua	Kano
Diffa	1					
Maradi	0.757**	1				
Tahoua	0.597**	0.780**	1			
Zinder	0.736**	0.888**	0.710**	1		
Maiadua	0.644**	0.797**	0.790**	0.730**	1	
Kano	0.188	0.540**	0.444**	0.529**	0.403**	1

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Source: *Authors' calculations based on SIMA (2017).*

Table 90. Maize price correlation in markets serving RISE II program area of Niger and reference markets

Market	Dakoro	Maradi	Mayahi	Zinder	Kano
Dakoro	1				
Maradi	0.681**	1			
Mayahi	0.729**	0.853**	1		
Zinder	0.691**	0.816**	0.811**	1	
Kano	0.094	0.533**	0.302*	0.404**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: *Authors' calculations based on SIMA (2017).*

Table 91. Cowpeas price correlation in markets serving RISE II program area of Niger and reference markets

Market	Dakoro	Maradi	Mayahi	Zinder	Kano
Dakoro	1				
Maradi	0.743**	1			
Mayahi	0.705**	0.847**	1		
Zinder	0.661**	0.762**	0.728**	1	
Kano	0.590**	0.712**	0.590**	0.360**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Source: *Authors' calculations based on SIMA (2017).*

Table 92. Goats price correlation in markets serving RISE II program area of Niger and reference markets

Market	Dakoro	Maradi	Mayahi	Tanout	Zinder
Dakoro	1				
Maradi	0.415**	1			
Mayahi	0.478**	0.188	1		
Tanout	0.592**	0.207	0.225*	1	
Zinder	0.491**	0.268*	0.261*	0.497**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: *Authors' calculations based on SIMA (2017).*

Table 93. Sheep price correlation in markets serving RISE II program area of Niger and reference markets

Market	Dakoro	Maradi	Mayahi	Tanout	Zinder
Dakoro	1				
Maradi	0.641**	1			
Mayahi	0.559**	0.511**	1		
Tanout	0.645**	0.566**	0.687**	1	
Zinder	0.441**	0.362**	0.388**	0.466**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

Note: *. Correlation is significant at the 0.05 level (2-tailed).

Source: *Authors' calculations based on SIMA (2017).*

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