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# Gendered effects of migration on social organization and smallholder production in Oubritenga Province, Burkina Faso

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## ABSTRACT

Shifting and intensifying migration flows are causing profound changes in household structures, livelihood portfolios, and rural landscapes worldwide. Yet, migration trends, including who migrates within the household, whether migration is permanent or temporary, and the relationship the migrant maintains (or not) with the household, have strong geographic particularities. In certain regions of sub-Saharan African, outmigration dominated by able-bodied men from their rural homesteads is causing a redistribution and redefinition of responsibilities, with women, children, and elders who remain on the farm negotiating ways to adjust to changing household demographics. In our study, we aim to understand migration trends and their impacts on the organization of farming households and their production systems in Oubritenga Province, in the Central Plateau of Burkina Faso. To do so, we draw on case study data acquired using mixed-methods in 12 villages in Oubritenga Province. We analyze how rural outmigration affects gendered knowledge and decision-making, labour organization and availability, investments in agricultural production systems, and future aspirations for household members who remain on the farm. We find that, in our study site, migration is highly economically-motivated, and underpinned by environmental and socio-cultural push factors. A shift toward temporary migration is shaping seasonal labour availability on the family farm, and although outmigration is overwhelmingly undertaken by young men, we do not find that a ‘feminization of agriculture’ is occurring. Instead, migrating and non-migrating men maintain most influence in decision-making, and temporary migrants contribute labour to household agriculture when they return to their farms during the wet season. We argue that the high rates of male outmigration in this context do not imply a fracture from agriculture nor a ‘feminization of agriculture’. Instead, outmigration offers potential for complementarity with and indeed new investments in the family farm, while deeply entrenched gender norms and cultural expectations raise questions about the sociocultural and intra-household outcomes of diversifying livelihoods through migration.

## 1. Introduction

Outmigration from rural areas has been accelerating worldwide and taking new forms in recent decades (Kelly 2011; Carte et al., 2019; Jokisch et al., 2019; Obi et al., 2020). In many regions, rather than entire households moving together, one or more household member(s) migrate (s) in the short-term or indefinitely, leading to multi-sited households and livelihoods, on and off the family farm. These movements create significant changes in rural and agrarian settings as well as in gender relations and divisions of labour (Deere 2009; McEvoy et al., 2012; Sugden et al., 2014; Doss et al., 2020). Non-migrating household

members often identify important changes in the quantity and type of their (farm) labour inputs (de Brauw et al., 2013; Bhandari and Chinappa Reddy 2015; Lahiri-Dutt and Adhikari 2016), though these impacts are differentially experienced within the household (Leder and Sachs 2019; Bhawana and Race 2020; Spangler and Christie 2020). In many contexts, migrants are generally men, which raises questions about the ‘feminization’ of agricultural production systems and changes in the gender relations they embed (Gartaula et al., 2010; Pattnaik et al., 2018; Nomunume Baada and Najjar 2020). This so-called feminization of agriculture broadly refers to women’s increased participation in agricultural labour and decision-making amid male outmigration; but

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questions abound surrounding its occurrence and diversified outcomes in rural settings worldwide (Slavchevska 2016; Doss et al., 2020; Kawarazuka et al., 2022; Leder 2022). Moreover, in some contexts, migration is predominantly undertaken by women, with further differences in how migration affects household members and livelihoods (Elmhirst 2007; Preibisch and Encalada Grez 2010; Camlin et al., 2014; Huang et al., 2020; Kawarazuka et al., 2020).

In countries like Burkina Faso, located in West Africa's Sahelian and Sudanian regions, migration is a common and longstanding livelihood strategy (David and Yabr e 1995; Breusers 1998; Sanfo et al., 2017; Ilboudo N eb e and West 2019; Kaag et al., 2019). Several studies identify interlinkages between migration and environmental factors in the country, with soil degradation, climate change, and rainfall variability – which challenge the viability of smallholder agriculture – encouraging movements out of rural areas (Deshingkar 2012; Gray and Wise 2016; Sanfo et al. 2017; de Longueville et al., 2019, 2020; Ilboudo N eb e and West 2019). Rural-to-urban migration, a growing trend often conducted in search of income and socioeconomic mobility, increasingly fragments Burkinab e households across rural and urban areas (Soura 2014; Thorsen 2013; Flahaux et al., 2020). In-migration due to rural-to-rural domestic migration, commonly from the Central Plateau and northern regions to the south of the country, has been closely associated with land-use and land-cover changes in receiving locations (Ilboudo N eb e and West 2019).

Outmigration affects rural sending communities in multiple ways. For instance, numerous Burkinab e migrant associations have helped establish public services, including schools and health centres, in their villages of origin (Beauchemin and Schoumaker 2009). Remittances are important for consumption and investment purposes, including investing in conservation activities such as constructing stone bunds to prevent soil erosion (Konseiga 2004). Remittances from international migrants have been associated with increased income inequality in rural communities, whereas those from domestic migrants have had the opposite effect (Wouterse 2008). Moreover, remittances from longer-term migrants have reduced the prevalence of child labour in contrast to those from more recent migrants (Bargain and Boutin 2015).

However, many questions remain surrounding migration in Burkina Faso. First, as a significant portion of internal migration is to the capital, Ouagadougou, much research focuses on migrants in this urban centre rather than in rural areas (Thorsen 2013; Flahaux et al., 2020; Kazianga and Wahhaj 2020; Mikal et al., 2020). Then, migration research has focused on permanent (versus temporary) migration; the dominant trend in the country. Yet, rural-to-rural and international migration, particularly to the Ivory Coast, as well as seasonal migration in pursuit of dry season livelihood activities, are also common and in need of attention (Breusers 1998; Zongo 2003; Ilboudo N eb e and West 2019). Third, despite the possible redistribution and redefinition of responsibilities among household members caused by migration, there has been limited gendered or intra-household analysis of migration trends and impacts. Where sex-disaggregated data is available (e.g. de Longueville et al., 2019; Flahaux et al., 2020), gender is treated as a secondary consideration rather than a key area of focus. Fourth, environmentally-driven migration, which is very important in Burkina Faso (Deshingkar 2012; Gray and Wise 2016; Sanfo et al. 2017; de Longueville et al., 2019, 2020; Ilboudo N eb e and West 2019), has dominated analyses, whereas other forms of and motivations for migration have received scarce attention. Finally, although migrants maintain important connections to their natal villages and households (e.g. Beauchemin and Schoumaker 2009; Bargain and Boutin 2015; Ilboudo N eb e and West 2019), the complexity of these relationships, particularly from the viewpoint of household members who remain on their farm, is under-examined.

Beyond Burkina Faso, too, debates surrounding the effects of migration on gender relations in agricultural production, or in generating a 'feminization of agriculture', are limited by an overall lack of empirical analyses (Deere 2009; Slavchevska 2016). In particular, research examining the feminization of agriculture tends to focus on few

countries, prompting the need for more research to address these lines of inquiry in other settings. Moreover, scholars have identified the need for more integrated analyses of the impacts of migration on both the migrant and the agrarian household, and on household processes of decision-making (Doss et al., 2020; Spangler and Christie 2020; Kawarazuka et al., 2022; Leder 2022). These gaps are critical for understanding gendered rural transformations, and of particular significance in countries with high and growing rates of migration, such as Burkina Faso.

To contribute to addressing these gaps, this paper focuses on rural outmigration trends and their impacts on the organization of farming households and their production systems in the province of Ouhritenga, on the Central Plateau of Burkina Faso—an area historically characterized by large-scale outmigration. Specifically, we ask.

- 1) What are the major migration trends in the province of Ouhritenga, Burkina Faso? Who is migrating, why, and how?
- 2) How do these trends affect gendered decision-making, labour, knowledge, and other investments in agricultural production systems?
- 3) How does migration influence the aspirations of household members who remain on the farm, and their future visions for agriculture and beyond?

To begin, we situate our rural study site within its national context before detailing our mixed-methods data collection strategy. We then explore the complexities of migration in this region, characterizing the patterns of migration and migrant motivations. We demonstrate that whether outmigration affects labour availability for agricultural production in sending households depends on the type and timing of migration, before turning to the importance and uses of remittances for the migrants' households and to changes to decision-making and knowledge (on-farm management capacities) as a result of migration. Finally, we present the aspirations of migrants' household members in and beyond agriculture, and how they relate to or extend beyond migration, before discussing the implications of these findings. We argue that migration is a heterogeneous phenomenon, and that the type of migration pursued has implications for gendered agricultural production processes and rural futures.

## 2. Research context and methods

### 2.1. Study site

The case study is situated in Ouhritenga Province, on the Central Plateau of Burkina Faso (Fig. 1). The region falls in the Sudanian-Guinea/Sudano-Sahelian climatic zone, where rainfed agriculture is constrained by low and unpredictable rainfall and a long dry season from November to April (Nyamekye et al. 2018; de Longueville et al., 2019, 2020). The Central Plateau is an agrarian region, with livelihoods focused on smallholder farming and livestock rearing (Breusers 1998; Wouterse 2008). The predominantly ethnic Mossi communities who inhabit the region also pursue non-agricultural activities such as gold panning and small-scale trade. The most common crops grown in the study area are white sorghum, small millet, cowpea, and maize for consumption; and cowpea, sesame, and groundnuts for sale (Author data, Key informant interviews).

According to Kazianga and Wahhaj's (2020) data from 20 villages, 83% of rural households in the Central Plateau and Centre West regions of Burkina Faso have at least one permanent or temporary migrant. The Central Plateau is a prominent migrant-sending region in Burkina Faso due to land degradation, declining agricultural yields, and drought, with migrants either permanently or temporarily migrating to more fertile areas in the south of the country or abroad (Reij et al., 2005; Ilboudo N eb e and West 2019). Mossi residents from this region have a history of migrating to the Ivory Coast, though this trend has fluctuated over time

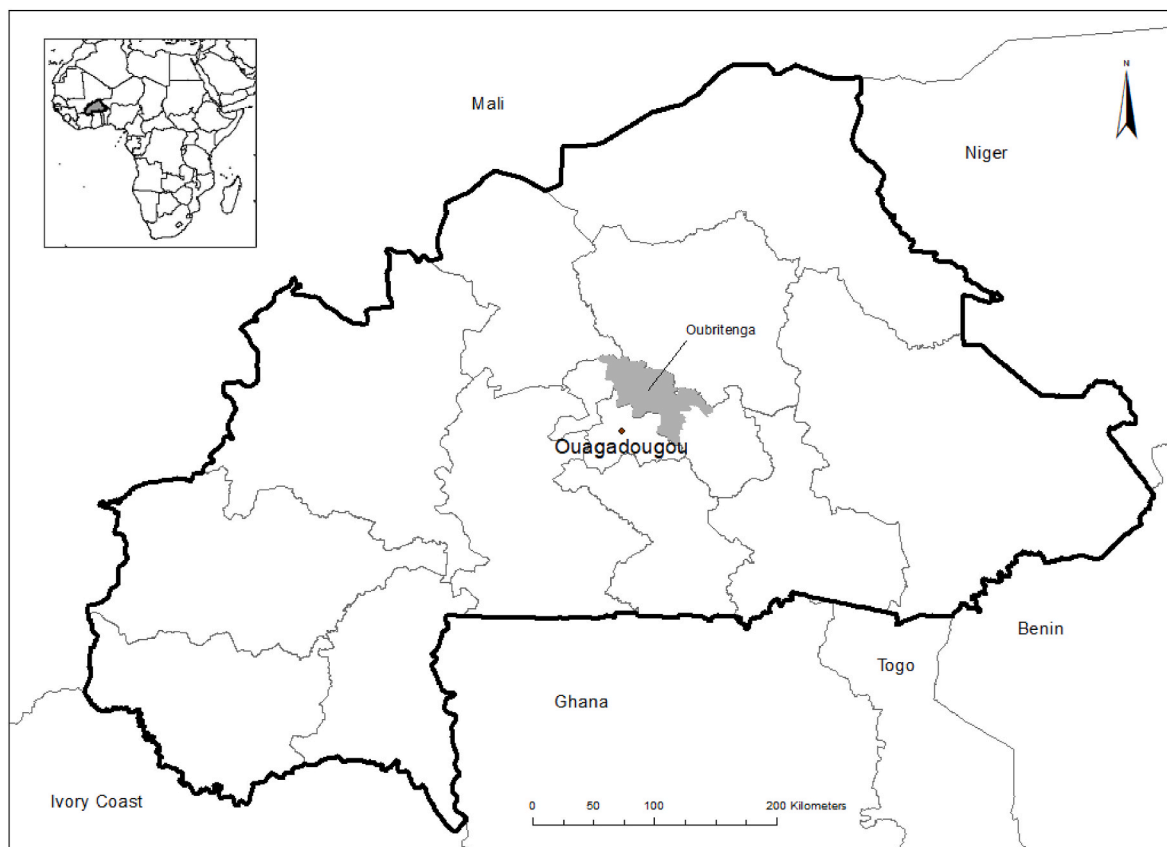


Fig. 1. Study location: Oubritenga Province, Burkina Faso.

and with political unrest in the Ivory Coast (Songré et al., 1974; Konseiga 2004; Deshingkar 2012).

Changes in rainfall over the past decade, as well as increasingly destructive environmental hazards such as strong rains and winds, have led to severe food shortages in this region (Author data, Key informant interviews). These have been compounded by local environmental changes, including the drying up of landscapes, soil degradation, and vegetation loss (particularly trees) (Author data, Key informant interviews).

## 2.2. Data collection and analysis

This paper draws on individual, household, and community-level data on migration in Oubritenga Province, where data were collected in 12 villages in the communes of Dapelogo (5 villages) and Zitenga (7 villages) between September 2019 and August 2020. Taking a mixed-methods approach, we conducted 55 key informant interviews (between 2 and 14 from each village) including community leaders, civil servants, entrepreneurs, religious leaders, teachers, and health workers, among others, to develop a profile of the study villages. Community profiles provided background information on each village, such as its history, local population, main livelihood activities, and in particular, recent migration trends.

The community profiles helped us shape questions for a small-n household survey ( $n = 192$ ), which was conducted with 16 participants in each of the 12 villages. Households were selected through stratified random sampling to have an equal number of households with and without migrants included in the survey. A list of households was acquired for this purpose through *Association tiipaalga*, an NGO working on land restoration in the region. Most household surveys were conducted with the household head (179 men, 3 women), however if unavailable, the household head's wife (9 cases) or daughter (1 case)

responded instead. Household surveys captured household demographics, livelihood activities and divisions of labour, limitations to the family farm, land restoration practices, details of migrant household members, their migration patterns and related impacts on production systems, and visions for the future of the family farm and local livelihoods. We use a broad definition of household to capture both composite and multi-sited households that are common in the region. We view household members as interconnected through webs of social and economic relations, but not inferring a fixed "unit" absent of power differences or life course (Rakodi, 2002; Huijsmans 2014).

As such, we subsequently conducted surveys with women ( $n = 79$ ; henceforth referred to as the 'women's survey') and temporary migrants ( $n = 14$ , all male; henceforth the 'migrant survey') for a subset of households included in the household survey to gain additional perspectives on migration. Wives of migrants were targeted for the women's survey, however if the wife was unavailable, the migrant's mother, daughter, or another female household member responded. Women were asked about the impacts of the migrant's absence on the household and the respondent, including associated changes in household and farm labour tasks, decision-making, remittances, and aspirations for the migrant and the household. In the migrant survey, we surveyed migrants who were present in the village at the time of data collection, for a total of 14 male temporary migrants, to hear their histories and perspectives on migration, and the ties they maintain with their households with regard to remittances, knowledge sharing, and decision-making.

Finally, we conducted focus group discussions ( $n = 10$ ; henceforth 'FGDs') with community members from the 12 study villages to explore similar themes as in the surveys at a community-level, in contrast to the household-level information sought in the survey. FGDs provided rich context and explanations for the trends observed in the survey. Participants were brought together across villages for this exercise, and group

composition was determined based on whether households had any migrants, and by gender. Five (5) FGDs were held with participants whose households had migrants, and 5 with those without. Groups were segregated by gender where possible, such that 4 FGDs were conducted with men only, 4 with women only, and 2 with both men and women. In total, there were 120 FGD participants, with an equal representation of men and women.

In this study we refer to permanent migrants as household members who have left the homestead over the preceding five years and who no longer eat or live in the household, excluding women’s departure from the household for marriage. Temporary migrants, in turn, refer to household members who leave the homestead for multiple weeks up to several months of the year, after which they return to the homestead. Instances of entire households migrating together were not considered in this study.

The qualitative data obtained from community profiles, open-ended questions in surveys, and FGDs were analyzed using magnitude and axial coding (Saldaña 2016), whereas quantitative survey data were analyzed in RStudio 2021.09.2 to produce descriptive statistics and carry out significance testing for comparisons of data subsets (using Mann-Whitney and Pearson’s Chi-Square tests). Identifiable information has been removed from data presentation to ensure participant confidentiality.

Overall, our mixed-method data collection approach allowed for multiple, and at times, contrasting, views to emerge from households and the individuals within them. By drawing on the perspectives of socially differentiated household members, particularly by gender, age, and household position, we are able to capture a nuanced and complex picture of the impact of migration on social organization and small-holder production in this context.

### 3. Results: the complexities of migration from rural Oubritenga

#### 3.1. Characterizing migration trends

##### 3.1.1. Who migrates?

Consistent with our stratified random sampling strategy, half of the surveyed households have at least one migrant member (Table 1). The most common form of migration is temporary, but some households (26)

**Table 1**  
Characteristics of the study population.

	Migrant composition of households			
	No migrants (n = 96)	Permanent migrants only (n = 26)	Temporary migrants only (n = 61)	Both permanent & temporary migrants (n = 9)
Number of migrants per household	0	1.39 (1–3)	1.43 (1–6)	2.44 (2–3)
Total household members	9.27 (2–26) <sup>a</sup>	10.89 (5–19) <sup>ab</sup>	12.92 (3–30) <sup>b</sup>	16.22 (8–22)
Active household members	4.02 (2–11) <sup>a</sup>	5.39 (2–10) <sup>b</sup>	6.00 (2–14) <sup>c</sup>	7.00 (5–9)
No. Of dependent household members	5.25 (0–15) <sup>a</sup>	5.50 (1–12) <sup>ab</sup>	6.92 (1–16) <sup>b</sup>	9.22 (3–17)
Household land size (hectares)	2.50 (0–7) <sup>a</sup>	2.46 (0.5–6) <sup>a</sup>	3.60 (1–25) <sup>b</sup>	4.11 (2–7)

Notes: Presented as mean (range). Values with a different superscript letter within the same row are statistically different (Mann-Whitney test,  $p < 0.05$ ). Households with both permanent and temporary migrants are excluded from significance testing given the small sample size.

have permanent migrants only, and a few (9) have both temporary and permanent migrants. The size of surveyed households ranges from 2 to 30 members (2–14 active members) and is correlated with the migration status of the household. Households with one or more migrant(s) ( $n = 96$ ) tend to be significantly larger (total household members and active household members) than those without migrants ( $n = 96$ ). Furthermore, households with one or more migrant(s) have significantly larger landholdings than households without.

FGDs help explain why household size influences capacities to migrate:

Not all households have the same ability to send or let members leave for migration. For example, if in a household there are only three people, namely the head of the household, his wife and son, no one can migrate, or the family would experience starvation. But if you can afford it, you can let a member of your household migrate permanently because you can pay a worker to replace him during agricultural activities (mixed-gender FGD, households without migrants).

A household with a large membership, 12–15 active members, may well let members migrate compared to a household with a total of five members. So it all depends on the size of the household and its composition. They say its composition, because your members could be only women, in which case you wouldn’t be able to have some members migrate out. Poverty is an aggravating factor in migration. The poorer you are, the more trouble you have retaining members of your household (men’s FGD, households without migrants).

Both permanent and temporary migrants are predominantly men (96% and 90%, respectively) (Table 2), as cultural norms and what one woman described as the “different realities” that men and women face limit women’s capacities to migrate (women’s FGD, households with migrants). Normative expectations that women undertake housework and childcare, worries about risks to women migrants, assumptions that women are unable to undertake the same level of difficult tasks and jobs as men, the idea that “we love our women and would not want to lose them in any way” (male key informant, September 25, 2019), and the view that women who go against established norms are “disobedient” (women’s FGD, households without migrants) help explain the low number of women migrants.

Women and men FGD participants elucidate that, as opposed to men, migration is very uncommon for women and widely viewed as unacceptable, with many stating that women are forbidden to migrate and would be repudiated as wives or daughters for doing so. For instance, in one village:

Women do not have the right [to migrate]. Men forbid them. They say it is tradition: a woman must always stay at home and take care of her children. Even to visit your parents, you’re only given two days’ leave. But for young men, as their parents cannot fulfill all their desires, migration can help them buy motorcycles and mobile phones, and we as the parents will be very happy and proud of them (women’s FGD, households without migrants).

Men and women are not at all facing the same barriers. A woman can’t even think about migrating because she’ll be repudiated and her husband will take another wife. The place of the woman is in the home. If she does not want the home, while she goes where she wants, she will be rejected by everyone (men’s FGD, households without migrants).

A small minority of respondents noted that women are slowly beginning to migrate, mostly temporarily, despite these societal expectations, as men are recognizing the economic contributions these women can make. However, this is barely perceptible in the overall dataset. Participants in several focus groups specified that women who migrate longer-term usually only do so alongside a male household member.

The migrants in our dataset are relatively young (mean age 28 for

**Table 2**  
Characteristics of permanent and temporary migrants.

	Permanent migrants			Temporary migrants		
	All (n = 49)	Men (n = 47)	Women (n = 2)	All (n = 97)	Men (n = 87)	Women (n = 10)
<b>Age Mean (range)</b>	28.10 (16–65)	28.42 (16–65)	20.50 (17–24)	25.78 (16–58)	26.30 (16–58)	21.30 (16–37)
<b>Education level</b>	33%	32%	50%	22%	24%	0%
None	31%	32%	0%	16%	15%	22%
Primary	14%	13%	50%	31%	30%	33%
Secondary	4%	4%	0%	6%	6%	11%
Tertiary	18%	19%	0%	25%	24%	33%
Bantaré <sup>a</sup>						
<b>Relationship to household head</b>	4%	4%	0%	15%	16%	0%
Household head	0%	0%	0%	2%	0%	2%
Wife	69%	68%	100%	68%	67%	8%
Son/daughter	27%	28%	0%	15%	16%	0%
Brother	0%	0%	0%	1%	1%	0%
Nephew						

<sup>a</sup> Bantaré refers to an adult literacy program in Burkina Faso.

permanent migrants and 26 for temporary migrants), although ages range from 16 to 65. According to FGD participants, the increasing migration of youth, particularly young men, owes to the inability of their family to pay for all their needs, to younger generations being less interested in agriculture, and to young men’s desire to purchase goods that their peers have been able to buy with income from migration activities. Moreover, FGD participants describe the challenges with farm management that can arise if the household head (versus younger generations) migrates. For example:

When it is the head of the household [who migrates], it causes a lot of difficulties in the management of the family farm, since he is very important in decision-making, overseeing, and executing decisions (men’s FGD, households with migrants).

Another FGD participant similarly explains that:

If it is the head of the household himself who is migrating, there is a disturbance in the organization of agricultural activities, because he is the first person responsible for the management of the family farm (men’s FGD, households with migrants).

In contrast, the departure of young men is less disruptive and thus more manageable. Hence, nearly 70% of migrants (permanent and temporary) are the son or daughter of the household head, followed by the household head’s brother. While relatively uncommon for the household head (predominantly men in this setting) or his wife to migrate, when this happens, it is usually a temporary rather than permanent move.

Temporary migrants are relatively more formally educated than permanent migrants, with most permanent migrants having no formal education or primary only and a much larger proportion of temporary migrants having graduated from secondary education or completed the Bantaré (adult literacy) education program.

### 3.1.2. Where do migrants go?

The destinations of migrants differ significantly based on whether they migrate permanently or temporarily (Table 3). Nearly 60% of permanent migrants in our study moved internationally (27 to Ivory Coast and 1 to Mali), and over 40% to urban domestic locations, predominantly Ouagadougou (17/20). Temporary migrants moved to both urban and rural locations, with international destinations including Ivory Coast (12 migrants), followed by Mali (3) and Nigeria (1). Temporary migrants also moved to over 20 different domestic locations. Although Ouagadougou was the most common destination, 72% of domestic migration was to other destinations. The 11 women for whom we have locational data migrated to rural areas within the same province or to domestic urban locations, and none migrated internationally.

**Table 3**  
Migrant destinations.

	Permanent migrants			Temporary migrants		
	All (n = 49)	Men (n = 47)	Women (n = 2)	All (n = 95)	Men (n = 86)	Women (n = 9)
Rural same province	0%	0%	0%	10%	6%	44%
Rural other province	2%	2%	0%	20%	22%	0%
Urban area in Burkina Faso	41%	38%	100%	54%	54%	56%
International	57%	60%	0%	17%	19%	0%

### 3.1.3. What do migrants do?

There is considerable variation in the activities that migrants undertake (Fig. 2). Permanent migrants are more likely to work as traders, paid agricultural labourers, and own-account farmers, whereas temporary migrants are more likely to pursue horticulture, gold panning, and their studies. Given the lack of water sources for productive use during the dry season months in the study villages, inhabitants outmigrate to pursue horticultural opportunities in areas closer to dams, such as the Loumbila, Koubri, Kongoussi, and Ouahigouya dams. Key informants explain:

It is poverty and the lack of water for production that lead the men to temporarily leave the village (male key informant, 03/10/2019).

After the harvests, they have nothing more to do here and for that they go practice horticulture in areas with dams to obtain money to buy motorcycles and laptops, for example. In fact, they leave with the intention of obtaining money to meet their secondary needs (male key informant, 10/09/2019).

New opportunities arising with gold panning in nearby Bam Province have also spurred seasonal migration to this northern province over the past five years.

### 3.1.4. When and for how long do migrants leave?

Participants from several FGDs explained that there has been a relative decrease in permanent migration in recent times, and an increase in temporary migration. Indeed, survey data illustrate a notable increase in temporary migration, as 81% of temporary migrants only began migrating over the four years preceding the survey (Fig. 3).

Within the calendar year, temporary migrants are absent for an average of 5.86 months (5.93 and 5.22 for men and women, respectively), though this ranges from under one month to nearly the entire year. Key informants explain that the duration and timing of temporary migration largely depends on the migrant’s activities:

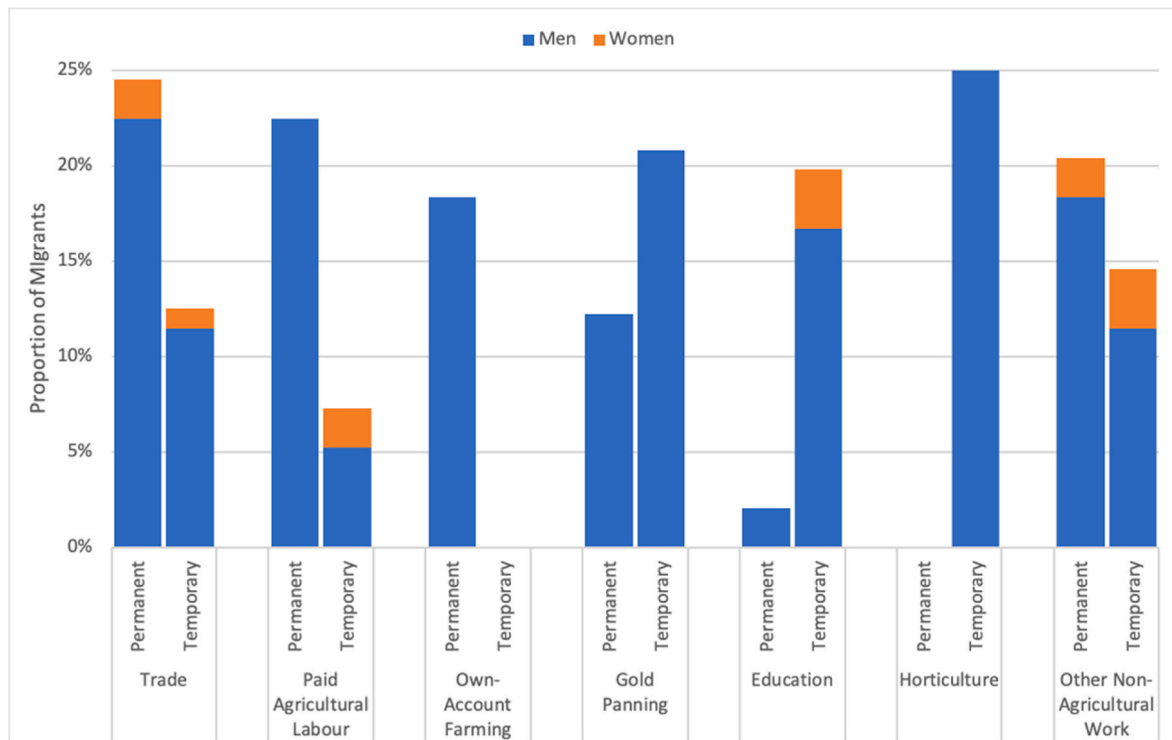


Fig. 2. Migrant activities (permanent migrants n = 49; temporary migrants n = 96).  
 Note: Other non-agricultural work includes masonry, butchery, mechanics, car washing, photography, artisanal handicrafts, driving, and charcoal production.

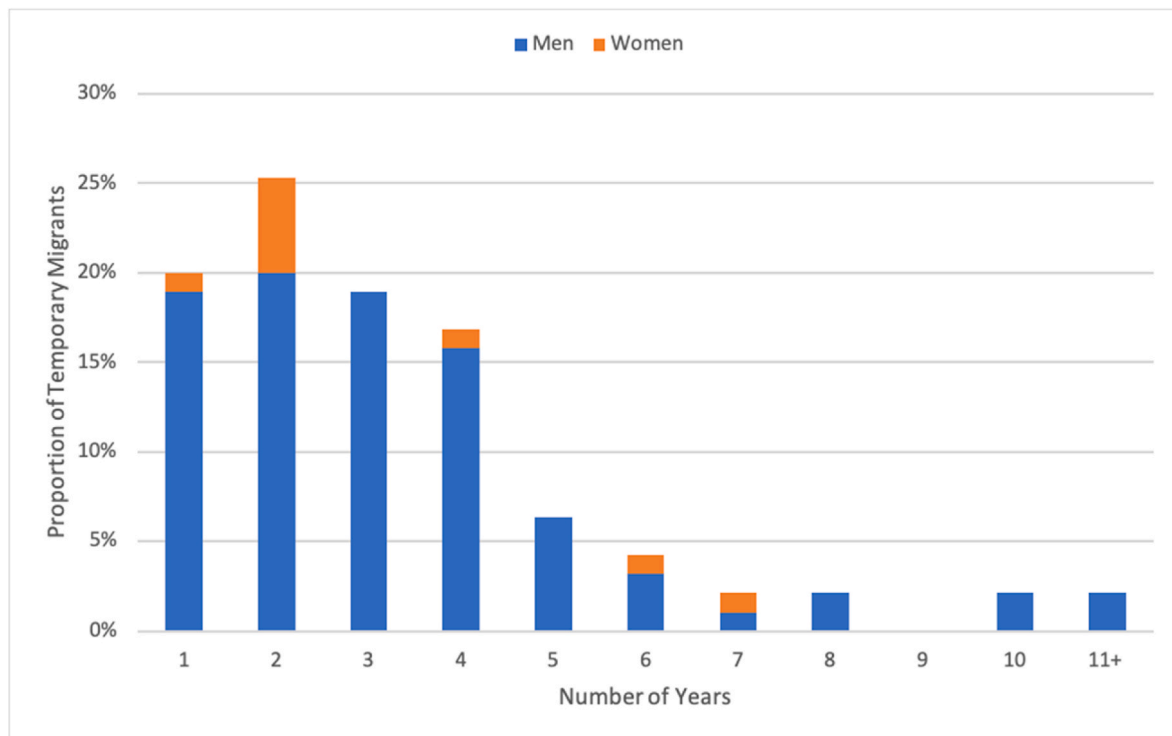


Fig. 3. Number of years temporary migrants have been migrating (n = 94).

There are three groups of temporary migrants. First, there are those who are away from the village for four months because they leave after the harvests and they return as the rainy season nears; meaning that they are gone generally from January to April. Then there are those who spend seven or eight months outside the village, since they

leave in October and come back in April or May. These people practice two cycles of horticulture before their return. They leave in October, return in January, and leave [again] in February to return in April or May to cultivate. Finally, there is the third group, which is made up of those whose departure is unknown, as is their return,

because they no longer even cultivate ... but they are not numerous. Certainly, by June at the latest, all those who return to cultivate are back (male key informant, 01/10/2019).

Those who do horticulture come back after five to six months. They leave in October and generally come back in April or May to cultivate. But those who do gold panning do not have a specific time to come back. They stay there until they are successful. When they return, they do not spend more than a month to see their family, and then return to the [gold mining] sites (male key informant, 04/10/2019).

As these excerpts suggest, temporary migration generally occurs during the dry season, when there is a lull in agricultural tasks (Fig. 4). Across study villages, key informants state that temporary migrants tend to return home between April and June to contribute to the new agricultural cropping cycle. Nonetheless, most FGD participants note labour shortages between April and August due to the high labour inputs required in their fields at this time. According to FGD participants, temporary migrants begin to leave again from September to December, either after plowing and weeding tasks are completed (in September) or after the harvest (October to December). Most temporary migrants are

thus absent from December to March, when their family farms require the least labour. The migration of students during the academic year further clarifies the seasonality of temporary migration, as students who leave for school do so in September or October and return in late May or early June.

Overall, the timing of temporary migration is intentionally seasonal with the family farm in mind. As one man summarized:

The periods when people leave coincide with the period when the activities that remain in the fields do not necessarily require a lot of manpower. But if there are any household members leaving in the middle of the winter season, then it can have a serious effect on agricultural activities because the head of the household has not foreseen this (men’s FGD, households without migrants).

### 3.1.5. Why do migrants leave?

Consistent across all sources of data is the overwhelmingly economic motivation for migration, coupled with a much smaller proportion of migration for educational pursuits, mostly among temporary migrants. Participants consistently discussed the need to generate income amid poverty, increasing costs of living, and a lack of income generating



Fig. 4. Seasonality of agricultural calendar and temporary migration. Top half based on household surveys (n = 95); bottom half based on FGDs (n = 10). \*For households that do not have the tools for mechanical weeding, all weeding is done manually.

opportunities within their village, as a primary motivation for migration:

Those who leave [internationally], it is not because they do not like their country or that they love to work, but there are no jobs here (male key informant, 04/10/2019).

Societal expectations for men to acquire some assets (e.g., motorbikes) in order to marry further motivate young men to migrate.

The decreasing availability of land associated with increasing population growth and more frequent land sales, and a decreasing interest in farm-based livelihoods, further encourage migration. FGDs suggest that poorer households are compelled to migrate, but also that insufficient funds to finance the initial migration event and debt from previous migration hinder the capacity to migrate. FGD participants noted the importance of migration in helping their households cope with the economic challenges posed by COVID-19, and anticipated higher rates of migration to confront the increased poverty levels created by the pandemic.

The success of migrants encourages subsequent migration from others in the village. In one FGD, for example, men depict a domino effect of migration among peers:

There is an increase in migration because migrants come back with money and buy luxury items like motorcycles. It encourages others to go too (men's FGD, households with migrants).

Hence, in another FGD, male participants estimate that temporary migration and daily off-farm movements have increased by at least 60% over the preceding decade. However, participants in several FGDs predict that participation in permanent migration would decrease over time, as migrants turn their focus toward temporary migration options.

In a FGD, women from migrant households explained the intergenerational dynamics that underpin decisions to migrate:

Yes, migration has an impact on the workforce. Once the children decide to migrate, their dad can't stop them from leaving. As soon as they leave, all you can do is pray that they have a job. Then, you stay with the little ones until they come back ... Nowadays, with this expensive life, you can no longer prevent a child from migrating if you have nothing to offer him. For example, with bad rainfall, we remain helpless and we can only count on luck ... If you prevent them from leaving and you have nothing to offer them in return, it can lead to discontent. If they migrate and succeed, they are aware that they have left their families behind, they can help you, but if they do not succeed, there is nothing we can do about it. That is why we let those of age go. We want several things at once. If we want them to have scientific knowledge when agriculture does not pay for their education or supplies, then if they migrate and succeed, they can come back and pay for their education and help you with the food (women's FGD, households with migrants).

Against this backdrop, community representatives highlighted the high prevalence and rapid increase of migration in their villages. Overall, key informants and FGD participants characterized migration as predominantly dominated by young men undertaking temporary migration:

There are times that if you come to this village, you cannot see a young man. Therefore, after the harvest, around 80% of households record migration of men (male key informant, 27/08/2019).

### 3.2. Impacts of migration for rural smallholder households

#### 3.2.1. Migrant remittances

According to the household survey, approximately 60% of migrants (61% and 59% of permanent and temporary migrants, respectively) sent remittances to their rural household over the 12-month period preceding data collection. Two thirds (66%) of temporary migrants' household

members note that remittances are extremely important for the household and family farm, and all but one of the rest believe remittances are either moderately or somewhat important (equivalent information not available for permanent migrants).

We observe gender differences in the FGDs with regard to the importance of remittances for household members who remain on the farm. Whereas men FGD participants noted the benefits of remittances for the family farm, women reflected that remittances, if any, remained insufficient to have any noticeable impact. FGD participants reflected that for households who did receive enough remittances to invest in the farm, by purchasing "carts, plows, and draft animals, yields only increase" (men's FGD, households with migrants). Within the same villages, however, both men and women reported that remittances were thus far insufficient. One woman explained:

There are no remittances because what they [migrants] earn is not enough. Since they started migrating, they have not yet been able to help us with the purchase of anything. Often, we even help them in return. What they earn is not enough for them, let alone to help us in return (women's FGD, households with migrants).

Households that receive remittances use them toward various ends: most prevalently, to purchase food for the household, then to settle healthcare costs and tuition fees (Fig. 5). Agricultural inputs, clothes, and hiring farm labour were other common uses, more so in temporary migrants' households. Other less common uses of remittances include pocket money, buying animals (mostly goats), solar panels, saving for emergencies, bike repair, and trade.

The data paint a mixed picture of who within the household decides how to spend remittances. Among women's survey respondents whose migrant household members sent remittances home, 72% consider that they are free to independently decide how to spend this money. Alternatively, in a FGD with men and women from households with migrants, there was a common understanding that both the male household head and his wife are involved in allocating remittance money, but that migrants do not always share the money they earn with other household members:

The investment is based on a consensus between the head of the household and his wife, wherein usually it is the head of the household who takes the initiative to invest in a particular activity. But in general, the migrants themselves decide what to invest in, because they already have their plan before going on migration. In general, they want to buy motorcycles (mixed-gender FGD, households with migrants).

Another participant in the same FGD explains the diversity in remittance sending patterns:

For some, there are remittances, but these funds do not allow them to acquire inputs; they are used for other needs such as health or school. Others don't send anything at all. Still others send money, but it is for the family to keep until they return and not to invest in anything. Before going on migration, each migrant has their own well-planned project, and if they happen to earn money, they think of themselves first before the family. There are fewer who care about their family, and what they earn and send does not allow them to invest in the family's inputs. When they send, you as the head of the family have to keep this money until they come back and decide for themselves what to invest in (mixed-gender FGD, households with migrants).

According to FGDs, migrants use the money they earn while away to access or acquire means of transportation (mainly motorcycles), farm inputs and machinery, technology (such as mobile phones), and other material goods.

#### 3.2.2. Effects of migration on household labour and agricultural production

Nearly all survey respondents (92%) of households with permanent migrants considered that migrants contributed labour to their family



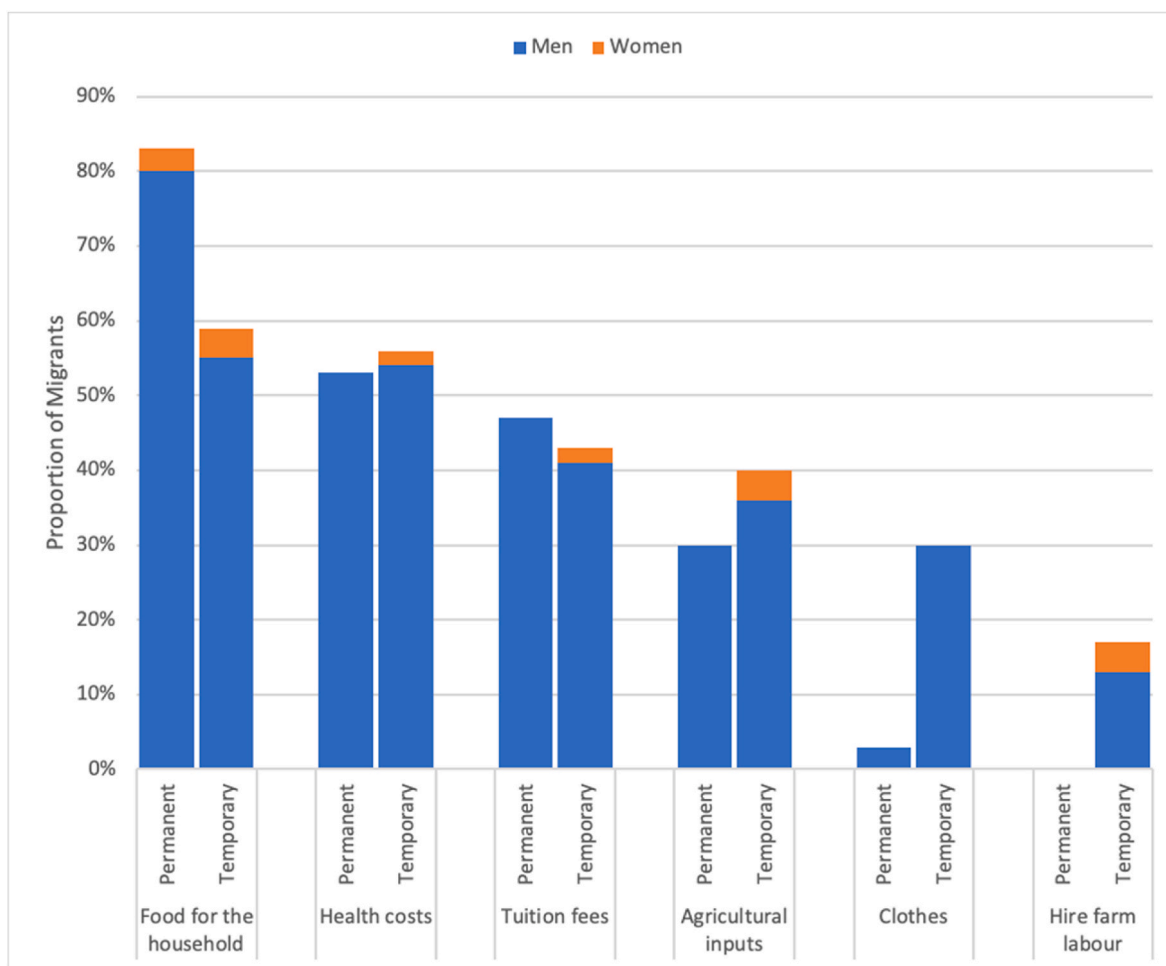


Fig. 5. Top six household uses for migrant remittances. Note: The sum of frequencies exceeds 100% as participants could select more than one response option.

farm before migrating (Fig. 6), and 75% reported that the migrant’s departure affected the quantity of agricultural labour available. Those who reported the contrary explained that other household members, mainly the migrant’s wife, makes up for the absence of the migrant’s

labour. FGD participants added that permanent migrants are no longer considered in agricultural production planning given the long duration of their absence.

Most household survey respondents did not consider permanent

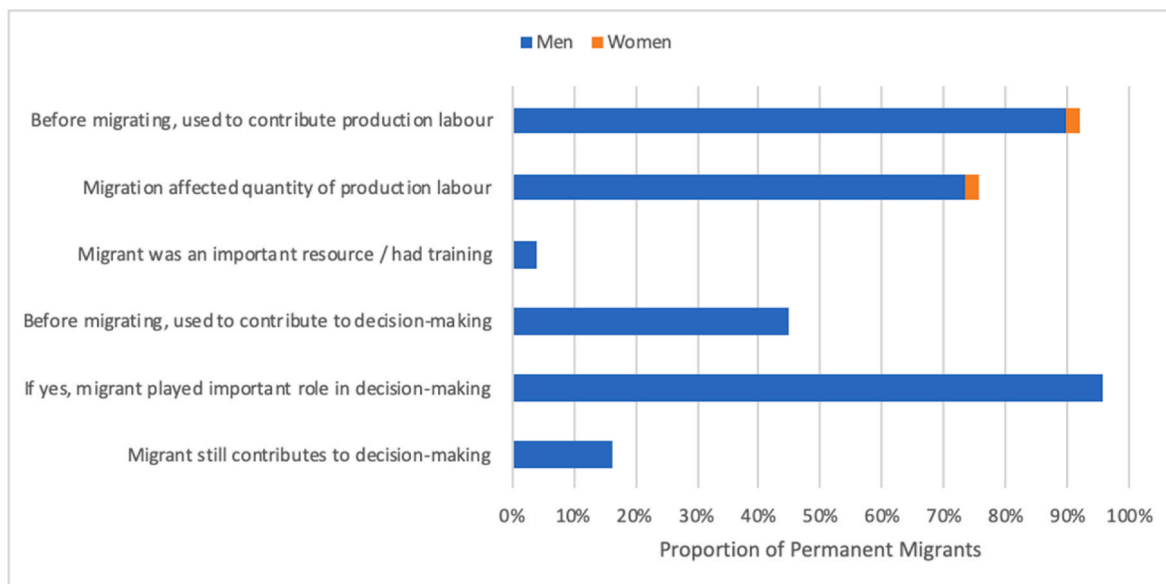


Fig. 6. Effects of permanent outmigration on migrant contributions to agricultural production.

migrants as an important resource or household member with specific training prior to their departure, and thus did not see their migration as a drain on the agricultural skills held by their household. About half of permanent migrants had contributed to decision-making before their departure, and of these, 95% played an important role in decision-making; however, only 16% continue to contribute (over the telephone). The majority who no longer contribute to decision-making were portrayed as quite separated from the household, with household survey respondents making comments such as “he rarely calls”, “as he is not nearby, it is complicated”, “he left a really long time ago” and has new activities now, or “since his departure he no longer cares about the family back in the village”. Some survey respondents also explained that the household head makes the decisions for the household, and the permanent migrant follows them.

The situation is different for temporary migrants, with the impacts of their absence being dependent on its timing in relation to the agricultural calendar (Fig. 4). According to survey respondents, over 80% of temporary migrants used to play important roles on the family farm during field preparation, cultivation, and the harvest before they began migrating. These contributions have mostly been maintained (Fig. 7) as temporary migration mainly occurs during lulls in the agricultural cycle—although some migrants may not return in time for field preparation, and may leave before the harvest (see Section 3.1.4 above). For temporary migrants who are studying, there is less flexibility to align their departure with the agricultural calendar; an important consideration as educational migration becomes more common.

Similar to permanent migrants, the absence of temporary migrants was not seen to affect the knowledge or skills available to the household for agricultural production, and only one in ten migrants were reported to share new technical agricultural information with the household. Survey respondents considered that, unlike permanent migrants, temporary migrants who have important knowledge and skills to contribute to farm production are still present when needed to share these.

Decision-making patterns were similar for temporary and permanent migrants. According to household survey respondents, nearly half of temporary migrants contributed to decision-making before they began migrating, and of those, over 90% played an important role. However, only 36% of them have continued to contribute to decision-making since they began migrating. These migrants are either the household head or able to contribute by phone or during temporary returns to the homestead. The drop in contributions to decision-making is even higher for

permanent migrants, among whom only 16% of those who previously contributed continue to do so after their departure.

In contrast to the predominantly male household survey respondents, the women’s survey respondents mostly reported that the absence of migrants does not affect household decision-making in relation to the family farm (93%) or the household (89%). They attribute this to many migrants not being involved in decision-making before their departure (e.g. because they are the children of the household head) or to decisions being made by consensus as a household, and still involving the migrant from afar.

FGD participants elucidated the impacts of outmigration on smallholder production. As one male participant explained:

[Outmigration] has a negative impact because it reduces work capacity, leading to more tasks for non-migrants since migrants leave a void to compensate for ... old people will be forced to perform other tasks that were not intended for them, such as the installation of stone bunds. This leads to a decrease in the area under cultivation, which in turn leads to a decrease in the quantity of crops because it will be difficult for non-migrants to manage large areas (men’s FGD, households with migrants).

Land restoration techniques related to field preparation, such as the building of stone bunds that control for erosion and the digging of *zai* pits (planting basins), tend to be undertaken before temporary migrants return home each year. As such, it is difficult for households to maintain these practices in their absence. Temporary migrants often help with some stages of the agricultural cycle, such as planting, but their departure hinders subsequent farm production as remaining labourers try to make up for their absence. Moreover, “they come back tired in general, so not very productive” (men’s FGD, households without migrants).

A recurrent theme in FGDs is that households annually determine the area of land they will cultivate in relation to the number of household members available to provide labour. If there is a reduction in labour availability due to outmigration, many households accordingly reduce the size of the land they will cultivate. For this reason, many respondents considered that outmigration does not reduce their capacities to cultivate their lands; they only put as much as they can manage into production. One FGD contextualized this practice within a larger historical trend: farm labour used to be done with collaborative (unpaid) labour, which required feeding the workers. As in current day households no longer have enough food to share with workers, they no longer request

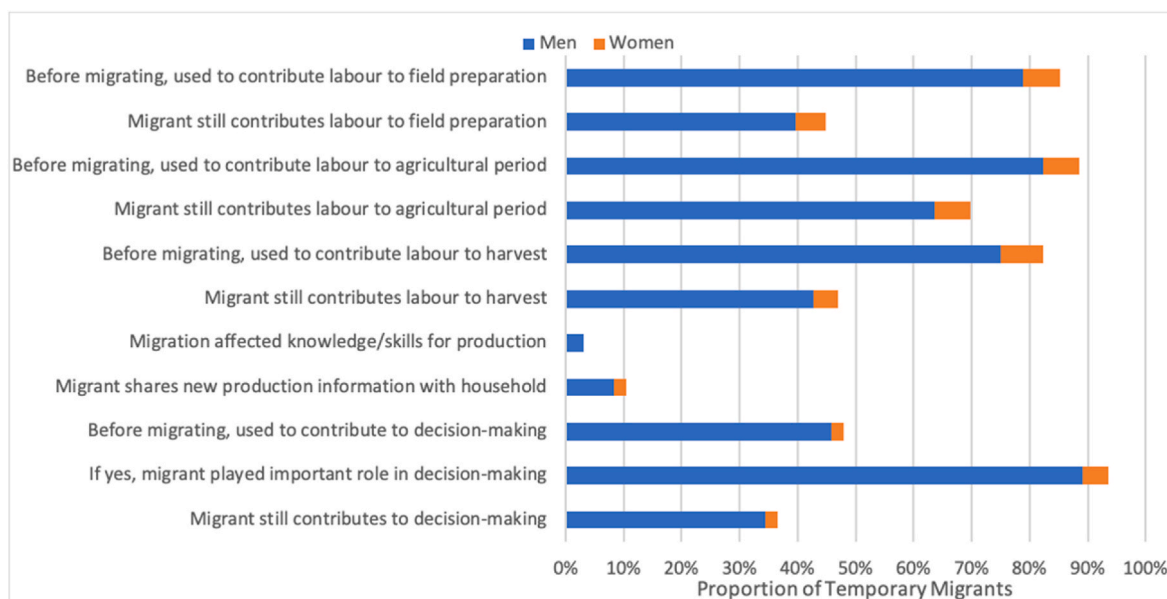


Fig. 7. Effects of temporary outmigration on migrant contributions to agricultural production.

their help and only work with their own household’s labour, adjusting the size of land under production to the household labour available. While a few respondents mentioned hiring labourers to fill in for their household’s migrating members, the majority stated that their household could not afford to do so.

Although most women reported that the departure of one of their household members does not affect their own work in the household and/or on the farm, approximately one third of women’s survey respondents felt that it does. The tasks most commonly cited for requiring more of women’s work are collecting water and firewood, feeding animals, and providing farm labour.

FGD participants also discussed the social effects of outmigration, including loss of reproductive and communal labour, and the impacts of outmigration on interpersonal relations:

These problems are the inability to travel and participate in various ceremonies, reduction of labour that leads to famine, and disruption of the homes of married migrants because the management of their families is generally difficult (men’s FGD, households with migrants).

We also have a problem of attendance at different ceremonies such as weddings, baptisms, and funerals as it should be. We are also understaffed to attend all social welfare activities such as house building or harvesting (men’s FGD, households with migrants).

There are a few cases of disagreements related to the fact that the migrant returns and does not want to share the profits of the fruit of his work, or that it is the head of the household who financed his move to the site of the horticultural activities or gold panning and who sometimes paid the inputs for him and even sent him the food. Returning migrants who do not have enough to buy the bike of their dreams are at odds with their family (men’s FGD, households without migrants).

Thus, outmigration can cause intra-household tensions, and reduce the ability to fulfill community expectations towards constituent households.

### 3.2.3. Effects of migration on household capacities to manage their farm

Overall, when asked “did your capacity to manage your farm change due to the outmigration of household members”, the majority of household survey respondents indicated that outmigration has not

changed (increased or decreased) this capacity (Fig. 8). Among those who do perceive such a change, more respondents considered that this capacity decreased rather than increased. This negative effect was more prominently reported for permanent rather than temporary migration (Fig. 8).

Survey respondents who believe that outmigration has had no effect on their household’s farm management capacity attributed this to having other labourers (usually other children in the family) replace the migrant, or to the migrant not having been involved on the family farm and/or with farm management prior to their departure. These answers were consistent for male and female migrants, and permanent and temporary migrants.

The eight survey respondents who reported that outmigration had increased their household’s farm management capacity were all referring to temporary migrants and unanimously attributed this increased capacity to the use of remittances the migrants provided, for instance, for purchasing seeds. Remaining households reported that outmigration had caused a reduction in farm management capacity because of the loss in labour, particularly where the migrant had previously contributed to farm management or was the household head. Instances where the head of household permanently migrated were exclusively associated with decreased management capacity, and in only one case did the temporary migration of the household head lead to a perceived increase in the household’s capacity to manage its farm.

### 3.3. Looking forward: rural futures and household aspirations

When asked about their hopes for the future of their migrating household member, 63% of the women’s survey respondents indicated that they would like the migrant to continue migrating and sending remittances home. A further 14% would like the migrant to continue migrating, but only temporarily, whereas only 16% indicated that they would like the migrant to return home to work on the family farm or to return to the homestead because they themselves are aging. Only 4% indicated that they would like to join the migrant at their destination.

Women’s survey respondents stressed the lack of opportunities for the migrant within the village, the importance of remittances for the household and for improving their family’s living conditions, and insufficient income from the farm alone. One respondent explained that “agriculture has no future”, while others considered that agriculture cannot meet household needs and is becoming even more challenging

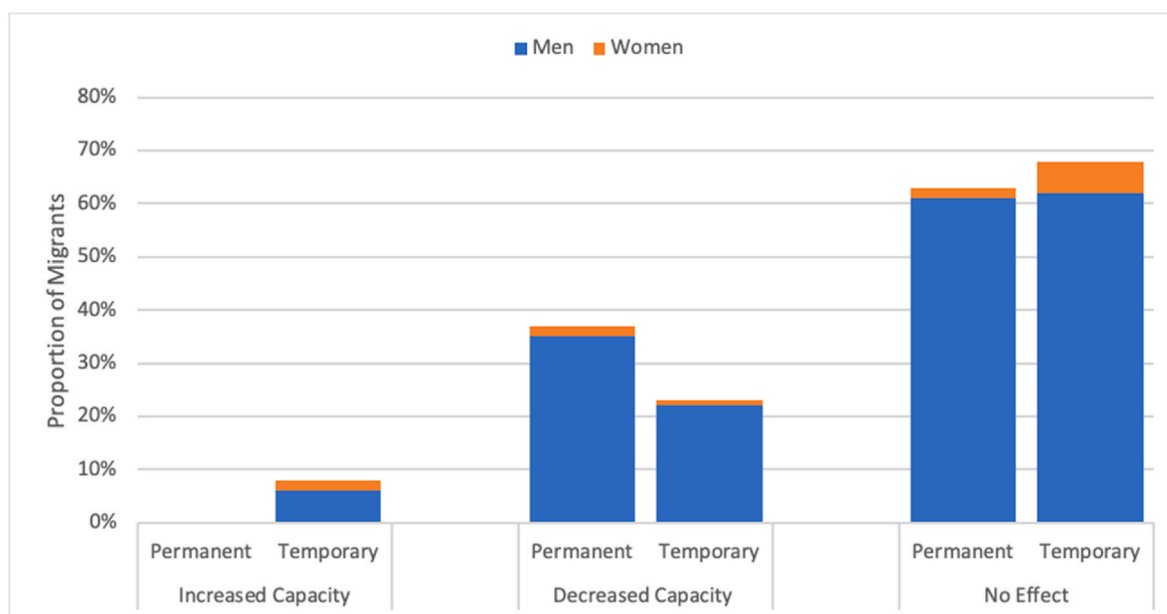


Fig. 8. Effects of outmigration on farm management capacity.

due to changing environmental conditions, particularly insufficient or unpredictable rainfall.

Yet, women's survey respondents and both male and female FGD participants preferred their household members to migrate temporarily rather than permanently, to be able to continue working with them and helping on the farm:

Let them continue to migrate and bring us money. Let them continue to migrate and come back to help us during the necessary period of agricultural work before leaving. [I would like] that they continue to migrate but preferably that they practice temporary migration because it allows them to return to carry out agricultural activities (men's FGD, households with migrants).

Some women's survey respondents preferred domestic, temporary migration to international, permanent migration as they considered that remittances from both were the same, or even higher from temporary migrants, and that temporary migration offers the benefit of being able to visit the homestead more often. FGD participants were eager to acquire new social and agricultural knowledge from migrants, use remittances to purchase vehicles and land, as well as improve their living conditions and those of the wider community.

Over half (56%) of the women's survey respondents expect their household's off-farm income-generation to grow over the next five to ten years, and 48% anticipate a reduction in the area of land their household cultivates over the same time period, with similar opinions shared in FGDs. Participants associate this reduction to a drop in household labour availability due to migration. Respondents across data sources lament the many limitations of smallholder agriculture, which is increasingly unable to meet household needs. According to women and men in one focus group:

In our opinion, the livelihoods of our village will change. Agriculture will play less of a role because of the irregularities of rainfall, the degraded soil, and children refusing to cultivate (mixed-gender FGD, households without migrants).

Parents expressed a desire for their sons and daughters to achieve high levels of training and formal education to access off-farm opportunities, and worried about their children's future if they were dependent on agrarian-based livelihoods.

Despite these aspirations, one third of women's survey respondents, as well as several FGD participants, anticipate increased investments in new agricultural practices and techniques, such as *zai* pits, stone bunds, composting, mechanization, and tractors and carts; all seen to help maximize outputs and profitability. One women's survey respondent stressed that this was needed to make farming viable: "Otherwise we will not survive." FGD participants were interested in receiving technical training in new agricultural and land restoration techniques, and in adopting promising practices on their farms. As one participant (men's FGD, households with migrants) explained, these new agricultural techniques are essential to generate the interest of youth in agriculture.

Overall, FGD participants articulated the role migration plays in shaping their visions for their family farm. As one woman from a migrant household explained:

Migration affects the vision of family farming because more and more children can no longer be relied upon. They are unpredictable (women's FGD, households with migrants).

Forty (40) percent of women's survey respondents considered that their future visions for their family farm are influenced by migration, mostly due to the associated lost labour input on the farm. Participants described making plans to account for the absence of household members who migrate, particularly when they are unable to return to provide agricultural labour. These plans include reducing the cultivated area or tasks on the farm, placing additional labour burdens on household members remaining on the farm, and purchasing agricultural inputs with future remittances.

#### 4. Discussion and implications

Our results offer a nuanced and gender-disaggregated analysis of migration in Ouhritenga Province, Burkina Faso; a country where migration has long been an integral component of rural livelihoods (Breusers 1998; Sanfo et al., 2017; Ilboudo Nébié and West 2019; Kaag et al., 2019). Our multi-village case study demonstrates that migration is a heterogeneous phenomenon. Overall, however, the observed patterns of outmigration in this region are dominated by households with more members and larger landholdings; overwhelmingly undertaken by men, due to deeply rooted gender norms and expectations; and largely pursued in search of income-generating opportunities. Migrants are mainly the children or brother of the (male) household head, and very rarely the household head and/or spouse. In our study site, migration is mostly temporary; a shift from the permanent type of migration that key informants and focus group participants described as being dominant in the past. Yet, permanent migration also occurs and has different effects on the organization of smallholder household production than temporary migration. For instance, permanent migrants contribute less to decision-making and agricultural production, and have a stronger negative impact on the household's capacity to manage its farm than temporary migrants. Migrant activities, motivations, destinations, and the level and type of involvement migrants maintain with their household are also diverse. These differences highlight the need to recognize multiple types of migration and their varied outcomes on the organization of smallholder production systems, rather than conceptualizing migration as a homogeneous phenomenon.

Current migration trends in our study site result from a conjuncture of interrelated, contextually-rooted factors occurring at multiple scales: environmental, including ongoing land degradation and rainfall unpredictability, which hinder agricultural production; socio-cultural, including peer effects shaping youth aspirations, norms and ascribed gender roles, and rising educational goals and pursuits; and economic, precisely the increased costs of living, the lack of dry-season income-generating activities in villages of origin coupled with new (gold panning and horticultural) opportunities in neighbouring localities, the need for cash-intensive farm inputs, and desires for new consumption goods (particularly motorcycles), which are increasingly expected of young men before marriage. Migration thus reflects both distress diversification and progressive diversification (Ellis 2000; Rigg 2006; Bouahom et al., 2004)—including over a medium to long time frame, as migration for educational pursuits is a longer-term investment in household livelihood diversification. As suggested by de Longueville et al. (2019: 473), migration is not inherently a "failure to adapt" to rural conditions, but can be a strategy to secure a living amidst limiting environmental and socio-economic circumstances in the migrant's location of origin. By surfacing the deep interconnections between environmental, socio-cultural, and economic drivers of migration, our study complexifies the narratives that peg Burkinabè migration down to environmental change (Deshingkar 2012; Gray and Wise 2016; Sanfo et al. 2017 de Longueville et al., 2019, 2020; Ilboudo Nébié and West 2019), and calls for a more multi-faceted understanding of the push and pull factors that motivate migration in this setting. This includes attention to both gendered and generational considerations within the household, part of a growing field of literature that unravels the intra-household dynamics of migration and deagrarianization as differentially experienced across household members; including those who migrate and those who remain at the homestead (Huijsmans 2014; Bryceson 2019; Rigg et al., 2020). Follow-up longitudinal studies will be important for understanding how these patterns and processes are influenced by life course and the ongoing environmental, socio-cultural, and economic changes identified here.

Importantly, we see that outmigration does not necessarily imply a rupture with agriculture. In our study, outmigration of a family member is undertaken in conjunction with smallholder farming at the household level, and even at the individual level, as most temporary migrants also

maintain a foothold in their family farm. In this context, migration often leads to reduced cultivation areas to adjust to a drop in household labour. Yet, a portion of remittances is sometimes used to purchase agricultural inputs or hire farm labour (in the case of temporary migrants), which demonstrates continued investments in the farm in spite of—or indeed because of—migration. Future visions and hopes for the farm reflect a sense that agriculture offers few prospects for the future, but also that it will remain integral to the household's overall livelihood strategy; hence the preference for the temporary migration of household members who can return to the farm during critical periods in the agricultural calendar. Although the livelihoods literature explores migration as a livelihood activity, and to a lesser extent its gendered dimensions and role in breaking down rural-urban divisions (de Haan 1999; Awumbila and Ardayfio-Schandorf 2008; Oberhauser 2016), it has only superficially engaged with the role of migration in pluri-activity household livelihood portfolios, such as we describe above, both for the migrant and the family farm. As such, greater attention to the individual migrant as situated within the household, as well as coexisting (and at times, contrasting) perspectives of migration among differently positioned household members, are important for intrahousehold livelihood and migration-based research (Huijsmans 2014). The tensions in the data gathered through mixed-method approaches, such as we used in this study, surface the plural ways that differentiated household members and households experience migration within changing rural contexts and livelihood portfolios.

Moreover, bringing nuance to macro analyses that show an increased labour participation in agriculture of women 'left behind' in rural areas across Africa (e.g., Bryceson 2019), our findings call into question that male outmigration necessarily equates a feminization of agriculture, or "the broadening and deepening of women's involvement in agriculture—in terms of workload, decision-making, or visibility" (Doss et al., 2020: 280). We find that, in the case of young temporary migrants, male outmigration causes changes in labour relations and production on smallholder farms, and particularly drops in the migrant's contributions to field preparation and harvesting. Yet, when the male household head is not the one to leave the farm, he remains the primary decision-maker. Likewise, male temporary migrants continue to contribute to farm-related decisions either through phone communication or when they seasonally return to the homestead. Therefore, despite reduced presence of male household members, women do not gain greater influence in decision-making in this context. Moreover, approximately two thirds of women did not report increased on-farm and off-farm workloads, and women do not appear to have increased engagement in agriculture due to male outmigration, as long as other men remain on the homestead. These place-based results among Mossi farmers in the Sudano-Sahelian region should not be generalized across rural Africa, however. Gender analyses in other socio-cultural and ecological contexts are needed to examine historically-rooted contextual specificities.<sup>1</sup> Nonetheless, our results support broader calls for critical approaches to 'feminization of agriculture' studies, including recognizing the limited effects migration can have in creating transformative impacts for gender relations and equality (Doss et al., 2020; Kawarazuka et al., 2022; Leder 2022).

Our findings further shine a light on women migrants, who are largely ignored in the feminization of agriculture literature. Some studies have examined women's migration and whether a 'feminization

of migration' is occurring (Elmhirst 2007; Preibisch and Encalada Grez 2010; Camlin et al., 2014; Huang et al., 2020; Kawarazuka et al., 2020), but these remain rare. Yet, when outmigration is primarily done by men, as is the case in many contexts such as Burkina Faso, the women who also migrate in that context are largely overlooked. Although they are too few in number in our sample to make gender-based comparisons, we found that some migrants are indeed women (4% and 10% of permanent and temporary migrants, respectively), despite norms around migration that discriminate against women leaving. These women should not go unnoticed under the assumption that migration is a man's activity. In rapidly transforming rural contexts, questions around gender norms, their evolution, and factors pushing or pulling women toward migration, as well as the implications their migration holds for their self-identities, households, societal positioning, and production systems, warrant future attention.

While debates on whether and where a feminization of agriculture is occurring are important, polarizing approaches have the tendency to simplify the complex links between migration and feminization processes (Kawarazuka et al., 2022). Applying a gendered lens to the study of rural outmigration (Doss et al., 2020) that also considers (inter) generational dimensions (Huang 2012; Thorsen 2013), the relationship migrants maintain (or not) with their household, and intrahousehold tensions or conflicts that can be generated (McEvoy et al., 2012; Huijsmans 2014) encourages a deeper understanding than migration as livelihood diversification or the passivity projected on those 'left behind' would suggest. Instead, it looks at the role of migration in householding, or how "creating and sustaining a household is a continuous process of social reproduction that covers all life-cycle stages and extends beyond the family" (Douglass 2006: 423), from both an individualistic, collaborative, gendered, and generational perspective. Further research is needed to delve into the economic and more-than-economic implications of migration for the multi-sited and at times trans-national households it generates.

These findings have important implications for the continuity of rural livelihoods. First, there is a strong intergenerational component to migration in our rural study site. The age of the migrants, as well as the perception of respondents that migration is predominantly undertaken by 'youth', may indicate generational shifts in rural livelihood trajectories and aspirations. Further in-depth and contextual research is needed to shed light on how these processes affect the 'inter-generational contract', or the shared and sometimes conflicting understanding of what family members expect to owe and receive from one another (Kabeer 2000; Whitehead et al., 2007). Our gender analysis shows the importance of disaggregating the concept of 'youth' to understand gender-specific migration opportunities and constraints, and the gendered effects of migration among household members who remain on their farm. Moreover, understanding the roles and power that 'youth' maintain in the household, how those may change depending on the age and position of young women and men (e.g., as an older or younger sibling) and relative to the maturity of the household along its life course, and how that is (re)shaped by migration, are important for understanding shifts in intrahousehold relations and generational expectations. Similar gender and generational trends have been observed in other contexts, highlighting the need for research on the feminization of agriculture, a process intricately related to broader rural transformations (Doss et al., 2020), to analyze the nexus of migration, youth aspirations, intrahousehold relations, and rural futures through a gender lens (Huang 2012; Huijsmans 2014; Elmhirst et al., 2017; Rigg et al., 2020; Huijsmans et al., 2021).

As temporary migration is a relatively recent phenomenon in our study site, its long-term effects on social organization and production remain to be seen. Our preliminary data suggest that when eldest sons leave their household, their responsibilities shift to younger siblings; and when successful migrants return, they gain new status and responsibilities within the household. Although plots farmed individually by migrants may remain in fallow for a few years, these lands are

<sup>1</sup> For example, in the nearby Sahelian region, which is dominated by different ethnic groups and livelihood strategies, and where tillage using the plough as well as conservative forms of Islam are more prevalent, gender relations in agriculture can assume very different forms. For more discussion on gendered agricultural participation in the region and beyond, particularly as differentiated by social structures and by use of the hoe versus the plough in agriculture, see Boserup (1965, 1970); Bryceson (1995, 2019); David and Yabré (1995); Nielsen and Reenberg (2010); Kiptot and Franzel (2012); Phiri et al. (2022).

eventually farmed by other household members, folded into collectively farmed household lands, or sold with the migrant's accord. Longitudinal research is needed to elucidate whether or how these processes play out across households and localities at different temporal scales, and their effects on rural differentiation and transformation.

## 5. Conclusion

Future studies on the intergenerational dynamics of gendered migration are essential for understanding the long-term impacts of outmigration on production systems, household labour allocation, and related shifts in agricultural knowledge systems and land uses. Greater engagement between the livelihoods literature and the literature on the feminization of agriculture would help to address the gender limitations of most livelihoods frameworks (Oberhauser et al., 2004), the complexity of gendered migration processes, and the reorganization of agricultural production processes as situated within multi-activity livelihood portfolios. Important gendered and generational components, interwoven with environmental, socio-cultural, and economic considerations, are creating new migration patterns that require renewed attention in rural development policies and programmes. Importantly, including gender in these analyses needs to extend beyond simplified divisions between men and women as off-farm and on-farm, respectively, or the presence or absence of a 'feminization of agriculture'. Rather than rural outmigration signifying a move away from smallholder production, our analyses have demonstrated the place-based heterogeneity of the phenomenon and its gendered implications; including its diverse drivers and outcomes, essential for understanding the family farm and broader rural transformations.

## Credit author statement

Jennifer C. Langill: Conceptualization; Formal analysis; Visualization; Writing – original draft; Writing – review & editing; Marlène Elias: Conceptualization; Funding acquisition; Methodology; Writing – original draft; Writing – review & editing, Barbara Vinceti: Conceptualization; Funding acquisition; Methodology; Formal analysis; Visualization; Writing – review & editing, Alain Traoré; : Conceptualization; Project administration; Methodology; Investigation; Writing – review & editing, Daouda Traoré; : Conceptualization; Project administration; Methodology; Investigation; Writing – review & editing.

## Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

<https://dataverse.harvard.edu/dataset.xhtml>.

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## References

- Awumbila, M., Ardayio-Schandorf, E., 2008. Gendered poverty, migration and livelihood strategies of female porters in Accra, Ghana. *Nor. Geografisk Tidsskr. 62* (3), 171–179.
- Bargain, O., Boutin, D., 2015. Remittance effects on child labour: evidence from Burkina Faso. *J. Dev. Stud.* 51 (7), 922–938.
- Beauchemin, C., Schoumaker, B., 2009. Are migrant associations actors in local development? A national event-history analysis in rural Burkina Faso. *World Dev.* 37 (12), 1897–1913.
- Bhandari, G., Chinnappa Reddy, B.V., 2015. Impact of out-migration on agriculture and women work load: an economic analysis of hilly regions of Uttarakhand, India. *Indian J. Agric. Econ.* 70 (3), 395–404.
- Bhawana, K.C., Race, D., 2020. Women's approach to farming in the context of feminization of agriculture: a case study from the middle hills of Nepal. *World Development Perspectives* 20, 100260.
- Boserup, E., 1965. *The Conditions of Agricultural Growth*. Aldine Publishing Company, New York.
- Boserup, E., 1970. *Women's Role in Economic Development*. Earthscan Publications, London.
- Bouahom, B., Douangsavanh, L., Rigg, J., 2004. Building sustainable livelihoods in Laos: untangling farm from non-farm, progress from distress. *Geoforum* 35, 607–619.
- Breusers, M., 1998. *On the Move: Mobility, Land Use and Livelihood Practices on the Central Plateau in Burkina Faso*. Wageningen UR Library, Wageningen.
- Bryceson, D.F., 1995. *Women Wielding the Hoe: Lessons from Rural Africa for Feminist Theory and Development Practice*. Berg Publishers, Oxford.
- Bryceson, D.F., 2019. Gender and generational patterns of African deagrarianization in labor and land allocation in smallholder peasant farming, 1980–2015. *World Dev.* 113, 60–72.
- Camlin, C.S., Snow, R.C., Hosegood, V., 2014. Gendered patterns of migration in rural South Africa. *Popul. Space Place* 20, 528–551.
- Carte, L., Schmoock, B., Radel, C., Johnson, R., 2019. The slow displacement of smallholder families: land, hunger, and labor migration in Nicaragua and Guatemala. *Land* 8, 89.
- David, R., Yabré, P., 1995. Male out-migration and women's natural resource management. In: David, R. (Ed.), *Changing Places? Women, Resource Management and Migration in the Sahel. Case Studies from Senegal, Burkina Faso, Mali and Sudan*. IFAD, London.
- de Brauw, A., Huang, J., Zhang, L., Rozelle, S., 2013. The feminisation of agriculture with Chinese characteristics. *J. Dev. Stud.* 49 (5), 689–704.
- de Haan, A., 1999. Livelihoods and poverty: the role of migration – a critical review of the migration literature. *J. Dev. Stud.* 36 (2), 1–47.
- de Longueville, F., Ozer, P., Gemenne, F., Henry, S., Mertz, O., Nielsen, J.O., 2020. Comparing climate change perceptions and meteorological data in rural West Africa to improve the understanding of household decisions to migrate. *Climatic Change* 160, 123–141.
- de Longueville, F., Zhu, Y., Henry, S., 2019. Direct and indirect impacts of environmental factors on migration in Burkina Faso: application of structural equation modelling. *Popul. Environ.* 40, 456–479.
- Deere, C.D., 2009. The feminization of agriculture? The impact of economic restructuring in rural Latin America. In: Razavi, S. (Ed.), *The Gendered Impacts of Liberalization: towards 'Embedded' Liberalism?* Routledge, New York, pp. 99–127.
- Deshingkar, P., 2012. Environmental risk, resilience and migration: implications for natural resource management and agriculture. *Environ. Res. Lett.* 7, 015603.
- Doss, C., Qaisrani, A., Kosek, K., Slavchevska, V., Galiè, A., Kawarazuka, N., 2020. From the "feminization of agriculture" to gender equality. In: Pyburn, R., van Eederwick, A. (Eds.), *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present and Future*. IFPRI, Washington, DC.
- Douglass, M., 2006. Global householding in pacific asia. *Int. Dev. Plann. Rev.* 28 (4), 421–445.
- Ellis, F., 2000. The determinants of rural livelihood diversification in developing countries. *J. Agric. Econ.* 51 (2), 289–302.
- Elmhirst, R., 2007. Tigers and gangsters: masculinities and feminised migration in Indonesia. *Popul. Space Place* 13 (3), 225–238.
- Elmhirst, R., Sisawati, M., Sijapati Basnett, B., Ekwoti, D., 2017. Gender and generation in engagements with oil palm in East Kalimantan, Indonesia: insights from feminist political ecology. *J. Peasant Stud.* 44 (6), 1135–1157.
- Flahaux, M.-L., Wayack-Pambè, M., Soura, A.B., Compaoré, Y., Sanogo, S., 2020. Reunifying and separating: an analysis of residential arrangements of migrant couples in Ouagadougou, Burkina Faso. *Popul. Space Place* 26, e2287.
- Gartaula, H.N., Niehof, A., Visser, L., 2010. Feminisation of agriculture as an effect of male out-migration: unexpected outcomes from Jhapa District, Eastern Nepal. *The International Journal of Interdisciplinary Social Sciences* 5 (2), 565–577.
- Gray, C., Wise, E., 2016. Country-specific effects of climate variability on human migration. *Climatic Change* 135, 555–568.
- Huang, Y., 2012. From the 'feminization of agriculture' to the 'ageing of farming populations': demographic transition and farming in a central Chinese village. *Local Econ.* 27 (1), 19–32.

- Huang, K., Deng, X., Liu, Y., Yong, Z., Xu, D., 2020. Does off-farm migration of female laborers inhibit land transfer? Evidence from Sichuan Province, China. *Land* 9, 14.
- Huijsmans, R., 2014. Becoming a young migrant or stayer seen through the lens of 'householding': households 'in flux' and the intersection of relations of gender and seniority. *Geoforum* 51, 294–304.
- Huijsmans, R., Ambarwati, A., Chazali, C., Vijayabaskar, M., 2021. Farming, gender and aspirations across young people's life course: attempting to keep things open while becoming a farmer. *Eur. J. Dev. Res.* 33, 71–88.
- Ilboudo Nébié, E.K., West, C.T., 2019. Migration and land-use/land-cover change in Burkina Faso: a comparative case study. *Journal of Political Ecology* 26, 614–632.
- Jokisch, B.D., Radel, C., Carte, L., Schmook, B., 2019. Migration matters: how migration is critical to contemporary human-environment geography. *Geography Compass* 13, e12460.
- Kaag, M., Baltissen, G., Steel, G., Lodder, A., 2019. Migration, youth, and land in west Africa: making the connections work for inclusive development. *Land* 8, 60.
- Kabeer, N., 2000. Inter-generational contracts, demographic transitions and the "Quantity-Quality" tradeoff: parents, children and investing in the future. *J. Int. Dev.* 12, 463–482.
- Kawarazuka, N., Doss, C.R., Farnworth, C.R., Pyburn, R., 2022. Myths about the feminization of agriculture: implications for global food security. *Global Food Secur.* 33, 100611.
- Kawarazuka, N., Duang, T.M., Simelton, E., 2020. Gender, labor migration and changes in small-scale farming on Vietnam's north-central coast. *Crit. Asian Stud.* 52 (4), 550–564.
- Kazianga, H., Wahhaj, Z., 2020. Will urban migrants formally insure their rural relatives? Family networks and rainfall index insurance in Burkina Faso. *World Dev.* 128, 104764.
- Kelly, P.F., 2011. Migration, agrarian transition, and rural change in Southeast Asia. *Crit. Asian Stud.* 43 (4), 479–506.
- Kiptot, E., Franzel, S., 2012. Gender and agroforestry in Africa: a review of women's participation. *Agrofor. Syst.* 84, 35–38.
- Konseiga, A., 2004. Adoption of agricultural innovations in the Sahel: the role of migration in food security. *Food and Nutrition Security Policies Regional Workshop in Mali*, 2004.
- Lahiri-Dutt, K., Adhikari, M., 2016. From sharecropping to crop-rent: women farmers changing agricultural production relations in rural South Asia. *Agric. Hum. Val.* 33, 997–1010.
- Leder, S., 2022. Beyond the 'feminization of agriculture': rural out-migration, shifting gender relations and emerging spaces in natural resource management. *J. Rural Stud.* 91, 157–169.
- Leder, S., Sachs, C.E., 2019. Intersectionality at the gender-agriculture nexus: relational life histories and additive sex-disaggregated indices. In: Sachs, C.E. (Ed.), *Gender, Agriculture and Agrarian Transformations: Changing Relations in Africa, Latin America and Asia*. Routledge, London, pp. 75–92.
- McEvoy, J., Petzelka, P., Radel, C., Schmook, B., 2012. Gendered mobility and morality in a south-eastern Mexican community: impacts of male labour migration on the women left behind. *Mobilities* 7 (3), 369–388.
- Mikal, J., Grace, K., DeWaard, J., Brown, M., Sangli, G., 2020. Domestic migration and mobile phones: a qualitative case study focused on recent migrants to Ouagadougou, Burkina Faso. *PLoS One* 15 (8), e0236248.
- Nielsen, J.Ø., Reenberg, A., 2010. Cultural barriers to climate change adaptation: a case study from Northern Burkina Faso. *Global Environ. Change* 20, 142–152.
- Nomunume Baada, J., Najjar, D., 2020. A review of the effects of migration on the feminization of agrarian dryland economies. *AgriGender* 5 (2), 1–12.
- Nyamekye, C., Thiel, M., Schönbrodt-Stitt, S., Zougrana, B.J.-B., Amekudzi, L.K., 2018. Soil and water conservation in Burkina Faso, West Africa. *Sustainability* 10, 3182.
- Oberhauser, A.M., 2016. (Re)constructing rural-urban spaces: gendered livelihoods, migration, and natural resources in South Africa. *Geojournal* 81 (3), 489–502.
- Oberhauser, A.M., Mandel, J.L., Hapke, H., 2004. Gendered livelihoods in diverse global contexts: an introduction. *Gend. Place Cult.* 11 (2), 205–208.
- Obi, C., Bartolini, F., Brunori, G., D'Haese, M., 2020. How does international migration impact on rural areas in developing countries? A systematic review. *J. Rural Stud.* 80, 273–290.
- Patnaik, I., Lahiri-Dutt, K., Lockie, S., Pritchard, B., 2018. The feminization of agriculture or the feminization of agrarian distress? Tracking the trajectory of women in agriculture in India. *J. Asia Pac. Econ.* 23 (1), 138–155.
- Phiri, A.T., Toure, H.M.A.C., Kipkogei, O., Traore, R., Afokpe, P.M.K., Lamore, A.A., 2022. A review of gender inclusivity in agriculture and natural resources management under the changing climate in sub-Saharan Africa. *Cogent Social Sciences* 8, 2024674.
- Preibisch, K.L., Encalada Grez, E., 2010. The other side of *el Otro Lado*: Mexican migrant women and labor flexibility in Canadian agriculture. *Signs* 35 (2), 289–316.
- Rakodi, C., 2002. A Livelihoods Approach – Conceptual Issues and Definitions. In: Rakodi, C., Lloyd-Jones, T. (Eds.), *Urban Livelihoods: A People-Centred Approach to Reducing Poverty*. Earthscan, London, pp. 3–22.
- Reij, C., Tappan, G., Belevire, A., 2005. Changing land management practices and vegetation on the Central Plateau of Burkina Faso (1968-2002). *J. Arid Environ.* 63, 642–659.
- Rigg, J., 2006. Land, farming, livelihoods, and poverty: rethinking the links in the rural South. *World Dev.* 34 (1), 180–202.
- Rigg, J., Phongsiri, M., Promphakping, B., Salamanca, A., Sripun, M., 2020. Who will tend the farm? Interrogating the ageing Asian farmer. *J. Peasant Stud.* 47 (2), 306–325.
- Saldaña, J., 2016. *The Coding Manual for Qualitative Researchers*, third ed. Sage, London.
- Sanfo, S., Fonta, W.M., Diasso, U.J., Nikiéma, M.P., Lamers, J.P.A., Tondoh, J.E., 2017. Climate- and environment-induced intervillage migration in southwestern Burkina Faso, West Africa. *Weather, Climate, and Society* 9, 823–837.
- Slavchevska, V., 2016. Feminization of Agriculture in the Context of Rural Transformations: what is the Evidence? *The World Bank Group*, Washington, DC.
- Songré, A., Sawadogo, J., Sanogoh, G., 1974. Réalités et efforts de l'émigration massive des voltaïques dans le contexte de l'Afrique occidentale. In: Amin, S. (Ed.), *Modern Migrations in West Africa*. Oxford University Press, Oxford, pp. 384–406.
- Soura, A., 2014. Dynamique démographique des quartiers informels de Ouagadougou: éclairage à partir des données d'un observatoire de population. *Revue de géographie du Lardymes* 13, 133–146.
- Spangler, K., Christie, M.E., 2020. Renegotiating gender roles and cultivation practices in the Nepal mid-hills: unpacking the feminization of agriculture. *Agric. Hum. Val.* 37, 415–432.
- Sugden, F., Maskey, N., Clement, F., Ramesh, V., Philip, A., Rai, A., 2014. Agrarian stress and climate change in the Eastern Gangetic Plains: gendered vulnerability in a stratified social formation. *Global Environ. Change* 29, 258–269.
- Thorsen, D., 2013. Weaving in and out of employment and self-employment: young rural migrants in the informal economy of Ouagadougou. *Int. Dev. Plann. Rev.* 35 (2), 203–218.
- Whitehead, A., Hashim, I.M., Iversen, V., 2007. *Child Migration, Child Agency, and Inter-generational Relations in Africa and South Asia*. Working Paper. Brighton: Development Research Centre on Migration, Globalisation & Poverty. Sussex University.
- Wouterse, F.S., 2008. Migration, poverty, and inequality: evidence from Burkina Faso. *IFPRI Discussion Paper* 00786.
- Zongo, M., 2003. La diaspora burkinabe en Côte d'Ivoire: trajectoire historique, recomposition des dynamiques migratoires et rapport avec le pays d'origine. *Polit. Afr.* 90 (2), 113–126.