

Narrative Research Report

Diversification of household activities among cotton-farming households in southern Mali

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Contributions

Study design: KC team, SW

Collection of field data: KC team, CMDT team, Cotton growers

Interpretation of qualitative data: KC team, ME, SW

Quantitative analysis: KC team, SW

Lead writer: SW

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The authors of this report, however, are responsible for the analysis and interpretations: these do not necessarily correspond to those of the reviewers, ODI Global or the Better Cotton Initiative.

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Abbreviations

CPC	Cotton Producers' Cooperative
BCI	Better Cotton Initiative
BNDA	Banque Nationale de Développement Agricole
CFA	Franc CFA: Malian currency. In mid- 2024 FCFA 606 = US\$1
CMDT	Compagnie malienne pour le développement des textiles
FAOSTAT	Data base of agricultural statistics, FAO
PSPP	Statistical analysis software program
RCI	République du Côte d'Ivoire

Structured summary

Motivation

Farm households worldwide, and especially in Mali, diversify their portfolio of activities to make best use of household labour, and to reduce exposure to hazards. During the 1990s, the south of Mali saw a boom in cotton farming, organised, guided and supported by a parastatal cotton company, the CMDT, that was to see Mali become a leading exporter of cotton by 2000. Subsequently growth of cotton output has slowed, and since around 2010, yields have fallen. Diversification to find new income sources thus matters for cotton-growing households.

Purpose

We examine diversification of activities, both agricultural and non-farm, of cotton-growing households in the south of Mali; aiming to document the extent of diversification, the activities undertaken, and to identify the factors enabling or blocking diversification.

Methods

To capture the many changes that households make, qualitative enquiry was prioritised. In five villages representing different parts of the cotton zone, key informants were interviewed, focus groups were convened separately with men and women, and life histories were solicited from eight (seven in one village) individuals.

Qualitative enquiry was complemented by a short household survey designed to determine the incidence of activities, enabling and blocking factors, drawing on understandings from the qualitative data. Some 300 households in five villages were randomly selected and surveyed.

Findings

In the five villages, households undertook a very wide variety of activities, on average of 14 different activities in each household. Most activities were agricultural, and, even among the non-farm activities, several were linked to local natural resources – gathering (and often processing) wild produce from woods and other commons, excavating sand and stone, harvesting fuelwood, etc.

Most activities were undertaken primarily to serve household (and village) consumption: that said, most households produced some items to sell both locally and in distant markets, beyond the village and local rural economy – products such as cotton, sesame, groundnut, and tree fruit. Higher-value activities, those offering better returns to labour, were predominantly agricultural: non-farm activities were less developed.

Little of what was observed revealed activities and options that represented substantially higher-returning livelihoods: perhaps the only common example was the salaried jobs, in private and public employment, undertaken by individuals in around a quarter of the households.

Many activities are associated with men or women; a product of social norms, and the limitations women face when they are expected to do most of the tasks of reproduction – cooking, cleaning, caring, etc. – before they can think of spending time on economic activities and sources of income.

Life histories gave insights into processes of change: processes where trends through time are influenced by and sometimes compete with a welter of seasonal changes, yearly variations

in the weather, and, perhaps as much or more than anything else, life cycles as individuals and households are born, grow and eventually pass away or break up. People and their households were mostly enabled to accumulate either through successful cropping and livestock raising, or through working hard to save funds, sometimes when migrating to towns and gold mines in Mali and coastal neighbouring countries. Most funds saved from non-farm work were subsequently invested in crops and livestock.

Discussion

Two longstanding features of the villages are clear: the salience of agriculture and use of local natural resources for production; and the value of extended, multi-generational households that offer economies of scope and scale, and protection from adversity for members.

Most individual changes seen in the villages were marginal gains, rather than transformations: but over time, these gains can build up to substantial change.

Villages are linked to the rest of Mali through trading; possibilities to migrate to towns and mines to earn and save; the provision of public services, investment in infrastructure, and producer supports (grants, subsidies, training, credit) by government and NGOs; and by provision of credit through microfinance agencies, cooperatives and banks. Particularly important have been the opportunities to sell higher-value produce to growing urban markets, migration, and the services of CMDT to cotton growing.

Life histories suggest that more people are moving out of poverty than are trapped in poverty. Against that positive picture stand concerns over

pressure on natural resources and environmental degradation – a concern more strongly voiced by observers than by villagers (perhaps because villagers also see the benefits of agricultural intensification in new crops); and insecurity.

Policy implications

One, shocks both personal and village-wide are costly: some could be mitigated. Better primary health care; more control of livestock disease – where paravets might be effective and economical; and insurance through basic social protection systems.

Two, some people are born into poverty and deprivation, disadvantaged from birth; after which they often struggle to escape. Consequently and ideally, all infants should have their growth regularly monitored (measured and weighed) linked to prompt treatment of severe acute malnutrition. Whatever child protection measures exist need to be increased, because sadly in some life accounts respondents when children suffered abuse. All children should be enabled complete primary school and ideally go on to secondary education.

Women also suffer disadvantage, having to work especially hard owing to their socially-determined domestic duties. Among other changes, better primary health services would especially benefit women; as would technical advances that lighten such duties – research tends to be directed to matters of production, ignoring reproduction.

Three, crops and livestock remain the most common activities in the villages. Whatever can be done to support farmers and herders will be valuable. A key opportunity is to expand small-scale irrigation to make full use of water and counter the effects of variable rains. But that requires some

capital spending: lack of capital was the single most cited obstacle to setting up enterprises. Finding ways to offer investment credit to (creditworthy) farmers would surely pay. Beekeeping is another opportunity, as is processing of cotton.

Four, concerns over the environment in Mali are understandable, setting an agenda made more

acute by global heating and the consequent need to make agriculture compatible with more variable rains, storms, winds, and higher temperatures. Farmers in the Sahel have long been accustomed to adapting their farming to match highly variable rains; combining indigenous technical knowledge with innovations coming from outside the villages promises to meet the challenge.

Summary

Background

Farm households diversify their portfolio of activities to make best use of household labour through specialisation, and to reduce exposure to hazards. Farmers in Mali have long diversified their activities, largely to cope with the significant variations in a single rainy season seen in semi-arid areas: indeed, the range and number activities undertaken by typical Malian farmers may be among the widest and highest in the world.

During the 1990s, the south of Mali saw a boom in cotton farming, organised, guided and supported by a parastatal cotton company, the CMDT, that was to see Mali become a leading exporter of cotton by 2000. But in the new century growth of cotton output has slowed, and since around 2010, yields have fallen. Some observers fear that cotton farming has been expanded at the expense of soil fertility; part of an overall concern that growth of all agricultural output in Mali came from expanding the cultivated with slow, if any, growth of yields. With cotton incomes stagnating, cotton-growing households need to find new sources of income through diversification.

Study aims and methods

We aimed to examine diversification of activities, both agricultural and non-farm, of cotton-growing households in the south of Mali: to document the extent of diversification, the activities undertaken, and to identify the factors enabling or blocking diversification.

Expecting considerable variation of experience across households, and aware that processes of diversification would be embedded in many other

changes experienced by households, we decided to prioritise qualitative enquiry, to understand processes of change. Five villages representative of different parts of the cotton zone were selected. In each village key informants were interviewed, male and female focus groups were convened, and eight people, representing well-off and less-well-off households, were asked to tell their life histories. Data were collected in January 2024. Qualitative data were interpreted in three ways by different study team members.

Using the understandings of changes seen in the qualitative accounts, a short household survey was devised to record the incidence of activities, and factors enabling and blocking diversification. For five villages – four from the qualitative enquiries plus a neighbouring substitute for a village where it was no longer possible to collect data – 60 households were randomly selected to be surveyed: 300 households across the cotton zone in all. Data were collected in April 2025, validated and checked, exported to Excel for analysis.

Findings

In the five villages, households undertook a very wide variety of activities, on average of 14 different activities in each household. Most activities were agricultural, and even among the non-farm activities, several were linked to local natural resources – gathering (and often processing) wild produce from woods and other commons, excavating sand and stone, harvesting fuelwood, etc.

Most activities were undertaken primarily to serve household (and village) consumption: that said, most households produced some items to sell

both locally and in distant markets, beyond the village and local rural economy – products such as cotton, sesame, groundnut, and tree fruit. Higher-value activities, those offering better returns to labour, were predominantly agricultural: non-farm activities were less developed.

Little of what was observed revealed activities and options that represented substantially higher-returning livelihoods: perhaps the only common example was the salaried jobs, in private and public employment, undertaken by individuals in around a quarter of the households.

Many activities are associated with men or women; a product of social norms, and the limitations women face when they are expected to do most of the tasks of reproduction – cooking, cleaning, caring, etc. – before they can think of spending time on economic activities and sources of income.

Life histories gave insights into processes of change: processes where trends through time are influenced by and sometimes compete with a welter of seasonal changes, yearly variations in the weather, and, perhaps as much or more than anything else, with life cycles as individuals and households are born, grow and eventually pass away or break up. People and their households were mostly enabled to accumulate either through successful cropping and livestock raising, or through working hard to save funds, sometimes when migrating to towns and gold mines in Mali and coastal neighbouring countries. Most funds saved from non-farm work were subsequently invested in crops and livestock.

Discussion

Agriculture, and associated use of local natural resources – water, grazing, bush and forest, dominates the economies of the villages, the

economies of the households and the lives of individuals. Much of the cropping, livestock raising and gathering would be familiar to previous generations. Even more familiar would be the dominant social formation: the extended, multi-generational household with its multiple marital sub-units fiving residence to more than dozen people, and often several dozen. Such large households have economies of scope and scale, while providing a safety net to individual members lest they fall ill or have an accident.

Marginal changes prevail in life histories: the logic of accumulation is repeatedly apparent – work hard, produce a small surplus, reinvest this in the farm, expand the fields, build up the herds and flocks. Accumulation is aided when there is cash crop such as cotton that usually has a guaranteed price and which, for registered growers, comes with state provision of credit of seed, fertiliser and other inputs. Cotton, relatively new since 1990, has provided farmers with a source of cash that previous generations did not have.

Individual gains may be marginal but through time they mount up. Dramatic technical change is not seen in farming: but the additions to the agricultural portfolio are not to be underestimated: sesame fields, orchards, irrigated market gardens – largely producing for the urban economy – can generate cash flows not seen before in these villages.

Highly visible technical change has come as transport – the now ubiquitous motorcycles, and in the form of consumer goods – radios and TVs, mobile phones, and solar panels.

Key links from the villages to the urban economy of Mali (and to some neighbouring countries) include: trading, where urbanisation results in new demands for higher-value produce and a supply of

consumer goods; possibilities to migrate to towns and mines to earn and save; the provision of public services, investment in infrastructure, and producer supports (grants, subsidies, training, credit) by government and NGOs; and provision of credit through microfinance agencies, cooperatives and banks.

Investments in roads, schools, health posts often feature as notable moments in the histories of the villages. Supports from public agencies, and formal credit, reach only a minority of households and even then, they do not often allow households to undertake new activities. An exception concerns the services of CMDT that greatly facilitate cotton growing. Other than cotton, life histories do not mention major changes to rural lives coming from public investments or projects (or from private initiatives either). Transformation in the five villages has not taken place from some single significant intervention over the short term; but has occurred over the medium to long term as marginal gains take effect, the product of multiple and diverse factors rather than any single intervention.

Given the many changes observed, some arising from seasonal and annual variations, some from life cycle changes, it cannot be said for certain whether life has improved or worsened for the people of these villages in the new century. Life histories have more accounts of positive than negative change, but that may reflect changes to respondents' life cycles rather than a trend.

Against that positive impression stand two concerns, one sometimes mentioned by respondents, the other much less so. The former is the effect of an increasing rural population, heavily dependent on local natural resources, on the environment – a concern over reduced fallows, inadequate use of manure or mineral fertiliser and consequent declining soil fertility,

and over exploitation of grazing, bush and forest. Respondents seemed less perturbed by these processes, however, than some outside commentators. An untested hypothesis is that the returns to new, intensified agricultural activities – fruit trees, sesame, irrigated vegetables – outweigh any losses to other crops from environmental decline.

The other concern is security: the spread of conflict across central Mali and now into southern and western Mali is alarming. This was only occasionally mentioned in the life histories, but that may be because at the time of the interviews in 2024 the villages were relatively secure.

Policy implications

Four policy implications can be deduced from the interpretations of this study.

One, shocks both personal and village-wide are costly: some could be mitigated. Better primary health care; more control of livestock disease – where paravets might be effective and economical; and insurance through basic social protection systems.

Two, some people are born into poverty and deprivation, disadvantaged from birth; after which they often struggle to escape. Consequently, all infants should have their growth regularly monitored (measured and weighed) linked to prompt treatment of severe acute malnutrition. Whatever child protection measures exist need to be increased, because sadly in some life accounts respondents when children suffered abuse. All children should be enabled complete primary school and ideally go on to secondary education.

Women also suffer disadvantage, having to work especially hard owing to their socially-determined

domestic duties. Among other changes, better primary health services would benefit women especially; as would technical advances that lighten such duties would be welcome: research tends not be directed to matters of production, not reproduction.

Three, crops and livestock remain the most common activities in the villages, and new crops and enterprises are common endeavours. Whatever can be done to support farmers and herders will be valuable. A key opportunity is to expand small-scale irrigation to make full use of water and counter the effects of variable rains. But that requires some capital spending: lack of capital was the single most cited obstacle to setting up enterprises. Finding ways to offer investment credit to (creditworthy) farmers would surely pay: for irrigation equipment,

leasing schemes should be possible; for other investments, offering collateral in the form of some of the more common assets households possess, such as a motorbike, might encourage financial agencies to lend to farm households. Beekeeping is another opportunity, as is processing of cotton.

Four, concerns over the environment in Mali are understandable, setting an agenda made more acute by global heating and the consequent need to make agriculture compatible with more variable rains, storms, winds, and higher temperatures. Farmers in the Sahel have long been accustomed to adapting their farming to match highly variable rains; combining indigenous technical knowledge with innovations coming from outside the villages promises to meet the challenge.

1 Introduction: motivation

Diversification of household activities and incomes can benefit rural households by increasing and stabilising incomes. Specifically, diversification:

- Reduces exposure to (risks of) hazards that apply to a particular crop or enterprise, but not to others;
- Allows farmers to make full use of labour when some of their activities are seasonal;
- Allows different members of the household to specialise and develop their skills and abilities in particular activities, thereby increasing their returns; and
- Allows income from one activity to pay for working capital for another or to accumulate savings to make substantial investments. (Ellis 1998, Musumba et al. 2022, Reardon et al. 2007, Waha et al. 2018)

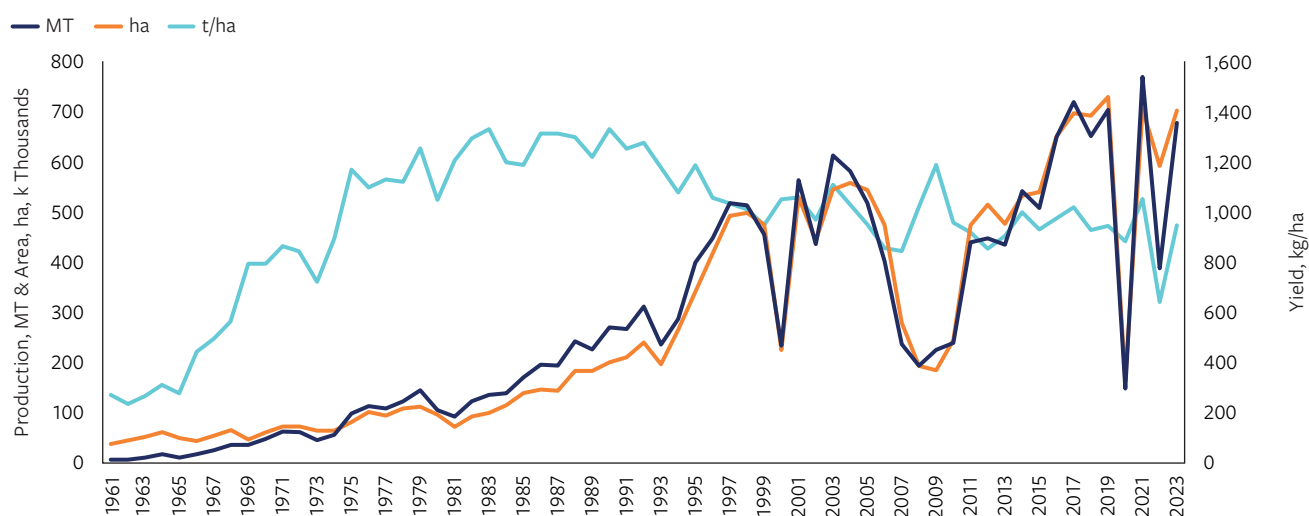
Farming households in Mali have long diversified their activities; primarily in response to variable rains in sub-humid and semi-arid lands where there is but one rainy season all year. Indeed, the number – an average of 14 per household in our survey – and range of activities typically undertaken by Malian households are high, perhaps as high as anywhere in the world. (Dissa et al. 2024, Toulmin 2020)

This study concerns farming households in the cotton zone of southern Mali. Cotton has long been grown in Mali: formal organisation of production by the state dates back to the French colonial occupation in the 1890s, with cotton growing made mandatory in suitable areas in 1912. Resentment at

the imposition of the crop mean that cultivation expanded slowly until the 1950s, when prices rose. (Benjaminson et al. 2010) Even so, until the early 1990s cotton was a minor crop, grown by little more than 11,000 farmers on just over 200,000 hectares (ha). During the 1990s prices rose and so did production, so that by 2004/05 the number of producers had risen to around 165,000 farmers in more than 6,000 villages planting more than 500,000 ha. (IER 2011) After this boom in cotton farming during the 1990s, Mali became a leading exporter of cotton. In the new century, however, production has risen only slowly while yields per hectare have tended to fall. The area sown to cotton, moreover, has seen extreme variations, with large reductions in the years 2000, 2007–2010, and in 2020. (Figure 1.1)

The state, both colonial and independent (after 1960), organises cotton through a parastatal, the **Compagnie malienne pour le développement des textiles** (CMDT) which registers growers, delivers seed and fertiliser to them on credit, offers technical assistance, and buys up the cotton harvest for ginning, to be sold in part to local mills but mostly to export ginned cotton to the world market. Provision of fertiliser has been a particularly welcome service, because cotton growers have been able to divert some of the fertiliser to crops such as maize.

Relations between growers and CMDT have sometimes been fractious, on account of prices paid for seed cotton and prices charged for inputs, leading to growers' strikes in 2000 and 2020.

Figure 1.1 Cotton production in Mali, 1961 to 2023

Source: Compiled from FAOSTAT statistics

Observers of the cotton zone have understandably been concerned by the fall in yields – from around 1.3 tonnes per hectare (t/ha) in the 1990s to around 1 t/ha in the 2020s; part of a wider concern that growth of agricultural output in Mali has come very largely from expanding the area cultivated with slow, if any, growth of yields of crops – with particular concern about the yields of cereals grown without irrigation: millet, maize and sorghum. (Keita et al. 2018. Ollenburger et al. 2016)

Adding to concern are developments in the 2020s, times of disruption to cotton production and income. Many producers we interviewed for this study are still indebted to their cotton farmers' cooperatives owing to harvest losses, including to the 2022 invasion of jassids, insects capable of severely damaging plants.¹ The Malian government's promise to the sector – payment of over 9 billion CFA francs to compensate for losses and an increase in the purchase price of seed cotton – remains, at best, an announcement.

By 2024, cotton growers in the older basins of Fana, Koutiala, and Sikasso faced infestations of swarming insects – jassids or leafhoppers – which required costly insecticides to control; plus mounting insecurity in parts of Koutiala and Sikasso. These problems have triggered large waves of migration towards the fertile lands of the newer cotton basins of Bougouni, Yanfolila, and especially Kita. The CMDT region of Kita has become the embodiment of Mali's agricultural El Dorado.

For those who remain, ensuring the operation and even the development of farms and households is a challenge. With rising populations, pressures on natural resources mounts – above all reduced length of fallows, too little use of mineral and organic fertiliser owing to their limited availability, and consequent reduction in soil fertility and falling yields.

¹ From Wikipedia: [Jassids =] 'Leafhopper is the common name for any species from the family *Cicadellidae* ... These minute insects, colloquially known as hoppers, are plant feeders that suck plant sap from grass, shrubs, or trees.'

While cotton growing may not be thriving, farmers have been intensifying production of other crops, including maize:

‘We conclude that the past 15 years of agricultural change in southern Mali can best be described as one where agriculture expanded slowly with gradual intensification of grain farming centered on maize production and simultaneous disintensification of cotton production as farmers shifted resources from cotton to maize resulting in a decline in cotton yields.’ (Laris et al. 2015)

As we shall see from this study, it seems some farmers (in the five villages studied) have increasingly been putting their labour, equipment, and cash to grow a range of high value crops: sesame, fruit and timber trees, vegetables, and livestock fattening.

This is the context for this study which aims to examine diversification of household activities among cotton farming households in southern Mali and what drives or impedes successful diversification. Our initial set of questions comprised:

1. What activities, in addition to growing cotton, do cotton farmers typically undertake? What are their costs – above all in labour (amount and skills), investment and working capital – of doing so, and what are the returns to them?

2. How does the incidence of costs and returns vary between different members of cotton households, above all between men and women, between youth and seniors?
3. Under what conditions do different cotton households undertake diversified activity? What features (access to resources, social relations, skills and experiences) of the household allow this, what elements of context (physical environment, local economy, society) facilitate (or hinder) this?
4. Do diversified income sources result in more environmentally friendly cotton growing practices, do they allow farmers to mitigate and adapt to climate change? To what extent are the diversified practices themselves environmentally sustainable and climate-smart?
5. What policies, investments, projects and programmes might allow cotton households more readily to take up opportunities and to expand the range of those opportunities? What would most assist households that are disadvantaged in access to land, labour and capital – or which suffer from discrimination? What would most assist those in the household least likely to benefit from diversification – such as women and girls, and perhaps also youth?

On reflection, and given the resources available, some of these objectives were over-ambitious – above all, attempt to quantify returns to activities.

2 Approach and methods

From the start the research strategy was to privilege accounts of change, including diversification, from members of farming households. It was expected that there would be households that had prospered and those that had not, so we tried to capture whatever diversity of experience existed – rather than to focus on some central tendency which might only reflect the experience of a minority of households. We were similarly concerned to capture processes of change, recognising that any study of villages at one moment would give a partial, and quite possibly misleading, vision.²

An associated practical consideration was to maximise insights from (limited) resources of budget and time available; as well as to avoid the pathology of over-elaborate household surveys that collect more data than can be analysed and waste the time of farmers and researchers alike.

The approach prioritised qualitative enquiry, above all enquiry that captured change through time and the processes driving such change.

Because the cotton zone of southern Mali is large, households were sampled in clusters at village level. Accordingly, five villages (see section 3.1: mapped at Figure 3.1 and summary features noted in Table 3.1) were selected – in discussion with managers from CMDT – to represent conditions in different parts of the cotton zone, ranging from

the longstanding areas of cotton growing in the east to the western, pioneer zone where cotton has been grown only in the last fifteen or so years.

2.1 Qualitative enquiry

In each village, between 05 and 18 January 2024, the team from Kéné Conseils held focus group discussions with women and men separately, interviewed key informants, and collected eight (but only seven in one village) life histories from people identified as representative of better-off and less-well-off households by the focus groups. Life histories were conducted in a local language, usually Bambara, with those interviewing writing up their notes in French.³ The interviews to document histories were largely unstructured, with the interviewer simply guiding the respondent through their life from childhood onwards, but with some questions asking people to assess their wellbeing at different stages of their lives.

The resulting notes on focus groups, key informant interviews and life histories were extensive, running to around 170 pages: they proved to be a rich source of insight into the lives of the villagers.

These qualitative data were analysed three ways: an initial interpretation of key insights from the field team of Kéné Conseils; a formal coding of life

2 In contrast, a detailed, quantitative survey of households would have generated statistics such as means and medians which would then tend to dominate interpretations of the data to the detriment of the range and dispersion of experiences. Such central tendencies, moreover, would only be accurate for one time and overshadow processes of change,

3 It was not possible to make recordings owing primarily to some respondents preferring not to have their accounts recorded.

histories using NVivo by Dr Eichsteller focusing on changes in the status of individuals and households; and a third interpretation drawing on the preceding analyses to highlight stories and narratives of change by the lead author.

2.1.1 Analysis of poverty and dynamics

As the life histories were coded, each was assessed as to whether the subject had escaped poverty (or was on a trajectory to do so), or was trapped in chronic poverty: a judgment based on self-reported states of wellbeing corroborated by information on assets possessed. Perceptions of wellbeing and poverty are reported in section 3.1.3.

2.2 Quantitative survey

After the qualitative enquiries, a household survey was conducted, to quantify the incidence of activities and factors affecting diversification among cotton-growing households, focusing on activities and processes that proved significant from the qualitative enquiry. The survey was designed to be brief and focused, to be short and undemanding of the time of the respondents interviewed, and to provide a data base that, being relatively small, could be readily analysed.

The study population comprised households established in the cotton-growing region of Mali, primarily in the Sikasso, Bougouni, Koutiala, Dioila, and Kita regions, and under the auspices of the CMDT. A sample of 300 households was selected using a two-level stratified sampling method, first selecting five CMDT zones (sectors) chosen for their importance in cotton production, then picking a particular village in each sector. Four were the same villages where the qualitative enquiries were conducted, but for Finkolo, where

it was not possible to survey owing to insecurity, a neighbouring village, Kaboila, was surveyed.

Within each village, 60 households were randomly selected from lists provided by local authorities, to ensure balanced representation. In a village where the sample size was not reached because there were fewer than 60 households, the remaining households were selected from another village in the same sector.

The structured questionnaire consisted of four main sections⁴, to collect data on

- Household demographic and socio-economic data (household composition, education, access to resources);
- Livelihood activities, both agricultural and non-agricultural;
- Factors enabling diversification (access to land, initial capital); and
- Barriers to diversification (institutional constraints and shocks).

The team from Kéné Conseils surveyed 300 households, 60 in each of five villages from April 5 to 19, 2025, by nine interviewers trained in the use of the KoboCollect smartphone application. Each interview was geolocated using GPS to allow for spatial validation. The supervisors carried out quality control by verifying the completeness and consistency of the responses as data were received.

Most of those interviewed were heads of household: 208 out of 300 respondents, the others being sons or daughters, 45; spouse, 15; or other family member, 32. Most interviewed were men: 279, reflecting that 295 of the 300 households were headed by men. A clear bias

⁴ In addition, names of the interviewer, date, and GPS coordinates were collected.

to male perspectives arises, although for many questions, being matters of fact – for example, what crops does the household grow? – it should make little difference who answered the question, so long as they know the household well, which is what might be expected from heads of household.⁵ In considering findings, where the sex of the respondent would likely affect the answers, this has been noted in the interpretation.

Raw data were checked and validated, exported from KoboToolbox to an Excel spreadsheet. The resulting database was relatively small and manageable, consisting of 300 household rows and 94 data columns. Descriptive and multivariate analyses (mainly regression) were carried out using both Excel and PSPP⁶. QGIS software was used for spatial and thematic analysis and map formatting. A first round of analysis was carried out by the KC team, complemented by additional analysis by the lead author.

-
- 5 Had there been more time and funds, the survey could have tried to interview more household members with equal participation of women and men, and of youth and seniors. But time and costs rapidly escalate, while the patience and forbearance of those interviewed diminishes (and with that, the likely reliability of answers).
 - 6 PSPP is a free, open-access package for statistical analysis, similar in functions to commercial packages such as SPSS. See: <https://en.wikipedia.org/wiki/PSPP>

3 Findings

3.1 Context

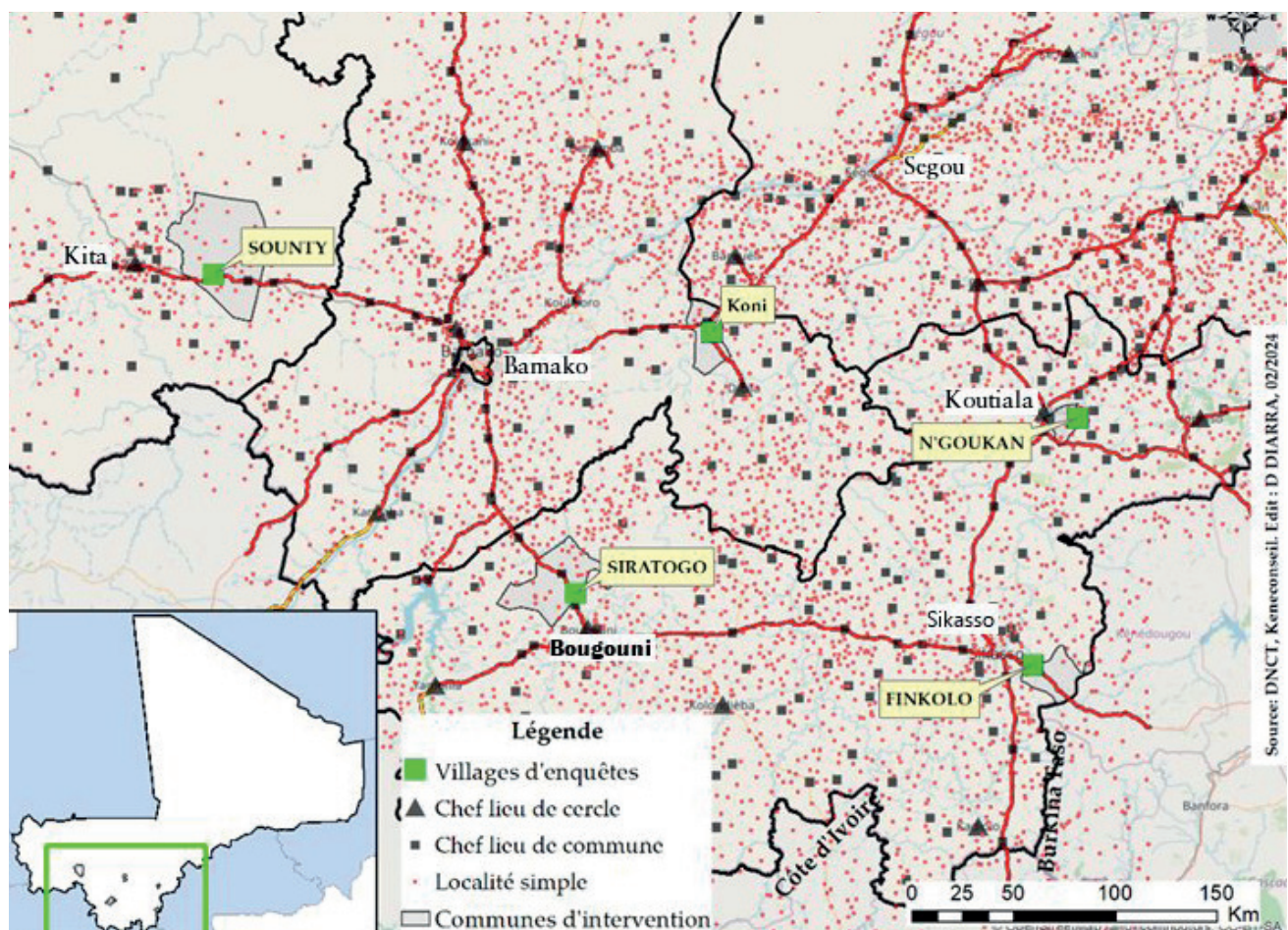
3.1.1 The five villages

The five villages studied are in southern Mali (Figure 3.1).

Villages differed by ease of access to urban centres – Finkolo, for example, lies on a main road,

while Sounty lies some way from a good road; and by their local natural resources of arable land, grazing, forest and water supplies. Some villages, such as Koni, lie in long-settled areas with relatively high population density, while those towards the west are relatively recent settlements where land abounds and a third or more of the population are recent arrivals. (Table 3.1)

Figure 3.1 Location of five villages



Most respondents, 62%, had been born in the village: 8% came from another place in the Commune, 2% from a place in the same circle (cercle), and 27% from other parts of Mali. This varied considerably by village, with the more westerly villages with spare land seeing more incomers. (Table 3.1) This question, however, is most susceptible to the make bias in respondents: newly-married women often come from other

villages and relocate to their husband's village when they marry. Had more women been interviewed, the share of population incoming would rise.

In all villages, cropping, livestock keeping and gathering wild produce from bush and forest dominate the economy, with relatively few non-agricultural activities. (Table 3.2)

Table 3.1 Native and incoming population among respondents

Village	Share of respondents:		
	Born in the village	Arriving from same Commune	Arriving from beyond the Commune
Koni	35%	32%	33%
Ngounkan	100%	0%	0%
Kaboila	87%	10%	3%
Siratogo	46%	0%	56%
Sounty	67%	0%	33%

Source: Household survey

Table 3.2 Key features of the five villages⁷

Village	Koni	Ngounkan	Finkolo	Siratogo	Sounty
Commune	Fana	Sincina	Finkolo	Sido	Sébékoro
Lat., Long.	12°44'16"N 6°56'05"W	12°21'22"N 5°19'05"W	11°16'05"N 5°30'40"W	11°35'02"N 7°32'19"W	13°01'48"N 9°03'00"W
Physical and contextual features	6 km to market town of Fana Marigot potentially to grow rice or a market garden Land speculation	18 km to Koutiala, major regional centre	Marie of Commune On main road, 18 km to Sikasso 6 km from Farako tea plantation: seasonal jobs Pockets of insecurity Listed forest	20 km to Bougouni, regional centre	10 km to market town of Sébékoro, but poor road Fertile land to clear Listed forest

⁷ The names of some sites are written differently, depending on the reporter, even though they are the same site. For example: Sounty= Sounti; Gounkan = N'Gounkan or Ngounkan.

Table 3.2 Key features of the five villages (continued)

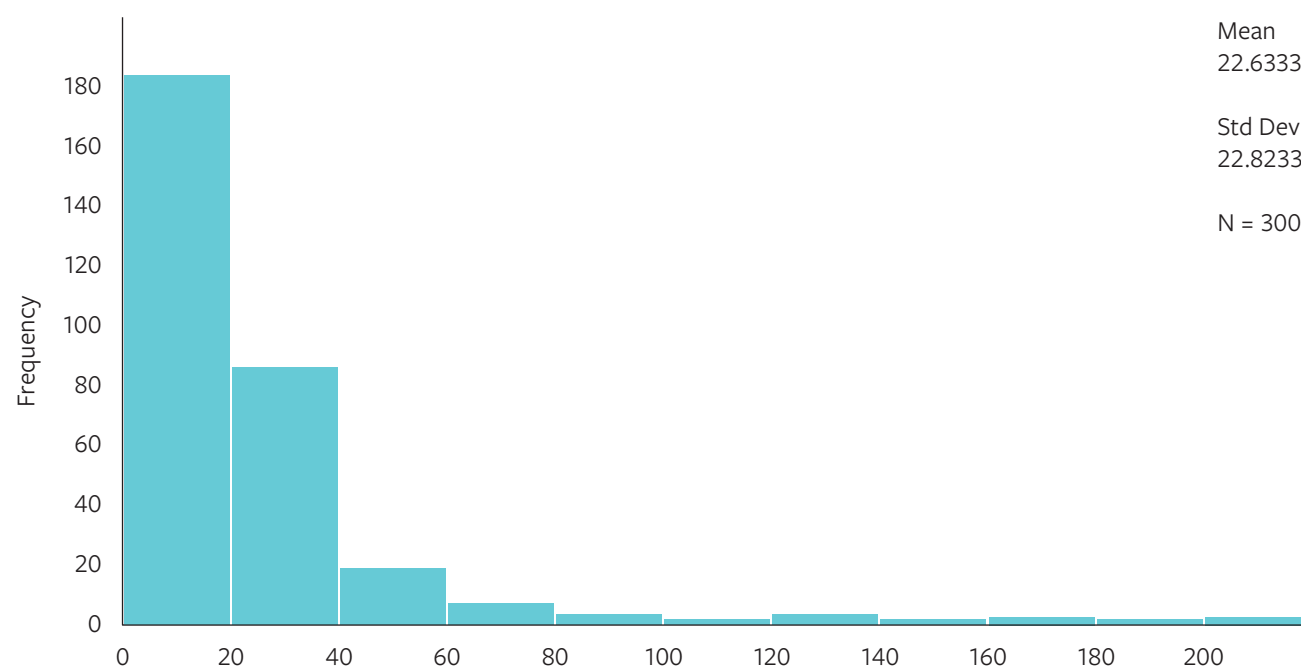
Village	Koni	Ngounkan	Finkolo	Siratogo	Sounty
Commune	Fana	Sincina	Finkolo	Sido	Sébékoro
Lat., Long.	12°44'16"N 6°56'05"W	12°21'22"N 5°19'05"W	11°16'05"N 5°30'40"W	11°35'02"N 7°32'19"W	13°01'48"N 9°03'00"W
Main activities	Cotton Cereals: maize, sorghum, millet, rice Oilseeds: groundnut, sesame Market gardening: okra, lettuce, cabbage, carrot, tomato Cattle, sheep, goats: fattening, dairy Processing shea butter	Cotton Cereals: maize, pearl millet, sorghum, beans Rainy season vegetables: okra, dah, soya Rainy season oilseed: groundnuts Dry season market gardening: tomatoes, peppers, shallots, lettuce Cattle, sheep, goats, chickens, pigs Beekeeping Processing of harvested products and vegetables (shea kernels, néré, soya) Trade in forestry products (fuelwood and shea kernels) and other products such as soap-making. Seasonal migration of youngsters	Cotton Cereals: millet, maize, sorghum Rainy season vegetables: okra, soya Potatoes Pulses: soya, beans Fruit: mango, orange, cashew, papaya, etc. Dry season market gardening: tomato, onion, potato, pepper, lettuce, cabbage, jakatou, courgette, chilli pepper, green bean, ginger, aubergine, etc. Migration by young Cattle, sheep, goats, poultry Marketing of agricultural products Sale of sundries Trade in forest products (fuelwood) and shea kernels Production and marketing of soap and lickstones Sand quarrying Plantation of eucalyptus and Gmelina	Cotton Cereals: maize, sorghum, pearl millet, rice, beans Rainy season vegetables: (okra, dah, soya, manioc, potato Oilseed in rainy season: groundnut, sesame Processing fruit and vegetable products (shea kernels, soya) Orchard: orange, quassia, eucalyptus, teak Dry season market gardening: onion, cabbage, chilli, aubergine, lettuce, papaya, banana Cattle, sheep, goats, poultry Trade in forest products: shea kernels Trade in wood and charcoal Seasonal migration of youngsters	Cotton Cereals: millet, maize, sorghum, rice Rainy season vegetables: okra, soya Rainy season oilseed: groundnut, sesame Fruit: mango, cashew, guava, orange, jujube lemon Growing watermelons Dry season market gardening: potato, tomato, pepper, shallot, lettuce, African aubergine Cattle, sheep, goats Processing: shea kernels, soya, , , , , , Crafts: wood and iron Small-scale sale of agricultural products and sundries Seasonal migration of young, esp. to gold mines

3.1.2 The households surveyed

Households in the five villages surveyed were typically large, averaging more than 22 persons

each (Figure 3.2), reflecting three or more generations of the same family living together.⁸ Households were almost always headed by a man: only five households were headed by a woman.

Figure 3.2 Size of households



Source: Household survey

Survey respondents, most of them heads of household, had little formal education: fewer than 20% had completed primary schooling or beyond; 36% had received Koranic schooling or had

learned to read and write in their mother tongue (mainly Bambara); and fully 44% had no schooling of any kind. (Table 3.3)

8 Bambara norms in rural Mali are that men with the means – draught oxen and ploughs, cash for wedding expenses, etc. – to do so form households with their several wives: most of their children remain resident even when they marry and may not leave the household until the patriarch dies. The household may have several sub-units consisting of sons and their wives, and their children. Apart from family relations, what unites the household is shared agricultural production, directed by the patriarch – although not all of the household farm is collectively worked: individuals usually have private plots as well as the communal fields.

Norms are norms: not all households and individuals conform to them, owing primarily to circumstance and fortune – for example, patriarchs emerge from ‘men with the means’, and not all men have such means.

See Toulmin 2020, and the summary of key features of Bambara society by Adem in the collection at Yale of ethnographic sources, the Human Relations Area Files (HRAF): <https://ehrafworldcultures.yale.edu/cultures/fao8/documents>

Table 3.3 Level of education of respondents

Level	Frequency	%
None	133	44.3
Koranic studies	57	19
Literate in local language	52	17.3
Primary	50	16.7
Secondary	7	2.4
Other	1	0.3

Source: Household survey

3.1.3 Local perceptions of wellbeing and poverty

Focus groups of men and women in each village were separately asked about wellbeing and poverty guided to tell the listening researchers about food and potential levels of poverty from ultra poor, extremely poor, moderately poor, not poor but vulnerable to shocks, and to relatively rich and resilient. Details from the ten focus groups appear at Appendix A.

Women gave the most detailed information on food: they reported that most people, most of the time ate three times a day, but that the diet was predominantly one of porridges ('toh') made from maize, millet or sorghum, eaten with sauces of dried fish, baobab powder, okra, onion, tomato or groundnut. Rice was served for special meals and guests. Meat and fish were consumed only on special days.

The focus groups considered that most people in their villages were moderately poor: in Sounty

the extremely poor were also mentioned, and in Ngounkan substantial numbers were considered not poor, but vulnerable (to hazards⁹). In all villages very few households were considered ultra poor or rich.

Poverty was largely defined by the (in)ability to grow enough to eat all year round from home-grown staples which in turn depended on having enough household labour and farm equipment – oxen, ploughs, a cart. The next level of escape from poverty was resilience to shocks: prosperous households could ride out shocks on their savings, assets and ability to take out a loan. Not many households were in this fortunate position: most households were vulnerable to hardship and sales of assets when serious shocks arose. The very few households seen as ultra poor were cases of small households with too little labour, often households where adults were chronically sick.

The importance of labour and equipment for farming, the centrality of cereals growing, and vulnerability to hazards are themes that resounded in people's life histories, as will be examined in section 3.3 on trajectories.

3.2 Diversification: extent and associations

Some 27 different activities were reported by households, of which 13 were undertaken by at least half the households surveyed. (Table 3.4) Almost all households grew crops for home consumption, gathered produce such as fuelwood, honey or shea butter from woods and commons, raised poultry, and planted cash

9 Hazard is the more formal term; when a hazard strikes, the resultant shock is defined by the severity of the hazard and the ability to cope with it. 'Risk' is often used to indicate hazard, but formally risk is the probability of a hazard occurring. In practice, the terms 'hazard', 'shock', and 'risk' are often used interchangeably.

crops such as groundnut or sesame¹⁰. The great majority, three-quarters or more, also kept draft oxen, grew cotton, raised sheep and goats, and planted vegetables for home consumption.¹¹

Other common activities, practiced by half or more of households, included raising cattle

(other than draft oxen), migrating by young men to towns or goldfields to seek work, growing fruit trees, casual labouring paid by day or piece, and growing vegetables for sale under irrigation by hand (watering cans or buckets). Another 14 activities were reported but practiced by less than half of households.

Table 3.4 Frequency of activities

Activity	Count: number of households	Share
Food crops	299	100%
Collecting or processing of natural produce: shea butter, honey, charcoal, fuelwood, wild fruits, etc.	295	98%
Poultry	294	98%
Cash crops: groundnut or sesame	287	96%
Draught oxen	259	86%
Cotton	259	86%
Smallstock: sheep and goats	243	81%
Market gardening for home consumption	235	78%
Cattle, other than draught oxen	200	67%
Migration: young men to towns	192	64%
Tree crops for sale: guava, mango, papaya, lemon,	166	55%
Casual labour, piece rate or day rate	164	55%
Migration: young me to gold mines	164	55%
Market gardening for sale, irrigated by hand	156	52%
Rice in wet lowlands	139	46%

¹⁰ While groundnuts have long been grown, sesame cultivation is relatively recent: popular owing to the attractive price offered by Asian and Middle Eastern buyers and relatively low labour needs, usually grown as an individual crop. (Camilla Toulmin, personal communication)

¹¹ Most of the households in the villages studied can be described as practising mixed farming, that is growing crops and keeping livestock. They might thus be termed 'agro-pastoralists', although sometimes that term indicates people for whom the livestock are the main activity and who may move seasonally with their animals. In this case, the people of these villages are settled and sedentary; for most of them the crops are their core activity, rather than the livestock. Traditionally Bambara farmers prosperous enough to have a large herd of cattle would entrust their care and grazing to Peul pastoralists, but that practice seems to have become far less common, largely because rising populations mean that there are usually no longer large tracts of grazing land close to farming villages where Peul may be herding.

Table 3.4 Frequency of activities (continued)

Activity	Count: number of households	Share
Migration: young to neighbouring and more distant countries	118	39%
Livestock fattening for sale	105	35%
Small businesses, such as shops	95	32%
Migration: young women to towns, domestic service	79	26%
Market gardening for sale, irrigated by pump	78	26%
Adolescent boys taking care of another household's livestock often paid in animals	76	25%
Artisan work: blacksmith, carpenter, tailor, potter, etc.	72	24%
Trading farm produce and inputs	70	23%
Growing trees for timber or fuelwood : eucalyptus, teak	50	17%
Salaried employment, private sector: processing plants, etc.	43	14%
Extraction of sand or stone	36	12%
Salaried employment, public: central, local government or parastatal	34	11%
Market gardening for sale, irrigated by gravity	19	6%
Migration: young women to gold mines	7	2%

Source: Household survey

Green shading for agriculture: casual labouring could be on farms or off farms.

Note: 300 households surveyed: shares expressed as a percentage of 300

Most households carried out many activities: on average 14 activities (median of 14), ranging from 6 to 24 activities, with a relatively small standard deviation of 3.5.¹²

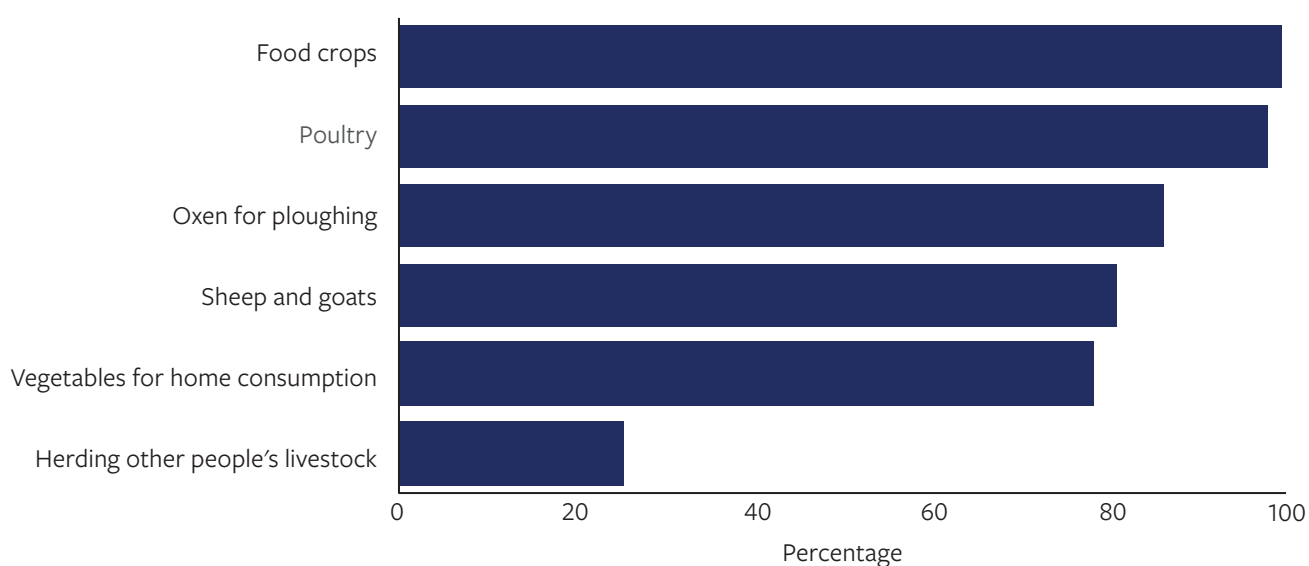
Activities may be clustered along two axes. One splits activities into those that produce goods and services primarily for domestic consumption

(‘subsistence’) versus activities which are more commercial, and which usually offer better returns to household labour than the former activities (‘value-added’). The other divides activities into agricultural (crops, livestock) and non-agricultural activities. This gives a four-way division of the activities recorded in the survey (Table 3.5).

¹² Dispersion was surprisingly small. just 23 households reported nine or fewer activities; 35 reported more than 18 activities.

Table 3.5 Household economic activities by type

	Agricultural	Non-agricultural
Subsistence	Food crops Vegetables for home consumption Draft oxen Sheep and goats Poultry Livestock herding for others	Casual labouring Gathering of produce from the commons and processing Sand and stone extraction Artisan work Young women migrating for domestic work Young men migrating to towns in search of work
Value-added	Cotton Fruit trees Timber and fuelwood trees Cash crops: groundnuts, sesame Rice in wetlands Commercial market gardening [with irrigation] Cattle keeping Fattening livestock	Salaried employment: public sector Salaried employment: private sector International migration by young men Small businesses Trading agricultural produce and inputs Migration to goldfields by young men Migration to goldfields by young women

Figure 3.3 Prevalence of agricultural subsistence activities

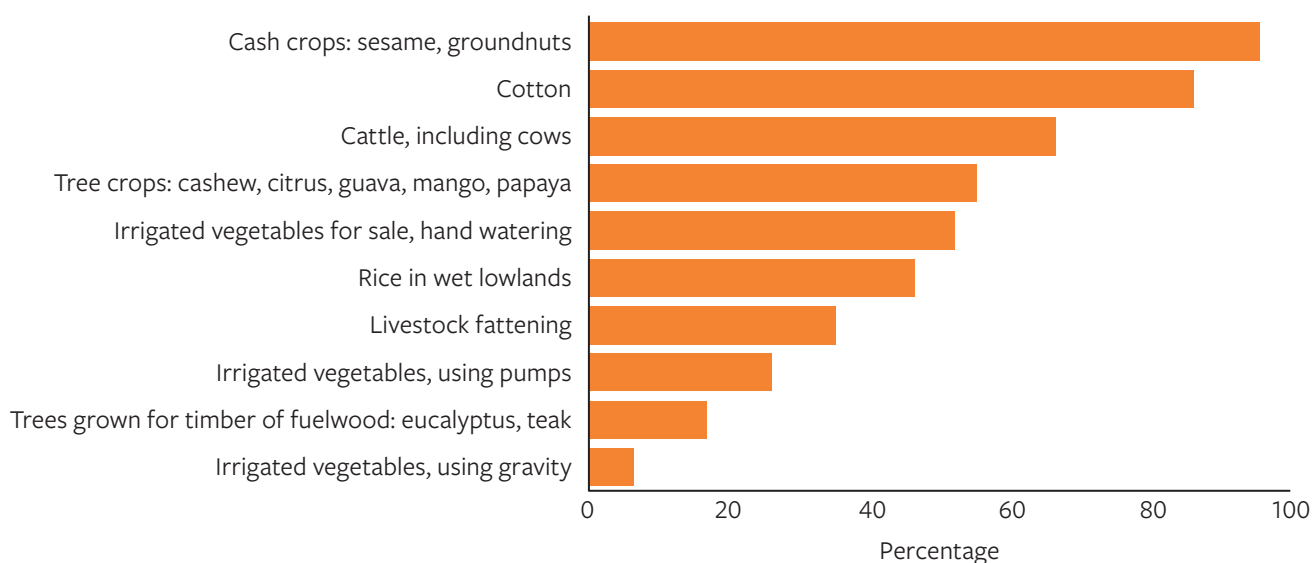
Source: Household survey

All households farmed for household consumption: growing food crops and raising chickens were almost universal activities. (Figure 3.3)

The large majority, 86% of households, kept draft oxen to work their fields. Most households raised

sheep and goats (81% of households), and most grew market garden crops for own consumption (78% of households). Less common was sending male youths out to take care of another household's livestock in return for the gift of an animal: reported by only 25% of households.

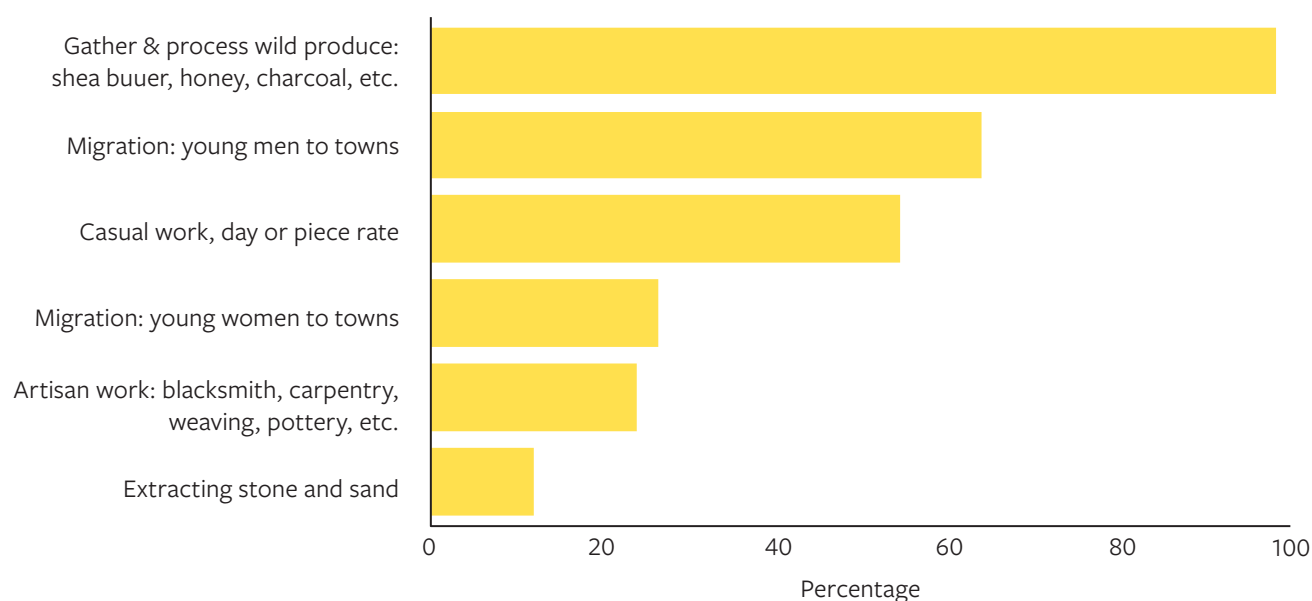
Figure 3.4 Prevalence of value-added agricultural activities



Source: Household survey

The large majority of households grew crops for sale. (Figure 3.6) Most households grew sesame or groundnuts (96%) and most grew cotton (86%). Nearly two-thirds raised cattle (67%). Just over half of households grew fruit trees (55%). Around half the households irrigated market garden crops; but largely by hand watering – only

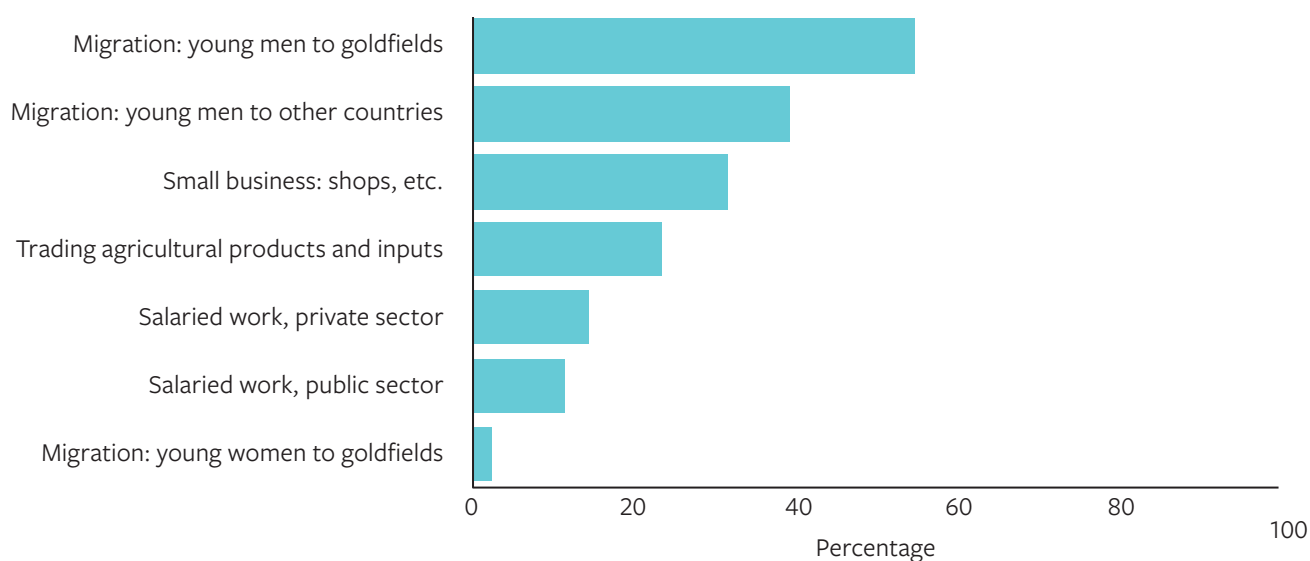
a quarter of households used pumps, and just 6% irrigated on a gravity-fed scheme. Just under half of households (46%) grew rice in wetlands, just over a third (36%) fattened livestock for sale. A small share of households (17%) grew trees for timber or fuelwood.

Figure 3.5 Prevalence of subsistence non-agricultural activities

Source: Household survey

Almost all households gathered and processed natural products from common lands and woods. (Figure 3.5) Most households (65%) included young males who migrated to towns and cities to find work, or who hired themselves out for day labouring (55%).

Only three other non-farm subsistence activities were recorded: young women migrating to towns to work as domestic servants (26% of households); artisan work as smiths, carpenters, tailors and potters (24%); and a few households (12%) extracting stones and sand.

Figure 3.6 Prevalence of value-added non-agricultural activities

Source: Household survey

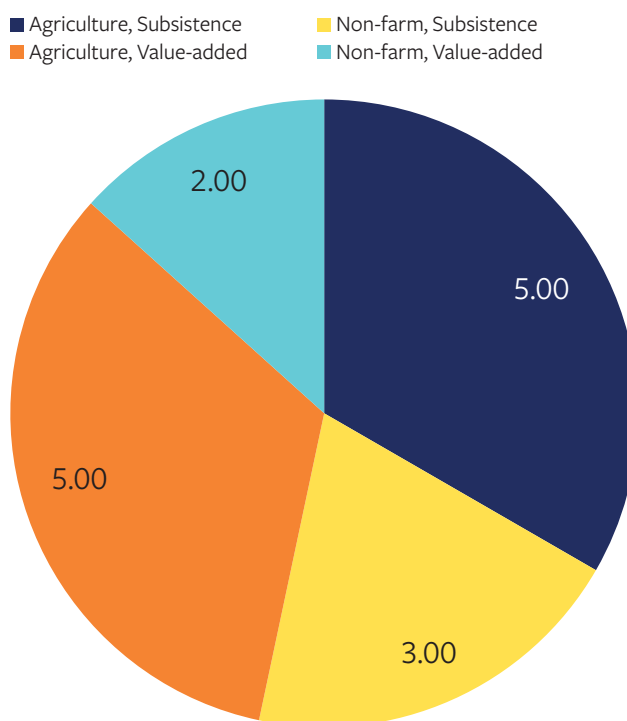
Non-farm activities that promise notably higher returns to labour were, for the most part, less common than for other sets of activities. (Figure 3.6) The most common activity (55% of households) was migration of young men to (mainly informal) gold mines, followed by young men migrating internationally to find work (39% of households). Just under a third of households ran small enterprises, typically retailing or offering personal services; while fewer than a quarter (23%) of households were involved in trading agricultural outputs or inputs. Almost a quarter of households had salaried jobs, either in private enterprise (14%) or in public service (11%). Young women also travelled to the gold mines for work, but only 2% of households saw this activity.

Looking at numbers of activities by type practiced by the median household (Figure 3.7), the predominance of agricultural activity is clear: the median household undertook ten agricultural activities, evenly split between those for home consumption and those for sale. Of non-agricultural activities, the median household practiced three for subsistence and two of higher value. But once again, the sheer number of activities undertaken by the median household was remarkably high – 14.¹³

3.2.1 Gender differences in activities

Men and women in the surveyed villages shared certain activities, while others were specific to each group.

Figure 3.7 Median number of activities per household, by type



Source: Household survey

Common activities included small-scale market gardening, small-scale livestock raising, harvesting dead wood, small-scale trade, rural migration, casual labouring, and growing crops other than cotton and cereals in the rotation, such as groundnut, fonio, and sesame.

Activities specific to men included cotton-cereal farming, fruit and tree plantation, charcoal production, carpentry and ironworking crafts, and rice cultivation outside of lowland areas.

Activities specific to women included processing of gathered and other agricultural products, sand extraction, catering (fast food), and lowland rice cultivation.

¹³ The values in the chart sum to 15: one more than applies when looking at the median for all activities – medians of sub-categories do not always sum to the median for the category as a whole.

3.2.2 Determinants of diversification: quantitative associations

Regression analysis was deployed to explore associations with diversification: whether the associations are causal, that is determinants of diversification, will be seen more clearly when analysing qualitative accounts, above all the life histories (section 3.4)

Some 32% of the variation in the **number of activities** undertaken by households can be explained by regression analysis. Factors significantly (90% or more likely to be statistically significant) associated with more activity include: older heads of household; larger numbers of people in the household; and having ready access to additional land if needed. The survey respondent (usually male, often head of household) being a migrant into the village reduced the number of activities.

Other significant associations look to be spurious, being counter-intuitive: households that have seen land conflicts; those with people who are ill or have suffered an accident; those with members who are handicapped; and those that have experienced separation or divorce – all were significantly more likely to undertake more activities. If there is a plausible explanation for these associations, it may be that households that have suffered from the problems mentioned have had to seek additional income from whatever sources however poorly rewarded.

Effect sizes, however, were rather small: significant associations rarely changed the number of activities by more than one – when the average is 14.

Taking **the number of higher value activities** – both agricultural and non-agricultural – undertaken by households, some 29% of the

variation across households can be explained. Statistically significant associations are similar to those for all activities: older household heads and large households were more likely to undertake higher value activities. The respondent being a migrant to the village reduced the number of higher value activities. Another surprising and counter-intuitive, yet statistically significant association, shows households that had experienced land disputes (of which there were few: 20 out of 300 households) having more activities. Once again, effect sizes were small.

Breaking down higher value activities by those which are agricultural and those which are non-agricultural produces similar levels of explanation, similar significant variables, and similar small effect sizes.

What is notable is that explanatory variables that might have been expected to promote more activities – getting a loan, receiving a grant or being trained – were not significantly associated with diversification. In some models, some of these variables were associated negatively (but insignificantly) with numbers of activities.

Education, surprisingly, was negatively associated with numbers of activities, albeit without being statistically significant, and with small effect size. That may just indicate that households with better educated adults were more likely to specialise their activities rather than diversify: plausibly, a household with one or two relatively well-rewarded activities such as a large cash crop (cotton, groundnut, fruit tree orchard, sesame), a salaried job, or remittances from the goldfields or overseas, might have less need to undertake arduous and less rewarding tasks such as gathering produce from the commons and processing it.

3.3 Trajectories

Reading life histories reveals repeated experiences that indicate patterns or trajectories of diversification. To frame the findings, events reported can be sorted by two sets of cycles, the cycle of natural events, above all the seasons and the rains; and life cycles. After taking these cycles into account, trends may merge – changes over several years that may have more permanence than the cycles of seasons, years and lives.

3.3.1 Cycles: natural rhythms

Seasonality: Rural households undertake activities in line with the seasons, above all the rainy season – running June to September – when crop farming takes place, and the drier seasons when other activities are undertaken.¹⁴

Annual variations Overlaying seasonality are annual variations of climate and nature which

can create shocks such as drought, flooding, and outbreaks of pests and diseases among crops, livestock and people. There may also be shocks arising in the economy and society, such as conflict, the effects of government policies and investments, and the state of the national economy – although public investments and policies, and the state of the economy may equally bring benefits to rural people. Table 3.6 shows some of the more memorable events recalled in the five villages since 2000 or so. The events are more or less evenly divided between occasional public investments from government and NGOs that have benefited people, and shocks. These latter will be discussed in more detail in section 3.4.5, but it is intriguing to see that bad weather – drought, floods, high winds – was relatively uncommon – five cases in five villages over more than 20 years: more important were pests and diseases affecting crops and livestock.

Table 3.6 Key events in the five villages

Years	Village				
	Koni	Ngounkan	Finkolo	Siratogo	Sounty
2000–04		2000: Granting of school by government 2002: Government builds three classrooms: education to 6 th grade 2004: Mairie drills borehole for drinking water	2001: Town hall (mairie) opened: Finkolo becomes administrative centre of Commune 2002: School opens second cycle	2000: One-hectare market garden created, UNICEF funds	1995: Cotton introduced 2003/04: Drought, as bad as 1984, major crop loss

¹⁴ Dissa et al. (2024) further divide the dry period into two seasons: ‘the dry-cold season or harvest period (October–January), and the dry-hot season or post-harvest period (February–May).’

Table 3.6 Key events in the five villages (continued)

Years	Village				
	Koni	Ngounkan	Finkolo	Siratogo	Sounty
2005–10	2011: Insolvency of farmers: Kafo Jiginew microfinance, led to arrests	2011/12: Sucking and fruit-eating biting insects cause 70% + losses of cotton 2012: Cereals warehouse built, USAID	2009: kindergarten opened	2008: Half-hectare market garden opened: Börnfonden [Swedish NGO] 2010: Four ha eucalyptus plot planted, AMADER 2014: Rural track developed from Siratogo to Dissen	2013: Farmers put in touch with sesame traders facilitating marketing
2011–15	2011: Violent winds topple crops	2014: Community builds cotton silo 2014: Community builds livestock vaccination park		2015: Community builds literacy room 2016: Mosque built, Qatar 2017: Six classrooms built, BuildOn [US NGO}	2015: Water storage and drainage for market gardening, UNICEF 2015: Medersa built
2015–20		2017: Severe anaemia in children detected 2019: Mairie builds maternity unit 2020: COVID-19 pandemic and movement restrictions 2020: Third borehole sunk for drinking water, UNICEF		2018: Mass animal theft: never happened before 2020: COVID-19 pandemic and movement restrictions	2019: Women's group installs solar panels to charge phones Climate migrants arrive to settle, growing cotton, encouraging locals to follow suit 2020: Mill installed to help women process crops
2021–	2021: Low rainfall, harvest losses 2021: Mosque and medersa built 2022: Flooding 2022: Jassids attack crops	2020/21: Cotton price down, input costs up: growers strike 2021: Market garden for women created, USAID 2021/22: Jassid attacks, esp. cotton crop, 30% losses, farmers in debt, inadequate public support 2022/23: Rare animal disease kills 80 sheep & goats, 50 oxen and many dogs	2021: Warehouse built to store market garden produce 2021: Rains end early, crop losses 2022: Drilling for drinking water and storage 2022: Jassids attack, esp. affecting 97 ha of cotton crop, farmers in debt, inadequate public support 2023: Caterpillars attack maize	2021: Mairie installs three street lamps 2022: Animal disease, 50 cattle lost 2022: Flooding, 70 ha cotton, 100 ha cereals lost 2022: Jassids attack cotton crop 2023: Borehole for drinking water drilled, UNICEF	2022: Flooding leads to crop losses 2022/23: Jassids attack

Source: Interviews with key informants

3.3.2 Life cycles

As seen, most households were large, consisting of extended families with three or more generations present, headed by a patriarch. Households ran through life cycles. Typically, new households were formed by married men on the death of their fathers: before that a married man and family would likely remain part of the extended household¹⁵ overseen by his father. The death of the patriarch did not necessarily mean the extended family would divide: if the patriarch had a younger brother capable of leading the household, the extended household might survive. But eventually the elder generation passed on, leaving the next generation to form households. Those would not usually be nuclear households: as or more likely brothers would combine their immediate families in an extended household – such are the advantages of large households if they can be managed well (more on this below).

In the early years a new household would be short of labour – the children had not yet grown old enough to work – and probably short of capital as well, above all oxen and ploughs,

The early years of a household, with relatively few adult workers and many young children, would involve heavy and hard work for the adults, and above all, women. MT is a 60 year-old widow now remarried living in Sounty:

‘This is the time when married life becomes increasingly difficult to bear. With lots of children, the workload increases. To be supported in daily tasks, you have to pray for a daughter among the children. Because it’s the young girl before her marriage who is at her mother’s service. At

this age, girls have a lot of energy, so they devote themselves wholeheartedly to work in the fields.’ [Sounty #8]

The strains of this phase are also financial, as AS, a 32 year-old married woman from Finkolo described:

‘After 15 years of marriage, there are now four children, 3 of whom (3 girls and one boy) go to school. Expenses have increased, but there has been no change in income.’ [Finkolo #7]

Women not only had to take care of households’ chores and care for children, sick and elderly, but also were expected to be economically productive. OKK, a 34 year-old married women from Koni, set out her duties and economic role:

‘Marital duties take priority and consist of looking after the husband, his parents and his unmarried brothers in terms of care, cooking and, above all, reproduction and looking after offspring. After that, we can go about our other personal business.

The family’s expenses are really managed by my husband (schooling, health, food for the children). I take care of some of the children’s clothing expenses and their school fees.

I also partially cover my clothing costs. I farm less than one hectare. I have a mobile phone and no credit/debts.

Not only do I love farming, it’s also the safest activity in the locality. As part of my farming activities, I received support for sesame and cowpea seeds from a project called PSEC/

¹⁵ An extended households typically includes three or more generations, including several marital units. Some authors prefer the term ‘complex’ to describe such households.

OXFAM, followed by support for small ruminants (goats).’ [Koni #4]

In Ngounkan, KoD a 43 year-old married woman listed her various production activities:

‘I’m a trader. I do market gardening, collect shea butter fines, farm, rear small ruminants, goats, sheep, pigs and produce shea butter.

I farm (rice, maize) for myself and the rest for my husband.

Poor rainfall, unstable prices and lack of access to fertiliser (a kilo of fertiliser costs f600) are all challenges for women. A project supported us with potato seeds. Access to agricultural land for women is not easy.’ [Ngounkan #7]

Although life could be hard, AC a 45-year-old married woman from Finkolo told of her contentment as she saw her children grow and her activities bore fruit:

‘AC is a happy woman at home, continuing her small business and looking after her goats, which provide her with some income. The children continue their schooling and help out in the fields during holidays. AC also grows vegetables on the 0.25 hectares of land made available to her by her in-laws.

‘All AC’s children are still at school, the first ones are in the second cycle and the last ones in the first cycle. AC’s standard of living is improving all the time, the family is close-knit, the husbands play their role to the full, the wives get on well together and the children also contribute to the various activities. One of her children dropped out of school when he was in the seventh class and her youngest child is not yet old enough to go to school. AC would like her children to

be able to achieve great things and take over from their parents. AC’s only regret is that she doesn’t go to school, but she hopes that her children will succeed where she hasn’t had the chance.’ [Finkolo #8]

With time, the children grow and become part of the workforce. With good fortune – see below (3.3.5) – capital builds up commonly through the margins earned from successful farming, not least from the growth of herds and flocks of livestock, and sometimes through earnings from off-farm and non-farm activities (3.3.4). The first call on capital was to ensure the household had oxen and ploughs to farm, but capital might also be invested in cash crops, or in small businesses. By this time, the household would come to have the labour force, oxen and ploughs to till ever larger areas.

Later, children might leave the extended household to form their own independent households – especially the case for women who married and moved to their husband’s household – and labour supply might fall. Finally male heads of households die, and unless there are younger brothers to take over, the household dissolved as male sons could now form their own households.

Widows of deceased male heads may then face a difficult time, unless they are taken in and well treated by her husband’s brothers or by their children. MK, a 60 year-old widow from Koni, was hit hard by the death of her husband:

‘MK’s life is turned upside down by the death of her husband, for whom she has left her family. After the period of widowhood, she began another life, that of a mother who is only there to give advice to the children and look after the grandchildren. Despite this posture, she continued with her small activities (cotton carding and her small goat farm).’ [Koni #1]

Early deaths, especially of adult males, disrupted these cycles with the survivors often being hard pressed to cope. HBK, a 34 year-old married man from Koni lost his father when young leaving him to support a large family with very little inherited from his father. [Koni #3].

3.3.3 Trends: prospering through agriculture

Most households that prospered in the five villages had done so through agriculture: by increasing output, and by growing crops and raising livestock for which there were good prices. The centrality of farming is striking: only a small minority of households had substantial and significant incomes from non-farm activities. As will be seen, however, success in agriculture can sometimes be facilitated by off-farm and non-farm activities which provide capital to invest in farming. Moreover, there are several routes to success in agriculture.

Large households: the advantages of collective production

A longstanding pattern in Mali is that farming is carried out by households, and by large households, sometimes very large households indeed. Large households have two advantages over smaller units: they can organise labour to make best use of diverse abilities and times available, thereby reaping economies of scale (and scope); and large households can diversify their farming and other activities to reduce exposure to risk. For individuals, being part of a large household reduces personal risks – should one fall ill or suffer an accident, not being able to work for a time does not mean one will not eat.

Some examples of large households with large farms follow.

In Koni, OM is a 22-year-old mother of two boys in a monogamous marriage. But she lives in large extended household. Thanks to the size of the household, a large area can be cultivated, more than 20 hectares:

‘The household owns farmland, and this year there were 6 hectares of cotton, 4 hectares of sorghum, 3 hectares of millet, 3 hectares of maize, 2 hectares of sesame, 2 hectares of groundnuts and 0.5 hectares of okra.’ [Koni #6]

She has no property of her own, but the extended household has housing with banco¹⁶ walls, tin roofs and cement floors; has equipment to farm – a cart and a draught animal (donkey), plough oxen and ploughs; has a motorbike and a bicycle; and possesses telephones, jewellery, a watch for her husband, wooden beds and a solar panel to generate electricity.

In Finkolo, SKF, a man aged in his 50s, heads a large family that has been able to work

‘around fifty hectares of land with 50 head of cattle, 15 goats, 6 sheep for the whole family and five goats and one groundnut field for their own use.’ [Finkolo #4]

In Koni, MN, 55 years old, heads a household of 30 persons.

‘They grow 5 ha of cotton, 5 ha of sorghum, 5 ha of groundnuts, 5 ha of maize and 1 ha of millet, for a total of 21 ha.’ To farm, the household owns ‘a plough, cart, multi-cultivator, seed drill,

¹⁶ Banco is mud, preferably with a high clay element, which has long been used in Mali to construct buildings – artisans in Mali are extremely skilful in working with banco: some mosques made from banco are world heritage sites, such as the one at Djenné.

and four plough oxen.’ In the off season, MN trades, as do his two wives; while two members of the household work seasonally in the cotton gins. The household in Koni village also benefits from remittances from two migrant members, especially one in Algeria. The household owns ‘four motorbikes, three bicycles and a television set.’ [Koni #8]

In Sounty, AD is 34 years old, married to two wives with nine children. He has always lived in large households:

‘AD was born in 1989 on a large farm employing around 100 people. Today he lives with his wife and nine children in his older brother’s household. The household has a total of 39 people. The members of the household cultivate the same collective field but eat on the large farm, which is run by the father. AD’s household sends fifty 100-kg sacks to the large farm each year. The nine women from the household and those from the other households take turns cooking there. The women are responsible for supplying the condiment when they are in the collective kitchen. To do this, they are each allowed to grow half a hectare of peanut and some market gardening. Each man supports his wife according to his personal means. These individual means are derived from their personal income from gold panning, petty trading, etc.

‘Most of the household’s livelihood comes from an area of 46 ha. This includes 10 ha of cotton, 20 ha of sesame, 8 ha of sorghum, 2 ha of maize, 1 ha of groundnuts and 5 ha of watermelons. The household’s productive assets include one cart, 2 ploughs, one seed drill, one ridger and six plough oxen. The six oxen were provided by the large farm.’ [Sounty #3]

In all these and similar cases, the household has both a social and an economic rationale: the household life cycle and its economy are closely linked. As children are born and raised, extended households typically see their labour force expand and with that the capacity to farm also extends – bearing in mind that in Mali, it has long been the case that spare land could be taken in for farming if there were the labour (and oxen) to till it. [Even with the extraordinary growth of Mali’s population since independence in 1960¹⁷, there are still parts of the south and west of Mali where arable land can be occupied by anyone with the means to cultivate: Sounty village being a prime example.]

More people allow more land to be cultivated, each additional worker in the family generates a surplus of agricultural production over the food needed for themselves and their immediate family, and part of that surplus is invested in oxen that allow larger areas to be tilled, and in livestock that, in addition to their production of milk and meat, act as savings bank. Barring misfortune – about which more will be said below (section 3.4.5) – an extended household grows both in people, numbers of activities, area cropped, and livestock kept.

The rate of accumulation varies. The cases above show households that have come to farm areas that in rural Africa are comparatively large, 20 hectares and more. But in other cases, accumulation can be slower and more modest. For example, in Ngounkan, BD heads a 20-person farm comprising his two wives with their eight children, four brothers, four sisters and his mother. [Ngounkan #2] BD’s household has expanded the farm: ‘before 2000, the total area was around 5 ha, including a maximum of 1.5 ha of cotton. This soon increased to 7 ha, including 3 ha

17 In 1960 at independence about 5.4 million people lived in Mali: by 2024, Malians numbered more than 24 million.

of cotton.’ BD had doubled the area to cotton, but still the whole farm was 7 ha – a much smaller area than some of the previous examples.

But small gains make a difference. DDM, a 46 year-old married man from Finkolo, was able to save enough to buy oxen and thereby triple the area tilled. Even if the farm still only measured three hectares, it was now enough to produce grain to feed the household all year:

‘After a number of good years, they were able to buy two plough oxen and a plough, and have now gone from 1 hectare to 3 hectares, including 1 hectare of cotton, 1 hectare of maize and 1 hectare of small millet. With this new formula, the production of 2 hectares of cereals made them self-sufficient.’ [Finkolo #5]

Opportunities from cash crops

Cash crops, some of them introduced in the last ten or so years, earning good prices in growing markets, can accelerate agricultural accumulation.

Cotton has long been a valuable crop. For, example, MT, a 54 year-old married man living in Koni had been able to invest in oxen and taken up cotton farming in 2010:

‘In 2010, after 17 years of cereal production, MT started growing cotton. With the support of his brother in France, the farm paid for its first piece of equipment. This equipment was incomplete, as the second plough ox was rented for 60,000 cfa. As the seasons went by, with satisfactory results, he was able to pay for the second ox in 2014. As a result, the farm has become self-sufficient in terms of covering its cereal needs. As the results improved, the farm paid for a third ox in 2016. In 2020, there was a cotton growers’ strike, but the subsidiary’s

growers did not follow the strike order and achieved good results. As a result, the farm bought the land it was farming for 600,000 cfa/ha. It was at this point in his life that MT began to enjoy some respite and well-being.’ [Koni #2]

In addition to cotton, other cash crops have become valuable in recent years, including growing fruit for the expanding urban markets. In Finkolo, AT, a 36 year-old married man, planted fruit trees for sale to the urban market. More recently sales from the orchard have risen to the equivalent of US\$1,670 a year:

‘The trees that the farm had planted in 2005 had started to bear fruit. There were almost 5 ha of mangoes and 1 ha of orange trees. The farm managed to sell around 500,000 cfa worth of fruit a year, and over the years sales have risen to 1,000,000 cfa a year. The farm began to equip itself with ploughs, carts, etc., and the number of months during which it bought cereals fell.’ [Finkolo #1]

As we shall see in the next section, AT had to work exceptionally hard to set up his farms.

Working to raise capital

When large extended households prosper, married men eventually inherit the means to farm (and form their own household) – above all oxen and some fields. But not everyone was so fortunate. Quite commonly in the life histories men who have inherited little or nothing had been able to set up their households and farms by working for others and saving the proceeds.

AT from Finkolo had a tough upbringing: he was sent to a medersa (Koranic school) away from his parents where he had to work hard and long for the marabout but received nothing more than

teaching in return. He returned home in his late teens with nothing, so he went to work cutting wood and making charcoal to raise funds:

‘When AT returned to his parents’ home in 2005, he was 18 years old. He was promised a daughter in marriage, but the necessary funding was not available. The farm at the time was poor (no equipment and the price of cotton was low), so AT worked as a woodcutter and charcoal miner to raise the 350,000 CFA required for the dowry and ceremonies. The marriage took place in 2007, when he was 20, to a girl from a village less than 3 km from Finkolo. During the first years of the marriage, the farm’s harvests could not cover his consumption needs for more than 7 months. “So we had to pay for cereals at the market to be able to eat”. The diet was very basic (in the evening they ate “tôt” with a simple sauce and no meat or fish, in the morning it was a cereal flour porridge with no sugar). Due to difficulties, the farm had to stop cotton production in 2008.’ [Finkolo #2]

BD, a 55 year-old married man from Ngounkan, similarly did not inherit: his parents were poor, the household lacked oxen. He spent three years herding for others to be able to afford the cost of a pair of oxen and expenses of his first wedding. Subsequently he has been able to form and head a household of 20 people. [Ngounkan #2]

Women also work to save and invest. KS, a 40 year-old married woman from Finkolo, collected and sold sand to start a small sheep flock.

‘The savings from the sale of sand enabled her to pay for three sheep to start her breeding business. This enabled her to give a sheep to her mother last Tabaski.’ [Finkolo #2]

Working to save for investment may involve migration. DS, 63 years old married from Siratogo, moved to Côte d’Ivoire as a teenager to learn carpentry:

‘In 1977, when he was just 17, DS went to Côte d’Ivoire to work for a year. On his return, he set up his first carpentry kit in the village. The following year, he went back to Côte d’Ivoire again and returned a year later with the rest of the kit. He also managed to buy a bicycle and give his father 100,000 CFA as a gift. DS thus became the first carpenter in his village and even in the vast Banan region.’ [Siratogo #1]

ABDN, a 62 year-old married man from Ngounkan was born into a poor household lacking farm equipment, and had seen his children move out, both when young and when adult, to earn money for the household:

‘With the children who are still alive, even at the age of 7, they would go off to be shepherds for a year and come back with an ox. This has helped us a lot and today we own four oxen. At the time, two oxen were used for ploughing, the third was sold to buy a motorbike for the family’s errands and the fourth ox was used to celebrate my younger brother’s wedding.

After this episode I started to take cash (100,000 CFA francs/year), i.e. 500,000 CFA francs for all my five boys who were in this practice (of herding).

... my children who have reached the age of majority are outside the village, one of my boys is a driver in Côte d’Ivoire, three other boys work in small-scale mines in Senegal and the other fifth one is in Kita.’ [Ngounkan #3]

In some cases, men migrated to acquire something they wanted badly. DDM, now a 46 year-old married man living in Finkolo, left home just 13 years old to acquire a bicycle:

‘As early as 1990, at the age of 13, he left on an exodus to Sokoroni in Burkina Faso in the hope of being able to return a bicycle, which was in vogue at the time. While there, he worked in the fields for a third party in exchange for a bicycle at the end of the year.’ [Finkolo #5]

Not every man moving out to earn money used their earnings wisely, as HBK, a 27 year-old married man from Koni, told us:

‘Like most of the young people in the village, I went out to look for money in 2009. With the informal activities I carried out, I was able to get a bit of money to go back to the village. As this money is not always well invested in sustainable activities, the income eventually runs out and it’s back to square one.’ [Koni #3]

Moving to find land

In two villages, Siratogo and Sounty, a third or more of households surveyed had moved to the village from relatively distant places – beyond the Commune and usually from beyond the cercle. AD is a 55 year-old married man who migrated to Siratogo from San, 500 km further east:

‘I’m a member of the village’s CPC [Cotton Producers Cooperative] This is proof enough of my level of integration, but also of the hospitality of the people of Siratogo towards people from other parts of the country.

I farm an area of 10 ha, including 7 ha of cotton, 3 ha of millet and 1.5 ha of maize. The 7 ha of cotton gave me 8 tonnes of cotton.’ [Siratogo #6]

Some people moved to the village from cities because living costs were lower and land could be had. AK, a 37 year-old married woman now living in Siratogo, is a case in point:

‘I earn my living in the second-hand clothing trade. I often cater for wedding ceremonies. Access to business is not easy. My husband married a second wife, so my expenses are mainly my own. I commute between Bamako and the village of Siratogo. But these days I’m interested in staying in the village because in Bamako I have difficulty meeting my financial needs. My husband and I are talking about moving to the village.

‘I’ve just been allocated a plot of land here in the village. I’m planning to set up here in the hope of earning a better living from farming, as my husband can no longer support the family.’ [Siratogo #8]

That said, getting land was becoming increasingly difficult as population rose. SF, a 60 year-old widow in Siratogo, reported the growing scarcity of land in the village:

‘Here, women do not inherit from their husbands. Access to land used to be easy, because with just ten kola nuts you could have an area of land. But with the presence of the Mianka, Bobo and Dogon, there’s a lot of pressure on farmland. What’s more, land disputes are becoming increasingly frequent. As a result, it’s no longer just anyone who can get a plot of land.’ [Siratogo #7]

3.3.4 Prosperity through non-farm activities

Just over a quarter of surveyed households had a member with salaried job (11% public sector, 14% private firms) – a larger share of households than might have been imagined.¹⁸ In Finkolo, DDM, a 46 year-old married man, had a steady job guarding the local (microwave) antenna, but also made money as a repairman:

‘In 2020, with the support of his father, he was hired as an antenna guard for the Orange/ Mali telephone company with an allowance of 48,000 francs/month. He also repairs satellite dishes, radios, televisions and some telephones, a job that can earn him at least 1,000,000 francs a year because he is one of the best in the area.’ [Finkolo #5]

DDM, the same man who had migrated to Côte d’Ivoire as a teenager to earn money to buy a bicycle (see above), was also a prosperous farmer:

‘Mr DDM, with his other brothers, owns 40 hectares of arable land, one orchard of 4 hectares (mango and orange) which they inherited from their father, in addition to these DDM has seven sheep and 100 head of poultry (chicken, guinea fowl).’ [Finkolo #5]

NBF, a 52 year-old married man, also from Finkolo, first obtained a job with the parastatal cotton company, CMDT, but subsequently was hired as a schoolteacher:

‘During this period, I was taken on as a caretaker at CMDT from 1998 to 2002 for 30,000 francs a month. With this money I was able to buy food for the family to supplement our harvest. In 2002, I started teaching on 60,000 francs a month.

‘Nowadays, the family’s resources are improving thanks to certain diversifications, such as the cashew nut orchard, where we can make a profit of 150,000 to 200,000 CFA francs. I also make a profit of 300,000 francs from the sale of potatoes. My other brothers and sisters elsewhere support us to the tune of around 250,000 francs a year. We have the following assets: 5 sheep, ten goats, 2 motorbikes, two bicycles, 1 motor pump for my market garden.’ [Finkolo #3]

In both these cases from Finkolo, having a guaranteed monthly income allowed investment in the farm. The same can happen to people with small businesses (almost one third of households surveyed), such as AD, a 34 year-old married man from Sounty:

‘AD’s small business operates with working capital of between 75,000 and 100,000 CFA francs. The cotton results are interesting, especially during the excellent production year of 2018. But all this income is still managed at farm manager level. The farm’s sesame acreage has grown to 20 ha, and in 2018 it began producing watermelons on 3 ha.’ [Sounty #3]

Migration was commonplace in the lives of most households: 85% reported at least one migrant, the median number was two persons

¹⁸ This shows the value of complementing qualitative insights with statistics from systematic quantitative surveys: in the absence of this statistic, the mentions of salaried jobs in the life histories might be seen as exceptions and outliers.

per household. [For young men, some 64% of households reported one living and working in town, 55% working in the gold mines, 39% one had travelled for work to neighbouring or more distant countries. For young women, 26% of households had one away working in town, 2% had one working in the gold mines.]

Life histories suggested that often migration was undertaken to earn and save, to come back with a lump sum to invest in the farm, in marriage, or some enterprise. Less commonly reported were members living and working away who were sending back regular remittances. But for some households, remittances were important. For example, the household of MN from Koni, a 55 year-old man heading a household of 30 persons, had two members living away, one in the local market town of Fana, the other in Algeria: the latter in particular sent back remittances to invest in the farm [Koni #5].

3.3.5 Fortune and misfortune

Life histories were marked by moments of good and bad fortune. Good fortune included being born into a relatively prosperous household; making a good marriage where the couple get on well together and – just as importantly – with their in-laws in the extended household; being healthy, fit, willing and able to work hard when needed; and being frugal and resisting the temptations of drink, gambling and other vices.¹⁹

Misfortune, however, was all too common in the life histories. Setbacks included those of the accidents of birth and childhood, ill health, social disputes, and those arising in the natural environment.

Accidents of birth and childhood

Some people were born into poverty and disadvantage, or else were badly treated as children. From then on, they often struggled to live a better and decent life.

For example, HBK a 27-year-old married man, told us:

‘I lost my father when I was very young. This situation meant that very early on I had too many responsibilities to take on. I manage to provide for the basic needs of my family, of which I am now the head following the death of my father. As the eldest member of the family, I support my mother, my wife and three children, 2 younger brothers and a younger sister. One of my younger brothers is also married, so he also contributes to the family expenses along with me. As I didn’t inherit much from my late father, it’s hard to make ends meet.

...

‘I inherited my father’s debts, which I’m paying off little by little.’ [Koni #3]

HBK’s disadvantage meant he had no oxen, making farming so much harder:

‘I hire oxen to plough my fields. Hiring oxen is very expensive. It can often cost up to 75,000 CFA francs during the Rainy season. What’s more, the availability of this service is another matter. Sometimes, even if you have the money, the service isn’t always there, so you have to wait a long time to get it, and sometimes you don’t get it at all.’ [Koni #3]

¹⁹ Having faith and following the precepts of Islam helps.

Similarly, BTS a 66-year-old married man from Siratogo came from a poor family:

‘My father only had 3 hectares of arable land: 1 hectare of sorghum, 1 hectare of small millet, 1 hectare of groundnuts and 0.5 hectare of peas. Our production was insufficient due to the lack of farming equipment (oxen and ploughs), in other words it didn’t cover our annual food requirements. Even before the onset of the rainy season, we were without food, and the mothers would go out looking for cereal bran to feed the family, or else we would go without food all day. We used tree leaves to treat ourselves, and as far as I remember, none of the family went to the health centres. We lived in this difficult situation throughout my childhood.’ [Siratogo #5]

MK, a 60-year-old widow from Koni came from a family that did not have the means to raise her and so offered her for adoption:

‘She comes from a polygamous family, where her father had six children, including two daughters, herself and her sister. She attended school up to the 3rd grade, but dropped out when her aunt adopted her. At the time, her father was a farmer, and he found enough to feed his family, but frankly he didn’t have enough money for her.

‘She was adopted twice, by a first aunt who brought her up very young, but unfortunately it didn’t work out because she was too strict and even mean towards her. A second adoption took place when she was 10 years old.’ [Koni #1]

KT, 47 years old from Siratogo, is a married man who had a difficult start to life:

‘He was born in 1976 into a polygamous family. KT only attended school for a short time, when he was withdrawn to work in the fields. There was disagreement in the household and KT was a victim of this. He was regularly beaten and ill-treated. So at the age of seven he went to Côte d’Ivoire, where he stayed for 3 years. He also suffered a lot during his time in Côte d’Ivoire.’ [Siratogo #2]

Ill health

Accidents and illness could hit people and their households hard, in villages where physical labour matters so much.

OM, a 22 year-old married woman from Koni suffered when her father fell ill:

‘Her father was a chicken seller; he had the means to provide for his family, but when OM was 13, he fell ill and even had difficulty walking. That’s what slowed down his chicken-selling activities, and the harvests dropped because his father was no longer able to go out to the fields; it’s now his younger brothers who do the farming. The household had difficulty meeting its needs, and it was his father’s younger brother who supported them by giving the price of meals.’ [Koni #6]

Costs of treating illness could be demanding. In 2018, DS, a 63-year-old married man from Siratogo ‘has to bear the high cost of hospitalising his seriously ill younger brother.’ [Siratogo #1]

Ill health, however, was (perhaps surprisingly) not often mentioned in life histories: in the survey, 57% of households said they had not experienced serious illness or accidents during the previous three years.

Social disputes

Accounts of disputes, arguments and fights were rare in the life histories, although when they did arise, they could be distressing. For example, OG is a 28-year married woman in Sounty. Her life had been marked by disputes where she suffered abuse. When young she was orphaned and went to her grandmother's village. She had education other children in the household did not, so she taught them, but this led to trouble.

'When she taught the children and they forgot, her uncles said it was because she didn't teach them what she knew. She says she suffered a lot because her uncles would hit her, saying she didn't want to teach the other children.'
[Sounty #2]

She married and although married life started harmoniously, relations later took a turn for the worse:

'There were times when he {the husband} would take her out to the fields to beat her up, but she had nowhere to complain because she was the one who got her married, even though her parents were against it. She had to put up with this until the age of 20. She doesn't get on with her in-laws because they were against the marriage, it was her and her husband's choice. There are always arguments between us in the family. She was discriminated against because there were projects coming here that wanted an educated woman in the village, but as everyone knows her husband is complicated, people refused to offer her when there were only two educated women in the village.'

...

'Things are calmer now between her and her husband, and the fights have subsided a little. She used to have a small business selling condiments, but she stopped because her husband demanded that she give him everything she earned, whether profit or turnover, so she stopped that; when she took the goods, it was her husband who counted and noted everything down to see how much profit she would make. Even if she goes on training courses with NGOs, when she receives a per diem, she gives it back to him and if he wants, he either gives it back to her or nothing at all.'
[Sounty #2]

Land disputes were comparatively rare: of 300 households surveyed, just 20 reported a land dispute. Seven of those 20 cases were in Sounty. Disputes over land were mentioned in villages where land was becoming scarce, such as Siratogo – as reported earlier (section 3.4.3) by SF a 60 year-old widow who told of increasing difficulties and disputes in acquiring land.

Environmental hazards

The village accounts (Table 3.6) include memorable shocks since 2000: across the five villages there were two instances of drought, two of flooding, and one case of high winds. More common than adverse weather were pests and diseases affecting crops and livestock: nine outbreaks, six attacking crops, three affecting livestock, registered across the five villages since 2000.

Livestock disease (and in one village, mass theft of livestock) was arguably the most serious shock, because it destroyed capital and reduced future production – loss of a crop harvest to pests, on the other hand, affected that year's production, but not necessarily future output.

Livestock disease could strike most of the livestock in a village, or it might just hit one herd or flock. Losses to one person's stock nevertheless could be serious setbacks. In the life histories, several women who had invested in small stock to raise and fatten them for sale had lost some of their animals. For example, SF, a 60 year-old widow from Siratogo told us, 'I rear small ruminants (goats) but animal diseases have devastated my stock.' ADS, a 39 year-old married woman from Sounty, lost two of her three goats which ended her livestock raising:

'With a women's empowerment project, I took on three goats, which didn't work out, then two of my goats died and out of fear of being up to my neck in debt, I had to sell the third and make up the money to pay back, I linked this to my luck, which didn't smile, if not other women have been able to make a profit from their business. After that episode, I didn't try with another small ruminant' [Sounty #4]

Quantifying fortune and misfortune

Just how common were helping hands or setbacks in the five villages surveyed?

Support

The survey included questions about access to credit, to grants and other supports, to training, and to land.

Credit: 65% of respondents had not sought a loan in the last three years: of those that did, most (16% of all households) had looked to a microfinance agency: others had gone to banks (11%), village savings groups (8%), or formal cooperatives (5%). Of the households getting a loan, only 43% said that this had enabled to undertake a new activity.

Grants and other public support: Most households (57%) had not received a specific support in the last three years: of the households that had benefited, 40% received something from government, and just 11% were supported by an NGO. Of those getting support, fewer than half, some 40%, said that this had allowed them to undertake a new activity.

Training: one third of households reported some training in the last three years, most of them (20% of households) from an NGO, the other 13% of households from government. Of the trained households, only a minority (38%) said they had been able to use their training to set up a new activity.

Access to additional land: just under half (49%) of households said it would be easy to acquire more land, by asking the village chief for land. Of the other households, 48% said they could not get more land, although a small number (5%) said they could rent or buy land.

Setbacks and obstacles

Respondents were also asked about setbacks over the previous three years: accidents and serious illness; divorce or separation; land conflicts and secure access to common lands; lack of skills and capacity; and lack of capital.

Accidents and serious illness: most (57%) households had not suffered either accident or serious illness. One third of households had experienced serious illness in the household; and one tenth had someone who had suffered an accident.

Divorce or separation had occurred in 13% of surveyed households.

Land conflicts had been rare: just 7% of households reported a conflict over land. These isolated incidents were not closely associated with land scarcity: a few cases were reported in all five villages.

Asked if they felt they had **secure access to common lands**, the vast majority of respondents said they did have such access: just seven households out of 300 reported insecure access.

Skills and capacity: almost 70% of respondents said they have the skills and capacities to take up new activities; 30% felt they lacked these abilities.

Lack of capital: by far the most common limit to diversification was capital: some 69% of households said they didn't have the funds to finance new activities.

3.3.6 Village matters: leadership and access to outside resources

Leadership in the villages brought duties, but in return earned respect and sometimes provided access to opportunities from beyond the village.

One such opportunity was literacy training for adults. AD, a 52 year-old widow from Sounty, took literacy classes from an NGO which allowed her to benefit from NGO projects:

'During this period [in her early 20s], she began taking literacy classes initiated by the NGO Plan Internationale, which built a literacy room. This project also donated a mill and a panel to enable the community to charge their batteries and telephones.

...

'After the death of her mother-in-law, who was the women's president, she was chosen as president of the women's group. She received a loan of one hundred and ten thousand francs (110,000F) from an NGO called PRODELKA to buy three goats for breeding. This project opened accounts for the beneficiaries at the BNDA in Kita for repayment over three months.' [Sounty, #1]

MD a 67 year-old married man, also in Sounty, took literacy classes in his 20s, partly in response to being rejected from a job in Côte d'Ivoire for his lack of schooling. His literacy led to him taking up voluntary jobs that required his new abilities.

'I was taught to read and write in the village here in Sounty thanks to the groundnut-growing project. Thanks to that, I can read and write. The CMDT also helped me. I had a setback in the RCI when I lost a job opportunity in a competition because I'm not educated. So I decided to send all my children to school. One of my daughters has passed her baccalaureate and two others have passed their B.T.2 in accounting. Another daughter is at a tailoring school.'

'For 12 years, I was the village storekeeper. As such, I managed the incoming and outgoing of the fertiliser shop. I weighed the cotton for the Village Association.

'When I was a storekeeper, we bought a 500,000 FCFA scale for weighing cotton. I'm also chairman of the secondary school management committee. Thanks to my farming, I manage to support my family. I even paid the school fees for one of my children at a vocational school in Bamako.' [Sounty #7]

SD is a 46 year-old married man from Ngounkan who took literacy classes:

'I didn't go to school, but I am literate thanks to the CMDT literacy project. This has been important in my life.

I was president of the village youth association for 10 years.

This position enabled me to mobilise a hygiene/sanitation project. After the project, many hygiene/sanitation behaviours continued, in particular the abandonment of open defecation and clean-up days.

I'm also a member of the village's Cotton Producers' Cooperative (CPC), where I'm in charge of organisation.' [Ngounkan #4]

Despite his leadership, SD considers himself poor because his farm cannot cover the household's food needs:

'I consider myself to be very poor, because my annual cereal production doesn't cover my needs. I have to go into debt to bridge the gap (borrowing money to repay with interest). I have enough land for farming, but I lack the means of production. I farm 12 ha, including 2 ha of cotton, 2 ha of maize, 3 ha of millet, 2 ha of sorghum, 0.5 ha of cowpeas and 1 ha of groundnuts.

'I benefited from the support of a project that gave me soya seed and two bags of fertiliser free of charge: sènè yiriwa.' [Ngounkan #4]

LD is a 45 year-old married man from Ngounkan who also benefited from CMDT literacy classes:

'I became literate thanks to the CMDT. This literacy training has earned me membership of the village agricultural cooperative. I'm also a member of the village youth group. We

generally provide agricultural services. This gives us the income we need to meet the village's expenses.' [Ngounkan #5]

Women's groups feature in the life histories, often giving women access to small supports, such as seeds and training, from NGOs.

MT is a 61 year-old widow, remarried, living in Sounty:

'I'm a member of the Benkadi women's group. I am the conflict secretary in this group as I am an elderly person.

'I'm also a member of the Jiguiyatou group, which has thirty members and of which I'm president. Thanks to Jiguiyatou, we are able to save on credit. Loans are repaid at 10% interest (i.e. 50 francs for every 500 francs). We often have a large sum in our account. Repayments are regular and so far we've never had any disputes.

'I'm the village traditional birth attendant, along with three other women from the village. We were appointed by the village. Whenever there are women in labour, we're called in and we do our work on a voluntary basis. It's a real honour for us. When we have difficulty delivering a woman, we report it early so that she can be sent to the formal health centre.' [Sounty #8]

OD is a 50 year-old married woman from Ngounkan:

I'm a member of a women's group called OUBIN, which means "let's make peace" in the local Mianka language. I am the administrative secretary of this group, which works to promote the women of the village through the services it provides. [Ngounkan #8]

Also from Ngounkan is KD, a 48 year-old married woman:

‘Her activities improved with her appointment as an advisor to the town council and to NGO training courses.’ [Ngounkan #1]

In Finkolo, some late middle-aged men recalled times from the past when age-group societies (‘ton’) would both work collectively for money, but also organise festivities:

NBF, a 52 year-old married man, remembered his childhood:

‘When we were children, we had two ton in the village, whose members would organise work in the fields for third parties every Sunday during the rainy season, in return for money. During the dry season, with these financial resources, they organised grandiose festivals in the village, bringing together children, young people and adults to listen to the sounds of the balafon for at least 4 days. They also maintained the village cemetery and rural tracks.’ [Finkolo #3]

SKF, also 52 years old, remembered the same events ...

‘During the dry season, the young people of the village organised festive days with the money they got from the field work of third parties.’ [Finkolo #4]

... as did DDM, 46 years old:

‘When he was a child, there was a ton in the village called “tonba” with a godfather and godmother who did not take part in the work in the fields organised by the members. Better still, they were even entitled to a day’s free work in their fields as a way of launching these activities.

After the rainy season, they organised a 9-night party to which all the villagers and surrounding villages were invited.’ [Finkolo #5]

Neither ton age groups nor village festivals were mentioned by any other of those telling their life histories.

3.3.7 Women’s lives, options and preferences

Women may live together, but gender norms and the demands of reproduction mean that the two sexes lead different lives and have different options: points that emerge from life histories and were explicitly made by women in village focus groups.

Women were expected to do most of the domestic and reproductive work: caring for children, elderly and anyone sick; cooking; cleaning; washing, gathering firewood and collecting water.

In farm work, they were expected to work on household collective cereal fields, but would have small private plots to grow vegetables, sesame, groundnuts. Women raised poultry and small livestock. Processing of crops and gathered produce fell to women. They were not expected to grow cotton: men said the pesticides used made this dangerous. Cattle were also a male preserve.

In non-farm work, women commonly traded goods, and young women typically migrated to towns and cities to work in domestic service to accumulate savings for marriage.

Women were disadvantaged in property and inheritance: widows were vulnerable to losing their rights to land and housing on the death of their husband.

Women in focus groups were quick to recount the obstacles they faced: heavy work loads, lack of farm equipment, and lack of capital – credit for cotton-growers from CMDT went almost invariably to men. Women saw opportunities to earn from processing gathered produce such as shea butter, and from trading goods.

Two potential advantages were mentioned exclusively by women: savings groups – mentioned in two villages, one of which had no fewer than six such women’s savings groups; and NGO support, reported in three villages. NGO support was not mentioned by men, only by women. Several NGOs had supported women with small grants of equipment, for example mills, grants of seed and fertiliser; by training women in farming skills such as making compost and in crafts such as manufacturing soap; by helping women’s groups to get a bank loan; and by training in awareness and prevention of violence by men to women. [Violence was reported in all village focus groups, but often women suggested that beatings were less frequent and less acceptable than had once been the case.]

Women invested in the education of their children. For example, MT a 60-year old widow, remarried from Siratago:

‘As a widow, she lived with her family in Niako and decided to take up farming activities such as growing rice and peanuts, processing shea butter and buying and selling rice and condiments. These activities enabled her to pay for her children’s schooling. Over time, she began to get support from her children, who started to work, and the girls got married too.’ [Siratogo #4]

Not that men did not help out with education, as was the case for ADS, a 32-year-old married woman from Sounty:

‘During this period, the income she earns from these small activities [she grows a hectare of sesame, groundnuts and market gardening] is used to support herself and her children, while her husband pays for the children’s care and education. This creates an understanding between her and her husband.’ [Sounty #4]

3.3.8 Prospering or falling behind

Out of the 39 life histories, 23 life histories can be seen as escaping from poverty, while 16 are accounts of the lives of people chronically poor. Clear associations between activities and poverty trajectories can be seen (Table 3.7).

Looking at all 39 life histories, those escaping poverty were more likely to have undertaken almost every activity, other than business – more activity associated with less poverty. Those escaping poverty were heavily engaged in agriculture, with a large difference in participation in cotton growing for poverty escapers compared to chronically poor. Poverty escapers were much more likely than poorer people to be engaged in salaried employment and to receive remittances – and, surprisingly, to be engaged in casual labour.

Differences can be seen between men and women: men escaping poverty were more engaged with cotton than women, more likely to have salaried employment than women; while women escaping poverty were more likely to engage in petty trading than men.

Among the chronically poor, men were much more likely than women to grow cotton and to migrate, while women were more likely to engage in petty trading.

Table 3.7 Activities and sources of income associated with poverty dynamics

	All	All	Male	Female	Male	Female
	Poverty Escaper	Chronically Poor	Poverty Escaper	Poverty Escaper	Chronically Poor	Chronically Poor
N=	23	16	12	11	8	8
Agriculture						
Farming	100%	100%	100%	100%	100%	100%
Cotton growing	65%	38%	83%	46%	63%	13%
Market gardening	43%	31%	41%	45%	63%	50%
Farm labouring	4%	0%	8%	0%	0%	0%
Non-farm						
Business	4%	6%	0%	9%	13%	0%
Petty trading	13%	13%	25%	0%	13%	13%
Petty trading (women)	35%	31%	17%	55%	0%	63%
(Casual) wage labour	26%	6%	25%	27%	0%	0%
Salaried employment	26%	0%	33%	18%	0%	0%
Migration	22%	19%	33%	9%	38%	0%
Other income sources						
Remittances	26%	6%	33%	18%	13%	0%
Rents	4%	0%	83%	0%	0%	0%

Source: Life histories, analysed by coding

4 Conclusion and discussion

4.1 Brief recap of key findings

In the five villages, households undertook a very wide variety of activities, on average of 14 different activities in each household. Most activities were agricultural, and even among the non-farm activities, several were linked to local natural resources – gathering (and often processing) wild produce from woods and other commons, excavating sand and stone, harvesting fuelwood, etc.

Most activities were undertaken primarily to serve household (and village) consumption: that said, most households produced some items to sell both locally and in distant markets, beyond the village and beyond the local rural economy – products such as cotton, sesame, groundnut, and tree fruit. Higher-value activities, those offering better returns to labour, were predominantly agricultural: non-farm activities were less developed.

Little of what was observed revealed activities and options that represented substantially higher-returning livelihoods: perhaps the only common example was salaried jobs, in private and public employment, undertaken by individuals in around a quarter of the households.

Many activities were seen as activities for men or women; a product of social norms, and the limitations women face when they are expected to do most of the tasks of reproduction – cooking, cleaning, caring, etc. – before they can think of spending time on economic activities and earning income.

Life histories gave insights into processes of change: processes where trends through time are influenced by, and sometimes compete with, a welter of seasonal changes, yearly variations in the weather, and, perhaps as much or more than anything else, life cycles as individuals and households are born, grow and eventually pass away or break up. People and their households were able to accumulate either through successful cropping and livestock raising, or through working hard to save funds, sometimes when migrating to towns and gold mines in Mali and coastal neighbouring countries. Most funds saved from non-farm work were subsequently invested in crops and livestock.

4.2 Interpretations

4.2.1 Agrarian lives, longstanding social units, and collective action

Agriculture, and associated use of local natural resources – water, grazing, bush and forest, dominates the economies of the villages, the economies of the households and the lives of individuals. Much of the cropping, livestock raising and gathering would be familiar to previous generations. This should not perhaps surprise one: even with rapid population growth in the last fifty years, rural Mali is not yet densely populated – regions in the south of Mali have rural population densities in the range 40 to 90 persons per square kilometre, while regions further west are far less populated: Kita, for example, has just 16 persons per square kilometre²⁰ – natural resources available per household remain considerable.

20 Drawing on data from the 2022 population census.

Even more familiar would be the dominant social formation: the extended, multi-generational household with its multiple marital sub-units providing residence to more than a dozen persons, and often several dozen. It is also clear from the life histories why the large household persists: economies of scope and scale apply when combining the efforts of half a dozen or more working adults; while the large household provides a safety net in a world where individuals are vulnerable to illness and accidents.

Collective action was not just important for households: village groups and association, such as cotton producers' cooperatives for men and savings groups among women, were frequently mentioned.

4.2.2 Incremental and marginal change

Changes reported in life histories are predominantly marginal changes: the logic of accumulation is repeatedly apparent – work hard, produce a small surplus, reinvest this in the farm, expand the fields, build up the herds and flocks. With the considerable caveat of not suffering from a substantial misfortune such as illness, accident, premature death of breadwinners, etc., the process of slow accumulation works. At least half the life histories tell of people who began their adult lives working small fields and raising a few head of livestock, but who, by the time they reached their forties when children started to join the workforce, cultivated much larger areas and built up considerable holdings of livestock.

Accumulation is aided when there is cash crop that usually has a guaranteed price and which, for registered growers of cotton, comes with state provision on credit of seed, fertiliser and other inputs. Not for nothing in southern Mali has cotton been described as the 'white gold'. Cotton is relatively new: there were few growers in the year 1990. Cotton has provided farmers with a source of cash previous generations did not have.

Marginal gains dominate; but through time they can mount up. Dramatic technical change was rarely seen, or rather rarely seen in farming: but the additions to the agricultural portfolio were not to be underestimated: sesame fields, orchards, irrigated market gardens – largely producing for sale to the urban economy – could generate cash flows rarely seen before in these villages.

Technical change, highly visible technical change, has come in the form of transport – the now ubiquitous motorcycles, and as consumer goods – radios and TVs, mobile phones, and solar panels.

One other change not overtly recognised in people's accounts of their lives, but which can be inferred from national surveys: marked improvements to public health. The life histories of some middle-aged and older women are heartbreaking: time and again infants are born only to soon be lost. But these stories are usually of events from two or more decades ago, younger women much less commonly mention such deaths.²¹

21 The latest Demographic and Health Survey for Mali, 2023/24, shows the rate of under-five mortality falling from 247 per thousand live births in 1987 (and still as high as 229 per thousand in 2002) to 87 per thousand by 2023. Those are national figures: in 2023, the rural rate was only a little higher, at 96 per thousand. (République du Mali, 2025)

4.2.3 Five villages, urban Mali and the outside world

For the people of the five villages, key links to the rest of Mali, and some of the neighbouring countries are fourfold. One is the **trading of produce and consumer goods**: an everyday affair which provides employment to some villagers but otherwise is rarely picked out in life histories. Implicitly, the existence and growth of urban markets, with consumers prepared to pay for food other than staples, is the stimulus to those villagers who have invested in higher-value crops – sesame, tree fruit, timber trees, irrigated vegetables – and in livestock fattening. Implicitly, the acquisition by many village families in the last 20 or so years of televisions, motorcycles, mobile phones, and solar panels also underscores the importance of everyday trading.²²

A second is **migration to towns and gold mines** for employment²³: such sojourns are often key moments in individual lives as earnings are saved to invest in the farm, to pay for marriages, or acquire some valued consumer good.

The third notable link concerns the **provision of public services, investment in infrastructure, and producer supports (grants, subsidies, training, credit)** by government – central government ministries (education, health), local Commune authorities, and a parastatal (CMDT) – and by NGOs. Investments in roads, schools, health posts often feature as notable moments

in the histories of the villages. Mention of public services in the life histories tends to be linked to investments: new schools, health facilities – the everyday operations of these services are rarely mentioned.

When it comes to producer supports, two points stand out. One is the importance of CMDT, above all in the prices set for inputs and seed cotton: disputes between growers and the company over these prices have been intense in some years, sufficient for growers to strike and not grow the crop. The other is the intermittent flow of grants and training from public bodies, above all NGOs, which have reached some of the population, but far from all – 40% of households received a government subsidy or grant, 11% a subsidy or grant from an NGO, and 20% some training. But most of those households in receipt of these supports reported they had not been able to undertake new enterprises as a result.

The fourth key link concerns **credit**: 36% of households had obtained a loan in the last three years, above all from microfinance agencies – but, similar to grants and subsidies – most loan recipients had not used these funds to invest in new activity.

These four interactions are part and parcel of village life: village life without them would be unimaginable. Some of the links provide quite vital support, above all trading and the operations of CMDT. Most public goods and services, roads,

22 These, of course, are far from the only goods arriving from the national and urban economy: these are just the major purchases which people value and mention when they tell their life histories. Over the last half century or so, many things that formerly would have been produced in the village such as homespun cloth, pots for water and roofing thatch have been replaced by industrial cloth, plastic utensils, and corrugated galvanised iron sheets: changes that Toulmin (2020) documents in detail for the village she has studied to the north of Ségou.

23 In the past, villagers from Mali and other parts of the Sahel had migrated in large numbers to coastal neighbouring countries to work on forest crops such as cocoa. Such journeys were mentioned by older respondents in their life histories, but hardly ever mentioned as having occurred in the last twenty or years.

health and education are valued, but do not often feature in accounts of the turning points of people's lives.²⁴

With the exception of cotton growing, greatly facilitated by CMDT, the life histories do not include accounts of major changes to rural lives coming from public investments or projects (or from private initiatives either). Transformation in the five villages has not taken place from some single, highly-significant intervention over the short term; but has occurred over the medium to long term as the results of marginal gains build up, the product of multiple and diverse factors rather than any single intervention.

4.2.4 A glass half full or half empty?

We did not attempt to measure changes over the medium term or longer: there were no baseline data against which to compare the villages in 2024 with a former time; nor did we run a quantitative survey that asked people to estimate earnings or wealth now and before.²⁵ That leaves hanging the (major) question of whether most households in the five villages have seen their lives improve or deteriorate over the last 20 or more years.

When the 39 life histories were coded, 23 accounts were those of households escaping (deep) poverty; 16 were from people in households that had remained chronically poor. Reading the histories, the striking impression was that most respondents had built up their households, expanded their fields, herds and

flocks, and had acquired some valued material possessions – phones, motorbikes, solar panels, TVs. That, of course, may reflect life cycle changes rather than trends. Then again, accounts of some of the older respondents spoke of times past of hardship and hard work; younger respondents faced difficulties to be sure, but lesser challenges than those faced by their elders.

Against that positive impression are two concerns, one mentioned by respondents, the other much less so. The former is the effect of an increasing rural population, heavily dependent on local natural resources, on the environment – a concern over reduced fallows, inadequate use of manure or mineral fertiliser and consequent declining soil fertility, and over exploitation of grazing, bush and forest.

Outside observers of rural Mali are understandably much exercised by such processes: the national statistics on cotton yields since 2010 or so are cause for alarm; analysis of farm surveys in southern Mali express concern that increased output comes from area expansion rather than yield increases (Ollenburger et al. 2016); Toulmin (2020) describes dramatic falls since the 1980s in millet yields in the village she studied north of Ségou, clearly attributable to pressure on available arable land.

Such pressures and processes, however, are not that often mentioned in the life histories, although that may be an artefact of interviews in which we did not ask people to comment on changes to

24 Mentions of health services are infrequent in the life histories, yet it is clear from national DHS surveys that public health interventions over the last two or more decades have greatly reduced the mortality of rural children under the age of five. It may be that our focus on economic diversification deflected the respondents' attention from improvements to public health.

25 An exercise which is imprecise at the best of times, but all the more imprecise when respondents are asked to report incomes or wealth from five or more years ago.

the natural environment. An untested hypothesis, one we cannot address from the data collected, is that intensification of some cropping and herding means that any loss of yields to cereals or cotton, has been offset by increased earnings from intensified, and often higher-value, activity.

The other concern is security: the spread of conflict across central Mali and now into southern and western Mali is alarming. This was only occasionally mentioned in the life histories, but that may be because at the time of the interviews in 2024 the villages were relatively secure.

4.2.5 A social science footnote

The results from regression analysis of factors associated with diversification, whether of all activities, or just the higher-value ones, were underwhelming in two respects: the lack of effect of statistically significant explanatory variables; and the lack of any statistically significant association with factors expected to enable or block diversification, with education as a prime example.

Life histories offer some clues as to why such regularities do not appear in the data: the things that drive changes in life circumstances are multiple – economies and societies, even those of small villages, are not simple entities; some factors are near-impossible to measure – such as having a good relation to someone who offers a helping hand, or the diligence and skill of labour in agricultural enterprises; and, in some accounts random surprises are all-important, some welcome surprises such as getting a paid regular job, others being shocks such as the early death

of a breadwinner. There are limits to how many of these factors can be observed, measured, and included in statistical tests and models.

Moreover, as set out in section 3.4, changes take place in a context of natural variations and cycles, and human life cycles: disentangling these from trends and attributing changes to the many and various factors is no simple matter.

4.3 Policy implications

The last two sections describe the difficulties of clearly and precisely identifying medium term (and likely sustained) changes and the factors which lead to them; but despite this inherent uncertainty, it is possible to deduce relatively clear and straightforward considerations for policy makers from this study.

Four stand out.

In no particular order of importance, they are:

4.3.1 Protection against hazards (shocks)

If there were no shocks, life in the villages would be so much easier for their inhabitants, and most people, those prepared and able to work, would see their lives improve. But some of these shocks could be mitigated.

For example, improved **primary health services** would benefit people who have fallen ill. From the falling rates of infant mortality, it seems Malian public health services have achieved much in the new century. Further investment in these services may well be amply rewarded.²⁶

26 This message applies above all to donor agencies: the fear is that investment in simple, primary health measures may, not being novel, be less attractive for agencies than the pursuit of some new rallying cry, such as ‘resilience’.

The village accounts and several life histories tell of the toll of **livestock disease**: death of animals is not just a loss of their current value but of their future value as well. It is likely that some or much livestock disease could be alleviated by prevention – vaccinations, for example – and by prompt treatment with veterinary medicines. Attention from qualified veterinarians can be costly: much less costly are the services of para-veterinary assistants, trained to deal with the most common ailments and linked to veterinary doctors to whom to refer more serious or difficult conditions.

The impact of shocks may be ameliorated by insurance – in the widest sense – against the occurrence of hazards. If basic social protection systems are in place to assist people suffering misfortune (for no fault of their own), deep poverty, or old age, scope then exists for offering additional assistance when covariant hazards occur – a drought, flooding, a locust plague, and so on. Advances in finding proxy indicators to trigger payments make such systems all the more feasible. In some cases, it may be possible to craft individual or household insurance programmes – life insurance for example – that are commercially viable, albeit perhaps with some public subsidy of premia.

4.3.2 Overcoming disadvantage, including that of women

Some of the life histories tell of people born into poverty and deprivation who are disadvantaged from the day they are born; who thereafter struggle to escape poverty, even if some do so, by dint of sacrifice and hard work. The agenda of leaving no child behind is not new, but its importance is underlined by this study.

Three measures are indicated. One, all infants should have their growth regularly monitored (measured and weighed) linked to prompt treatment of severe acute malnutrition.

Two, whatever child protection measures exist need to be increased, because sadly in some life accounts respondents when children suffered abuse.

Three, ensure that all children complete primary school and ideally go on to secondary education. Life histories are full of adults who regret they were withdrawn from primary school because the family needed them for home duties, to work in the fields, or watch over livestock. This is not an easy challenge: labour is so valuable in these villages, that a healthy child is likely to be pressed into work that prevents them from continuing their schooling. But it is unthinkable in modern and future Mali to have people who lack literacy and other basic education.

The lives of women are hard: in the life histories women have had many pregnancies, sometimes with difficulties, have then to care for many children, and carry out most domestic tasks – and yet must usually still earn some income to cover household expenses. Improving women's lot is a considerable agenda, but some simple things would make a difference, and in the short term – better local health services; and technical advances that lighten the load of everyday tasks – such as drawing water²⁷, collecting fuelwood, pounding cereals, etc. When public agencies research technical advances the tendency is to focus on improvements to economic enterprise and to overlook innovations that ease domestic tasks.

27 Toulmin's (2020) accounts of the village north of Ségou includes a simple example: the proliferation of donkey carts in the village means that women no longer have to head-load water back to their houses.

To enhance women's agency, support for women's groups in villages is indicated, something that some NGOs already do, but which is far from universal in reaching all villages and all women. What support should be prioritised will vary by village and the preferences of local women; but given the general lack of financial capital in the villages and women's marginalisation from credit from CMDT, it is likely that assistance to village savings groups would often be fruitful. This might be training in bookkeeping for secretaries and financial literacy for members, or capital injections commensurate in size with the ability of the group to make good use of funds without harming the social fabric of mutual saving and lending.

4.3.3 Agriculture still the key to most households' livelihood

Crops and livestock remain the most common activities in the villages, and new crops and enterprises are common endeavours. Whatever can be done to support farmers and herders will be valuable,

One key opportunity is to make more and full use of water for irrigation – something that was mentioned specifically by elders in Koni where a marigot (marsh) could be developed. Small-scale irrigation is not necessarily costly to develop – sinking a shallow well, installing a pump and piping may suffice – costs of pumps in real terms have fallen considerably over the last 20 or more years; as have the costs of solar panels that can run the pumps – but however cheap this equipment may be, it still requires some expenditure.

Lack of capital was the single most cited obstacle to setting up enterprises. Finding ways to offer

investment credit to (creditworthy) farmers would surely pay: for irrigation equipment, leasing schemes should be possible; for other investments, offering collateral in the form of some of the more common assets households possess, such as a motorbike, might encourage financial agencies to lend to farm households.

Two other areas offer opportunity. Beekeeping is one, particularly if honey can be marketed as pure and organic, as it should be from hives hung in bush and forest. The other is processing of cotton: it should surely be possible to spin more cotton in Mali, and perhaps create a textile industry – the technology is well-known, and labour costs should be low.

4.3.4 Conserving the environment

Concerns over the environment in Mali are understandable, setting an agenda made more acute by global heating and the consequent need to make agriculture compatible with more variable rains, storms, winds, and higher temperatures. Farmers in the Sahel have long been accustomed to adapting their farming to match highly variable rains; in some cases they have proved adept in making maximum use of rainwater – for example, the innovations pioneered in neighbouring Burkina Faso and Niger such as stone walls (cordons des pierres), half-moon depressions (demi-lunes), and planting pits (zaï) (Cotillon, Tappan and Reij 2021; Magrath 2020). Agroforestry, long understood by farmers in the Sahel, may provide further opportunities to develop farming systems that make full use of water and soil nutrients, preserve soil fertility and prevent erosion.

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Appendix A Local perceptions of wellbeing and poverty in the five villages

Women	Men
Koni	
The women said they ate at least three meals a day. The main meals eaten are: toh of maize, millet and sorghum with fresh or powdered okra sauce, and fresh or powdered baobab leaves. Rice is eaten mostly on public holidays and when families receive strangers. There is no such thing as the rich in their community. Some households own cattle, but most are owned by Peuls.	A family eats well if it has three regular meals, including millet or maize porridge in the morning, rice at midday and tôh (millet sorghum-based dough) or couscous (bashi). 1. Ultra poverty: a person who is ill and has no support. Only one person in Koni is in this situation. 2. Extreme poverty: healthy people, able to work but lacking farm equipment. Working for others to find food is common. 3. Moderate poverty: numerous in village Koni; better equipped but have difficulty repaying loans. Cereal needs not covered all year round. 4. Vulnerable people: majority in Koni. Not fully equipped for farming. , In years with good rainfall, they can improve their equipment and cover cereal needs. In years of poor rains, or low prices, sale of goods causes them to regress. 5. The resilient: few in Koni. Have farm equipment, can hire labour during peak farming times, have easy access to loans and repay them. In difficult years, can sell livestock or other assets to repay loans. Have substantial external income in a normal year with good rainfall.
Ngounkan	
Ate at least three meals a day. The main meals eaten were millet, sorghum and maize toast. Rice rarely eaten in the village; people eat it on public holidays or when they have strangers over. The sauce is mostly made from green or dried (powdered) baobab leaves, fresh or powdered okra, aubergine, onion and tomato. Crushed and powdered dry fish is used in the sauce; some people add it to the sauce without crushing it. Fresh meat and fish are rarely consumed in households. Most of the population of Ngounkan is moderately poor.	In N’Goukan, food is essentially based on cereals (sorghum, millet, maize). Early bread and couscous are the most common foods. To eat the tôh, people accompany it with various sauces (okra, baobab leaves, kapok tree flowers). Those who can afford it add fish or meat stock. Focus group participants pointed out that “when we talk about fish, we’re talking about dried fish, fresh fish is rare”. Everyone likes to eat rice, but not every day. People who can afford it regularly eat rice with peanut paste sauce. Everyone likes peanut sauce, but it’s a product that’s sold to make money. Bean meals are also popular, but people would rather sell them than eat them.

Women	Men
Ngounkan	Local definitions of poverty and wealth: Ultra-poor: just one person in this category in Ngounkan; she's sickly and old. We have to feed her because she can't work; cared for by extended family. . Extreme poor: numerous, they can work, ur but they are not equipped to work in the fields. In general, they grow cereals, but the harvest doesn't last 4 or 5 months. Have to hire out their labour throughout the year, especially during the growing season, to feed the family. Moderately poor: Many, but fewer than extremely poor. Have equipment and a bit of labour, and grow a bit of cotton as well as cereals. Their acreage is not large. Sell their cereals and a few months later they have to buy more. They have difficulty repaying the loan. Rich, but vulnerable: Fewer than moderately poor. Farms well equipped (cart, several pairs of draught animals), have sufficient labour. In a normal year, these farms do not pay for cereals. But as soon as the first rainfall anomaly occurs, they will buy cereals or reduce the number of meals. In the event of a cotton harvesting deficit, they can repay the loan. They are therefore reliable and can easily obtain loans. Have little income from off-farm activities (e.g. migration). Rich and resilient: few households. Well-equipped and have labour. If they need to during the winter, they can hire enough labour. Cotton and cereal harvests good because they manage to fertilise their plots well. They eat their favourite meals. In a difficult year (poor rainfall or illness of a member), they can sell livestock or go into debt. External income may be sought. Rich: just a few households. Well-equipped and farm large areas. Labour shortages are met by hiring labour. Outside income is substantial. They own property in the town of Koutiala. Often part of the family lives there. They travel back and forth.

Women	Men
Finkolo	
People in their community eat at least three meals a day. The main meals eaten are toh of maize and sorghum. Millet toh is rarely eaten because people no longer cultivate it as they used to due to soil impoverishment and climate change. Rice and potatoes are also eaten, but rarely. Sauce most commonly used here is made from fresh or powdered baobab leaves and fresh or powdered okra. Peanut, onion and tomato sauces are also used. People generally use fresh, dried or powdered fish for the sauce because we have a river in which people fish. Classification by income The women's focus group in the village of Finkolo revealed the presence of these different categories of poor and rich groups in their community: Most people are either moderately poor or not-poor but vulnerable; with more of the latter than the former.	[No definition of poverty from men.]
Siratogo	
People in Siratogo eat at least three (3) times a day. The main dishes eaten are To of maize, millet and sorghum, accompanied by fresh baobab leaf sauce or dried powdered baobab leaf sauce, fresh or powdered okra, onion sauce and sometimes groundnut sauce. Rice is rarely eaten, only on feast days, and beans are also eaten from time to time. Generally, dried or powdered fish is used in the sauce. Fresh fish is eaten when the rivers dry up and people go fishing. The moderate poverty category is the highest in Siratogo.	Daily foods eaten: tôh, rice, cowpeas and peanut sauce. Eating meat and fish is a sign of wealth. Breakdown of population by income 1. Those who can ensure food self-sufficiency throughout the year and manage to market part of their production. 2. To ensure self-sufficiency without being able to market part of the harvest. 3. Those whose income is not sufficient for food self-sufficiency and who buy supplements
Sounty	
Main meals eaten in Sounti are Toh of millet, sorghum, maize and beans; rice rarely eaten. These dishes are accompanied by simple peanut sauce, peanut sauce with green leaf, green leaf or dried powdered fish, which is most commonly used. Meat is used on special days such as holidays. Households have three (3) meals a day despite the fact that they are not rich. Most of the population of Sounty are moderately or extremely poor.	Based on income, 3 groups of poor people: • Those who manage to cover their food needs, but not beyond; • Those able to meet their food needs, but do not have the agricultural equipment needed for good agricultural production; • Those who do not have enough food due to a lack of farming equipment. Three 3 groups of less poor people: • Those who have the money and can bear other burdens; • Those who are self-sufficient but can't bear any more burdens; • Those with sufficient means to build houses to let in the towns.



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