SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

MERCY CORPS | AGRIFIN

Dalberg Research

DRIVING INNOVATION IN DIGITAL AGRICULTURE: EXPLORING THE USE OF DIGITAL SOLUTIONS TO ADDRESS FINANCIAL AND INFORMATION GAPS FOR SMALLHOLDER FARMERS AND PASTORALISTS IN KENYA

SUMMARY FINDING

JUNE 2023

UKaid from the British people

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.


Photo credits to Christian Muhindo

Dalberg Research

SPARC

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

MERCY CORPS | AGRIFIN

Dalberg Research

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

BACKGROUND & OBJECTIVES

Study Methodology & Objectives

This study employed purely secondary research by triangulating publications, journals, white papers and other credible literatures from credible agriculture stakeholders and research organizations.

The findings were supported by analysis of proprietary datasets from different Public, Private and Non-governmental institutions.

The objective to this study was to:

1) Conduct in-depth profiling of smallholder farmers, agropastoralist and pastoralists, through studying the value chains they participate in and how they access and use Digital Financial Services (DFS) and/or Digital Information services (DIS)

2) Interrogate existing information on access and utilization of DFS and/or DIS, exploring opportunities to enhance information sharing and adoption by producers

Source:
Note: The literature considered to generate insights in this study was seven years old as opposed to five years required due to effect of COVID 19 which hampered data collection efforts.

Definition of terms

Digital Financial Services (DFS) refers to the use of digital technologies such as mobile phones, the internet, and other electronic devices to deliver financial services. DFS includes services such as mobile banking, mobile money transfers, online payments, and other electronic financial transactions. These services are aimed at increasing financial inclusion by providing affordable, convenient, and secure financial services to individuals who have limited access to traditional banking services[1]

Digital Financial Services (DFS)

Digital Information Services (DIS) refers to the delivery of information and knowledge to individuals or organizations through digital channels, such as mobile phones and the internet. DIS can include weather updates, market prices, agricultural advice, and other relevant content that can improve decision-making processes and livelihoods, particularly for those living in remote or underserved areas[2]

Digital Information Services (DIS)

SPARC

MERCY CORPS | AGRIFIN

Dalberg Research

Source:
[1] Digital Financial Services (DFS) | Alliance for Financial Inclusion (afi-global.org);
[2] How digital technologies can help Africa's smallholder farmers | E-Agriculture (fao.org)

Man feeding herd, Kenya. Photo: Curt Carnemark/ World Bank

SPARC

MERCY CORPS | AGRIFIN

Dalberg Research

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

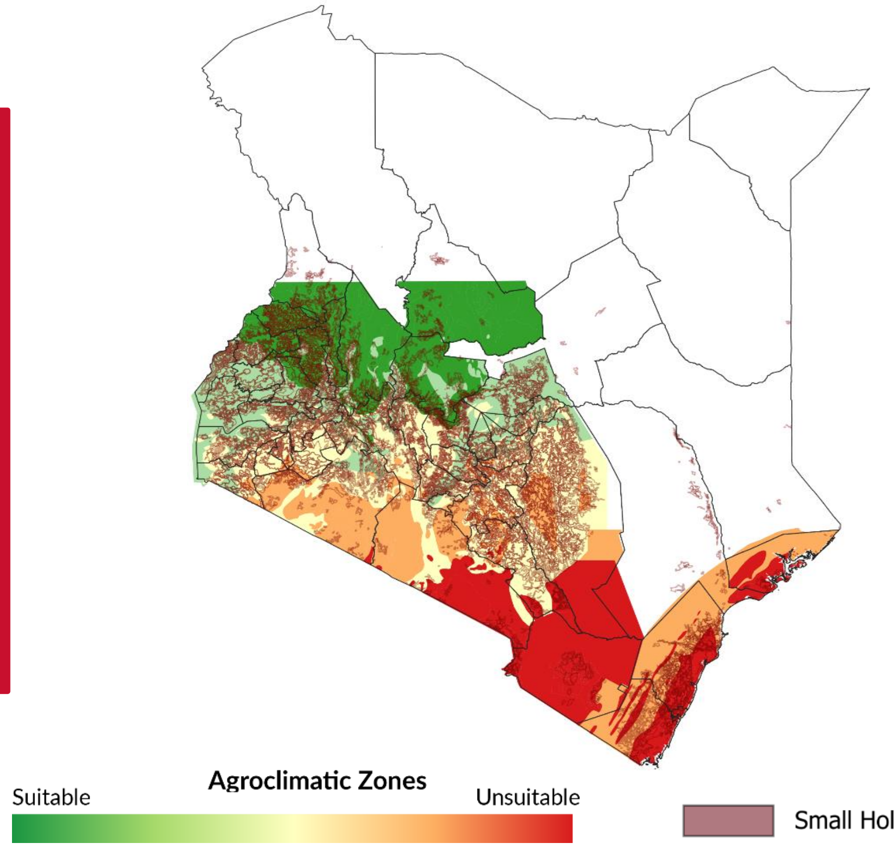
This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

SMALLHOLDER, AGROPASTORALIST AND PASTORALIST PROFILES

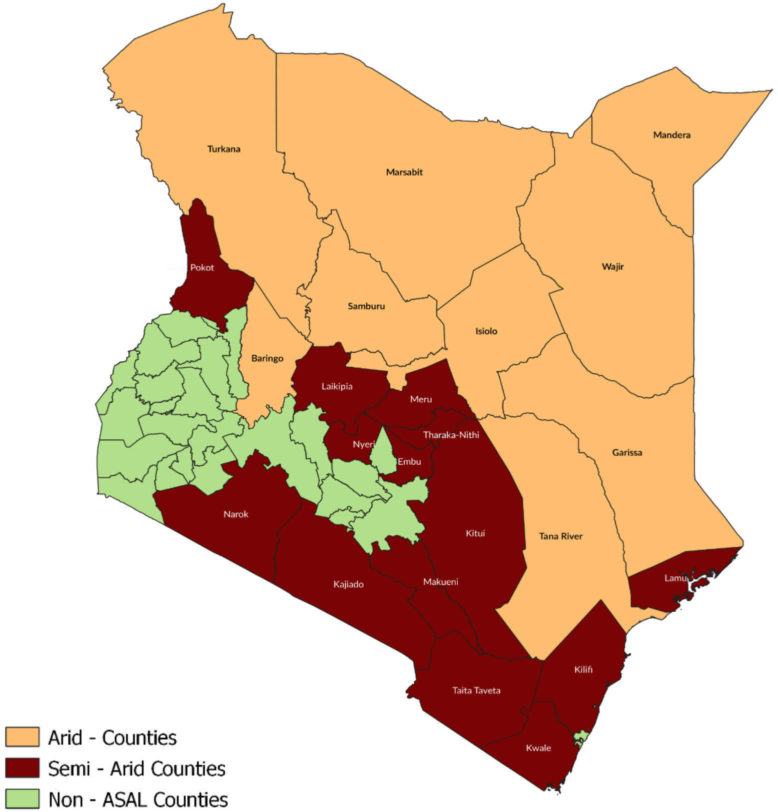
Smallholder farming is mainly practiced in the Central and Western regions, while pastoralism is common in ASAL Region

Location

Distribution of smallholder farms over agroclimatic zones



Map of ASAL and Non ASAL counties in Kenya



The agro-climatic zones of Kenya are based on temperature and precipitation ranges within which the main crops can flourish and the probability of these zones meeting the temperature and water requirements of the leading crops. These zones give an estimate of the climatic yield potential.

SPARC MERCY CORPS AGRIFIN Dalberg Research

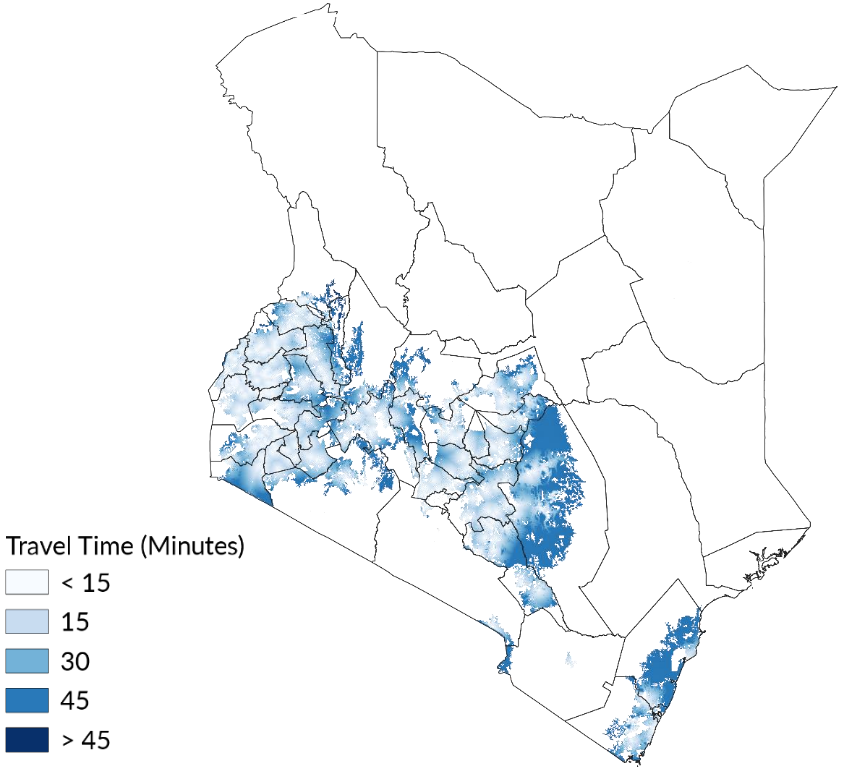
Source: Geoscience Landscape Portal; World Resource Institute
Notes: *This coverage does not include information on the non cultivated (pastoralist) areas.

SHF operate in areas with better market accessibility as compared to pastoral communities

Market

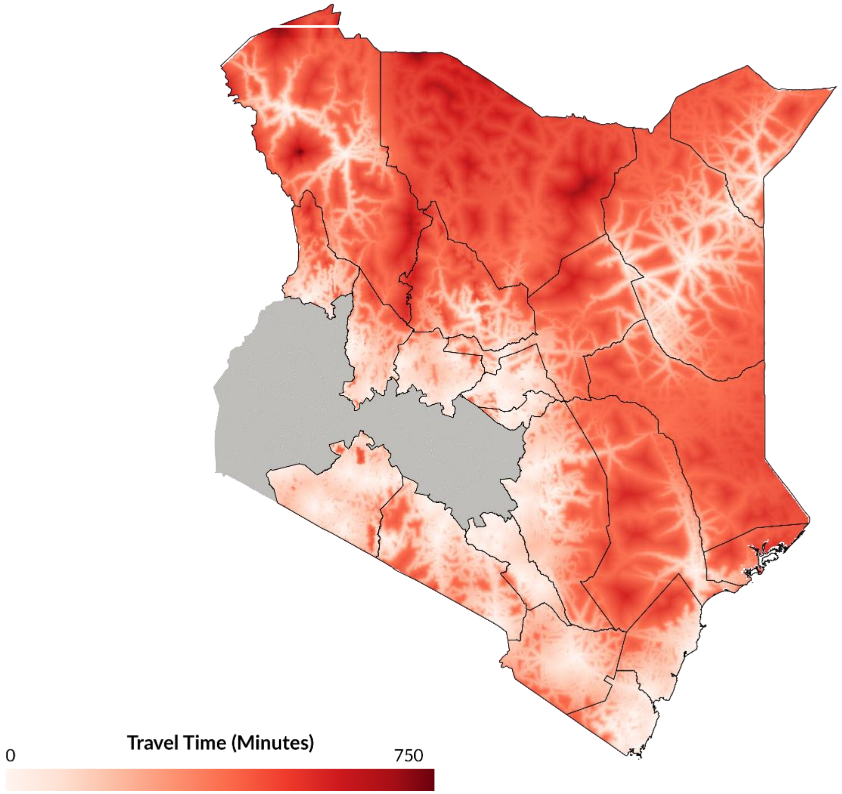
Travel time to markets Smallholder

Travel time in minutes



Travel time to markets in Pastoral community

Travel time in minutes



Access to markets has been cited as one of the challenges to agricultural productivity, access to financial institutions in Kenya among small holder farmers and pastoral communities.

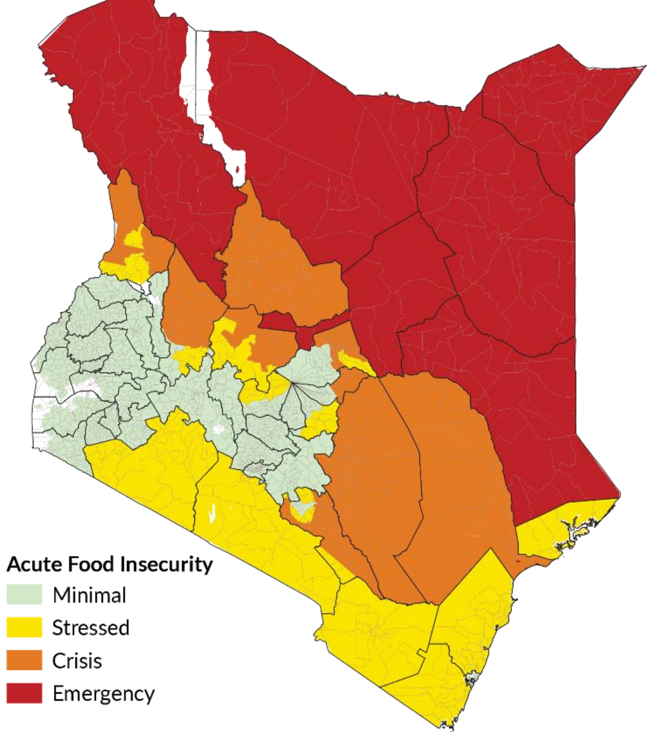
Source: Malaria Atlas Project, Open Street Maps and LOCAN Analysis

… Pastoralist operate in food-insecure which at times can affect priorities in the digital solutions

Location

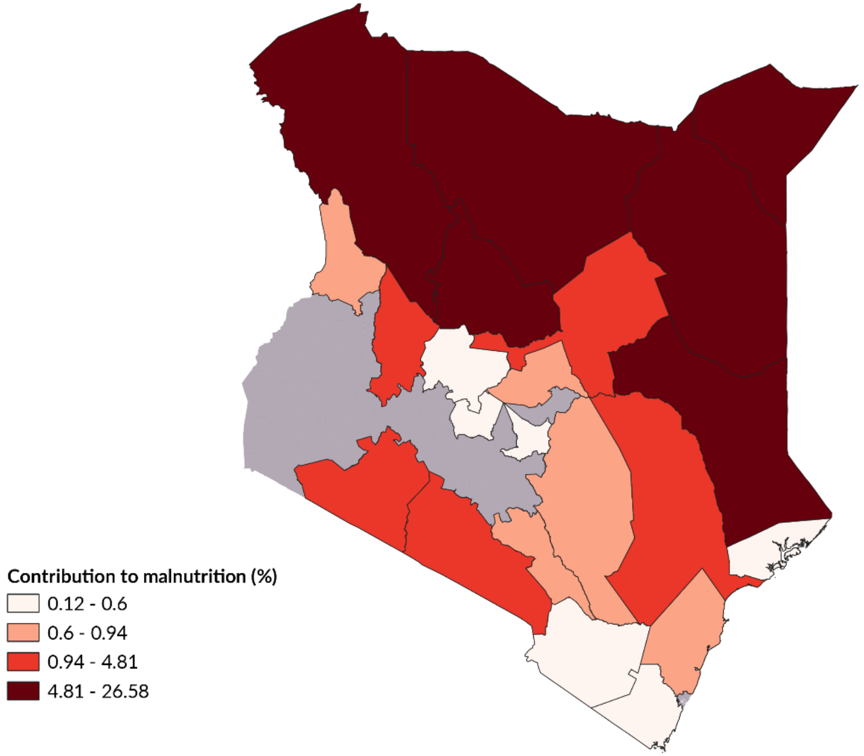
Current/ Projected acute food insecurity

Kenya Food Security Classification (October 2022 – May 2023)



Current/ Projected acute malnutrition

Map of moderate acute malnutrition



74% - 97%
People In the ASAL live below the absolute poverty line

The food security data was derived using satellite data measuring precipitation anomalies, vegetation anomalies (Normalized Vegetation Index - NDVI) and expert opinion based on knowledge of market and trade functioning systems. **Turkana**, **Mandera** and **Wajir** are on the lead, collectively contributing **57%,** more than half of malnourished pregnant and lactating women.

Total counties under ASAL counties as per the IPC report are 23

SPARC MERCY CORPS AGRIFIN Dalberg Research

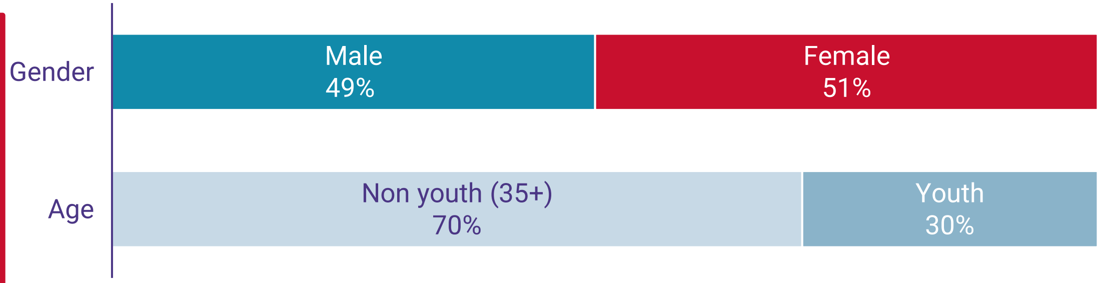
Source; Ministry of East African Community (EAC), The ASALS and Regional Development. Feed the Future, The accelerated value chain development program national conference report 2018, The Famine Early Warning Systems Network (FEWS NET) and Integrated Food Security Phase Classification (IPC)
https://www.asals.go.ke/asal-info/#:~:text=ASALs%20Categorization&text=It%20is%20home%20to%20about,high%20rates%20of%20evapo%2Dtranspiration;
https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Kenya_Acute_Food_Insecurity_Acute_Malnutrition_2021FebMay_ASAL.pdf

Producer

Smallholder farming is dominated by non-youth; Smallholder farmers are fairly educated compared to pastoralists

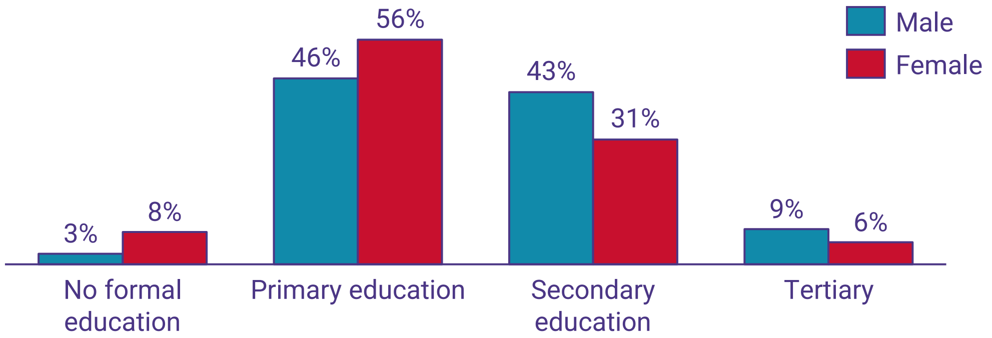
SHFs distribution by gender and age (n=2005)

% distribution



Education level of SHFs (n = 2005)

% distribution of SHFs by level of education

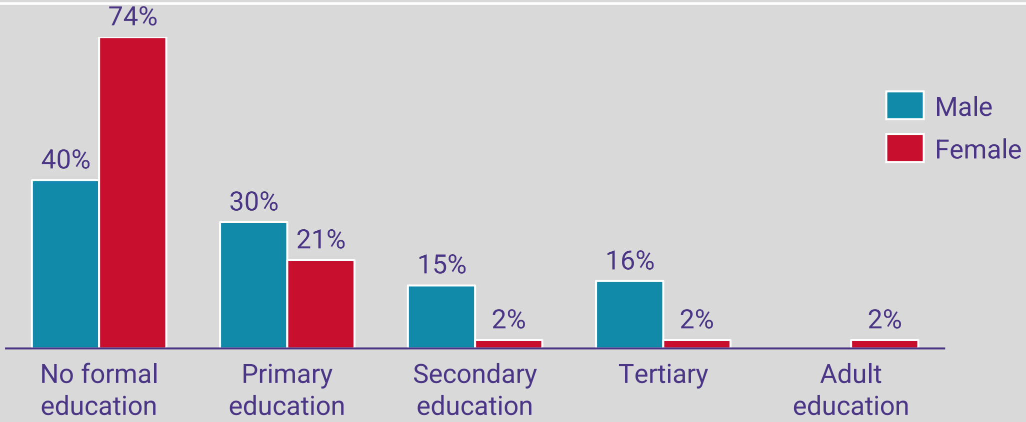


Pastoral household heads by gender and education[1] (n=329)

% of gender of household head

Education level of household head pastoralist (n = 329)

% distribution of the level of education

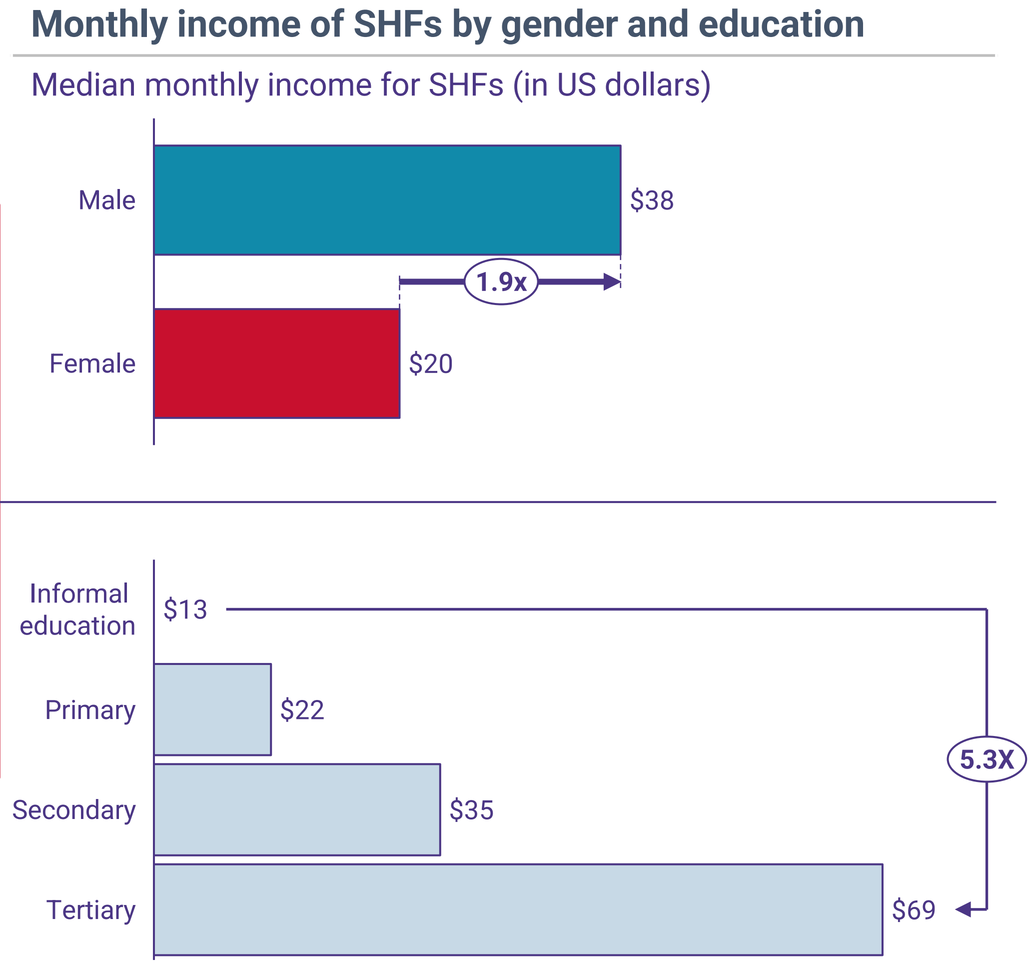


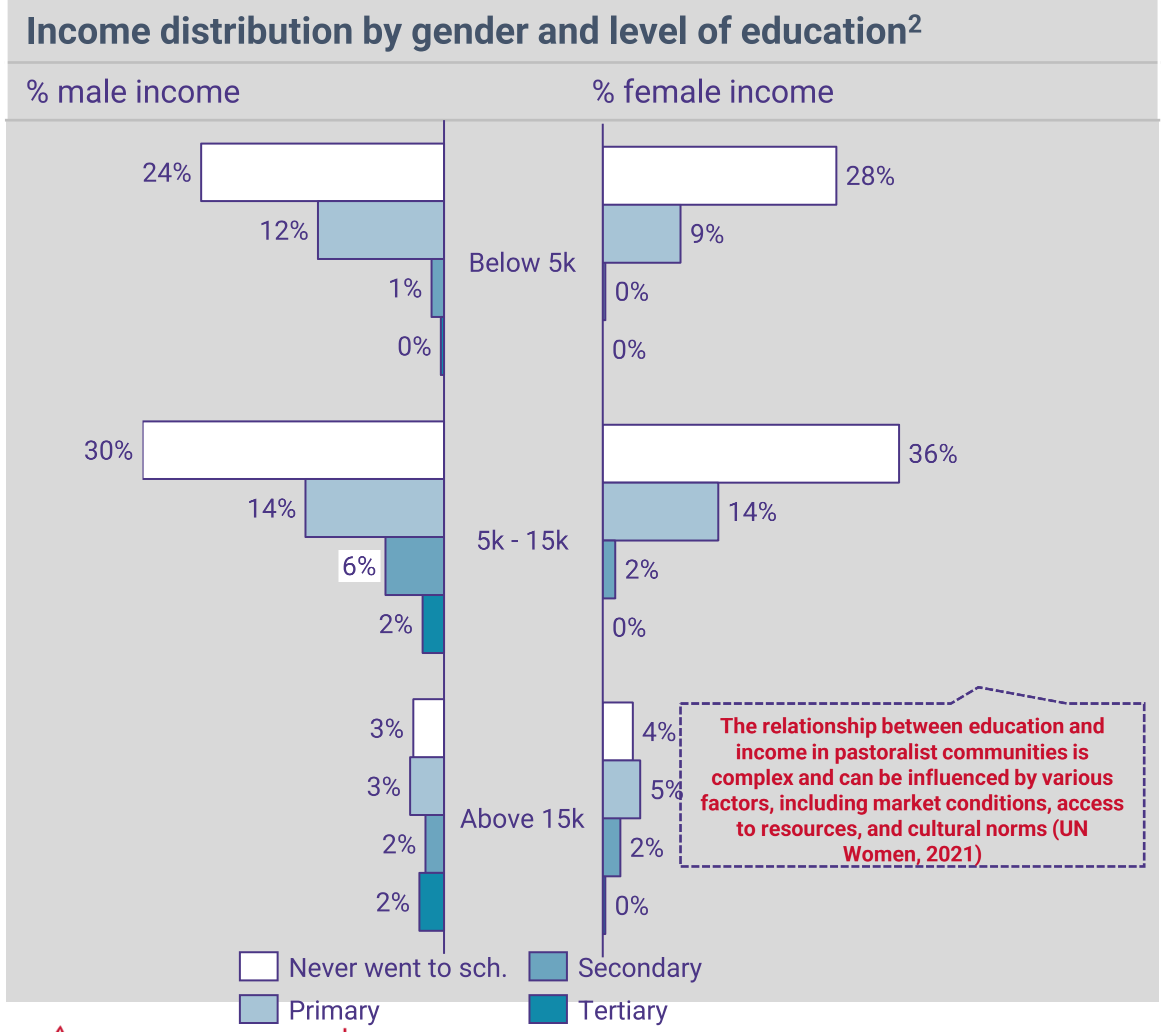
SPARC MERCY CORPS AGRIFIN Dalberg Research

Source; Agrifin accelerate, Benchmark study of smallholder farmers of Kenya, 2015; MercyCorps: Comparative Analysis of Smallholder Farmers in Kenya, Zambia And Tanzania , 2017; Gender productivity differentials among smallholder farmers in Africa, 2015.
Notes: Central counties included Kiambu, Kirinyaga, Murang'a, Nyandarua, Nyeri. Western counties included Bungoma, Busia, Kakamega, Vihiga

Male SHFs earn around double the average income of female SHFs.

Producer





SPARC MERCY CORPS AGRIFIN Dalberg Research

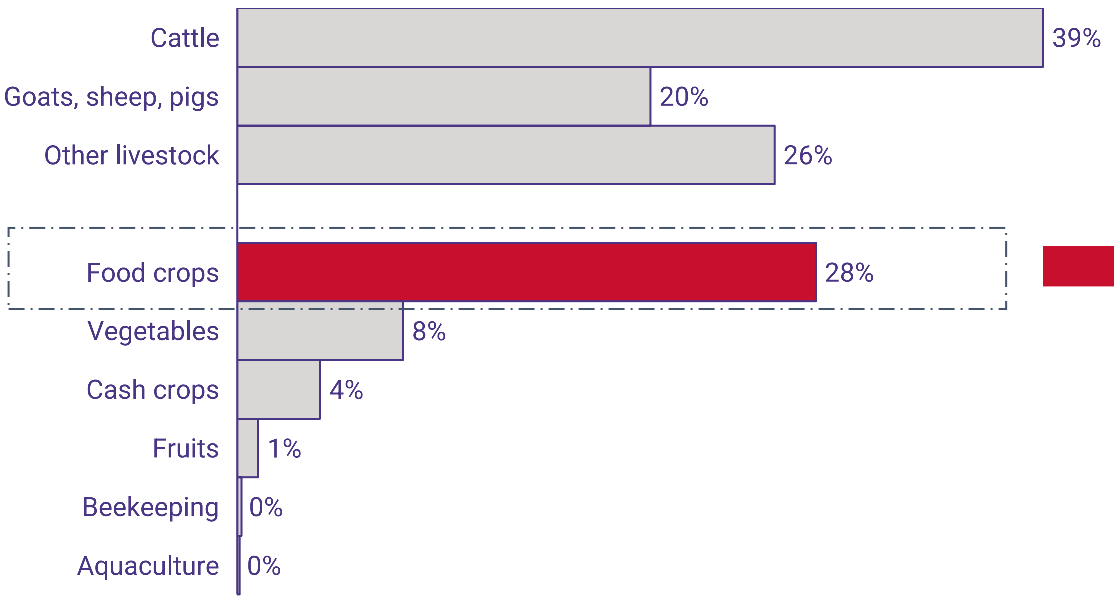
Source; Agrifin accelerate, Benchmark study of smallholder farmers of Kenya, 2015; MercyCorps: Comparative Analysis of Smallholder Farmers in Kenya, Zambia And Tanzania , 2017; Gender productivity differentials among smallholder farmers in Africa, 2015. Notes: Central counties included Kiambu, Kirinyaga, Murang'a, Nyandarua, Nyeri. Western counties included Bungoma, Busia, Kakamega, Vihiga

SHFs are involved in mixed farming with cattle rearing and growing food crops being the most practiced

- Apiculture and aquaculture are the least common value chains among SHFS; this could be attributed to high initial and maintenance costs incurred in setting up the beehives and fish cages/ponds
- Traditional value chains like Sorghum, Millet, Cassava are underdeveloped across multiple SHFs
- SHFs who grow Tea, Coffee and Sugar cane as their primary crops do not intercrop

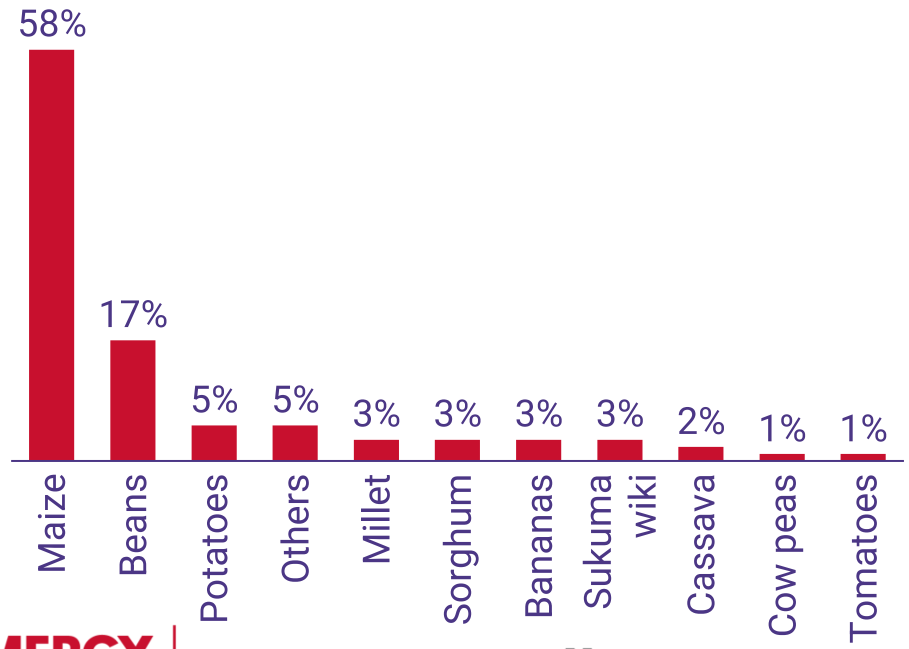
SHFs Value chains (n=2005)

% of the value chains that SHFs are involved in



Food crops cultivated SHFs (n=562)

% of SHFs who cultivate specific food crops



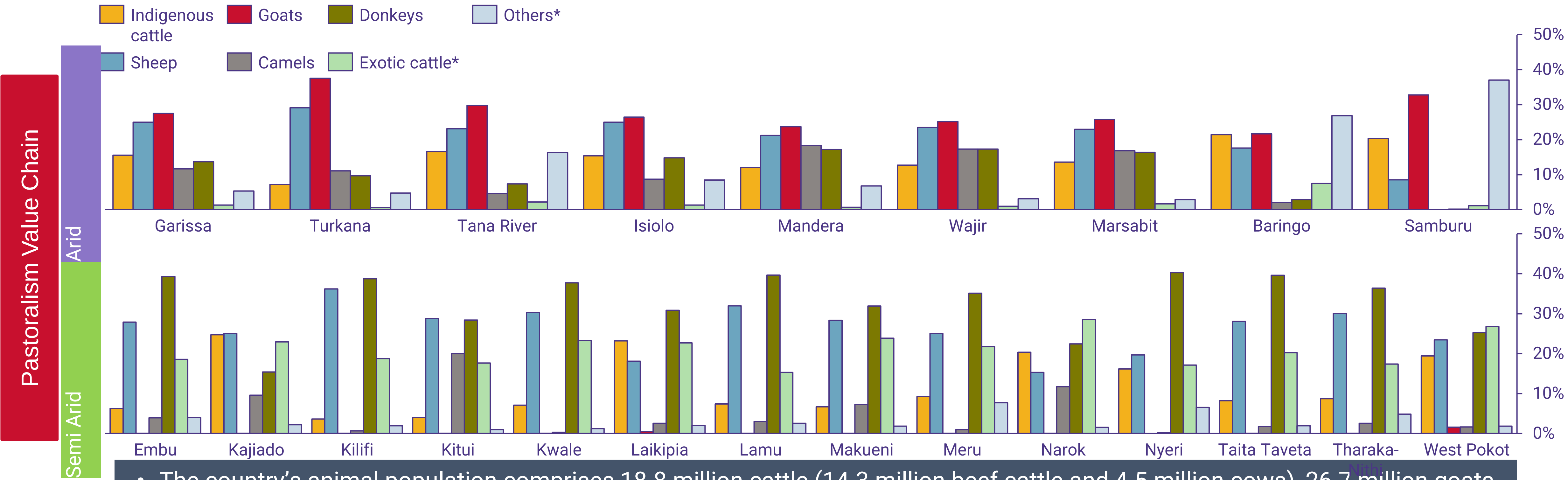
SPARC | MERCY CORPS | AGRIFIN | Dalberg Research

Source; MercyCorps: Comparative Analysis of Smallholder Farmers in Kenya, Zambia And Tanzania , 2017; AgriFin accelerate, Benchmark study of smallholder farmers of Kenya, 2015
Notes; Other livestock includes poultry (chicken, ducks, turkeys and geese); Others include vegetables such as black nightshade (managu), spider plant (sagaa), amaranth.

Cattle, goats, and sheep are the most common value chains among agropastoralist and pastoralist

Distribution of households rearing livestock value chains across arid counties in Kenya

Proportion of households practicing livestock rearing within arid counties by type of livestock



- The country's animal population comprises 18.8 million cattle (14.3 million beef cattle and 4.5 million cows), 26.7 million goats, 18.9 million sheep, 3.2 million camels, 44.6 million poultry, 1.9 million donkeys, 0.5 million pigs.

SPARC MERCY CORPS AGRIFIN Dalberg Research

Source: ILRI Research Report, Kenya Population and Housing Census, 2019
Notes; Exotic cattle include both dairy and beef cattle. Others include exotic chicken layers and broilers and indigenous chicken.

SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

MERCY CORPS | AGRIFIN

Dalberg Research

UKaid from the British people

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

DIGITAL FINANCIAL SERVICES

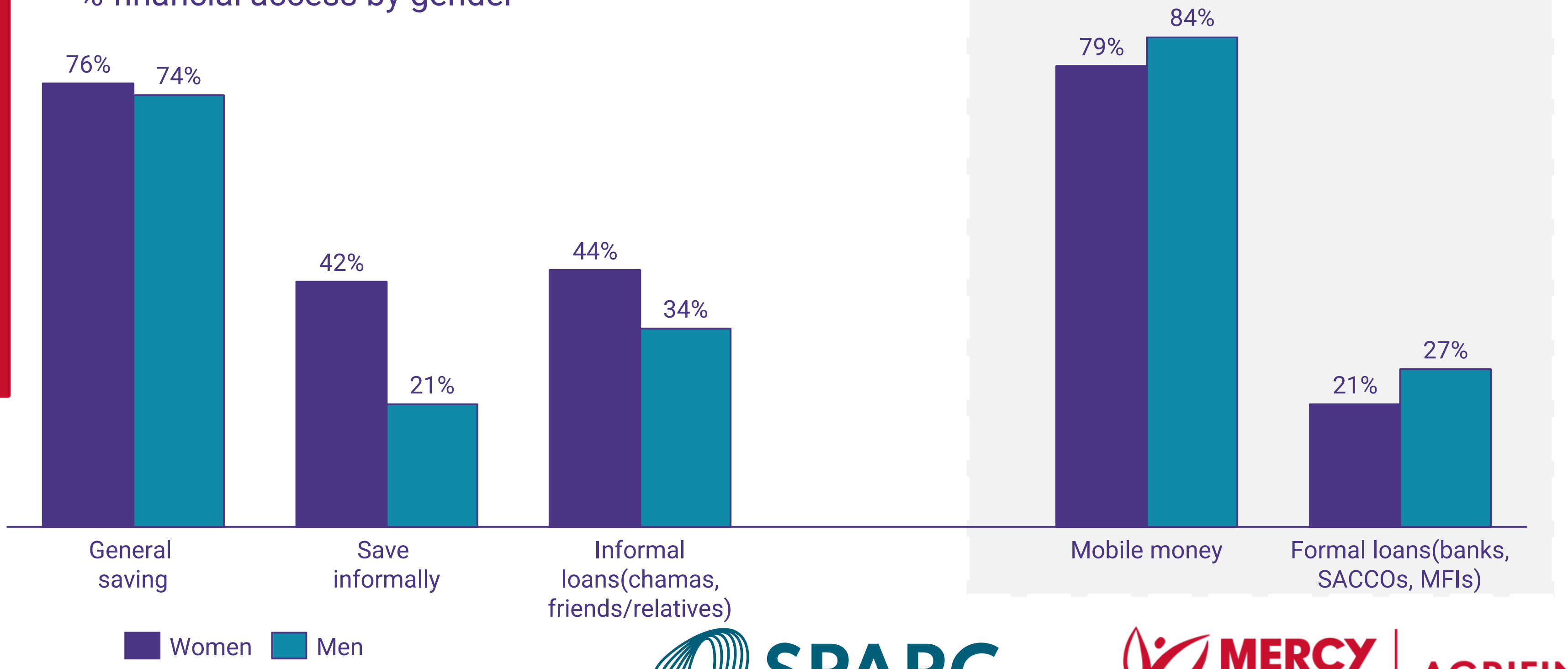
Formal agri-finance access is generally lower among SHF, with limited access for women compared to men

- **Further studies have indicated that , women in rural areas struggle with access to formal funding** for agriculture due to a lack of collateral and limited decision-making power. This forces them to turn to informal finance sources. Men on the flip side have higher access to formal, responsible agri-loans
- Addressing these barriers through initiatives and policies promoting gender equality is important for improving women's access to financial services in agriculture.

Smallholder

Access to finance (n= 5308)

% financial access by gender



Key highlights on financial access

- SHFs women save more than men (76% and 74% respectively)
- More men than women are using formal loans (27% and 21%) unlike informal loans
- SHFs have high access to mobile money (81%) with both women and men accounting for 79% and 84% respectively

SPARC MERCY CORPS AGRIFIN Dalberg Research

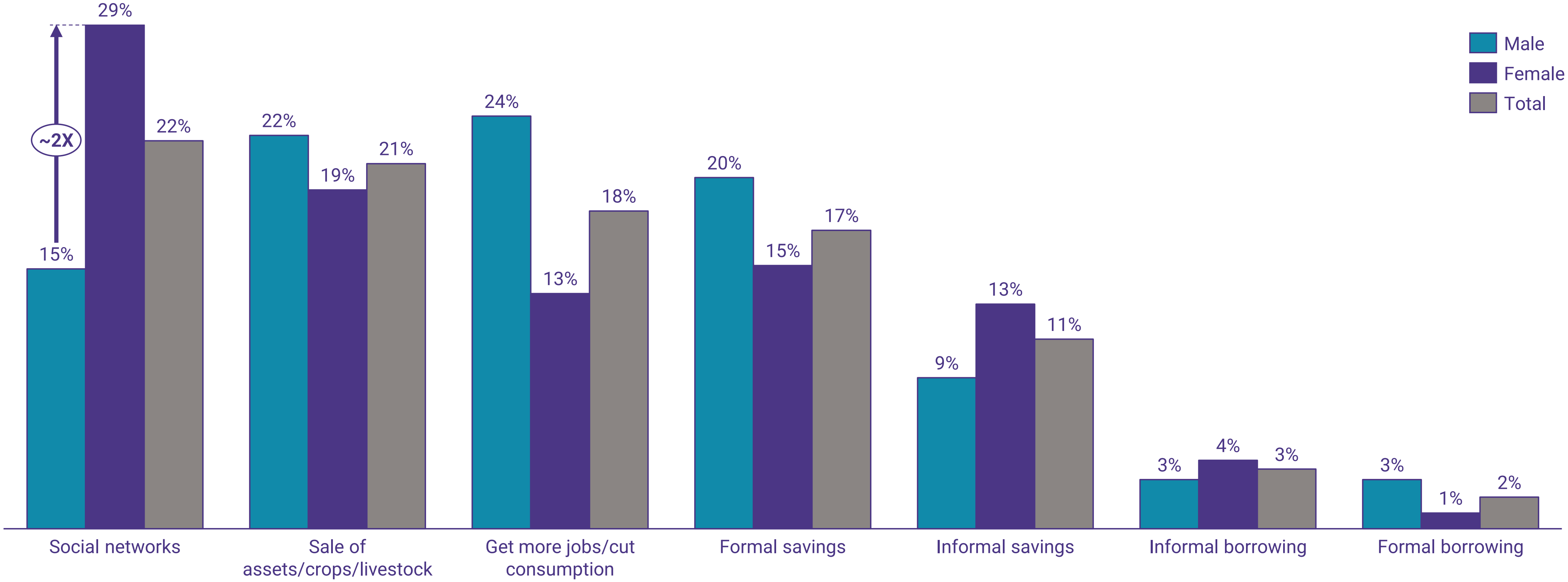
Source: FSD Kenya (FinAccess 2021): Agriculture and Processing Financing Market Analysis , 2022; 1KIPPRA, Women's Access to Agricultural Finance in Kenya: Baseline Report, 2019
Notes: KIPPRA – Kenya Institute of Public Policy Research and Analysis: General saving refer to saving in different channels inclusive social network, ROSCAS, ASCA's, VSLA's

Women are twice as likely as men to secure funds through social networks

Smallholder

Sources of Funds for Financing Agricultural Operations by Gender (n= 5308)

% of SHFs by source of financing



SPARC | MERCY CORPS AGRIFIN | Dalberg Research

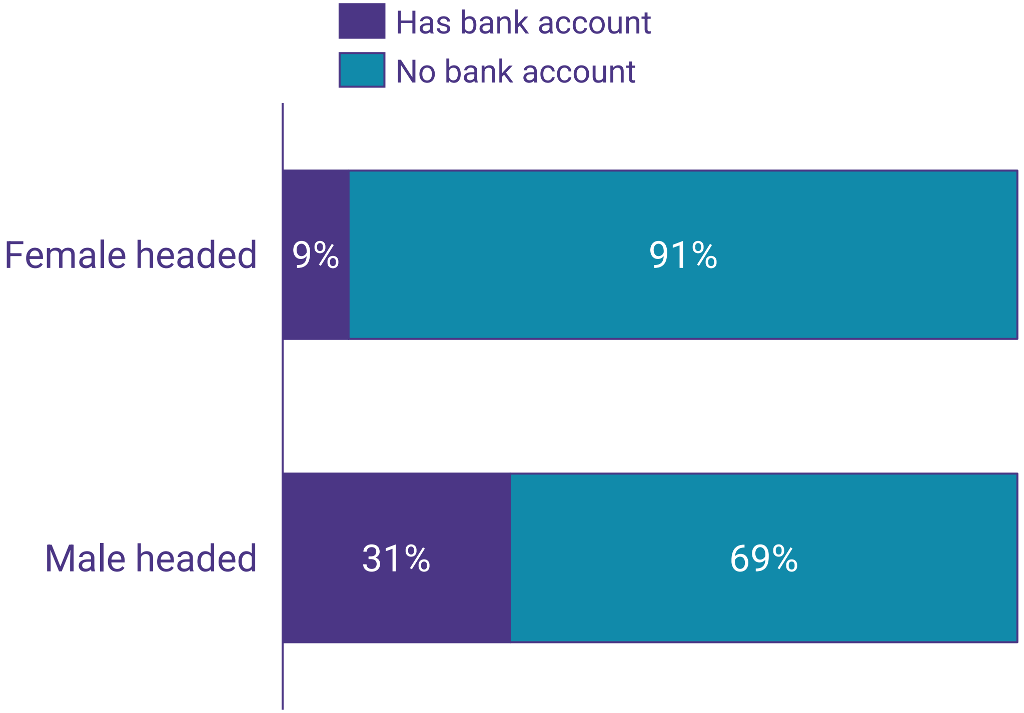
Source: FSD Kenya (FinAccess 2021), Agriculture and Processing Financing Market Analysis , 2022; 1KIPPRA, Women's Access to Agricultural Finance in Kenya: Baseline Report, 2019

Among the pastoralist, more male-headed households own a bank account than their female counterparts

Agropastoralist & Pastoralist

Households with bank accounts

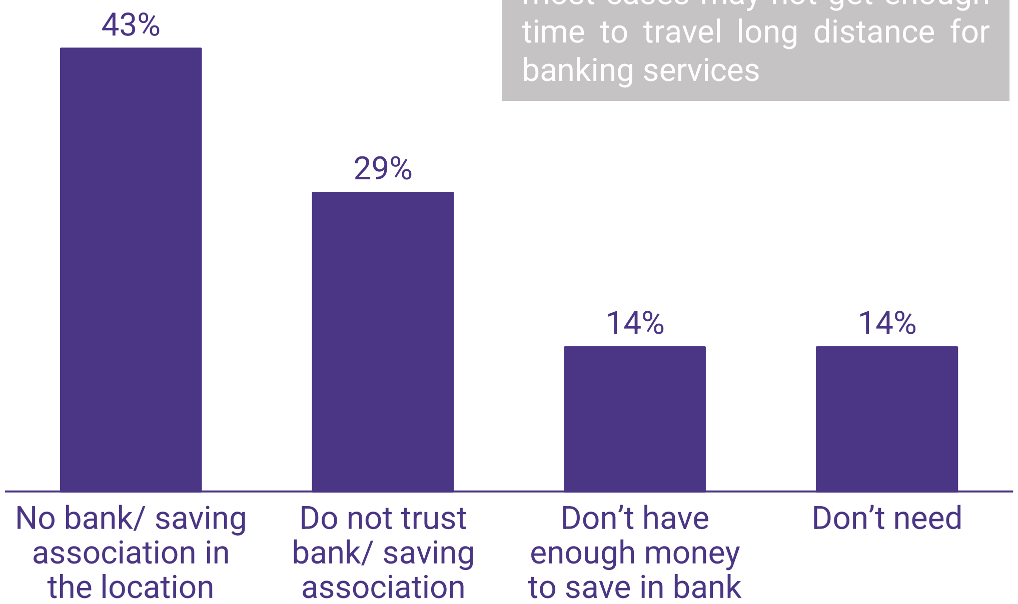
% of households with bank accounts



Reasons for female headed households not saving in banks

% of respondents by r

Some additional studies highlighted that Women have the burden of childbearing and in most cases may not get enough time to travel long distance for banking services



- Majority of the pastoralists feel they don't have adequate money to keep in the bank, lack regular income or unable to afford bank services as well as low literacy levels and thus the reason for being underserved on banking services
- Male headed pastoral households added other reasons for not saving as; it was more costly than other sharia compliant options

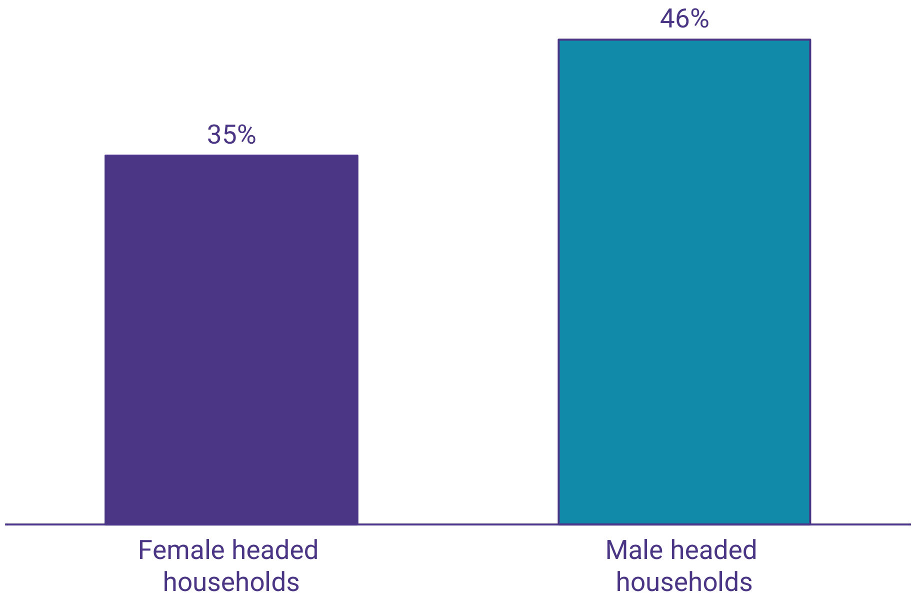
Source: ILRI- De-Risking, Inclusion, And Value Enhancement of Pastoral Economies in the Horn of Africa (DRIVE) Report, 2022; WFP, Humanitarian Aid and Civil Protection, & GoK. (2013). Market Dynamics and Financial Services in Kenya's Arid Lands; IGAD, Stock-Taking and Gap Analysis Study of Financial Products for Pastoral Areas and Linking Pastoralists to Financial Service Providers,2016 –Qualitative analysis, UKaid & CGIAR, 2021 Notes: n = 187, VSLA - Village Savings and Lending Associations

Savings in female and male-headed households is comparable; females prefer MOMO and home savings, while males choose banking

Agropastoralist & Pastoralist

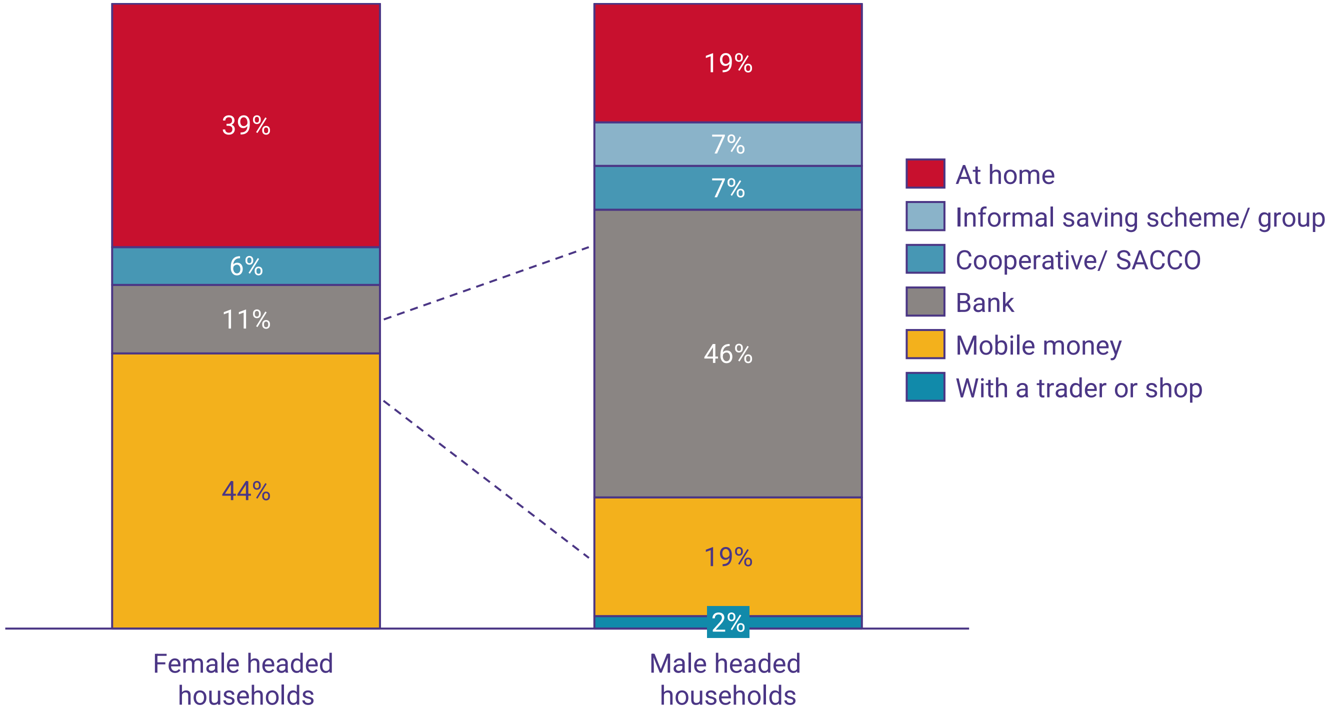
Cash savings by gender of household head

% of households with cash savings



Channels used to save by gender

% of pastoralists using specific saving channel



- Savings through banks is more than 3x among male headed households compared to female headed households. Females were ~2 time saving on mobile money or at home when compared to the males
- Further, results of the study also show that in more than three-quarters of the households that have a bank account, it is registered on a man’s name compared with women.

Source: ILRI- De-Risking, Inclusion, And Value Enhancement of Pastoral Economies in the Horn of Africa (DRIVE) Report; n = 187

SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

MERCY CORPS | AGRIFIN

Dalberg Research

UKaid from the British people

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

DIGITAL INFORMATION SERVICES

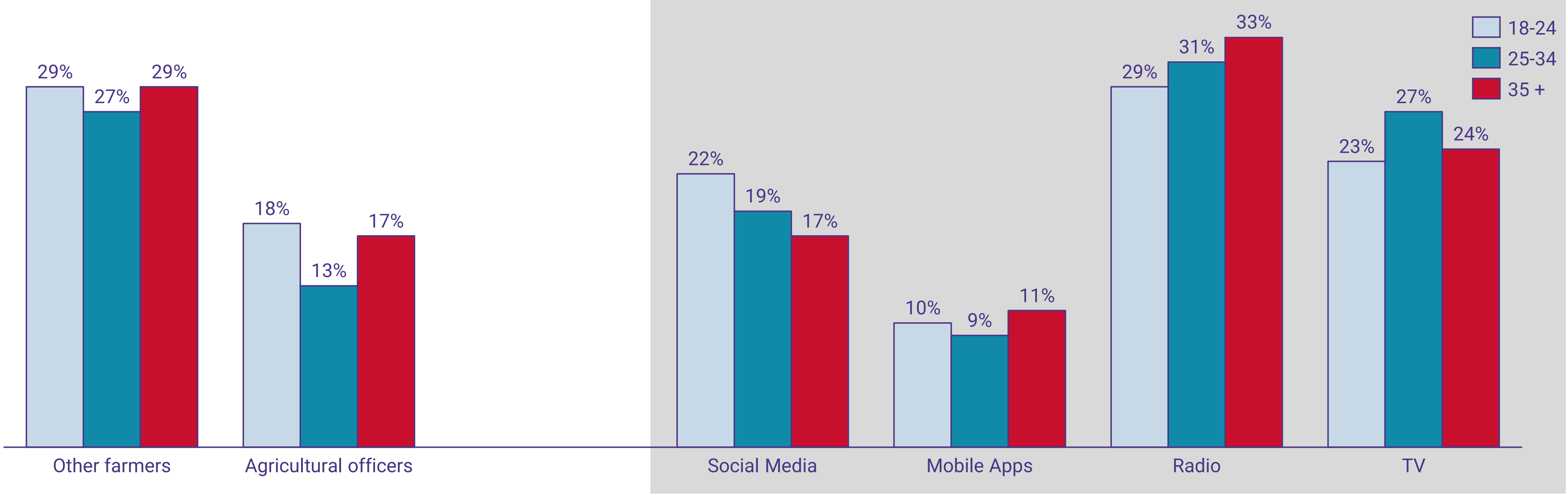
SHFs access agricultural advisory services mostly through low-tech methods

Smallholder

- Mainstream media (TV and radio) is the most prevalent source of information among majority of SHFs[1] and even among the older farmers (35+). This group of farmers tend to feel more comfortable with information rendered by low-tech methods (radio, TV, other farmers and agricultural officers)
- The study further noted that word of mouth (other farmers and agricultural officers) is still commonly used to gather agricultural information by the farmers. The youth are more inclined towards social media whereas the elderly towards low-tech methods

Sources of Agricultural Advice (n=900)

% of SHFs who accessed agricultural advice through digital extension and advisory services



Source: GeoPoll, A study of Kenya's agricultural sector: the effect of mobile technology on farming in modern Kenya, 2018; 1Food and Agriculture Organization of the United Nations (FAO), HEP, 2021-Challenges And Capacity Gaps In Smallholder Access To Digital Extension And Advisory Services In Kenya And Uganda

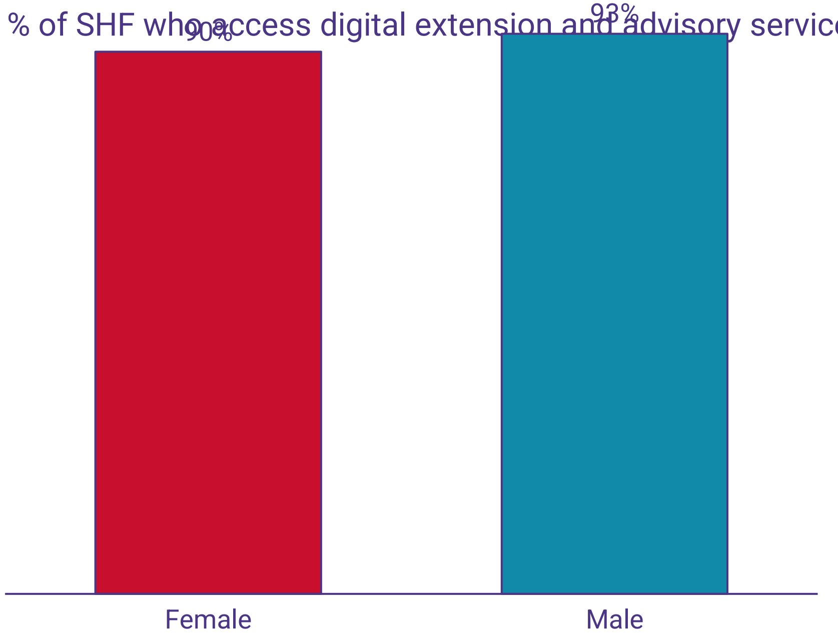
Most of the SHFs have access to digital extension and advisory services; this is mainly through radio, TV and cellphone

Smallholder

- Even though the SHFs have access to digital extension and advisory services, non-digital extension approaches have remained dominant. Integrating face-to-face and digital methods can enhance inclusive scaling of extension services
- Radio commands the dispatch of digital extension and advisory services to the SHFs; this is attributed to the widespread of radio ownership among the SHFs than other digital devices
- Female and elderly farmers are more likely to report challenges associated with farming practices as opposed to their counterparts

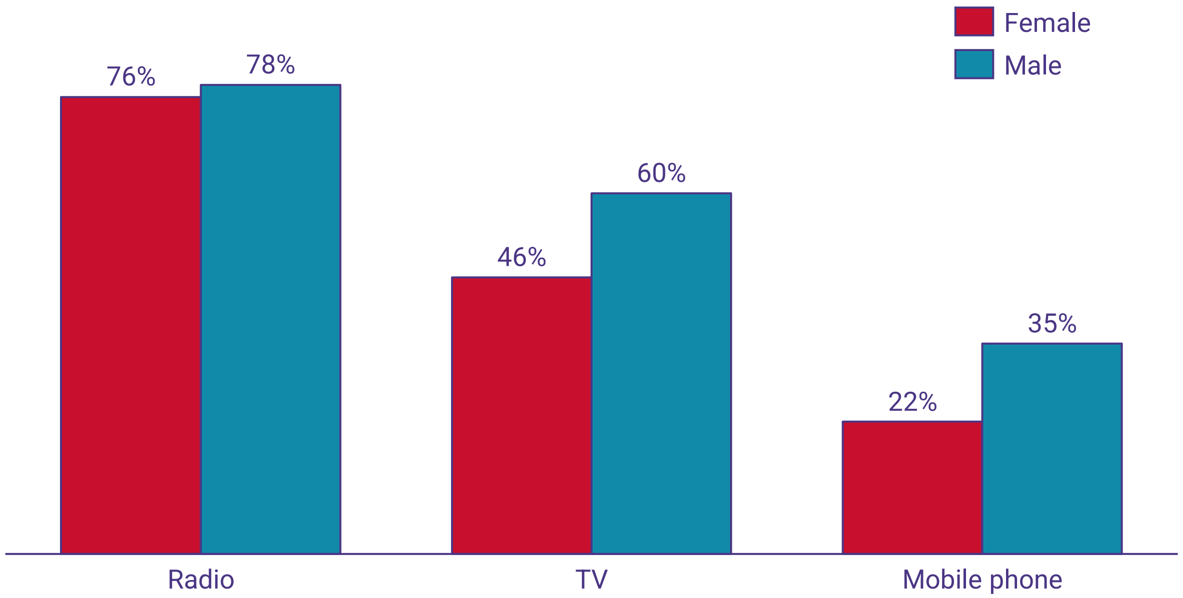
Access to digital extension and advisory services

% of SHF who access digital extension and advisory services



Access to digital extension and advisory services

% channels of extension and advisory services



SPARC MERCY CORPS AGRIFIN Dalberg Research

Source; Food and Agriculture Organization of the United Nations (FAO), HEP, 2021- Challenges And Capacity Gaps In Smallholder Access To Digital Extension and Advisory Services In Kenya And Uganda, n = 436

The influence of extension officers on information accessed by SHF’s in inputs cannot be underrated

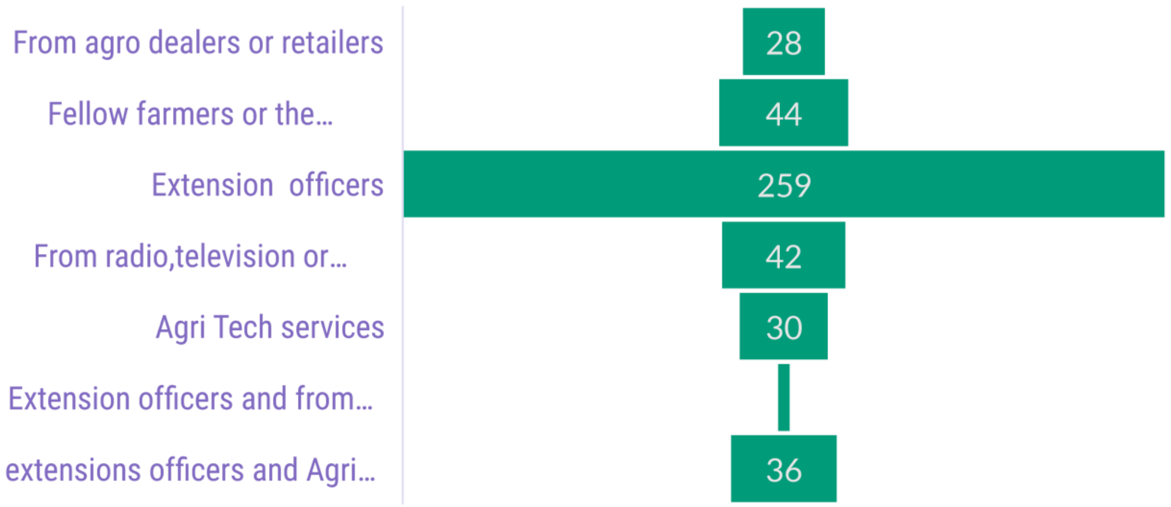
Farmers’ information sources for the choice and amount of inputs is based on trust and familiarity with other stakeholders

Smallholder

Farmers noted that they can get the information on best farming practices from the following sources

- Extension officers advise farmers on the best variety of seeds to plant for their region and how to tend to them.
- Farmers also cited self-experience from previous seasons and observation of other successful farmers as sources of reliable information to choose inputs.
- Agri techs were cited as a source of farming news and farming tips by 9.2% of the farmers interviewed.
- Most farmers admitted to knowing the right quality and quantity of input even when they did not manage to use them due to economic constraints.

Sources of information about inputs



Implication

AgriTech need to leverage the influence of extension officers to promote their services.

One of the agro-dealers was quoted saying, *“Once the farmers have been advised by the extension officers it is very hard to change their mind”.*

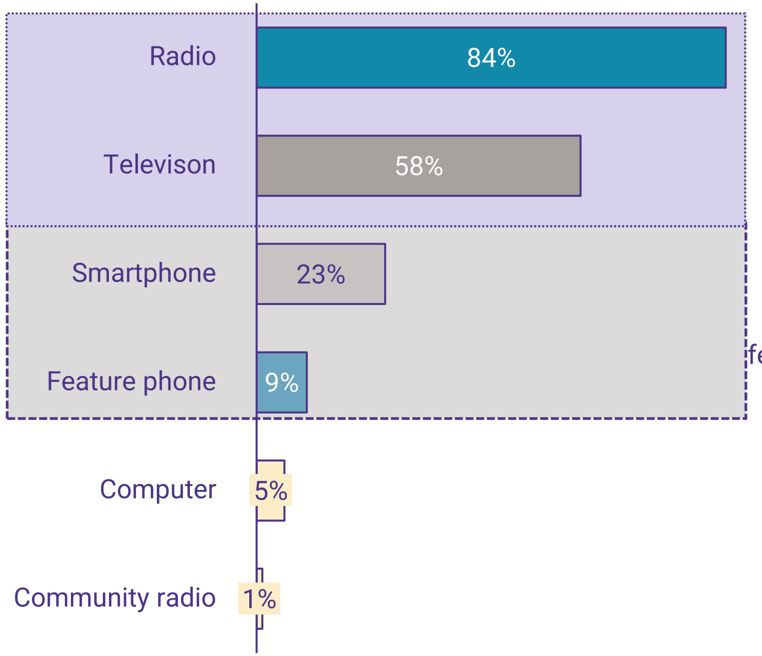
SPARC MERCY CORPS AGRIFIN Dalberg Research

Radio is the most prevalent digital device used by SHFs to access agricultural advice

Smallholder

Sources of Agricultural Advice

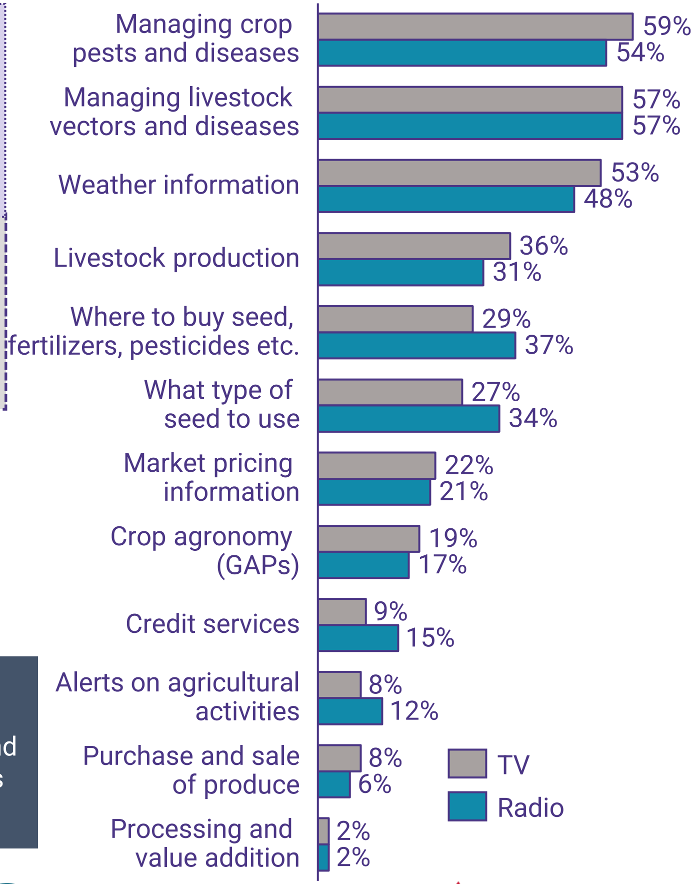
% of SHFs who accessed agricultural advice through digital extension and devices

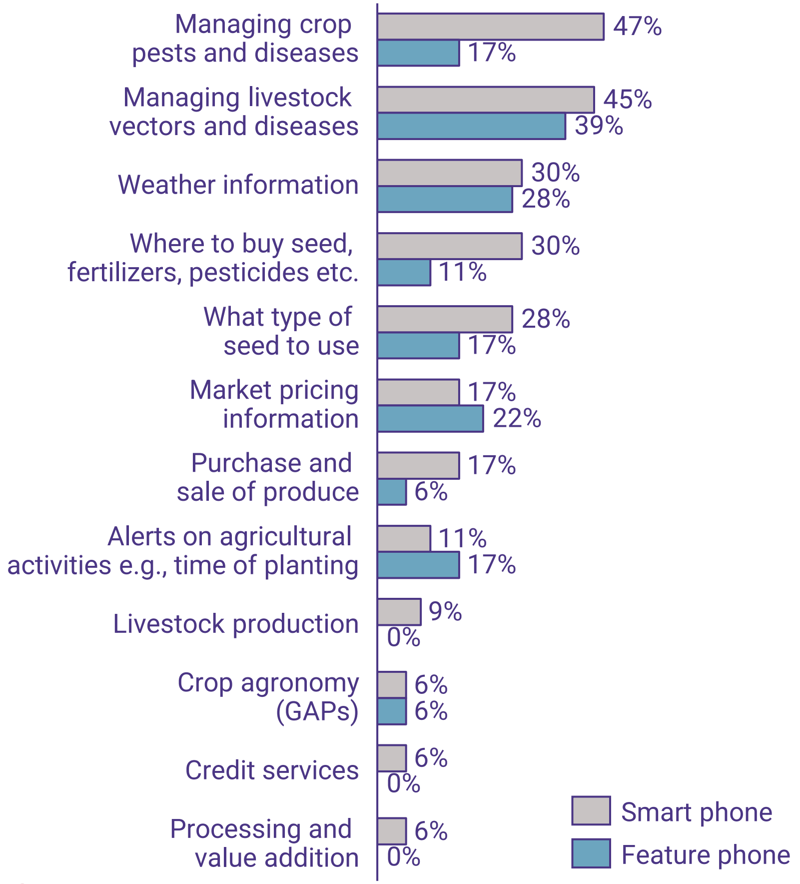


There are numerous agricultural programmes aired by television stations in Kenya. They include Kilimo Biashara on K24 TV, Shamba Shape Up (SSU) on Citizen TV, Seeds of Gold on NTV and Global Farming on Kass TV. Seeds of Gold that is aired by NTV is produced in conjunction with Egerton University.

Type of information that SHFs sought - by TV/Radio - by phone

% of SHFs who seek specific type of agricultural information





Source; Food and Agriculture Organization of the United Nations (FAO), HEP, 2021- Challenges And Capacity Gaps In Smallholder Access To Digital Extension And Advisory Services In Kenya And Uganda, International Journal of language and linguistics; Role of Television in Communicating Agricultural Information: the Case of Citizen Television's Shamba Shape up Programme in Kenya

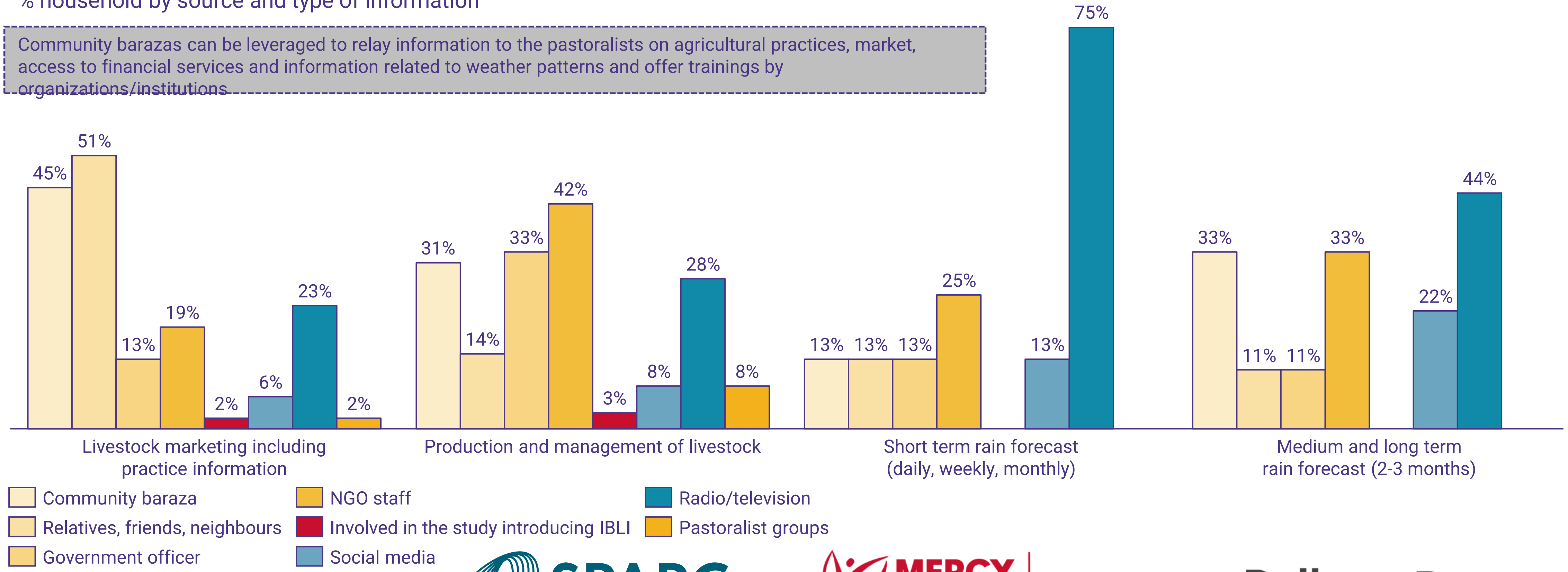
Various sources of information on livestock are available although Radio/TV and traditional methods are the

- Pastoral households primarily access information about livestock marketing through their social network of relatives and friends and community gatherings, while weather forecasts are mainly obtained from radio and television broadcasts.

Sources of information by pastoralist households

% household by source and type of information

Community barazas can be leveraged to relay information to the pastoralists on agricultural practices, market, access to financial services and information related to weather patterns and offer trainings by organizations/institutions



Source: ILRI- De-Risking, Inclusion, And Value Enhancement of Pastoral Economies in the Horn of Africa (DRIVE) Report; African Research and Economic Development Consultants (AFREDEC), 2022. ILRI, USAID Kenya Accelerated Value Chain Development Program (AVCD)-Livestock component, Analysis of livestock and fodder value chains in arid and semi-arid lands in Kenya, 2018; ILRI, CGIAR,CTA, Exploring pastoralists' demand for information and channels for its effective delivery, 2018.

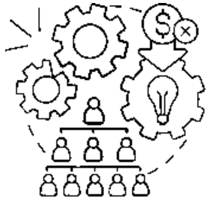
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

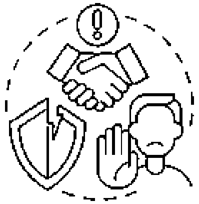
CHALLENGES AND OPPORTUNITIES IN DIS AND DFS ADOPTION

Producers in Kenya face various factors that hinder the adoption and utilization of DIS/DFS including infrastructural and capacity

Lack of digital literacy and technical skills: Although SHF have better education, many agropastoralits pastoralists lack basic digital literacy and technical skills, which hinder their ability to use and fully utilize digital financial services.

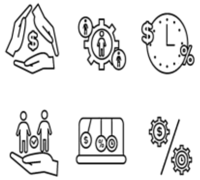


Limited access to digital infrastructure: Many rural and remote areas, lack reliable and affordable access to digital infrastructure, such as internet connectivity, power, and mobile devices.



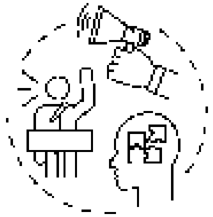
Lack of trust and understanding of digital financial services: Many pastoralists and agro-pastoralists are not familiar with digital financial services and may have limited understanding of their benefits and risks. This lack of trust and understanding can limit their willingness to use these services.

Perceptions, socio-cultural and gender barriers: Socio-cultural and gender norms in pastoralist communities may discourage women and other marginalized groups from accessing and using digital financial services.



Lack of relevant and tailored products and services: Undeveloped products taking care of sharia compliance are available in the market among pastoralists, flexible payment plan on loans based on maturity period of crop among others

High costs of digital financial services: The costs associated with digital financial services, including transaction fees and the cost of digital devices e.g., smartphone. And airtime to buy bundles



Insufficient awareness and outreach: There is often a limited awareness and outreach efforts by providers and regulators to educate pastoralists and agro-pastoralists about digital financial services, their benefits, and how to use them effectively.

Language barrier: Many pastoralists speak indigenous languages, but information is often only available in English or Swahili, making it difficult for them to access relevant information and services

SPARC MERCY CORPS | AGRIFIN Dalberg Research

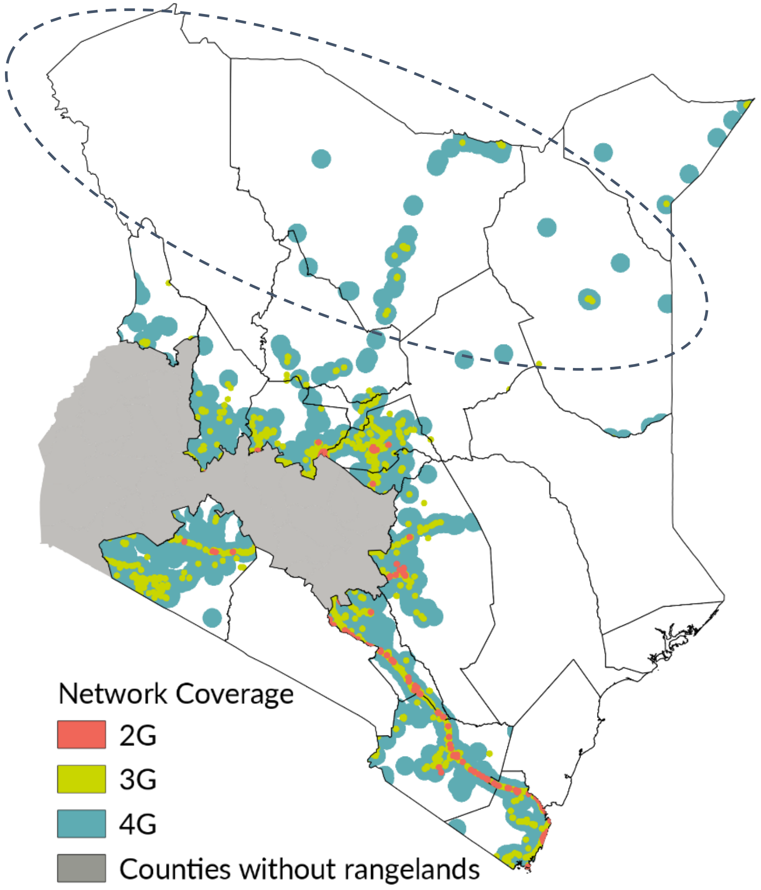
Source; International Food Policy Research Institute (IFPRI), Annual Report, 2019; United Nations Capital Development Fund (UNCDF), Regulating the Use of Digital Financial Service Agents in Developing Countries,2015; World Bank, Kenya Economic Update, 2020; Bett, Information and Communications Technologies (ICTs) and Livelihoods Enhancement in Agro-Pastoral Communities in Kenya, 2022; Mugo et al. Pastoralists and digital information access: An exploratory study from northern Kenya, 2019.

Pastoral counties in northern and eastern Kenya, have poor infrastructure to support cell phone and internet utilization

Agropastoralist & Pastoralist

Network coverage

Coverage by type network



Digital penetration in counties dominantly rearing livestock

Proportion of internet use and mobile ownership among livestock keeping households

SPARC | MERCY CORPS | AGRIFIN | Dalberg Research

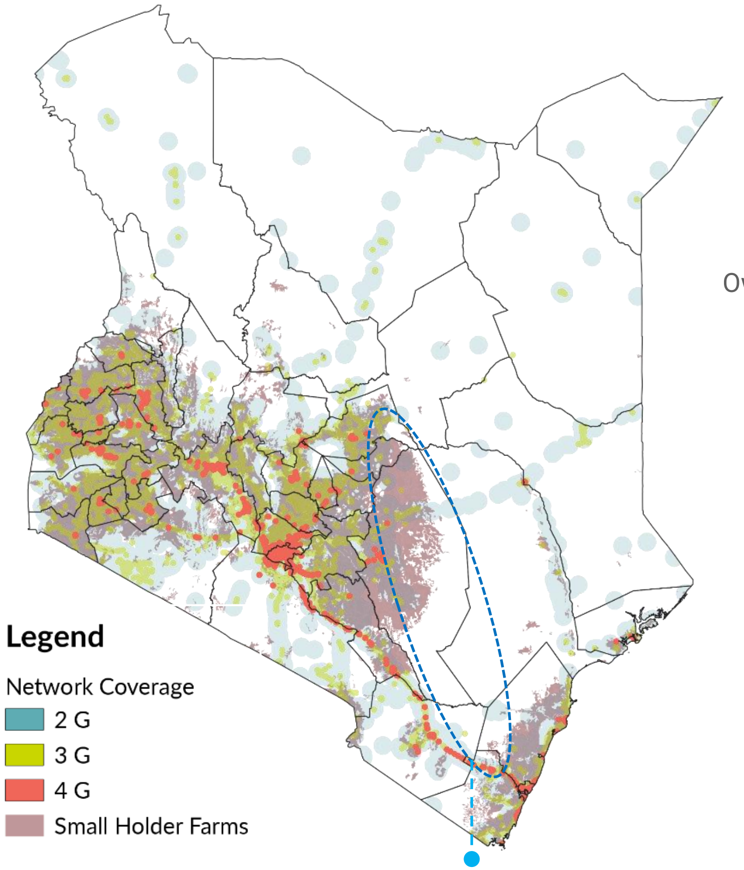
Source: GSMA, Kenya National Bureau of Statistics, 2019 and LOCAN Analysis
Livestock rearing counties selected based on:- P176517-DRIVE-Project-Kenya-Environmental-and-Social-Management-Framework-ESMF-July-13-2022, page 14

Network coverage among Smallholder counties is well distributed except for the lower eastern regions

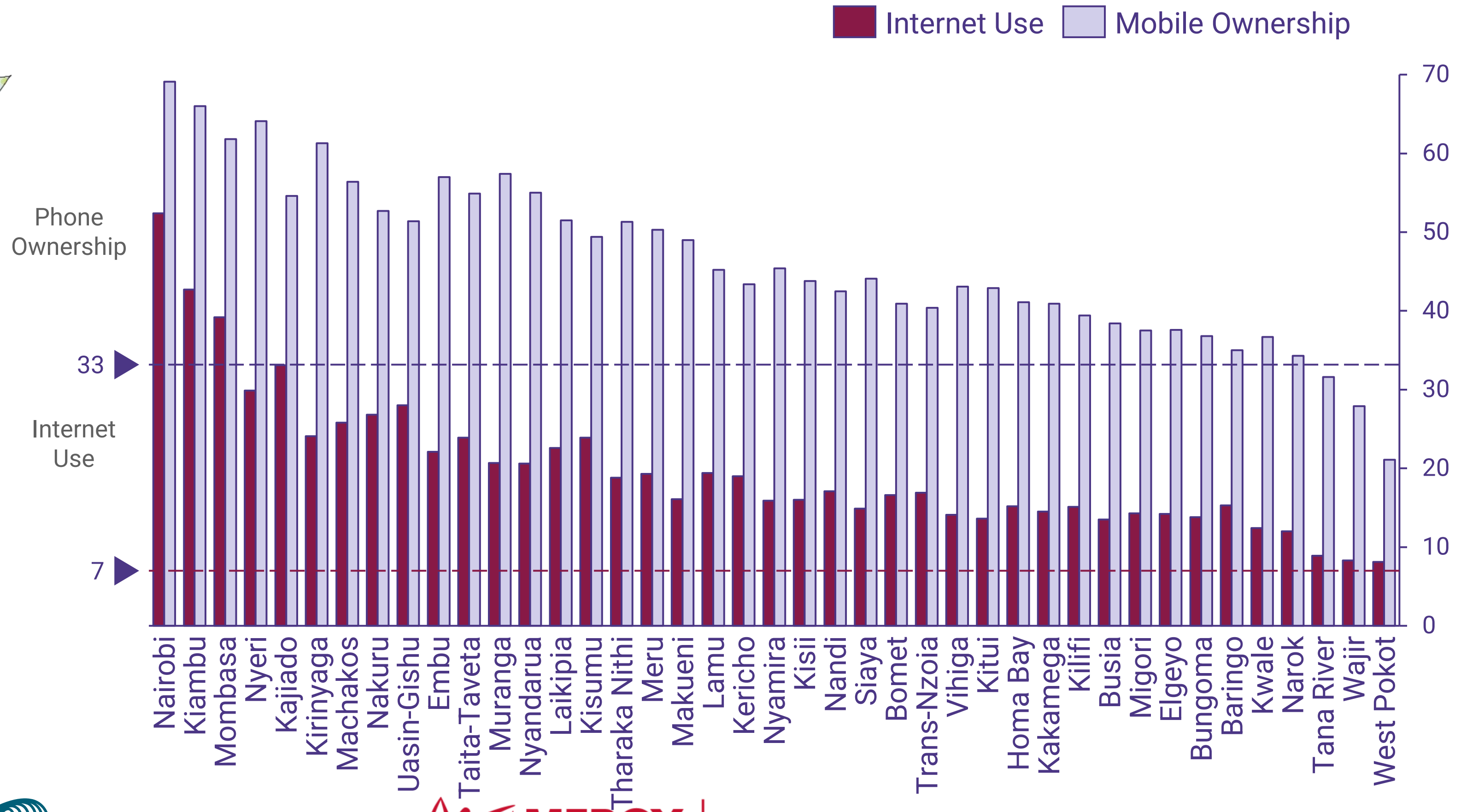
Smallholder

Network coverage among SHFs, 2021

Coverage by type



Level of digital penetration



SPARC MERCY CORPS AGRIFIN Dalberg Research

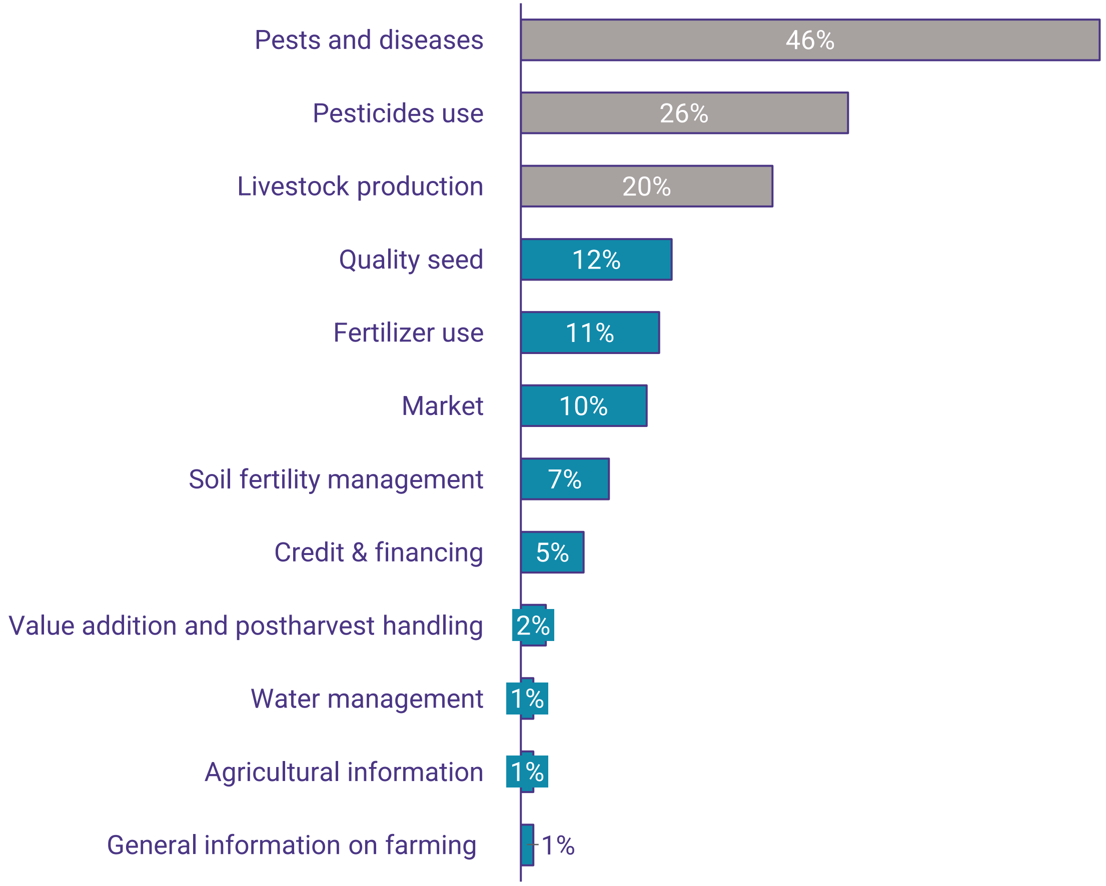
Source: Malaria Atlas Project, Open Street Maps and GSMA

While crop pest and disease management information was highly sought after, nearly half of SHFs identified information gaps

Smallholder

Difficult information to be accessed by SHFs

% of SHFs by type of information



Information gaps

Markets: information on market prices, how to access markets and where to get good markets

Fertilizer use: safe use of fertilizers, where to get affordable fertilizers, application rates, effective/recommended fertilizers, how to obtain subsidized fertilizers, how to make organic fertilizers and the types of fertilizer to use on different crops

Credit facilities: how/where to access credit facilities

Quality seed: best type of seed to grow in their area, where to obtain quality/certified seed, information on quality/certified seed, how to distinguish quality seed from 'fake' seed and best cultivars to plant

Soil fertility management: soil pH testing services, how to increase soil fertility, best soils for different crops and advice on soil conservation

Value addition: how to do value addition and processing of milk and fruits and postharvest storage

Water management: who can help in installation of piped water and how to deal with too much rainwater

General information on farming: landscaping, how to practice crop rotation, how to do organic farming, increasing production, spacing, how to increase yields, and weather

SPARC MERCY CORPS AGRIFIN Dalberg Research

Source; Food and Agriculture Organization of the United Nations (FAO), HEP, 2021 - Challenges And Capacity Gaps In Smallholder Access To Digital Extension And Advisory Services In Kenya And Uganda

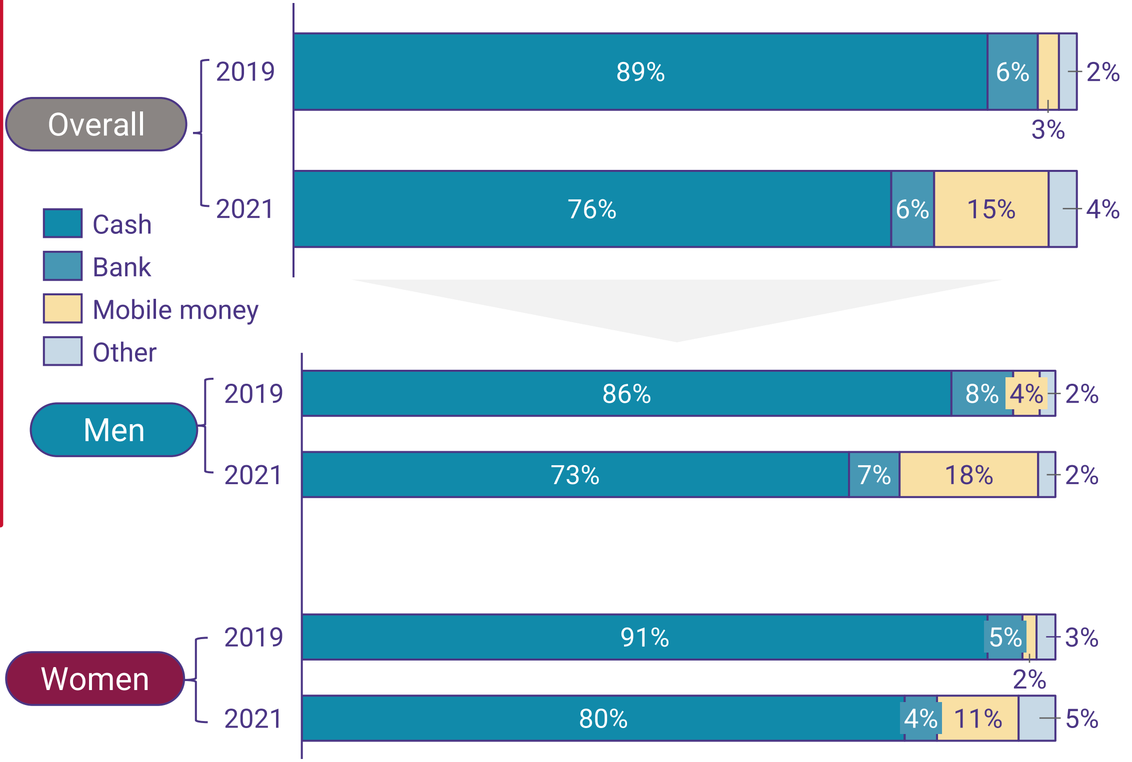
Opportunities

Among SHFs, utilization of mobile money grew by more than 2x between 2019 and 2021

- Cash payments deny farmers and agricultural produce buyers the opportunity to generate bankable data that can support FSPs in their credit underwriting.

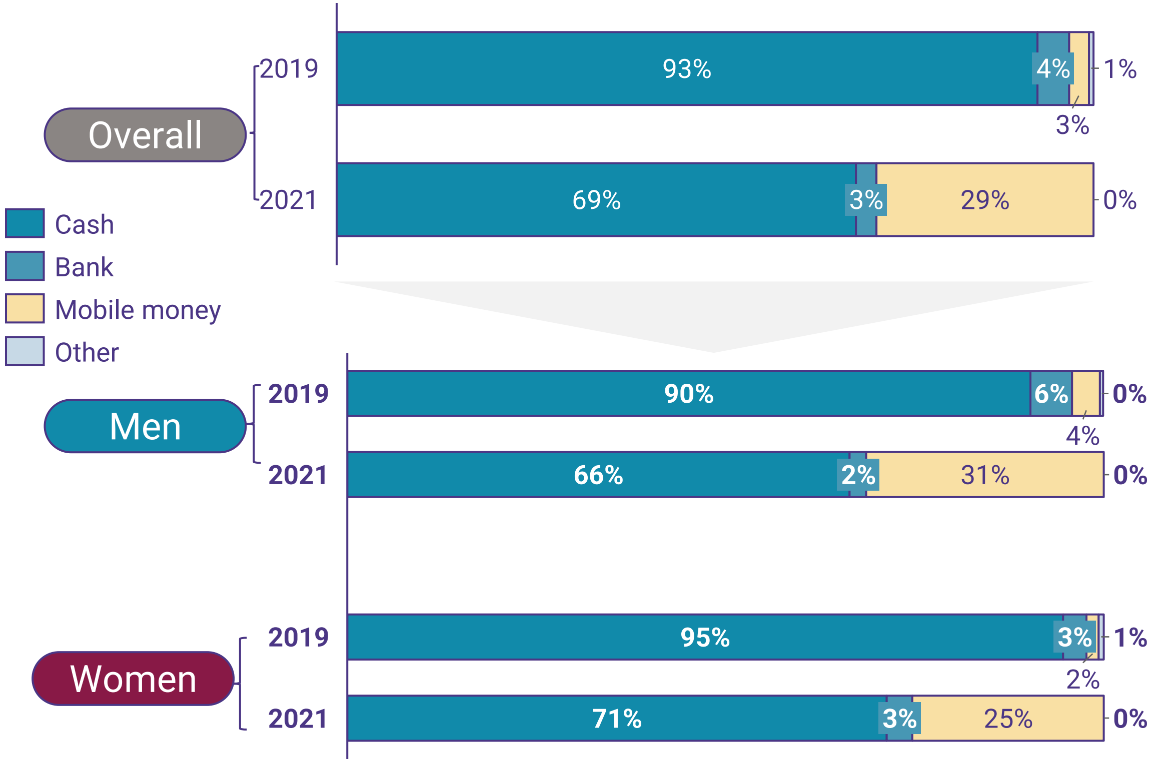
Mobile money usage to receive farm related payments

% SHFs who use mobile money to receive farm related payments



Mobile money usage to make farm related payments

% SHFs who use mobile money to make farm related payments



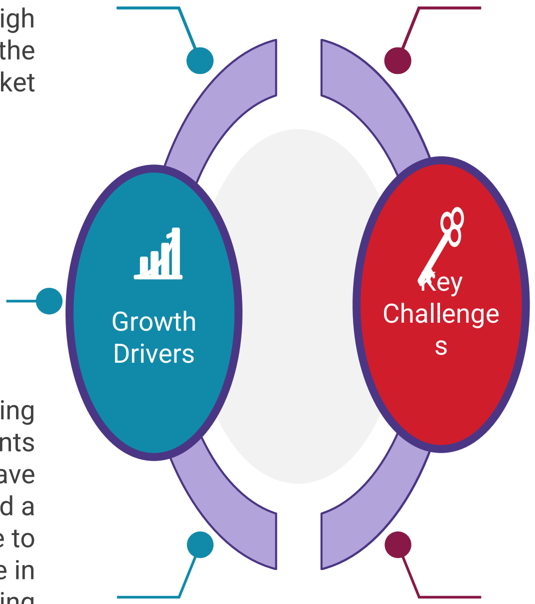
Source; FSD, Agriculture-and-Processing-Financing-Market-Analysis (2021).
Notes; The payments mentioned are on how SHFs agricultural households receive farm related payments

Globally according to Fintech report 2016, some of key market growth drivers and challenges of DFS are …

High influx in the usage of Mobile devices has injected high growth into the market

Major players of the market investing in RegTech to comply with high expenses

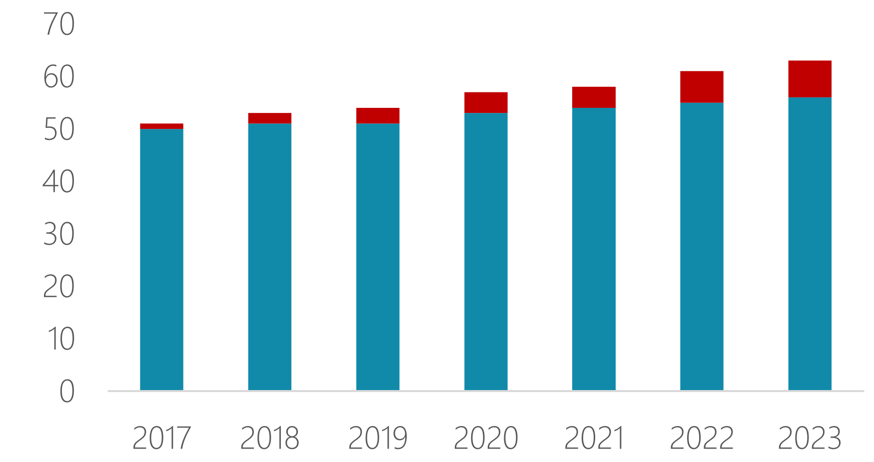
Online trading and E-payments have experienced a boom due to increase in online trading activates



High risk of Cybercrime due to majority of transaction taking place online has exposed Smallholder farmers to online fraud and sensitive data leak

Lower physical engagement of smallholder farmers with companies can increase the level of customer attrition

DFS Industry Market Trends Forecast



Major Highlights and Projections

- Digital Commerce
- Mobile POS Payments

SPARC | MERCY CORPS | AGRIFIN | Dalberg Research

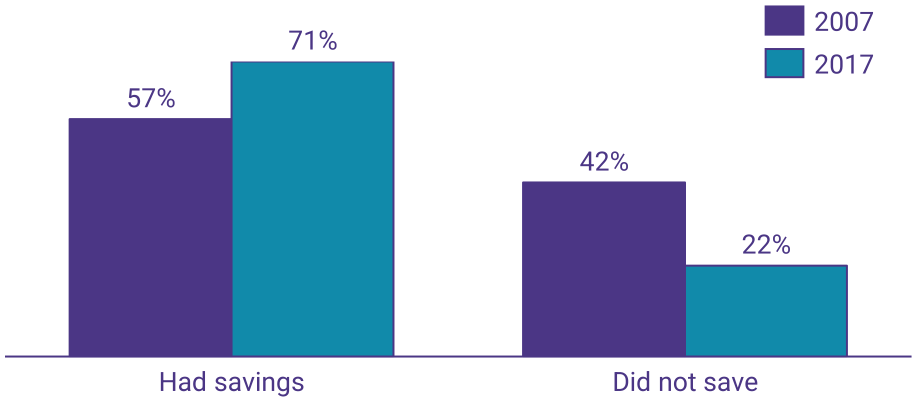
Source: Fintech report, 2016

A case study conducted between 2007-2017 among agro-pastoral households showed improved savings upon financial training

Case Study
West Pokot

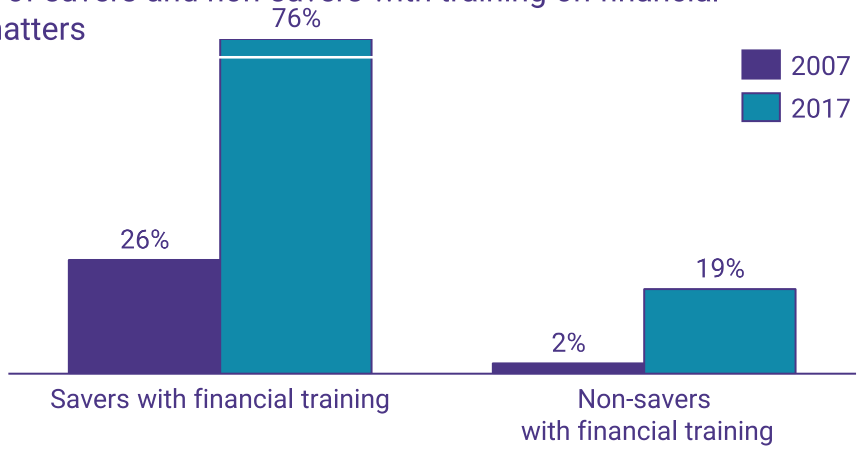
Household savings

% household savings



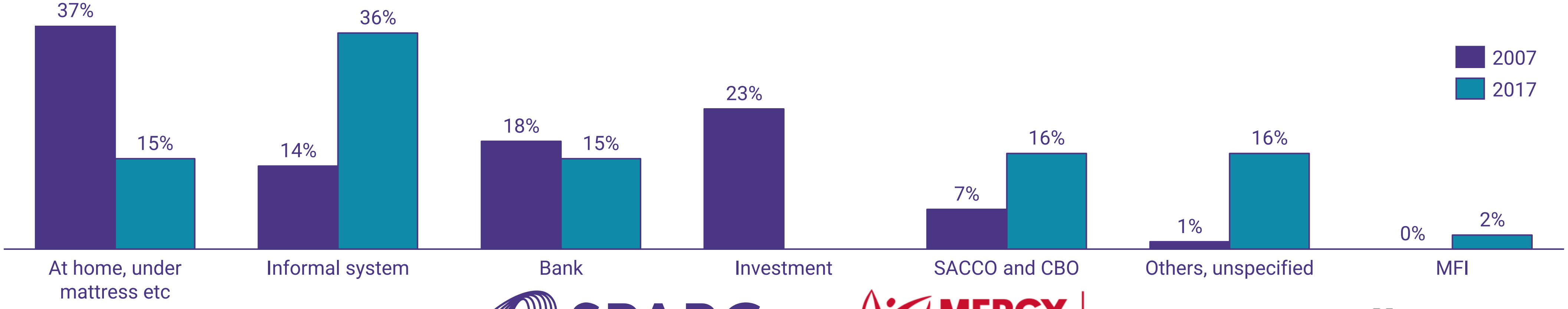
Saving with training on financial matters

% of savers and non-savers with training on financial matters



Household saving channels in West Pokot

% household saving channels



SPARC MERCY CORPS AGRIFIN Dalberg Research

Source; Bostedt et al., Saving and borrowing behavior among agro-pastoralists in West Pokot County, Kenya, 2021. Panel data by NGO Vi Agroforestry between 2007 and 2017. Note: Training is offered by some financial institutions. The question had a 3rd answer option as “No answer”, Informal - (merry-go-round, table banking, VSL etc.), VSL- Village saving and lending; n= 310

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

This material has been funded by UK aid from the UK government; however the views expressed do not necessarily reflect the UK government's official policies.

GAP ANALYSIS

The literature research and data analysis surfaces the following gaps

Theme	Identified Gaps
Digital Financial Service	• Despite the growth of digital financial services in Kenya, there is limited data on the financial behavior and practices of producers especially in the most remote areas. • There is limited information that quantifies the amounts in saving, borrowed, requested and granted loans and utility of funds across gender, age or education levels among the producers • There is limited research on the experiences and needs of smallholder farmers from underrepresented communities, including women and marginalized groups, which limits our understanding of the challenges they face in accessing financial service • While there is some evidence that DFS and DIS can improve the livelihoods of smallholder farmers, there is limited research on the long-term impact of these services. • There is limited quantitative studies on cyber security concerns among farmers which can reduce perceived risks and lack of confidence on digital systems

SPARC MERCY CORPS AGRIFIN Dalberg Research

The literature research and data analysis surfaces the following gaps cont.’

Theme	Identified Gaps
Digital Information Services	• Information on how producers have been able to use information accessed to solve problems like disaster preparedness is limited • Digital Literacy: Many producers, especially the older farmers or those with limited education, may have low levels of digital literacy. This can make it difficult for them to navigate digital platforms, access online information, and fully utilize digital tools and resources. • Language and content packaging: As the producers have lower education and literacy, not much effort is in place to understand how much influence tailored products that fits local language and context can blend with digital content sharing • Most of the literature and datasets available do not uniquely identify agro-pastoralists as a key segment across all themes hence proper classification is required during data collection and analysis. • Most studies on pastoralism was structured on case studies as opposed to representative sample or a census

SPARC MERCY CORPS AGRIFIN Dalberg Research