

2022

AgriFin Digital Farmer II



REPORT

Developing Smallholder Farmer Resilience in the Face of Global Issues

COPE. ADAPT. THRIVE

› 6th Annual Learning Event

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REFLECTIONS

The 6th Mercy Corps AgriFin Annual Learning Event (ALE) identified different learning opportunities and solutions with the aim of helping farmers cope, adapt and thrive amidst numerous stressors caused by environmental and economic shocks. Recommendations were identified through discussions on how partnerships between private sector, development finance institutions, governments and donors can coordinate on institutional and global public good investments. Taking advantage of collective action and maximizing investment resources through **coordinated support for the vibrant ecosystem of local innovators** addressing local challenges to develop smallholder farmer resilience in the face of global issues was identified as an emerging solution.

Through the event's sessions, participants identified cross cutting hurdles. These were:

- 1** *Major gaps in smallholder farmer access to services.*
- 2** *Presence of a persisting gender gap regarding access to digital tools.*
- 3** *Climate change: This has led to a disruption of farming systems, erratic weather which in turn affects farmer resiliency.*

These hurdles affect access to services and are key considerations to innovators when solving farmer challenges. In order to promote enhanced sustainability, solutions need to be to consider cost, literacy, safety, coupled with designs and deployment mechanisms that work for women. Application of these and other learnings was highly encouraged throughout the event.

“

For Mercy Corps and partners, there's an opportunity to translate lessons learned to country programs and projects.

Sean Granville-Ross Africa Regional Director, Mercy Corps



The following report provides a synopsis of the day's events and is structured into six sections each addressing a conference session, reporting the discussions that took place, and tying in learning opportunities and solutions, all focussed on the event's theme of developing smallholder farmer resilience in the face of global issues.

CHAPTER ONE

**6th Mercy Corps AgriFin ALE Theme:
DEVELOP THE RESILIENCE OF
SMALLHOLDER FARMERS IN THE
FACE OF GLOBAL ISSUES**

400+
participants from the private and public sectors, financial institutions and scientific and donor organizations across the region and beyond

INTRODUCTION

MercyCorps Agrifin, hosts the ALE with the aim of bringing together stakeholders in the agricultural sector who are focused on leveraging digital technology, to drive the sector's growth, and improve the lives of smallholder farmers.

Smallholder farmers in Africa are affected by multiple stressors and shocks that negatively disrupt farming systems and consequently threaten farmers livelihoods. These stressors are caused by environmental and economic shocks. Economic shocks include those caused by conflicts that lead to failing agricultural markets. Environmental shocks include the effects of climate change that lead to proliferation of disease incidences and pest infestation, such as the 2019 - 2021 desert locust invasion, droughts and floods. In addition, smallholder farmers are heavily affected by pandemics such as Covid-19. The booming digital technology era provides a viable way to build farmers' resilience to cope with the shocks. Through forums such as the ALE, Mercy Corps AgriFin provides a critical platform for stakeholders in the agriculture ecosystem to learn through experience, share tested digital technologies and practices that strengthen the resilience of smallholder farmers.

The 6th Mercy Corps AgriFin ALE was centered around three pathways.



These were shared during the opening keynote speeches and deliberately structured to spotlight good practices, share success stories for scaling, moreover, provide voice and reflection points by exploring case studies of what is not working well to inform the necessary change. Some of the cases touched on digital innovations, bundling advisory services with credit, insurance and market access tools as channels to **develop the resilience of smallholder farmers in the face of global issues**, the theme of the 6th Mercy Corps AgriFin ALE.

This ALE was the 6th event that Mercy Corps AgriFin has held and the first to take place in-person post 2019 providing an interactive experience for the participants, different from the online sessions held for the 2020 and 2021 ALE. The event took place on November 22, 2022 in Nairobi, Kenya, with over 400 participants from the private and public sectors, financial institutions and scientific and donor organizations across the region and beyond. It was organized into thematic sessions as outlined below. Each session had main speakers, plenary discussions and Q&A. Details on presenters/speakers and links to the recorded sessions are provided in the appendix.

Architecture of the 6th Mercy Corps Agrifin ALE;

Opening Plenary: Shocks and Stressors, and the Role of Stakeholders

Session 1: Data to Drive Efficiencies, Support Smallholders, and Strengthen Decision Making

Session 2: Driving Investments in Digital Agriculture

Session 3: Boosting Gender Equality in Agriculture Through Innovation and Digitization

Session 4: Digital Climate Smart Agriculture

Session 5: Making Platforms Work for Smallholder Farmers

Session 6: Financial Inclusion: Frontier Insights on Access to Farmer Data and Blockchain Technology

Closing Plenary: Addressing Global Issues in Digital Agriculture

CHAPTER TWO

PROCEEDINGS REPORT

OPENING PLENARY

Shocks and stressors and the role of stakeholders

Objective

To highlight the ongoing shocks and the role that development actors play, with a focus on the role of Mercy Corps and AgriFin. The session was attended by approximately 330 participants across the public and private sectors.

Keynote speakers¹ identified the Mercy Corps AgriFin ALE as a premier learning and sharing event where collaborators come together, reflect and share lessons to solve sector challenges.

BILL AND MELINDA GATES FOUNDATION (BMGF) PERSPECTIVE

Food systems in sub-Saharan Africa are facing increasing pressure due to ongoing shocks and stressors like the Covid-19 pandemic, the conflict in Ukraine and climate change leading to the slow-down and even reversal of previous gains. This necessitates the identification of solutions that can help farmers cope.

To sustainably increase farm productivity, raise incomes and improve nutrition, keynote speakers highlighted the need to:

- **Enhance access to services like information and financing** - It was reported that there are 300 million small scale farmers globally who have never received climate informed advisory, with hundreds of millions of smallholder producers who still do not use or have access to digital agricultural services.
- **Minimize gender gap** - The gender gap is persistent, in terms of digital access, and is reported to be 16% for mobile internet access. Underscoring the need for stakeholders to continue to work on overcoming barriers to access such as cost, literacy and safety.



300M
who have never received
climate informed advisory



16%
gender gap in mobile
internet access

¹ Roger Voorhies - President, Global Growth & Opportunity Division - Bill & Melinda Gates Foundation, Hanna Reed - Program Officer, Integration, Evidence & Learning - Bill & Melinda Gates Foundation Sean Granville-Ross - Africa Regional Director - Mercy Corps, Sieka Gatabaki - Program Director - Mercy Corps AgriFin.

Opening Plenary

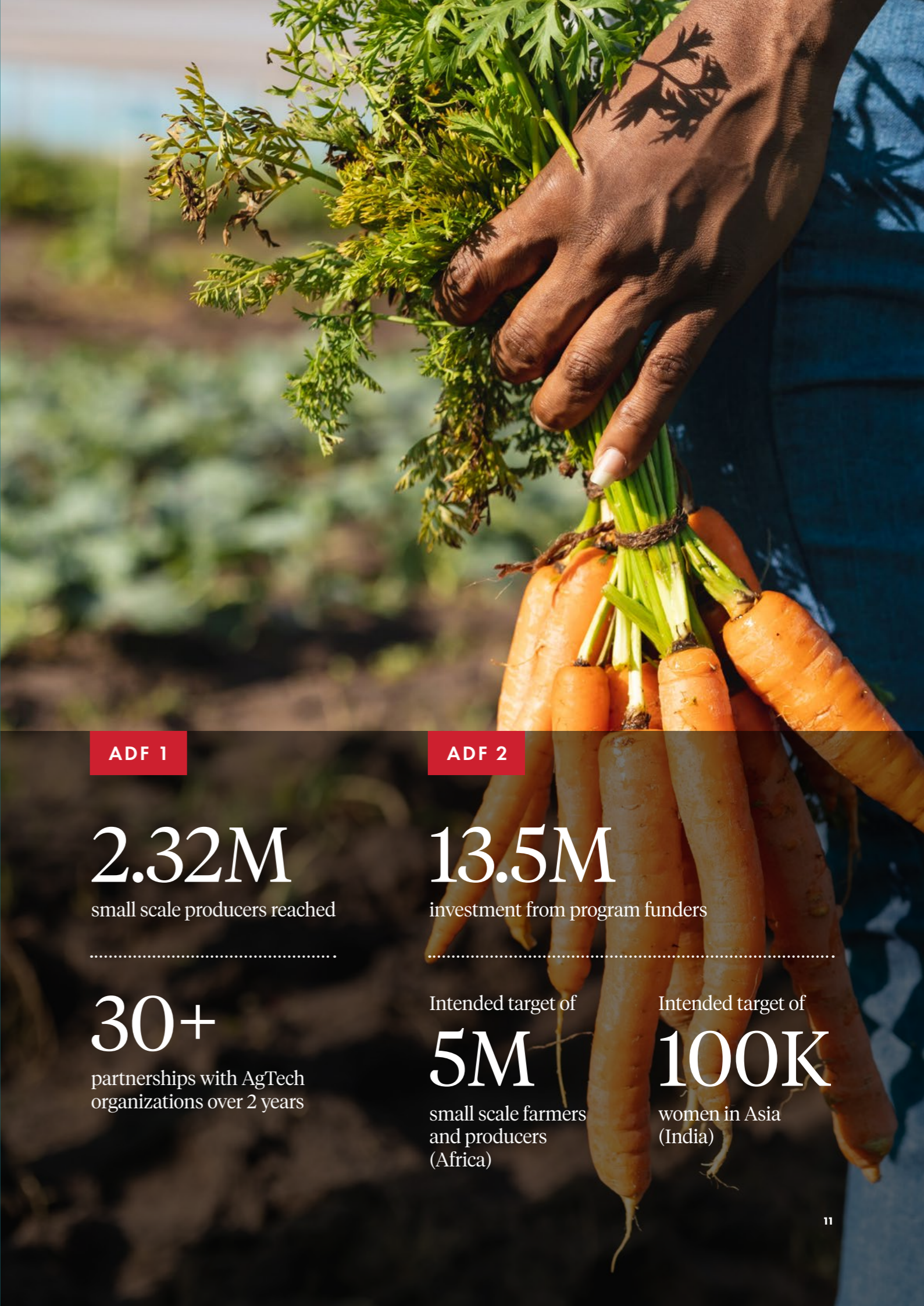
SHOCKS AND STRESSORS AND THE ROLE OF STAKEHOLDERS

MERCY CORPS PROGRAMMATIC FOCUS

AgriFin Digital Farmer (ADF) 1 reached 2.32 million small scale producers in partnership with over 30 AgTech organizations over two years. With a 13.5 million investment in ADF 2 from the program funders, the Bill and Melinda Gates Foundation's agricultural development and financial services teams with support from the Bayer Foundation, GIZ, and the Walmart Foundation, the program intends to target 5 million small scale farmers and producers in Africa, and 100,000 Women in Asia (India). Achieving an increase in incomes and productivity, and maintaining a 50% active user rate with at least 40% of registered users being women. The program's goal contributes to inclusive agriculture transformation through digital solutions, identifying reliable pathways out of poverty for small-scale producers in sub-Saharan Africa.

This target will be achieved through a focus on;

- **Digital innovations and bundling advisory services.**
These introduce greater efficiencies into agricultural systems, enabling millions of farmers to access the services necessary to stabilize and grow their businesses.
- **Design for women and those with low literacy and digital skills.**
This was noted to only be possible when stakeholders move beyond the era of small pilots and start designing for scale and developing pathways to sustainability.
- **Climate adaptation.**
Keynote speakers emphasized the dire situation where:
 - In the past decade, 2012 - 2022, the horn of Africa has endured three severe droughts, with the latest likely to persist into 2023. Parts of Ethiopia, Kenya and Somalia will have experienced four consecutive failed rain seasons affecting farmer resilience.
 - Linked to this, global undernourishment has increased each year since 2016, reaching 768 million in 2021. Sub Saharan Africa's undernourished has increased from 160 million to 260 million in 10 years.



ADF 1

2.32M

small scale producers reached

30+

partnerships with AgTech organizations over 2 years

ADF 2

13.5M

investment from program funders

Intended target of

5M

small scale farmers and producers (Africa)

Intended target of

100K

women in Asia (India)

Opening Plenary

SHOCKS AND STRESSORS AND THE ROLE OF STAKEHOLDERS

MERCY CORPS PATHWAY TO POSSIBILITY

AgriFin works to facilitate the innovation and the deployment of digital solutions for smallholder farmers. Working with private and public sector partners to identify the route to adoption and active use of those solutions, identify the service bundles that can be put together to ensure that farmers truly benefit from digital solutions and increase their farm productivity and incomes.

Pathway to possibility represents Mercy Corp’s articulation of strategy into program, focusing on *who to target, with what solutions and how*. Mercy Corps as a global international agency in Africa works across 18 countries and looks at building resilient communities (*the who*). This involves focusing on drivers of resilience; vulnerability and poverty (*the what*). Through climate smart, evidence driven, locally led solutions within 4 sectors (*the how*);



Food Security



Peace and Good Governance



Economic Opportunity



Water Security

The challenge AgriFin has taken on is to translate initiatives in these 4 sectors onto technology platforms and take them to scale so as to impact 5 million smallholder farmers. The success of these global public goods requires working in **partnership** with the private sector, governments, donors and development finance institutions to ensure **coordination** on institutional and global public good investments to **support a vibrant ecosystem of local innovators addressing local challenges**. In this first year (2022), the program (ADF 2) has reached a third of the intended beneficiary target.

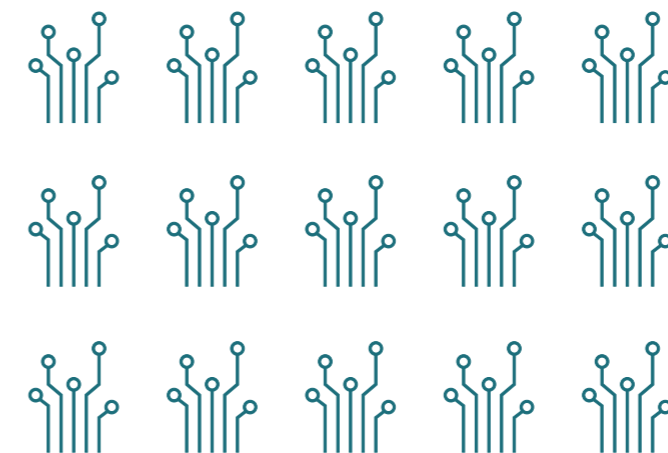
SESSION 1

Data to Drive Efficiencies, Support Smallholders, and Strengthen Decision Making

Showcase of efforts going into collecting, analyzing and sharing data as a public good within the agriculture sector

Objective

This session introduced ecosystem actors to the potential of building products and services that utilize data sharing principles. Exploring the opportunities, challenges, and importance of sharing agriculture data to drive efficiencies, support smallholders, and strengthen decision making. It was attended by about 85 participants.



Session 1

DATA TO DRIVE EFFICIENCIES, SUPPORT SMALLHOLDERS, AND STRENGTHEN DECISION MAKING



The availability of timely and accurate data has become the key input for decision making in agriculture, in pursuit of food security. Insights generated by data service providers such as the World Bank's **Big Data Platform** and national data providers such as Kenya Agricultural and Livestock Research Organization (KALRO), showcased opportunities in the agriculture sector for all stakeholders and farmers at large. However, despite the importance of timely, accurate data, the access as well as broad use and reuse of data in a privacy respecting, trustworthy, and sustainable way, remains a challenge. Within the session, presenters brought in multi-disciplinary perspectives that shed light on the efforts going into collecting, analyzing and sharing data as a public good to strengthen decision making processes and de-risk investments within the Agriculture sector. The session speakers² also shed light on three components of data in agriculture; Investment in data, Data as a service and Innovative ways to collect data.

INVESTMENT IN DATA

The World Bank has heavily invested in data through various projects in Kenya. Through collaboration with KALRO;

1.5 million farmers have been reached, and mobilized into approximately 50,000 farmer groups which include 25 to 50 farmers each, and nearly 500 farmer producer organizations commonly referred to as cooperatives in Kenya.

Using lead farmers from these groups, the World Bank is developing value chain specific good agricultural practices (GAP) and climate smart agricultural technologies. Through adaptive and applied research, KALRO has developed:

900 climate smart technologies developed

These technologies have been digitized and aggregated to enhance access to credit, savings and community based extension services. The World Bank has also facilitated KALRO to recruit data conversant human resource, and establish the big data platform also known as the KALRO data hub. KALRO has made use of this set up as its required hardware for the big data platform. More than 2.3 Million farmers have been registered on the platform and are already receiving agrovet services, market advisory as well as GAP. The investment has also generated 650 Community Driven Development Committees, called SACCOs with 25,000 resource farmers, called lead farmers. Additional investment from the World Bank has gone into setting up 154 new automatic weather stations to provide formal accurate data on drought and floods situations and other weather forecasting data. Other investments have been channeled into collecting data from 235 physical markets where crop and livestock commodities are being traded, and setting up a call center to include farmers with lack of access to smartphones.



2.3M+
farmers registered



650
community driven development committees



154
new automatic weather stations

² <https://agrifinale.org/speakers.php#hall-one>

Session 1

DATA TO DRIVE EFFICIENCIES, SUPPORT SMALLHOLDERS, AND STRENGTHEN DECISION MAKING

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Kenya's farmers trust in mobile phones to utilize agro weather advisories and market advisories. Now, we need to think about how farmers use this data for decision making. Is the data being converted to usability is the no. 1 question we all need to think about.

Vinay Kumar Vitukuru (Senior Agriculture Specialist World Bank)



With the above information as relates to investments that have gone to data, the session reflected on the benefits farmers derive from the Big Data Platform - specifically, its reach and the access to digital solutions it affords farmers.



DATA AS A SERVICE

Weather data and its translation into actionable advisories can be seen as a public good investment. As part of the session, organizations highlighted as utilizing data to drive action within farming and pastoral communities were KALRO, Digital Green and CGIAR.

KALRO

The KALRO Data Hub also known as the big data platform acts as the central facilitator for access, sharing and utilization of data and data services across the agricultural ecosystem in Kenya. The objective of the platform is to aggregate and manage data, promote data sharing and usage, inspire innovation and action using data and build capacity of stakeholders. KALRO's success factor is defined as turning this data into a service. KALRO's policy is that all data collected must be utilized to create an impact among stakeholders. Other policies guiding data usage include those on data retention period (amount of time an organization can hold information), access and sharing of collected data to third parties. It was noted that the data ecosystem consists of many players and technologies, therefore each organization must recognize what they own privately and what they can make accessible to the public.

In the past year, KALRO's major achievements were linked to processing and interpreting data into information and subsequently channeling it to end users to apply. This was done through sensitization activities with pastoralists and farmers on digital technologies, farmer training on use and access to Agro weather, and market advisory. The reach and access KALRO's national farmers database provides makes it a success story in Kenya.

Lessons learned from the big data platform include:

- **Incorporate a digital strategy as a way to attract partners,**
- **Aggregate data can be turned into a product or service,**
- **Make data a public good in order to promote data sharing and usage and**
- **Use data to develop collaborations, sustainable models and inspire innovations.**

Session 1

DATA TO DRIVE EFFICIENCIES, SUPPORT SMALLHOLDERS, AND STRENGTHEN DECISION MAKING



Digital Green

Utilizing the Digital Agriculture Advisory Services (DAAS) product, Digital Green's mission is to use technology and data to build prosperous farming communities, moreover, its major flagship program is to digitize agricultural extension services. Although these digital agricultural touchpoints and services generate a lot of data, Digital Green's effort in data sharing has faced challenges; trust - where data may be used for unintended purposes, lack of awareness of the kind of data owned by organizations, and lack of data policies and control over the kind of data shared.

Digital Green is establishing a product referred to as **Farmstack**. An open source platform for peer to peer data exchange that secures the data transfer process between stakeholders. The three major functionalities of Farmstack include: a central data hub where stakeholders can share data directly to other partners within the ecosystem, a data usage policy with different requirements to obtain certain kinds of data, and a data discovery ability for stakeholders to find the kind of data owned.

INNOVATIVE WAYS OF COLLECTING DATA

Most data is collected through surveys. The challenge of survey fatigue - a phenomenon where respondents exhibit a lack or loss of interest in completing surveys - requires that stakeholders interested in primary data collection are innovative in the way they go about it. This is further prompted by the level of investment that goes into the collection of agricultural data.

Agricultural apps have opened up a space that allows for different types of data to be collected.

However, stakeholders need to guard against fatigue among respondents. To ensure utility of data collected through digital platforms, data collectors need to ensure that it is: **Findable** (metadata and data should be possible to find by both humans and computers), **Interoperable** (data needs to work with applications or workflows for analysis), **Accessible and Reusable** (existing data can be easily sourced, allowing researchers to proceed to primary data collection only for data that is unavailable and requires further contextualisation, saving on time, financial resources, and the farmer's end fatigue attached to responding to the same set of questions).

Forums that integrate innovation in data collection within the Agriculture sector were presented as:

- **Global Agricultural Research Data Innovation & Acceleration Network (GARDIAN)**. CGIAR's flagship data harvester which enables the discovery of publications and datasets from across thirty-odd institutional publications and data repositories within CGIAR Centers and beyond.
<https://gardian.bigdata.cgiar.org>
- **Rural Household Multi- Indicator Survey (RHoMIS)**. RHoMIS, designed to improve the process of gathering information from farming households in the rural developing world, is built using open source software. The tool maximizes the reliability of responses and improves consistency between different studies.
<https://www.rhomis.org>
- **Crowdsourcing data collection**. The Let it rain game improved weather data and risk assessment through crowd-sourcing. Serving 3 major purposes: aggregate, educate and validate. Through the use of a crowdsourced citizen science approach for testing at scale. It also added behavioral analysis to understand which factor helped in farmer decision making.
<https://bigdata.cgiar.org/digital-intervention/gamifying-weather-forecasting-let-it-rain-campaign/>
- **Evidence for resilient agriculture (ERA)**. ERA looks at data to assess which climate adaptation processes and agricultural technologies work well and in what locations. The platform leverages the last 30-plus years of agricultural research, providing insights on the effects of shifting from one technology to another on key indicators of productivity, system resilience and climate change mitigation.
<https://era.ccafs.cgiar.org/about/>

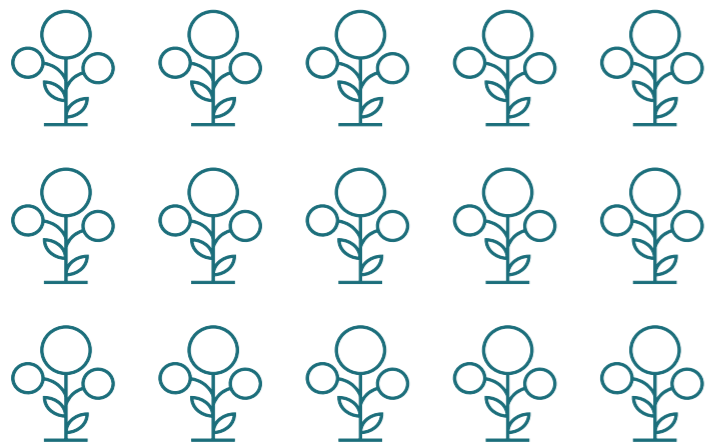
SESSION 2

Driving Investments in Digital Agriculture

Finance, data and social impact measurement, drivers of investment funding in digital agriculture

Objective

This session served as a deep dive into the current state of investment in digital agriculture, with the aim of understanding opportunities for investors in the digital agricultural space, and exploring how best to scale innovation. Thereby unlocking investments by connecting innovators to the right opportunities with the right information. The session was attended by 55 participants from donor organizations, financial institutions and the public and private sectors.



The integration of digital technologies into various agricultural processes has been shown to save costs in the long term, eliminate risks and increase production. Session discussions highlighted key **challenges** in digital agriculture investments, with the speakers³ and participants analysis consolidated under the following three challenges:

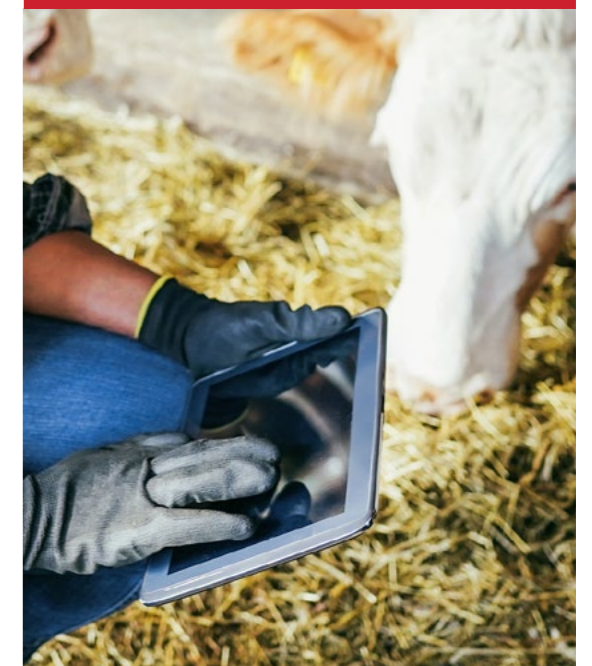
FINANCE MOBILIZATION

Increased levels of food stress, as a consequence of climate change, has necessitated different ways of funding digital agriculture. Leading to a rise in innovation in the sector and provided an opportunity for the growth of AgTech. However, one main challenge innovators face is financing, due to the perceived high risk investors take for the kind of investment needed in agriculture.

The investments needed in agriculture can be categorized as specific to infrastructure, systems, capacities and technologies. These can be funded in 2 ways; *debt financing (borrowing of money) and equity financing (selling a portion or stake in the company)*. Though the latter is the more dominant form of financing in Africa, it has been linked to specific challenges, including:

- **Exit horizon, which forms the timeframe within which the investor will be in a position to realize their investment.** This leads to a selection bias from the perspective of the investor.
- **Pressure on AgTech to expand early or move beyond their mandate to fit the investors parameters.**

AgTech is the use of technology or any innovation across the agricultural value chain with the aim of improving yield, efficiency, profitability and/or sustainability to innovate so as to manage risks and create efficiencies within agricultural food systems.



³ <https://agrifinale.org/speakers.php#hall-two>

Session 2

DRIVING INVESTMENTS IN DIGITAL AGRICULTURE

Debt is mainly constrained to the income the AgTech generates and the assets it has, limiting the amount AgTechs can access during the critical stages of startup and growth before they reach resource maturity.

With the understanding of the investment vehicles currently available, debt and equity, the question of how AgTechs mobilize financing comes into consideration. One way of looking at this is through an examination of the levers that maximize impact and make the AgTechs more attractive to investors;

- **Development of a risk impact framework and ecosystem level solutions.** This involves using analytical capacities, evidence and data to facilitate system based transformation.
- **Co-design investment vehicles.** This involves working with investors to develop hybrid channels and investment vehicles that allow investors to de-risk their investments.
- **Initial investment (self-financing) in bankable projects which are ready and attractive for investors.** This allows for strengthened pipeline development.

The challenge of **finance mobilization** requires innovators and AgTechs in the private sector to work with market enablers and the development sector, to connect pipelines with investors according to risk appetite profiles. It also requires working with investors to develop investment vehicles to de-risk the pipeline if needed. Platforms that connect the two together, such as **accelerator and incubator programs**, provide a nexus for ideas, partnerships and collaborations.



INVESTMENT IN DATA

Investors are often willing and ready to finance bankable projects, however, the **information and data** required to support their decision making on where to plug in resourcing can be minimal. Leading to a review of available data points to build upon financial data.

Data and information that investors consider before they commit resources, and hence should be readily available, includes;

- **Impact:** Adaptation measures that increase the resilience of agriculture and food systems, supporting habitats, and related livelihoods, particularly of smallholder farmers. The effects of climate change are crucial to many investors and therefore need to be visible.
- **Scale:** The ability to reach greater populations, be available in multiple countries or areas therefore adapting and potentially evolving to provide complimentary products and services.
- **Strong track record or evidence of execution:** An indication of efficiencies needed, and a demonstrated understanding of what works.
- **Character of entrepreneur:** Many funders rely on their networks for referrals, therefore, it is important to build relationships.



Investment in the **collection and tracking** of evidence based data that reflects on the innovators projects, e.g penetration and retention rates, end user feedback loops etc, in a way that is transparent to interested parties, like potential investors, is a prudent way market enablers can **support businesses to gain credibility during the investment process.**

Session 2

DRIVING INVESTMENTS IN DIGITAL AGRICULTURE

SOCIAL IMPACT MEASUREMENT

Social Impact investments seek to generate beneficial social or environmental impact alongside a financial return and thereby plays a major role in climate finance. However, the challenge is that the **measure of social impact is complicated due to how amorphous it is.**

As a result, the important emerging trends in climate finance include:

- **Impact measurements that are digital by nature** to provide indicators on what the right investment vehicle looks like and the solutions it can provide.
- The **use of proxies** of information and data e.g payment or transaction data to determine credit worthiness.



Within social impact measurement, transparency in adaptation versus mitigation measures is crucial, as is behavior change of communities to ensure lasting impact. A fair blended metric to measure impact of adaptation/mitigation discussed was:

- Redistribution of funds to cover risks and shocks.
- Bundling solutions that combine sectors to create a greater value proportion for farmers e.g insurance products that have both a health cover for the farmer and a crop cover.
- Utilizing community organizations as a last mile network to balance top down programming and create enduring change.

SESSION 3

Boosting Inclusion of Women in Agriculture through Innovation and Digitization

Entry points for engaging women to play a more active role in the agricultural value chains

Objective

The objective of this session was to learn from the experience of selected organizations, identifying stakeholder entry points to making it easier for women to play an active role in agricultural value chains. The session was attended by approximately 100 participants drawn from donor organizations, financial institutions and the public and private sector.



Session 3

BOOSTING INCLUSION OF WOMEN IN AGRICULTURE THROUGH INNOVATION AND DIGITIZATION



Women constitute **25%** of the **33 million farmers** in sub Saharan Africa. However, their productivity is **20-30% less** than that of men.

This gap in performance is attributed to gender differences in access to inputs and services and other restrictive gender norms that are unique to women. Digital transformation in agriculture opens avenues for women's economic and social empowerment and can be used to boost gender equality - specifically women inclusion. Closing the digital gender gap is an urgent priority as digitization potentially supports women in a myriad of ways, from earning income, growing employment and networking prospects, to accessing knowledge and information.

The session explored Mercy Corps AgriFin's use cases, research, and insights from their engagements, so as to examine the constraints faced by women with agricultural livelihoods, and the opportunities service providers and funders offer to add value to their lives and livelihoods. The speaker⁴ and participant discussions focussed on use cases from India with lessons, challenges and entry points from two AgTechs; **Dehaat** and **Samunnati**, guiding the conversation.

AGRICULTURE AND FINANCIAL INCLUSION IN INDIA

Agriculture in India is a 275 billion USD sector, contributing 14% to the country's Gross Domestic Product (GDP) and 43% of total employment. Although nearly 57% of agriculture laborers and 28% of cultivators are women, less than 14% of the operational holdings belong to them. This shows the existing gender gap between participation and ownership of agricultural innovations. To address this gap, about 1,300 AgTechs have emerged to create new product solutions, and put women farmers at the forefront of their innovations.



1300 AgTechs will create new product solutions placing female farmers at the forefront of their innovations

Contributing to this positive pivot, the Mercy Corps AgriFin For Women (A4W) program in India with the help of Dalberg, a global advisory firm, aims to drive the gender lens in India by working with two of the fastest growing AgTechs - Dehaat and Samunnati. This is with the aim to:

- **Probe their strategies in boosting inclusive technology solutions.**
- **Build digital financial inclusion for 100,000 women smallholder farmers.**
- **Utilize this collaboration to scale partnerships with other large industry players, to deliver high-impact, digitally-enabled services to women in farming households across India.**

More on the services offered by Dehaat and Samunnati in partnership with A4W in India, and their efforts to include women in their work, is explored below.

DEHAAT Seeds to harvest pilot program

Dehaat is a fast growing start up providing end-to-end solutions to farmers. Dehaat aims to increase the uptake and usage of advisory insurance products by women in farming households using a go-to-market strategy.

So far Dehaat serves and connects more than 600,000 active smallholder farmers to over 450 input manufacturers and more than 350 output buyers.

SAMUNNATI Boosting women inclusion through product bundling

Samunnati is one of India's largest AgTech non-banking financial and open agricultural networks. Its focus is to identify the optimum bundles of agri-related products and services for women in farming households extended by women village level entrepreneurs (VLE) as last mile delivery partners. Since its inception, it has reached more than 4 Million farmers with its value added partner, Frontier Markets.

⁴ <https://agrifinale.org/speakers.php#hall-three>

Session 3

BOOSTING INCLUSION OF WOMEN IN AGRICULTURE THROUGH INNOVATION AND DIGITIZATION

Working with Dehaat and Samunnati in their pilot programs, A4W established that all agro dealers **touch points** are owned by men. To efficiently serve women Dalberg advised on the **formation of women entrepreneur channels for women farmers**. This was informed by a foundational knowledge of; *levels of women agency, wants and aspirations together with prevailing social norms* e.g involvement of husbands through awareness drives to build trust and reduce barriers to women attending program activities, to inform channels of engagement and solution delivery.

Lessons from the pilots on engaging women to play a more active role in agricultural value chains.

- Advisory given to women **needs to go beyond farming** and include additional information that is important to women e.g education, household, child care. The advisory needs to be actionable in the near time i.e provides immediate value.
- **Identification of suitable touch points that are socially and culturally acceptable** needs to be considered during program design e.g in some of the regions of Dehaat and Samunnati social norms prohibit women from interacting with male strangers. In this case the program would require to actively recruit female extension officers.
- **Trust building** is crucial and goes beyond individual engagements to the community structures. Identification of existing trust structures allows programs to dispel misconceptions about innovations. This can be done by tapping into these structures, e.g gaining permission from their spouses, reducing potential friction when engaging women in the community.
- There is a wide chasm between **women's intentionality and execution** (intention-action gap). Channeling the right technical assistance and utilizing existing business models that exist within women and women groups allows programs to bridge this and nudge women to actively participate in innovations.



Building upon these lessons, participants were able to identify challenges and potential action points for AgTechs when engaging women. These were:

- **Lack of data:** This affects development of appropriate solutions. Synergy between research organizations, with data collection capacities, and implementers, is required. This is to allow for an adaptive approach in innovations.
- **Lack of access to resources:** This limits access and affordability of solutions. Through coordination and collaboration among AgTechs targeting the same end users, there is the potential to manage backend costs, making solutions more affordable. One such way is through bundling.
- **Time constraint:** This limits availability to learn and engage with emerging solutions. Re-assessing what actually works for women and designing around this is crucial. AggTechs can train closer to the homestead to save on travel time, set training and engagements that consider the household chores schedule or provide child care services during the training sessions.

In conclusion, collaboration and coordination are the best way to achieve inclusivity. It is therefore critical to understand opportunities and constraints that surround women, their values, interests and aspirations in the design and deployment mechanisms of solutions.



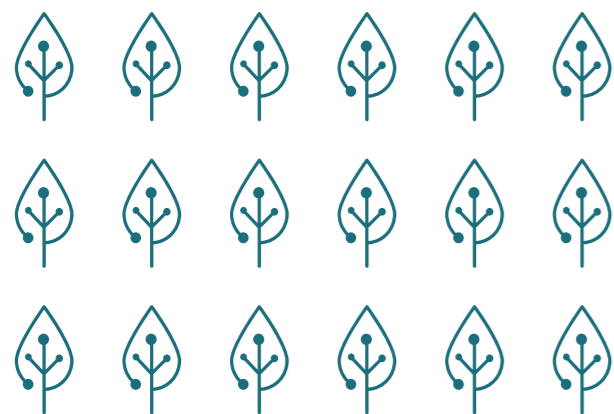
SESSION 4

Digital Climate Smart Agriculture: Building Knowledge and Bundles to Drive Adaptation and Resilience

De-mystification of the concept of ‘digital climate smart agriculture’ through sharing real life examples of AgriFin’s work

Objective

This session explored how innovation, digitalisation and start-ups, can be scaled and adopted in response to the emerging rise in temperatures, and extreme weather conditions, such as droughts and floods, which ultimately affect food security in the Global South. It was attended by about 100 participants from the public and private sectors, donor organizations and financial institutions.



Farmers today face longer periods with little or no rains, flooding and reduced soil health. Climate smart agriculture (CSA) is an approach that guides actions to transform agri-food systems towards green and climate resilient practices. Within the session AgriFin brought together various partners⁵, **Mediae**, **Learn.ink**, **Farm to Feed**, **ILRI** and **CGIAR** among others, to de-mystify digital climate smart agriculture (DCSA). The extent of each of these organizations’ engagements with DCSA, is described in the section below.

During the session, **AgriFin launched Sprout**: the Open Agriculture Content Platform that has a range of climate smart agriculture resources and information, as well as climate related products and services that can be leveraged by partners to support farmers to build resilience to climate change, and ultimately aid smallholder productivity.

“
We believe every smallholder farmer in Africa should have access to digital, farmer friendly advice and services that farmers can rely on.

Elias Nure Digital Climate-Smart Agriculture and Sprout Platform Lead



⁵ <https://agrifinale.org/speakers.php#hall-four>

Session 4

DIGITAL CLIMATE SMART AGRICULTURE: BUILDING KNOWLEDGE AND BUNDLES TO DRIVE ADAPTATION AND RESILIENCE

Sprout is an established and open digital B2B marketplace for agricultural content and services. With a growing ecosystem of partners. The key objective for SPROUT is to connect key Farmer Facing Organisations (FFOs) with Expert Content Creator Organizations (CCOs).

Organizations and their engagement with DCSA.

MEDIAE TV for Climate and Youth Engagement

Mediae is using digital platforms to engage and share knowledge on climate smart agriculture innovations.

Through Shamba Shape Up, Mediae is building **knowledge** bundles to drive adaptation and resilience through publicly available video content and TV shows that have reached over 8 million weekly viewers in Kenya. The show is available in English and Swahili and has reached over 8 million weekly viewers. The main topics covered are climate adaptation and youth engagement.

Shamba Shape Up has recently ventured into Uganda and Zambia.

LEARN.INK Digital Training on Climate Smart Agriculture for Rural Agents

Learn.ink partnered with AgriFin to create open-source training content, free to use for all subscribers. It is a B2B training platform for last mile users, mainly designed for the private sector to overcome the challenge of **capacity building** and training for rural agents, as well as farmers.

Learn.ink creates interactive, conversational lessons by turning content into an accessible, localized experience, and distributes learnings in over 38 countries. The vision of Learn.ink is to support the African agriculture sector to reach agents and farmers at scale, with an improved training experience to build capacity around farming successfully in today's climate.



FARM TO FEED (FTF) Combating Food Waste and Loss

Farm to feed is a digital solution that increases food availability and supports climate change, by minimizing food waste that is responsible for 8% of greenhouse gasses. This is achieved in 2 ways; changing the perception of food loss, and transforming the food system for the producer by channeling imperfect and surplus produce from farmers to off-takers, ensuring food stays in the human food chain.

INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (ILRI) (CGIAR) Decision Trees for Climate Informed Farming Operations

Current climate information services (CIS), such as weather linked extensions as well as climate information, are not location specific, are generalized for all crops and soil types, and are fragmented and overloaded with information. This presents an urgent need for contextualization. Evidence suggests better adoption and impact when CIS offers real time location and crop specific advisories, based on historical, current and predicted conditions.

The solution proposed, Digital Climate informed Advisory Services (DCAS) can improve smallholder productivity and profitability, and has the ability to interface with pluralistic channels such as SMS and Mobile Apps.

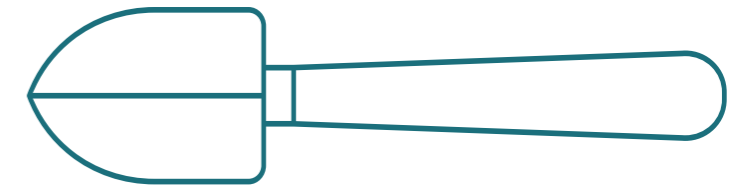
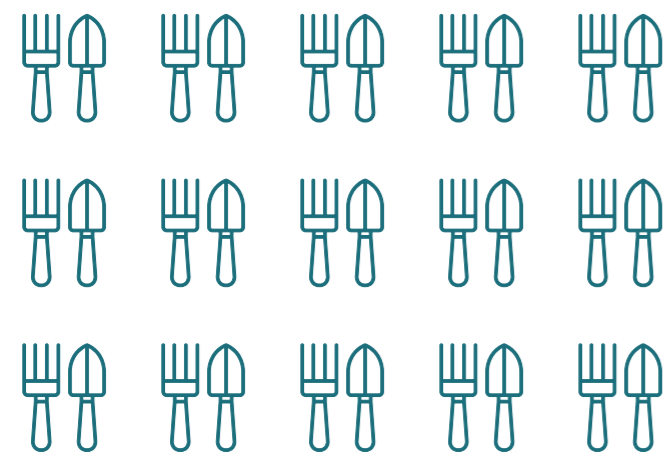
SESSION 5

Making Platforms Work for Smallholder Farmers

The value add of digital platforms in complementing agriculture extension for smallholder farmers and distribution

Objective

The main objective of this session was to explore how platforms can be scaled and adopted in response to emerging global trends. The session was attended by approximately 100 participants.



The discussion focussed on ways digital platforms complement agriculture extension services at country, county and stakeholder levels, to create cost effective points of entry when strategically coupled with in-person engagement, that though more effective in awareness and knowledge creation are resource heavy to maintain. During the session, participants engaged with an expert panel to explore⁶; how bundling supports platforms to achieve effectiveness, how to develop effective partnerships for platform engagement, and review what needs to be done for platforms to work for women. Key discussions on each are presented below.

HOW BUNDLING SUPPORTS PLATFORMS TO ACHIEVE EFFECTIVENESS

Last mile distribution can be resource intensive for individual AgTechs. Bundling of these solutions allows for cost sharing of distribution costs and the costs attached to the strategic human connection required for successful scale up of digital technologies. This is because the targeted end users of AgTech solutions are the same.

	ORGANIZATION World Bank	COUNTRY Kenya
<p>The case reviewed in this discussion was the one million farmer platform. The platform, funded by the World Bank, brings together AgTech innovations onto an impactful digital platform. The platform is front-facing to 1 million Kenyan farmers and bundles different solutions like networking (linking farmers, innovators, public agencies/ counties and businesses), Incubation (mentoring and coaching), knowledge and learning, policy support and feedback among other services.</p>	<p>In three years (2019-2022), 27 AgTech startups on the platform have worked with 36 county governments and reached 450,000 smallholder farmers. The platform has been successful in facilitating a private public partnership between county governments and AgTechs. Where the government input and investment is in the provision of public goods, specifically, farmer data in addition to capacity building, and AgTech input and investment is in the provision of delivery of services that leverage economies of scale.</p>	

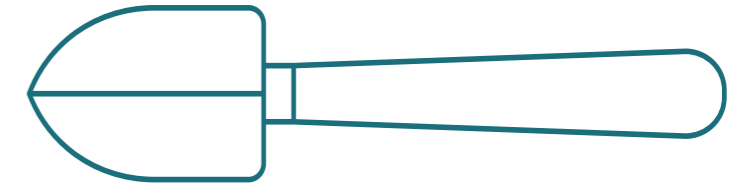
⁶ <https://agrifinale.org/speakers.php#hall-five>

Session 5

MAKING PLATFORMS WORK FOR SMALLHOLDER FARMERS

HOW TO DEVELOP EFFECTIVE PARTNERSHIPS FOR PLATFORM ENGAGEMENT

AgTech solution providers increasingly appreciate the necessity of a strategic human interface when it comes to awareness, knowledge creation and sustained use of their solutions. An existing resource that presents a viable solution to provision of a human interface, more effectively than AgTech deploying human resources from their offices, is the partnership with local organizations and youth who are interested in Agri-entrepreneurship.



Within the discussions panelists and participants highlighted the importance of trust building between farmers, farming communities, AgTechs (private sector) and the public sector. Existing perceptions on motivations of different partners can affect uptake of solutions. For instance, governments might view the private sectors as exploitative and focussed heavily on profit instead of positive impact, whilst the private sector's outlook of the government is often of a slow moving and monolithic entity. However, understanding that each actor has challenges and opportunities, and subsequently working to match and create partnerships based on smallholder farmer need and opportunity by clearly outlining what role each actor plays, facilitates effective provision of solutions.

A REVIEW OF WHAT NEEDS TO BE DONE FOR PLATFORMS TO WORK FOR WOMEN

Women make up 40-50% of smallholder farmers and play a central role in rural economies yet only 25% are AgTech users. They are hindered by various barriers which digital platforms can help overcome.



THE CASE OF
Kuza

.....

COUNTRY
Kenya

KUZA is a rural entrepreneur development incubator model that has adopted a grassroot level approach to develop effective partnerships that support its operations, in addition to providing online content on farming. Youth are trained and mentored as agri-entrepreneurs to offer bundled services e.g crop advisory, inputs and market services, and serve as the human touchpoint bridge between farmers and solution providers.

“

Marginalized people don't have marginalized minds.

Sriram Bharatam, Founder,
Kuza Biashara





ORGANIZATION
Value for Women

.....

COUNTRY
Nigeria, Kenya, India

Value for women conducted research on ways AgTechs can be intentional in their inclusion of women. This was done through an examination of the potential impact to rural women of 4 platforms; **AFEX**, **CoAmana**, **Copia** and **Samunnati**. By intentionally addressing gender inequalities, digital platforms can be inclusive of women through:

- ➔ Embedding gender consideration in organization strategy, for example by having strong women representation in leadership.
- ➔ Collecting and analyzing sex disaggregated data for better decision making. This can be done by adapting a systematic approach to data analysis to identify consumer patterns.
- ➔ Creating innovative offerings e.g making design interfaces and engagements for low digital audiences more visually appealing and the inclusion of a human interface at critical points that are potential pain points.

Session 5

MAKING PLATFORMS WORK FOR SMALLHOLDER FARMERS

In conclusion, making platforms work for smallholder farmers requires actors to integrate existing practices. Bringing together actors in the AgTech space and scaling solutions for greater reach - **coordination**. Through the provision of products and services that make life easier for everyone, the needs of smallholder farmers of all genders are met leading to higher traction and impact. The future and growth of digital platforms lies in taking a flexible adaptable approach, customizing solutions based on need and bundling services. Thereby creating access for the target end users, smallholder farmers.



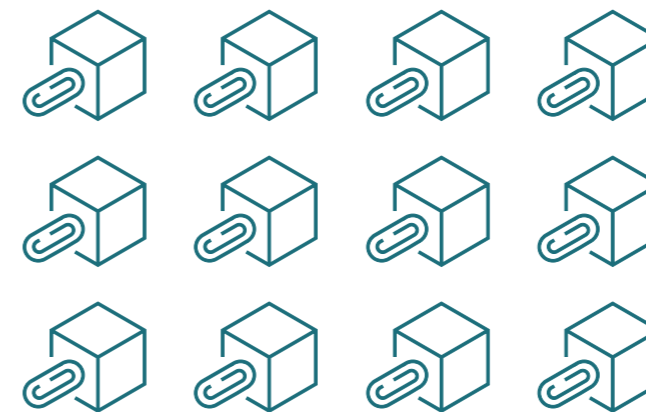
SESSION 6

Financial Inclusion: Frontier Insights on Access to Additional Farmer Data and Blockchain Technology

How farmer data is being used to improve access to financial products, specifically credit and insurance

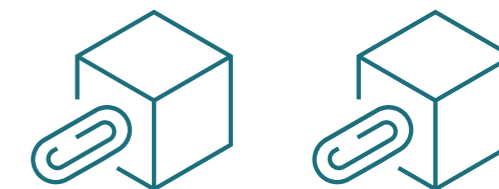
Objective

The overall objective of this session was to highlight the strides that farmer data is taking in enhancing reliable scorecard models to finance smallholder farmers. Additionally the session reviewed use cases of block chain technology (technology that allows digital information to be recorded and distributed without editing, making it secure as transactions cannot be altered once recorded) in insurance and credit based products. The session was attended by about 60 participants.



Session 6

FINANCIAL INCLUSION: FRONTIER INSIGHTS ON ACCESS TO ADDITIONAL FARMER DATA AND BLOCKCHAIN TECHNOLOGY



Over 50% of adult Africans, a significant number of whom are smallholder farmers and other workers in the agriculture value chain, lack sufficient access to formal financial services.

This is caused by lack of collateral translating to credit unworthiness, administrative inefficiencies and the high-cost of reaching them manually.

Digital interventions on farmer data collection and digitalisation of farmer onboarding and profiling have served to improve access to financial services. This session sought to understand the concept of farmer profiling and its effect on access to credit. Furthermore, the session delved into the concept of smart contracts and how blockchain can be used in insurance for smart and faster payouts.

To achieve these objectives, representatives⁷ from organizations successful in the use of data to profile farmers for the purposes of financing them, led the discussion. Allowing participants to probe how these credit score indices have worked in ensuring financial inclusion. To set the scene, the discussion kicked off with conversations on the current state of financing farmers' work, proceeding into a discussion around data at farm and farmer level and subsequently, its use in improving access to financial products. First looking at how credit scoring is contributing in moving the dial and then pivoting to look at the role blockchain plays in improving financial inclusion for smallholder farmers.



⁷ <https://agrifinale.org/speakers.php#hall-six>

FARMERS AND FINANCING

Farmers' sources of financing are limited. A lack of variety in choice from formal financial channels to support farming activities has resulted in more farmers turning to informal financial sources like group savings schemes (merry-go-round and table banking groups), friends and family, other businesses, mobile money lending, sale of assets etc. The choice of financing is influenced by; **availability, convenience, trust and reliability, affordability and suitability based on need.**

FARMER AND FARM LEVEL DATA AND CREDIT SCORING

In the past, lack of collateral translated to credit unworthiness, limiting farmers' ability to access financial products. However, currently organizations are increasingly looking at how farm level data can be used to de-risk financial products.

Farm level data that is utilized in credit scoring includes: farmer profiles, geo data, crop season data, input calculations, production data, extension feedback, crop cut data, farmers orders, input deliveries, loan tax data etc.

One of the organizations highlighted in the session, **AM technologies**, utilizes farm level data to perform automatic credit scoring on farmers.

AM technologies, utilizes village elders to report data for updating farmers' credit scores. So far 50 million loans have been disbursed to farmers based on alternative farmer data.



Session 6

FINANCIAL INCLUSION: FRONTIER INSIGHTS ON ACCESS TO ADDITIONAL FARMER DATA AND BLOCKCHAIN TECHNOLOGY

A highlighted organization - **Social Lender** - utilize farmers' social circles and ambassadors to help onboard farmers on social lending platforms. Utilizing social reputation as a scale. The ambassadors register the farmers and open a bank account, onboard them on social platforms for scoring. So far this has led to a partnership with 7 financial institutions and operations in two countries Nigeria and Morocco, serving over 150K end users with services such as input credit, micro insurance and digital community saving scheme.

Another form of farmer level data being used to improve access to financial products is data from social networks. Here offline connections are considered by **Social Lender** to form a credit score. The credit score is calculated by looking at lenders habits, interests, social networks, analytics, friends, and works with trust to perform a score.

A challenge faced in the utilization of credit scoring is at input financing. A featured organization - **BK Techouse** - identified that although before each season farmers looking to access subsidized input from their platform are required to make a request through USSD or digital Apps not all farmers actually pay for and collect the inputs. To de-risk the market, scorecards become useful tools. Scorecard metrics speak to the borrower's ability, financial strength and willingness to repay a loan.

In addition to using transactional data BK Techouse aims to solve the challenge of credit scoring by considering farmer orders and agronomic characteristics.

Case Study

Using transactional data for credit scoring

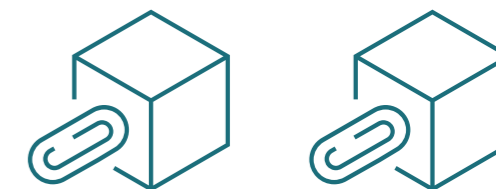
Credit scoring is being utilized within mainstream formal financial institutions.

Equity Bank, one of the biggest banks in Kenya utilizes transactional data to perform credit scores on farmers and pre-allocate them loan limits. This is made possible through Finserv, a subsidiary of Equity bank. The bank is able to provide telecom and mobile banking solutions to more than 17 Million people and use this data to learn and serve clients better. Finserv allows clients to log in and sign up for loans which are set using pre-allocated limits and repay them digitally when loans are due.

The bank is also actively participating in ensuring financial inclusion through digitalization. To achieve this the bank is implementing an **African Resilience and Recovery Plan** to **reach 100 million customers and create 25 million job opportunities through digital avenues**. This strategy encourages farmers to save and invest, borrow, reduce their risk through insurance and expand their opportunity with new product design and technology.

Session 6

FINANCIAL INCLUSION: FRONTIER INSIGHTS ON ACCESS TO ADDITIONAL FARMER DATA AND BLOCKCHAIN TECHNOLOGY



Credit scoring was observed to be a great value add to the agriculture sector and specifically in improving access to financial products by smallholder farmers who are collateral constrained. Presenters and participants examined challenges affecting credit scoring with the aim of identifying opportunities to resolve them. The challenges and possible action points to resolve them are presented below.

Challenges facing credit scoring

- Getting a perfect credit score is almost impossible. There is so much data that is needed for effective credit scoring.
- When lending, clients' character is used as a parameter but there is no way to measure character.
- Everyone is protecting data because it has a cost implication (collection and storage) and nobody wants to share the cost.
- It is difficult to find complementing partnerships between Fintechs and AgTechs.
- Farmers still have low levels of digital capabilities limiting digital footprint and subsequent data that can be used for credit scoring.

Opportunities to collaborate in data sharing for credit scoring

- Cross disciplinary collaboration e.g where financial organizations partner with SACCOs with historical data on farm outputs with various farmers to allow credit limit assignment.
- De-risking data sharing by market enablers and through policy e.g As stated in Rwanda's national revolutionary policy various key players must be coordinated and work together by sharing specific kinds of data. The policy defines what can be shared and what cannot.



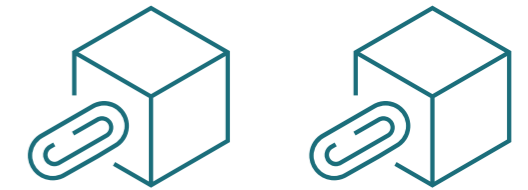
BLOCK CHAIN AND FINANCIAL INCLUSION FOR SMALLHOLDER FARMERS

As farmers face climate change related challenges, like drought, pests and diseases coupled with high cost of inputs and limited access to financing, risk transfer solutions with effective payout methods are required to secure farming businesses. However, in Sub Saharan Africa, only 3% of smallholder farmers access crop insurance with barriers to adoption including a huge information gap between farmers and insurers, high premium costs with most of the cost going into implementation, and not the actual risk, slow and complex claim settlement processes, and lack of transparency and connection with farmers, leading to poor uptake and understanding of benefits. This leaves farmers vulnerable to climate shocks.

Towards finding a resolution for this challenge, Mercy Corps Ventures tested real world block chain use cases as an alternative to traditional payout mechanisms.

Session 6

FINANCIAL INCLUSION: FRONTIER INSIGHTS ON ACCESS TO ADDITIONAL FARMER DATA AND BLOCKCHAIN TECHNOLOGY



Use Case 1

ACRE Africa

The use of smart contract weather insurance for farmers in Kenya

ACRE Africa integrated block chain smart contracts into one of the organization's existing weather index products. Within weather index insurance products, policies are automatically triggered in the event of an extreme weather event.

In the pilot, with the integration of smart contracts into weather index and picture based insurance, payout timelines were drastically reduced by 97% from an industry average of 45 days to 24 hours. Other positive findings from the pilot included:

- **Increase in coverage.** Smart contracts enabled an increase in coverage amount. Within the pilot ACRE Africa reported an increase in coverage by 27% from smallholders compared to the previous season when smart contracts were not available.
- **Increase in trust.** Smart contacts transparency increases trust with over half of participating farmers reporting increasing trust in insurance.
- **Improvement in quality of life.** This was as reported by 40% of farmers.
- **Picture based insurance (PBI)** is able to cover pests and disease. PBI is also provides live monitoring of pests and diseases and direct advice to farmers.

Due to the positive commercial value smart contacts integration had within the pilot, ACRE Africa has made a ground breaking commitment to put all of the organizations parametric insurance products on block chain.

Use Case 2

DeFi

Enabled salary advances for smallholders in Kenya

DeFi possesses an exciting opportunity to leverage the trust and infrastructure built by planned value added services. These emerging technologies can reduce barriers for entry and accelerate traction and impact at scale in areas like climate finance, climate smart agriculture, climate Fintech for MSMEs, supply chain analytics, carbon credit and shared risk and revenue.

Within this pilot the potential for scale is tested with DeFi, a lending platform by Cinch markets that enables fast credit at affordable rates and significantly reduces the administrative burden. The core hypotheses to be tested are; that the solution will provide quick affordable access to credit for landowners and employees, increase borrower satisfaction, drive financial resilience for smallholder farmers and that the pilot will significantly reduce administrative burden for Cinch to provide credit to its borrowers and employees allowing Cinch to attract and retain land owners and casual laborers.



Session 6

FINANCIAL INCLUSION: FRONTIER INSIGHTS ON ACCESS TO ADDITIONAL FARMER DATA AND BLOCKCHAIN TECHNOLOGY

Use Case 3

Buy-now-pay later products for MSMEs in Kenya

This pilot tested the provision of a cheaper credit product to micro, small and medium enterprises (MSMEs) in Nairobi e.g. informal food vendors. The credit product functioned as a ‘buy now pay later’ (BNPL) product and was accessed by tapping into a global liquidity pool. The hypotheses tested in this pilot were:

1. **Reduced transaction cost for MSMEs and increased access to flexible payment solutions enabling the growth of revenue and profits.**
2. **The pilot can offer an on-demand BNPL product to its network of vendors, improving their experience of their products and increasing transactions.**
3. **Creation of yield-generating opportunities for liquidity providers seeking investment opportunities in developing countries.**

In conclusion, this session demonstrated the value of a facilitated approach in the integration of emerging innovations like credit scoring and blockchain within financial products like credit and insurance. Providing the proof of concept (or first step) required to demonstrate the commercial value these technologies can have in supporting financial organizations to unlock solutions. While in parallel reducing the barriers to entry, increasing the pool of smallholder farmers reached and served and ultimately scaling financial inclusion and impact.





CLOSING PLENARY

Addressing global issues in digital agriculture

Objective

This session involved a panel⁸ discussion on how to ensure smallholder farmers and the institutions that serve them, not only cope with global issues but also adapt and thrive.

Creating a vibrant ecosystem for farmers requires information sharing from actors in the public and private sector, development finance institutions and donors, as they form and create the environment smallholder farmers operate in and inform the policies that affect them.

⁸ <https://agrifinale.org/speakers.php#closing-plenary>

Cross engagements and collaborations allow for wholesome solutions to emerge e.g the agricultural and financial sector, though viewed as different, are integrated. Financial services act as an enabler to the agricultural ecosystem and play a role in the composition of services necessary for smallholder farmers to be successful. They help unlock economic opportunities by being in service to agriculture e.g from a value chain perspective, financial services serve value chain actors who engage with the smallholder farmer.

Coupled with collaboration, inclusivity in solution design and deployment allows stakeholders to serve the entirety of the farming community. More so those in need and currently underserved. This can be seen when a gendered approach to enable access of products and services by women is included.

Stakeholders, particularly innovators, now increasingly appreciate how designing without gender intentionality locks out women and shackles the impact of solutions. As innovators provide inclusive solutions into the ecosystem, they are faced with multiple hurdles.

“

If you design for women, men will access.

Amani M'bale, Senior program officer, Bill and Melinda Gates Foundation



Closing Plenary

ADDRESSING GLOBAL ISSUES IN DIGITAL AGRICULTURE

A primary hurdle is mobilization of financing, influencing their ability to provide bankable projects and scalable solutions to smallholder farmers. An extensively discussed proposal in the closing plenary touched on the importance of coordinated efforts across investors and funders. Peer level coordination efforts have been ongoing between key organizations and more intensified efforts are underway to de-risk collaborations in the ecosystems, primarily of innovators and AgTechs. This coordinated facilitation has 2 main advantages; *the management of innovation fatigue on the farmers end, and increased on-ground scale and impact of solutions.*

As a precursor to collaborations, 2 considerations that influence success were presented:

- **The importance of role clarity by the different stakeholders. This ensures the individual strength of different actors is leveraged on.**
- **A clear and standard metric of evaluating the innovations which ought to be scaled. A proposed criteria included a combination of 5 factors to help balance and review whether a solution can scale:**
 - **Impact or value:** This includes productivity, profitability, and how well a solution responds to demand through collection of feedback from farmers to help improve the product.
 - **Delivery systems and delivery partners:** consideration of whether organizations have the capacity, network and capability to deliver on scale, through a review of the strength of their partnerships.
 - **Enablers or system components:** the readiness of the enabling environment, policies, regulatory structure and infrastructure, as well as the availability of data and resources to help anticipate needs/barriers or gaps.
 - **Financial sustainability:** Whether a solution is targeting a private and or public sector scaling pathway through a clearly defined hypothesis
 - **Technical readiness:** Whether a solution works in a smallholder contexts.

In conclusion, the agricultural sector currently faces a myriad of challenges, however, strides have been made to allow smallholder farmers to cope, adapt and thrive. Stakeholders within the sector need to maintain a **continuous learning outlook** and leverage data to unlock investments, create greater reach, build inclusivity into models and most importantly **collaborate**; to build solutions that work and last.

APPENDIX

CONFERENCE AGENDA

WELCOME AND KEYNOTE SPEECHES

Moderator



Collins Marita
Director
AgriFin MERAL

Speeches



Roger Voorhies
President, Global Growth &
Opportunity Division
Bill & Melinda Gates Foundation



Hannah Reed
Program Officer
Bill & Melinda Gates
Foundation



Sean Granville-Ross
Regional Director, Africa
Mercy Corps



Sieka Gatabaki
Program Director
Mercy Corps AgriFin

Watch recording online

Theme: Collaboration
[Pre-recorded Speech | Presentation | Speeches]

SESSION 1

Sharing Agriculture Data to Drive Efficiencies, Support Smallholders, and Strengthen Decision Making Within the Agriculture Sector

Moderator



Emmanuel Makau
Technology Data
Decision Manager and
Kenya Country Lead
Mercy Corps AgriFin

Presenters/Panel



Beza Bogale
Director, DAAS Product, Digital
Agricultural Advisory Services
Digital Green



Irene Wambui
ICT Specialist and
Data Scientist
KALRO



Vinay Kumar Vitukuru
Senior Agriculture Economist
World Bank



Evan Girvetz
Principal Scientist and
- Team Leader
CIAT, CGIAR

Watch recording online

Watch recording online

Themes: Data | Investment
[Presentation | Panel Discussion]



Aniruddha Ghosh
Data Scientist
Alliance of Bioversity
International and CIAT

SESSION 2

Driving Investments in Digital Agriculture

Moderators



Grace Njoroge
Deputy Program
Director
Mercy Corps AgriFin



Stefan Wilhelm
Associate Director
Social Impact
Bayer Foundation



Nathaniel Peterson
Managing Partner
Burgeon Strategy

Presenters/Panelists



Mwombeki
Baregu
Investment Office
IFC



Mathew
Shakhovskoy
Director
ISF Advisors



Rebecca Mincy
Investment Director
ARAF



Hafsa Jumare
CEO
CoAmana



Dr. Michael
Schwall
Senior Consultant
Bayer Foundation



Godefroy Grosjean
Lead – CGIAR
Sustainable Finance
Activities
CGIAR



Joshua Murima
Head of Engagement
& Investor Relations
Briter Bridges



Peninah Wanja
Managing Director
Digicow



William Sab
Strategy Advisor
IDH



Hetal Patel
Director of
Investments
Mercy Corps Ventures



Albert Boogaard
Head Smallholder
Solutions
Rabo Partnerships

[Watch recording online](#)

[Watch recording online](#)

Themes: Climate Change | Data | Investment
[Presentation | Panel Discussion]

SESSION 3

Boosting Gender Equality in Agriculture Through Innovation and Digitization

Moderator



Kassim Zani
Gender Transformative
Programming Lead
Mercy Corps Agrifin

Presenter/Panel



Amani M'bale
Senior Program Officer
(East Africa)
Bill & Melinda Gates Foundation



Michael Mbaka
Country Relationship
Manager
ZEP-RE - Kenya



Leesa Shrader
Deputy Director for Women's
Livelihood Development
Bill & Melinda Gates Foundation



Renée Chao-Beroff
Founder and Managing
Director
*PAMIGA and PAMIGA
FINANCE SA*



Vineet Bhandari
Associate Partner
Dalberg Advisory



Nikhil Toshniwal
Vice President, New
Initiatives & Digital
Partnerships
DeHaat, India



Jamie Anderson
Senior Financial
Sector Specialist
CGAP

[Watch recording online](#)

[Watch recording online](#)

Themes: Gender | Data | Investment
[Presentation | Small Group Discussion |
Panel Discussion]



MARKETPLACE

The aim of the Marketplace, to bring together stakeholders in the agricultural sector, was fulfilled by creating a space that enabled one-on-one interactions between a select group of industry players and all who attended. The interactions fostered a deeper understanding of the approaches utilized and services provided by these players in improving the lives of smallholder farmers, leading to greater opportunities for collaboration.



SPROUT

SPROUT is an open/public good content platform

[Website Link](#)



SPARC

The SPARC program was set up to co-create, curate and broker evidence on innovations and innovation systems in the drylands of East and West Africa

[Website Link](#)



WOWZI

We connect global brands to our diverse community of African creators, tastemakers & influencers, unleashing the power of creator marketing

[Website Link](#)



LENDX

Financial Access Consulting Services has in-depth expertise in value chain mapping, landscape analysis, data analytics, Agri financing and Agri sector risk assessment

[Website Link](#)



CoAmana

Amana Market is a digital marketplace ecosystem designed to increase ease of business and access to information for small businesses and rural farmers, address price inconsistencies and help facilitate transactions between markets, farmers and buyers

[Nigerian Website Link](#)

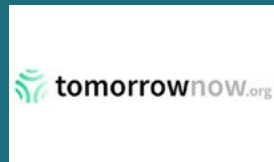
[Kenyan Website Link](#)



IDH Farmfit

Our mission is to make data-driven decision the norm for inclusive agricultural development

[Website Link](#)



Tomorrow Now

TomorrowNow is taking urgent climate action to ensure that EVERYONE can adapt and thrive in a changing climate

[Website Link](#)



Green Edge/Farmex

As a company, our main mission is to support emerging markets, leverage digital solutions to drive enterprise development

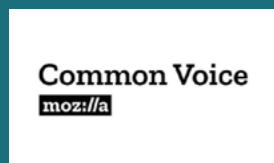
[Website Link](#)



Briter Bridges - Agrihub

Briter Bridges is a market intelligence and data research firm focused on emerging economies

[Website Link](#)



Common Voice

Mozilla Common Voice is a publicly available voice dataset, powered by the voices of volunteer contributors around the world

[Website Link](#)



Kuza

Kuza One is revolutionizing the resilience of smallholder farmers by creating a sustainable network of rural youth agripreneurs

[Website Link](#)



LERSHA

Named after the Amharic term 'for agriculture', Lersha is a digital platform envisioned to make agriculture easy for everyone

[Website Link](#)



DIAL Catalogue

The Catalog of Digital Solutions is an interactive online tool providing data and resources for donors, governments, procurers and implementers to support their digital initiatives

[Website Link](#)



BOOMITRA

At Boomitra we enable farmers and ranchers worldwide to generate third-party certified carbon credits at scale and sell them at scale to corporations and governments looking for carbon removal increasing farmers' incomes

[Website Link](#)



AFEX

AFEX Fair Trade Limited Kenya (AFTL Kenya) prioritizes farmer inclusion in deploying supply chain solutions for key commodity value chains in Kenya

[Website Link](#)



Digifarm

Digifarm provides an end-to-end agriculture platform that leverages technology, data, and partnerships to sustainably connect smallholder farmers to the best products, services, and markets to provide FOOD FOR ALL

[Website Link](#)

SESSION 4

Digital Climate Smart Agriculture: Building Knowledge and Bundles to Drive Adaptation and Resilience

Moderators



Victoria Clause
Agriculture Manager
Digital Climate-Smart



Elias Nure
Agriculture and Sprout
Platform Lead
Digital Climate-Smart

Presenters



Winnie Onyango
Associate Director
Plant Village Kenya,
Lead, *Dream Team*
Agroconsultancy Limited



Adam Wills
CTO/Co-Founder
Learn.ink



Sophie Rottmann
Shamba Shape Up
Series Producer
Mediae



Ram Dhulipala
Senior Scientist -
Digital Agriculture
and Innovation
ILRI, CGIAR



Claire van Enk
CEO/Founder
Farm to Feed



Watch recording online

Themes: Climate Change | Data
[Presentation | Panel Discussion]

SESSION 5

Making Platforms Work for Smallholder Farmers

Moderators



Samuel Karanja
Agriculture Manager
Mercy Corps



Alexis Teyie
Research Lead
SPARC

Presenters/Panelists



Sriram Bharatam
Founder
Kuza Biashara



Renée Hunter
Project Manager
Value for Women



Georgia Barrie
CEO and Co-founder
Learn.ink



Vinay Kumar
Vitukuru
Senior Agriculture
Economist
World Bank



Mark Kaigwa
Founder and CEO
Nendo



Thibaut Mallet
De Chauny
Co-Founder
EXA Innovation Studio



Farayi Ziswa
VP of Merchandise
Copia Global



Watch recording online



Watch recording online

Themes: Gender | Data | Investment
[Presentation | Panel Discussion]

SESSION 6

Financial Inclusion: Frontier Insights on Access to Additional Farmer Data and Blockchain Technology

Moderator



Betty Muriithi
Digital Banking Manager
AgriFin Accelerate (AFA)
Program

Presenters/Panelists



Ewan Wheeler
Chief Executive
Officer
ACRE Africa



Hetal Patel
Director of
Investments
Mercy Corps Ventures



Florence Kariuki
General Manager - Food
& Agriculture Pillar
Equity Group Foundation



Amrik Heyer
Head of Research
Financial Sector
Deepening Kenya



Pius Sigei
Chief Executive
Officer
Amtech Technologies



Bade Adesemowo
Chief Technology Officer
and Co-Founder
Social Lender



Deogratius
Massawe
Chief Technology Officer
BK Techouse



Paul Kweheria
Managing Consultant
Quad Tee Corporation



Watch recording online

Themes: Investing/Investments | Gender | Data
[Presentation]

CLOSING PLENARY

Organizational perspective on strategizing and planning to provide smallholder farmers with support and tools to cope with prevailing shocks

Moderators



Collins Marita
Director
AgriFin MERAL



Grace Njoroge
Deputy Program
Director
Mercy Corps AgriFin

Presenters



Amani M'bale
Senior Program Officer
(East Africa)
Bill & Melinda Gates Foundation



Hamisi Williams
Deputy Country
Representative
FAO



Stefan Wilhelm
Associate Director
Social Impact
Bayer Foundation



Hannah Reed
Program Officer
*Bill & Melinda Gates
Foundation*



Vinay Kumar
Vitukuru
Senior Agriculture
Economist
World Bank



Watch recording online

Themes: Investments | Gender | Data | Collaboration
[Panel Discussion]

