

DRIVING CLIMATE SMART DIGITAL SOLUTIONS FOR THE WORLD'S SMALLHOLDERS

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Mercy Corps AgriFin (MCA) supports the COP26 action agenda through our continuing work to develop scalable, digitally enabled solutions that build climate resilience, food security and inclusion for the world's smallholder farmers. Two of our key initiatives include our Digital Climate Smart Agriculture (DCSA) Playbook for solution providers and our Digital Climate Smart Agriculture Sandbox to accelerate, de-risk, test and scale services and business models with direct climate resilience impacts.

Context

COP26 is bringing the world together over the next two weeks to focus on the gravest threat humankind faces today - climate change. Agriculture is central to the issues that must be addressed. Agriculture contributes one quarter of greenhouse gas emissions, accounts for 70% of freshwater use and is the biggest driver of biodiversity loss. **Farming and food systems must be part of climate-smart transformation for this planet** to avoid a climate disaster.

Smallholder farmers did not create the conditions of climate change, but they stand on the frontline of its impact. Increasing droughts and floods, along with pest attacks like fall armyworm and desert locusts, are impacting farmers around the world, with the impacts of COVID-19 and population growth exacerbating these trends and disproportionately affecting women and youth. As we move into COP26, the FAO estimates a possible 25% decline in crop yields by 2025 linked to climate change in Africa.

The Promise of Digital Innovation for the World's Smallholders - the DCSA Playbook

In the face of these challenges, digital technology and advances in precision rural advisory services, financial services, market access and climate-smart agricultural tools can contribute to smallholder adaptation and mitigation, while forming the basis for increased investment in and sustainable growth of the agricultural sector.

The surging wave of digital innovations in the agri-tech sectors allows for new digitally accessible, low-cost channels for climate-smart products and services, which were often not previously possible via analogue means.

MCA's Digital Climate Smart Agriculture (DCSA) Playbook presents our technical approach with partners to leverage these tools, platforms, and activities to support decision making, adapt to climate change and drive impact. Over the last six years, Mercy Corps AgriFin has supported more than 150 partners to design, test and scale digitally enabled services for smallholders and has reached more than 16 million farmers. Even during the pandemic, impact studies aggregated across a portfolio of partners showed that the use of digital services drove 73% of farmers using the services to increase farm production, 34% to increased income, and 53% increase in resilience to shocks.

Why Go Digital to Drive Climate Smart Transformation?

Smallholder farmers support the food security and livelihoods of billions of people. If farmers are unable to adapt to the changing climatic circumstances, then food security, deforestation, access to and conflict over natural resources will continue to accelerate. **By enabling and incentivizing farmers** to adopt "climate-smart" approaches such as regenerative agriculture, sustainable water uses and other interventions, farmers will become more resilient and even thrive.

Farming has to change urgently and at scale. Digital solutions can support this rapid and large-scale transformation for a number of reasons:

- Digital learning **reaches more people** faster and at a lower cost than traditional extension services.
- **Digital financial and insurance services** lower the cost of customer acquisition, de-risk financing SHFs, reduce the finance barrier to CSA adoption and protect SHFs from weather shocks.
- Digital lends itself to **customisation**: products, information and services tailored for a specific location or farm.
- Digital provides a **platform for multiple providers** to reach SHFs with bundled products and services across the value chain.

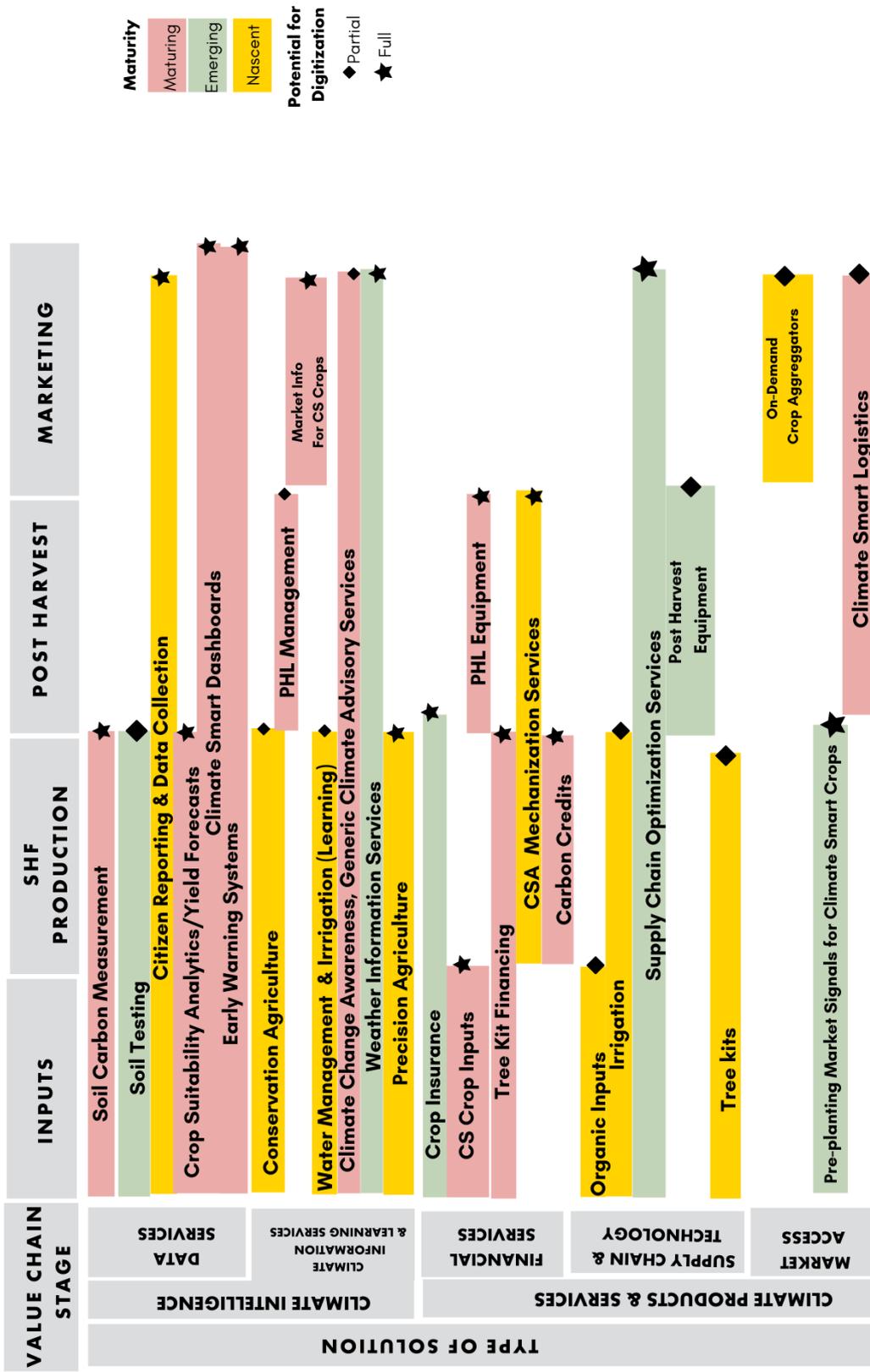
Nearly one billion smallholders and their farm households stand at the centre of this challenge of climate change, food security and poverty. Smallholder farmers account for nearly two-thirds of the labour in the developing world and produce nearly 80% of its food, while being the largest group of the working poor. Smallholders are uniquely vulnerable to climate shocks due to low access to information, markets and investment, low use of inputs, degraded soils and reliance on rainfed agriculture. Yet, they receive less than 2% of financing for climate adaptation.

Digital climate smart agriculture is a **rapidly developing field** allowing **for real-time and better decision making.**

What is Possible: Landscaping Climate Smart Solutions for the World's Smallholders

Developing markets have demonstrated that they can successfully "leapfrog" the technology of developed nations – the uptake of mobile phones and mobile money is evidence of this – where millions by-passed landlines, desktop computers and physical banks, altogether. It can be done with agriculture too. AgriFin has developed a **landscape of digital climate smart agriculture solutions** ranging from the mature to the cutting edge in action now across our partners, showing maturing (red), emerging (green) and nascent (yellow) solutions, and stars representing important opportunities for digitization.

DCSA MARKET MATURITY DIAGNOSTICS



Snapshot of Digital Climate Smart Agriculture Solutions Landscape

MCA is taking forward this cutting edge work in partnership with 150+ companies across Sub Saharan Africa and India, working with leaders such as [SunCulture](#), [Ignitia](#), [DigiFarm](#), [ACRE Africa](#), [Mediae](#), [PlantVillage](#) and [Hello Tractor](#) (see our [Agile Impact Series](#)), through our programming with the Bill and Melinda Gates, Bayer and Walmart Foundations. With our pipeline of innovation, there is a lot to be excited about, but a great deal of innovation to design, test and scale to the world's smallholders across value chains, countries and farmer groups. **We urgently invite new partners, investors and funders** to work with us to support, stimulate, de-risk, test and scale the services and business models for innovation in digital climate resilience solutions through our **AgriFin Climate Smart Sandbox**.

>> **Download our [DCSA Sandbox Concept Note](#).**

Related Resources:

- [Digital Climate Smart Agriculture](#)
- [Assessment of Climate-Smart Dashboards to Serve Farmer Facing Organizations](#)
- [Introducing the Digital Marketplace Playbook](#)
- [The Impact of DigiFarm on Smallholder Farmers](#)
- [The Impact of Digital Services on Women Smallholder Farmers](#)
- [Big Bets on Food Security in the Time of COVID-19](#)

If you want to find out more about our work, or are interested in collaborating, please get in touch!



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