



CLIMATE-SMART AGRICULTURE

FARM AFRICA'S APPROACH

 **FARM AFRICA**

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FARM AFRICA'S VISION FOR A PROSPEROUS RURAL AFRICA

Investing in smallholder farming is key to combating poverty in rural Africa. Prosperity depends on making agriculture work better, using natural resources well, creating strong markets for what farmers produce and facilitating access to finance to grow agri-businesses.

Almost half the world's extreme poor live in sub-Saharan Africa. The vast majority work in agriculture in rural areas. But agricultural yields and profits are a fraction of their potential.

The region is full of opportunities for growth, including much fertile land and water, and millions of smallholder farmers who are eager for change.

Farm Africa works with smallholders to develop practical solutions that work locally and can be replicated elsewhere. Our approach papers set what we aim to deliver, and how, in support of our vision of a prosperous rural Africa.



PREFACE

Farm Africa's approach papers set out what we aim to deliver, and how, in relation to:

Agriculture



- technology
- climate-smart agriculture
- land, water and environment

Environment



- forests
- rangelands
- landscapes

Business



- business development
- trade
- finance



PREFACE

The climate-smart agriculture approach paper focuses on the **resilience of smallholder agriculture to climate shocks** and trends and their **contribution to greenhouse gas emissions**.

It relies on the UN's approach to building resilience through **anticipation** of seasonal and longer term **climate trends**, **absorption of the risk** through insurance and **reshaping smallholders' livelihood systems** so that they become less vulnerable. It also seeks to identify opportunities for increased **energy use** efficiencies and enhanced **carbon storage** on farmers' fields and the wider landscape.

The paper derives from Farm Africa's longstanding experience in the highly unpredictable semi-arid climates across eastern Africa.

Further details about how to increase crop and animal production and guarantee environmental sustainability in agricultural development endeavours can be found in the *technology and land, water and environment* approach papers.

Further guidance on opportunities for carbon storage across the landscape can be found in the *integrated landscape management* paper.

WHAT'S THE ISSUE?

- Much of eastern Africa is beset by **droughts** and **floods**. In semi-arid areas, conditions can be favourable for production one year and cause crop failure another. Traditional agriculture is well adapted to these conditions but finds it hard to cope with the population's evolving demands.
- **Temperatures are on the increase** across the region, causing a higher demand for water and heat-stress. This warming has a greater impact on crops in the tropics, especially if they are also suffering nutrient deficiencies.
- Global warming's **impact on rainfall is much less certain** and varied. In many places rainfall might increase overall; in others, it is expected to decrease. There is growing evidence that rainfall intensity could increase in the future, potentially causing increased floods and landslides.

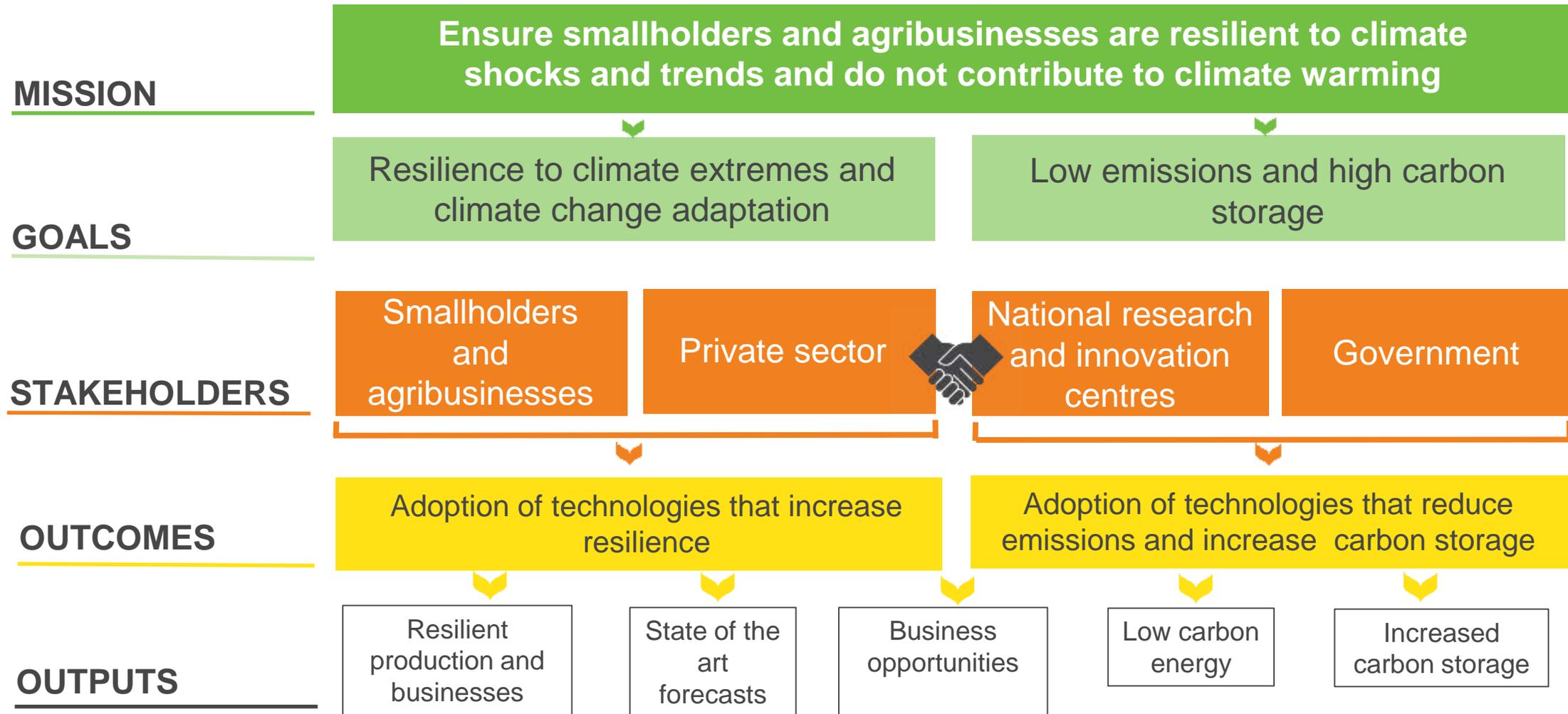


WHAT'S THE ISSUE?

- Agriculture's energy use and land and livestock husbandry **emit greenhouse gases** and reduce **carbon storage** in the soil and the vegetation. There are numerous ways agriculture can increase the absorption of atmospheric carbon and sell such 'negative emissions' through the 'carbon market'.
- There are **opportunities for businesses** to enhance smallholders' resilience to climate shocks and trends, increase their energy efficiency and carbon storage and reduce their greenhouse gas emissions. These include the provision of **weather forecasts** that can help farmers plan better and **weather-indexed insurance** systems to protect against extreme events.



THEORY OF CHANGE



FARM AFRICA'S APPROACH

We combine community knowledge and initiative with science, innovation and the market to make smallholder agriculture resilient to climate extremes and trends and contribute to climate change mitigation



FARM AFRICA'S APPROACH

We strengthen smallholders' and agribusinesses' awareness of how they can adapt to climate extremes and trends and how they can minimise their emissions

We assess climate impacts and identify opportunities for adaptation and mitigation action across the value chain

We work with communities and experts to develop approaches that make farming more resilient to climate extremes and trends, optimise carbon storage and energy consumption

We work with national meteorological services and scientists to share relevant weather and climate information and develop weather-indexed approaches to risk spreading

We identify and develop market opportunities to increase climate resilience and mitigation potential across the value chain

METHODOLOGY

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| Phase 1. Mobilisation and assessments | A. Stakeholder mapping and initial engagement: local communities, government and agribusinesses |
| | B. Surveys and assessments: current and future climate risks, energy efficiency and carbon storage |
| | C. Identification and prioritisation of suitable technologies |
| | D. Identification of market opportunities |



METHODOLOGY

| Phase 2. Design, test and roll out | A. Development of climate-smart technologies: climate resilience |
|--|--|
| | B. Development of climate-smart technologies: energy efficiency and carbon emissions |
| | C. Development of climate-smart technologies: carbon storage |
| | D. Early warning and risk preparedness |
| | E. Risk spreading: weather-indexed crop and livestock insurance |
| | F. Business development |



METHODOLOGY

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| Phase 3. Learning and adapting | A. Agree indicators of successful adoption and progress review process |
| | B. Collect data and analyse |
| | C. Collate feedback to and from local communities and adjust approaches as required |
| | D. Consolidate learning and share with public and private sector |



HOW TO USE FARM AFRICA'S APPROACH PAPERS

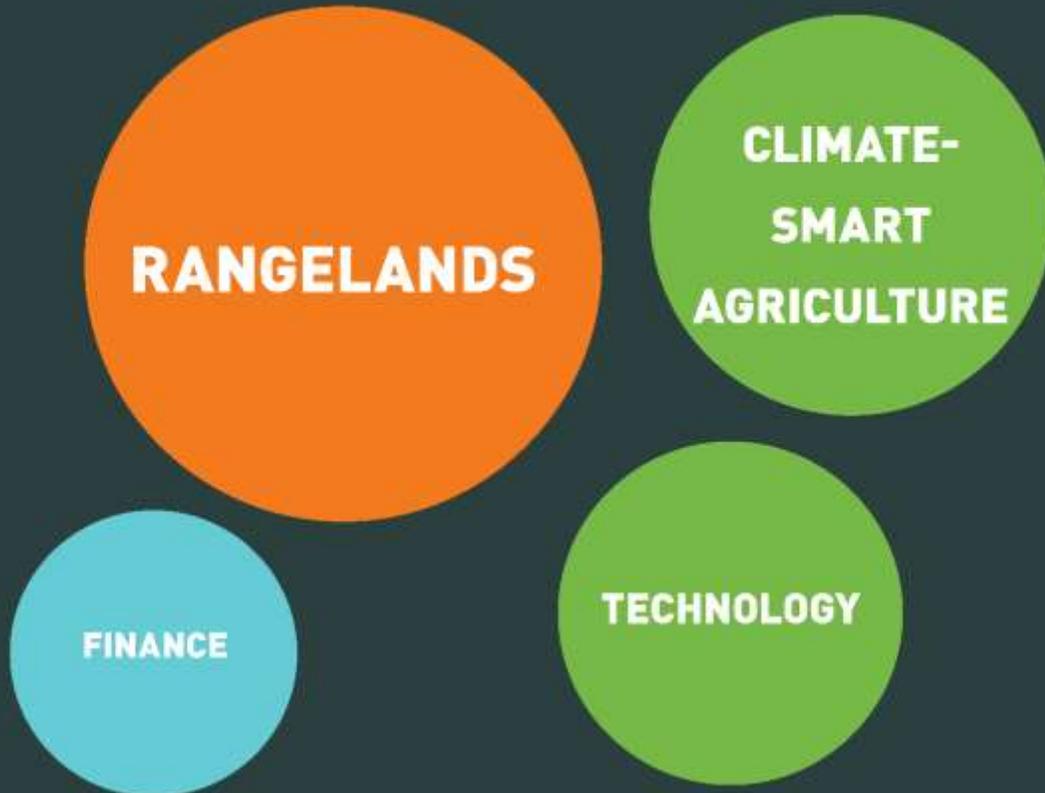


What the approach papers are for:

- Provide clarity to the communities we work with and those who support us about what we do, and how
- Build coherence across our operations
- Ensure each project is based on our experiences, lessons learnt and consolidated knowledge

HOW TO USE FARM AFRICA'S APPROACH PAPERS

A typical natural resource management project



How to use the approach papers in project design:

- The structure of our approach does not mirror the organisation of our individual interventions. The latter are constructed by combining elements from the approach papers – as illustrated in the diagram to the left
- While the approach papers give detailed guidance about how to do things, this will not always be followed to the letter in all projects. Local context and needs will continue to guide Farm Africa's project design and implementation.

We continuously learn and adjust our approach. The approach papers are regularly updated to reflect the dynamic nature of our experience.