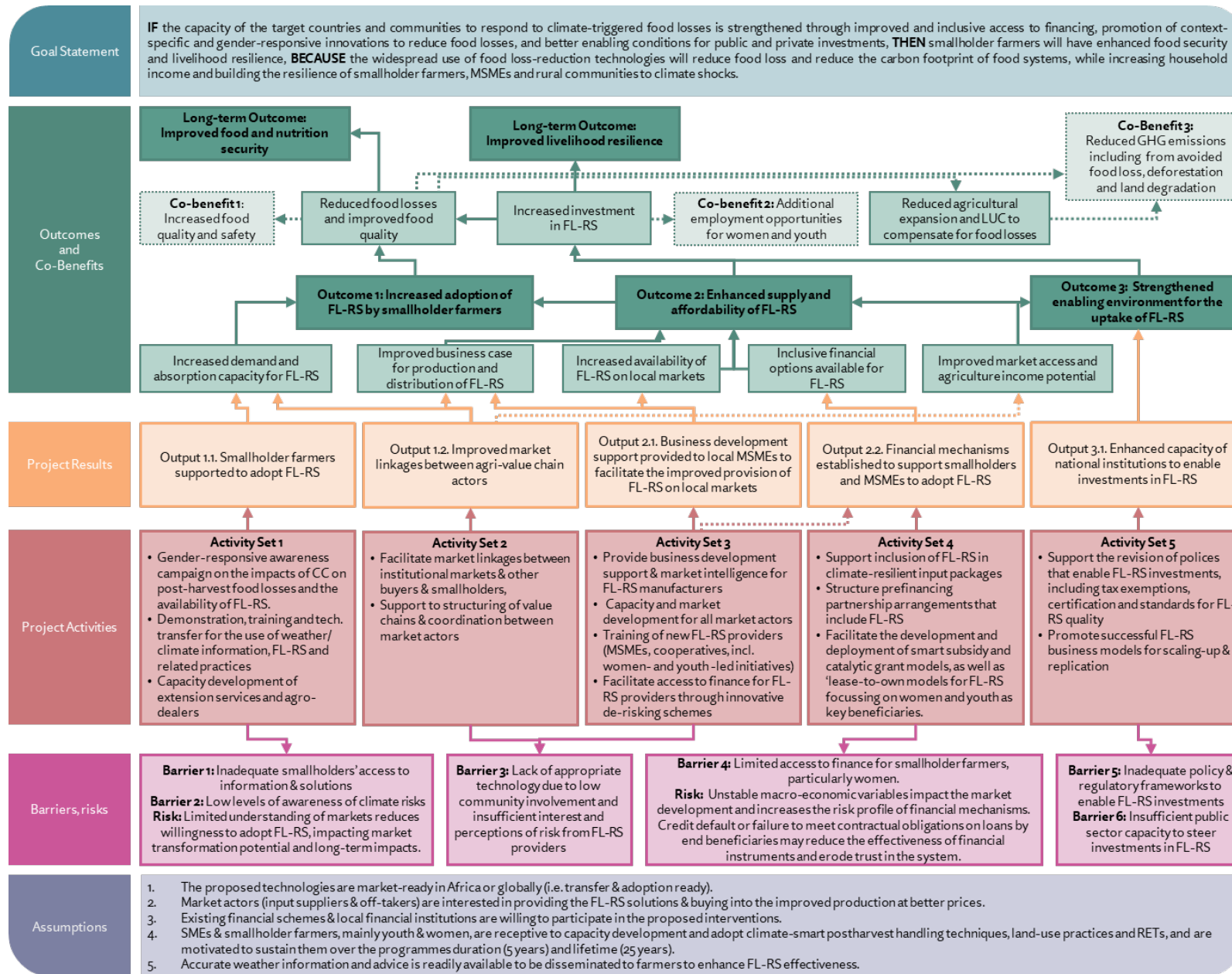




R E - G A I N
**Programme components & Financial
models**



Little to no work has been done on the link between climate change and food loss

- Harvest
- Postharvest Handling and Management
- Storage
- Transportation
- Quality
- Processing





Climate Rationale

Climate change-driven (or exacerbated) food spoilage and contamination in post-production stages of the value chains compound the climate change-driven productivity and yield losses during cultivation. This results in a double-blow to farming communities from climatic factors such as rising temperatures, higher moisture levels (warmer air holds more moisture), increased precipitation, more frequent or intense heavy rainfall events, flooding. Climate change is thus a threat-multiplier to crop value chains. **The impacts from climate change in the post-production value chain stages, which result in substantial post-harvest losses and reduce the output that farmers have left to sell, depress incomes and jeopardize livelihoods of small-holder farmers.** This perpetuates vulnerability to climatic shocks and stresses and prolongs the cycle of persistent poverty.

Furthermore, **in the face of climate change-driven post-harvest losses, farmers have an impetus to keep less of the reduced output for their own domestic consumption and to offset the volume losses (during harvesting, field-drying, on-farm storage) by selling more of what remains in the market.** This worsens household food insecurity in countries that already have markedly high levels of undernourishment (per FAO figures). All of these reduce adaptive capacity and must be ameliorated to ensure resilience of smallholder farmers in the seven countries.

In light of these findings, it is imperative for **RE-GAIN to support adaptation to climate change through harvest and post-harvest loss-reduction solutions** and enable climate resilience in crops' post-harvest value chains of smallholder farmers and communities.



Environmental Co-Benefits

Programme interventions to reduce post-harvest food loss yield significant environmental advantages:

- **Reduced land degradation and improved water use efficiency**
- **Decreased in net use of fertilisers and pesticides**
- **Reduction in air pollutants from waste food disposal**
- **Increased greening and improved land use**
- **Reduced loss of biodiversity**

Mitigation Impact

The programme will achieve an estimated 111,275 tCO₂e emission reduction over five years by:

- **Reducing emissions** from compensatory food production.

Socioeconomic and Health Co-Benefits

- **Increased food quality and safety:** Enhanced post-harvest practices increase food safety, nutritional value, and reduce contamination risks, strengthening public health.
- **Job Creation:** By supporting MSMEs and local suppliers in the FL-RS value chain, the programme creates employment opportunities, especially for women and youth.
- **Market Stability:** Consistent food supply minimizes price volatility, benefiting both producers and consumers.



Reducing food losses with implementation of appropriate post harvest technologies.

Non-Physical Solution Set

CLIMATE ADVISORY

DECISION MAKING



CAPACITY BUILDING OF EXTENSION PERSONNEL AND FARMERS.

Our Physical Solution Set

Model 1



On farm storage: Metal and plastic silos



Hermetic bags and polypropylene plastic bags



control agents (biological, chemical fumigants,



Tarpaulins and plastic sheets

Model 2



Moisture meters



Mechanical multi-crop threshers and shellers



Storage structures (e.g., huts, baskets, grain sheds)

T h a n k y o u