

# Design of an evaluation framework to assess infrastructure investment

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## Introduction

- Crop breeding is one of the core research and development areas of the CGIAR
- Modernizing breeding programs and networks through infrastructure investment is posed as an avenue to improve breeding operations
- 14 breeding resource projects under the umbrella program 'Crops to End Hunger' were provided with financial support from BMZ to implement capital, digital, and human capacity interventions across CGIAR and National Research and Extension Institutions



In total, 90 interviews were conducted.



## Aims

- Investigate how infrastructure investment influences breeding efficiencies, gender equality and sustainability

**Program outcomes were defined as:**

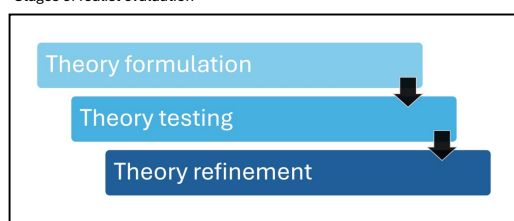
1. [Improved] collective research capacity (people and facilities) for gender appropriate, impact targeted breeding
2. [Increased] shared services in a collaborative network
3. Efficient product development (time/cost)
4. [Improved] Environmental and financial sustainability
5. Shortened research lag

## Evaluation Framework

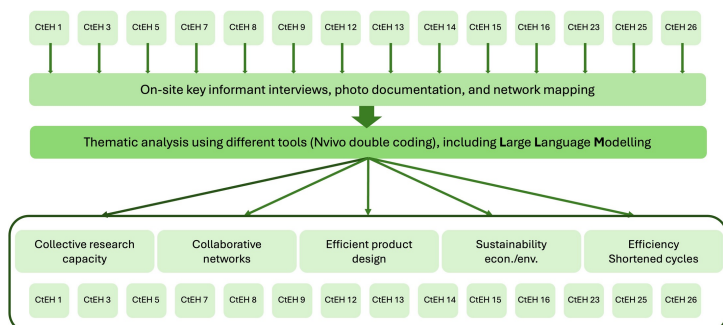
**Realist process evaluation enquiry**

- To uncover what works for whom, how, why and under what circumstances
- It is not geared towards identifying cause and effect relationships
- Follows evaluation stages

Stages of realist evaluation



## Evaluation design and Analysis



## Preliminary findings:

### Mechanisation and technology upgrades



TARI – Irrigation Infrastructure



IIAM- Soil Testing Kit



ZARI – Greenhouse Installation

### Human capital, training and operations



CIP – Women-led potato breeding



CIP-capacity improvement

## Sustainability



IITA- QR code labelling system



NARO – Solar Installation

## Outcomes

- Efficiency depends on the infrastructure provided, and how it is integrated into overall breeding operations
- The use of new equipment was dependent on additional capacity-building activities
- Mechanisation improved women's participation in some projects, but also displaced female labour in other projects
- Restricted project funding impacts sustainability negatively