

# Kenya Evidence Forum - June 14, 2016

Using Evidence to Improve Policy and Program Designs



Impact Kenya



# Maximizing the returns to large scale infrastructure investments

Example from the Nzoia Irrigation Program



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# Maximizing the returns to large scale infrastructure investments

Recap of the previous talks...

- Sanitation and Electricity investment challenges??



- Irrigation project??



Area of improvement....

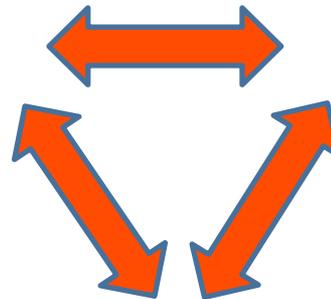
- Operation and Maintenance
- Water efficiency and productivity
- Distribution of resources
- Market access, etc. etc.

# Maximizing the returns to large scale infrastructure investments

KWSCRIP Impact Evaluation team



PMU



Bunyala scheme



WORLD BANK GROUP

DIME

Water GP

## HISTORY

- Naivasha Workship in April 2012
- Project approval in June 2013

# Maximizing the returns to large scale infrastructure investments

## IE STRATEGY

- 1) To measure impact of irrigation in the long-term
  - building new irrigation scheme takes time!
- From subsistence farming to commercial farming
- The impact of irrigation on:
  - Crop choices
  - Yields
  - Food security
  - Profitability

# Maximizing the returns to large scale infrastructure investments

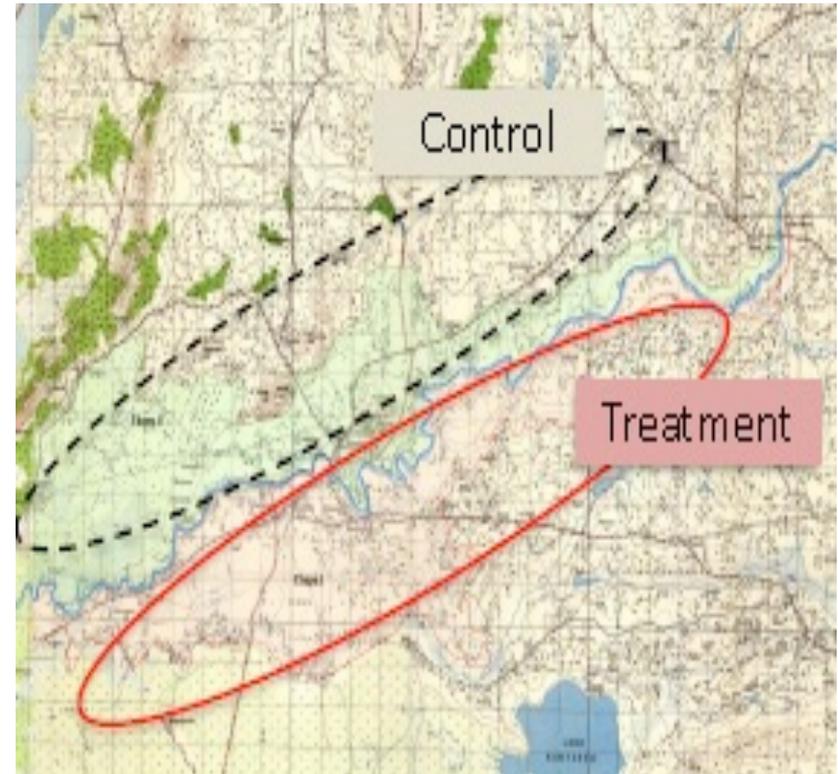
## IE STRATEGY

- 2) Test how to achieve the impact of irrigation in the Mid-term
  - learning from the already operating scheme
- The most effective combination of microcredit and training in improving the returns of irrigation.

# Maximizing the returns to large scale infrastructure investments

## PROPOSED IE DESIGN

- Evaluation 1: Irrigation Infrastructure
- What is the impact of irrigation on crop choices, yields, food security and profitability?
- To evaluate the impact of overall irrigation project (Phase I).



# Maximizing the returns to large scale infrastructure investments

## PROPOSED IE DESIGN

- Evaluation 2: Farmer Training & Access to Microcredit
- What combination of training and microcredit is most effective in improving the returns of irrigation?
  - 1) *Treatment Group 1: Farmers who receive both training & access to credit*
  - 2) *Treatment Group 2: Farmers who receive only training*
  - 3) *Treatment Group 3: Farmers who receive only access to credit*
  - 4) *Control: Farmers who receive neither training nor access to credit*

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## EXPECTED OUTPUT

- To improve the operation in Bunyala Irrigation Scheme
  - Process of IE helps to think through other operational challenges
- To inform the implementation plans of the broader Nzoia Irrigation Scheme.
  - Does not need to wait for the completion of the construction (end of project) to inform policy