Rwanda - Land Husbandry, Water Harvesting and Hillside Irrigation Project Impact Evaluation 2016, Fourth Follow-up Survey

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Overview

Identification

ID NUMBER
RWA_2016_LWH-W4_v01_EN_M_V01_A_OCS

Overview

ABSTRACT
Agriculture is a major engine of the Rwandan economy and remains a priority sector in the Government of Rwanda's goals of reducing poverty and achieving food security through commercialized agriculture. Sustainable improvement to agricultural productivity is the only way to achieve this target, calling for investments in participatory land management, water harvesting and intensified irrigation of the hillsides. The Land Husbandry, Water Harvesting and Hillside Irrigation (LWH) project has been working to meet these goals.

Evaluating the overall impact of LWH is important to allow Ministry of Agriculture and Animal Resources (MINAGRIs) to effectively plan for its future activities. LWH covers a relatively small area of 30,250 ha, eventually affecting approximately 20 watersheds. From the perspective of MINAGRI, LWH can be seen as a pilot program for comprehensive agricultural overhaul. LWH includes major infrastructure investments such as hillside terracing, irrigation dams, and post-harvest storage. The project aims to operationalize MINAGRIs strategy to encourage mono cropping of cash crops, as opposed to the traditional system of inter-cropping for household consumption.

LWH has been rolled out in three phases: implementation in the four Phase 1A sites began in 2010, in the three Phase 1B sites in 2012, and in the Phase 1C sites in late 2013.

There have been five surveys for this project including baselines and four follow-ups. There were two sample groups: 1B and 1C. For the 1B sample group, the baseline was conducted in 2012, and follow-up surveys in 2013, 2014, and 2016. For the 1C sample, the baseline was implemented in 2014, and a follow-up in 2016.

The data file documented here is from the fourth follow-up survey.

The datasets from previous surveys are also published in the World Bank Microdata Library with the following study IDs:

1) The baseline, the first and the second follow-up surveys: RWA_2012-2016_LWHIE-BL-F2_v01_M

2) The third follow-up survey: RWA_2014_LWHIE-F3_v01_M

KIND OF DATA
Sample survey data [ssd]

UNITS OF ANALYSIS
Households

Scope

NOTES
The scope of the study includes:

- Access to various forms of extension services

- Adoption of agricultural technologies and improved farming methods

- Use of irrigation

- Crop cultivation decisions

- Total harvests

- Expenditure on inputs

- Total sales

- Non-farm income

- Food consumption and security

- Usage of services from formal financial institutions

TOPICS

Topic	Vocabulary	URI
Agriculture & Rural Development	FAO	
Food (production, crisis)	FAO	
Land (policy, resource management)	FAO	
Water	FAO	

Coverage

GEOGRAPHIC COVERAGE
Regional

Producers and Sponsors

PRIMARY INVESTIGATOR(S)

Name	Affiliation
Florence Kondylis	The World Bank
Maria Jones	The World Bank
Saahil Karpe	The World Bank

FUNDING

Name	Abbreviation	Role
Global Agriculture Food Security Program	GAFSP	Funded the study

Metadata Production

METADATA PRODUCED BY

Name	Abbreviation	Affiliation	Role
Office of Chief Statistician	OCS	Food and Agriculture Organization	Adoption of metadata for FAM
Development Impact Evaluation	DECIE	World Bank	Preparation of metadata
Development Data Group	DECDG	World Bank	DDI documentation

DDI DOCUMENT VERSION
RWA_2016_LWH-W4_v01_EN_M_v01_A_OCS_v01

DDI DOCUMENT ID

DDI_RWA_2016_LWH-W4_v01_EN_M_v01_A_OCS_FAO

Sampling

Sampling Procedure

There were two baseline surveys, one for the 1B sample group and another for the 1C sample group.

1B sample:
A baseline survey was implemented in three 1B LWH project sites. Rwamagana-34, Rwamagana-35 and Kayonza-4, and three control sites were selected by pairwise-matching. The sample was designed to meet three criteria: geographic representation at the site-level, inclusion of multiple members of farmer groups within sites, and sufficient size to power tests of variations in treatment within the Phase 1B sites.

To meet these criteria, sampling was done through a two-stage process. In the first stage, researchers randomly sampled "seed" households, stratified by village. The total number of "seed" households varied by treatment status. For treatment sites, the number of "seeds" depended on the estimated number of Self-help Group (SHG), calculated based on the site population and the typical size of SHGs, which is 20 households. For control sites, the number of "seeds" was set at 25, which provided sufficient power for the measurement of overall project impact.

In the second stage, researchers asked each "seed" farmer to list four "plot neighbours", i.e. people who have contiguous or near-contiguous plots to his own. These four people were added to the survey sample, and the five respondents together constitute a synthetic SHG. Since the SHGs are formed based on proximity of agricultural land, households in synthetic SHGs are likely to be assigned into a single farmer group. Comparison sites were elected using pair-wise matching, from a list of sites considered eligible to receive LWH but that will not receive the project.

1C sample:
A baseline survey was implemented in four 1C LWH project sites. The LWH Project works at a site level (the valley and surrounding hills chosen for the intervention). The LWH project implemented different activities at different areas within the site: Command Area, Command Area Catchment, and Water Catchment areas. Because Phase 1C site Gicumbi was only receiving land husbandry interventions, the sample was taken only from the Water Catchment area of the site. At Muyanza site, the full portfolio of LWH interventions to be implemented, as reflected in the sampling across the different areas. Comparison sites were selected using pair-wise matching, from a list of sites considered eligible for the LWH project but not to receive the project. Extensive data was recorded for the sites considered eligible for the project, including data on geography, weather and land use patterns, making the identification of such matching sites possible.

Weighting

No information. Refer to dataset provided by World Bank Data.

Questionnaires

No content available

Data Collection

Data Collection Dates

Start	End	Cycle
2016-06	2016-06	N/A

Data Collection Mode

Computer Assisted Personal Interview [capi]

Data Processing

Data Editing

All data was collected electronically on tablet computers using Open Data Kit/SurveyCTO

Data Editing

Data Appraisal

No content available