

# Ghana - Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Projects

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## Identification

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### SURVEY ID NUMBER

GHA\_2013-2014\_KIP\_v01\_M

### TITLE

Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Projects

### COUNTRY/ECONOMY

Name	Country code
Ghana	GHA

### STUDY TYPE

Agricultural Survey [ag/oth]

### ABSTRACT

The Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Projects study sample is comprised of 1,616 smallholder farmers who cultivated rice plots within the two communities, Kpong and Weta, located in Ghana's Eastern and Volta Regions. Approximately one-third of the study sample farmers are female. Three main data collection rounds took place. A baseline survey in late 2013 captured data on the 2012 major cropping season. And two additional data collection rounds captured data on the 2013 minor and 2014 major cropping seasons, respectively. This study took place as part of the Ghana Commercial Agriculture Project (GCAP), which is a program funded by the World Bank and USAID that aims to promote agricultural productivity and livelihoods, specifically by linking small farmers into the agricultural value chain. These surveys were conducted with the intent of being used as part of an impact evaluation on the impact of out-grower contracts on smallholder farmers. However, the impact evaluation was discontinued after GADCO, the private sector partner that was operating the out-grower program, changed their plans for the program.

### KIND OF DATA

Sample survey data [ssd]

### UNIT OF ANALYSIS

- Individual primary cultivators
- Household of primary cultivators

## Version

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### VERSION DESCRIPTION

- v01: Edited, anonymous datasets for public distribution.

### VERSION DATE

1999-11-30

## Scope

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### NOTES

The scope of the Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Projects includes:

- Demographics of primary cultivator and his or her household, including a household roster, ethnicity, geographical origin, education, political offices, physical abilities, household wealth, household quality, household decision-making, expenditures, attitudes, a short term memory test, parcel rosters, and land holding details.
- Farming activities, agricultural production, crop area (all crops farmed by household), livestock, farm safety, farmer information networks, and productivity.
- Income from wage employment and paid labor (all HH members), income from non-farm self-employment, and other

income generating activities.

- Access to land: quantity held and farmed, tenure security, land quality, and improvements.
- Use of agricultural inputs (all chemical, mechanical, and labor inputs) and technologies.
- Labor use on agricultural plots, including hired labor.
- Use of credit including credit constraints, loan applications, loans taken, loans given out, and remittances (in and out).
- Output markets (for rice only).

## Coverage

### GEOGRAPHIC COVERAGE

The Kpong Irrigation Project (KIP) is located in the Greater Accra Region, in Shai Osudoku District, along the Volta River, and is fed from the Kpong Dam (also known as Akuse) dam. The KIP covers 3,000 hectares, and its headquarters are in Asutsuare. The Weta Irrigation Project (WIP) is located in the Volta Region, in Ketu North District, just west of Lomé. The WIP covers approximately 900 hectares.

### UNIVERSE

The study sample is comprised of individuals who are the primary cultivators (PCs) of plots within the Kpong and Weta irrigation projects.

## Producers and sponsors

### PRIMARY INVESTIGATORS

Name	Affiliation
Daniel Ayalew Ali	The World Bank
Derick Bowen	Millennium Challenge Corporation
Klaus Deininger	The World Bank
Markus Goldstein	The World Bank
Angeli Kirk	The World Bank
Tricia Koroknay-Palicz	The World Bank

### FUNDING AGENCY/SPONSOR

Name	Abbreviation
The World Bank	WB
United States Agency of International Development	USAID

## Sampling

### SAMPLING PROCEDURE

The sample design for the surveys conducted with primary cultivators of the 2013 Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Project involved the following four main steps:

- 1) The Ghana Irrigation Development Authority (GIDA) provided a list of plots within the Kpong and Weta Irrigation Projects. This list included 3,065 plots in Kpong and 1,087 plots in Weta, as well as the name of the leaseholder for each plot.
- 2) The study met with the Kpong Irrigation Project (KIP) and Weta Irrigation Project (WIP) block leaders. With the help of the block leaders, plots that were vacant, waterlogged, had no owner, or were owned by a private firm or institutions were

removed from the list. Plots that were de facto subdivided for use by multiple cultivators were counted as multiple plots. And names of the primary cultivators (PC)s for each plot were secured. After this process the resulting number of plots and PCs in the KIP was 2,606 plots with 1,875 PCs and in WIP was 1,093 plots with 993 PCs. In total, 31% of PCs were female; 78% were plot owners; 16% were renters; and 6% were both owners and renters.

3) The study decided to enroll in the sample 1,600 of these PCs. All female PCs were drawn into the sample, to achieve as close to a balanced sample as possible by gender. And a random subset of male cultivators were drawn into the sample, stratifying on number of plots (one plot or more than one plot), tenure type (owner, renter, or owner and renter), and irrigation site (Kpong or Weta). For Kpong only, the study also stratified on plot section.

4) The selected individuals were screened for their willingness to participate in the study and interest in participating in the Global Agricultural Development Company's (GADCO) Copa Connect Smallholder Program (CCSP). The study sample was then formed only of those individuals who were interested in participating in CCSP and who completed the baseline survey. Those who did not meet these criteria were replaced, with replacements randomly drawn from within the same strata as the replaced farmer, where possible. For cases where the sample frame contained no more cultivators within that strata (primarily in the case of female cultivators), a cultivator was randomly drawn from all remaining primary cultivators. The target number was exceeded by 16, such that a total of 1,616 PCs were enrolled in the study sample.

Two additional survey modules were conducted:

A) For the Input Seller Survey, all individual persons or shop establishments that sell chemical inputs within the study communities, including herbicides, insecticides, fungicides and fertilizer for rice production, were included.

B) For the Labor Wage Survey 14 focus groups were created: one in each of the 14 community groupings. Each focus group was comprised of between 7 and 10 individuals. Focus groups were formed from a listing of agricultural laborers, which gave particular attention to gender, community of residence, the agricultural tasks the laborer specialized in, and whether the laborer has been involved in this activity since the 2012 major season, to ensure a fair representation of gender, labor, task and communities. The listing was done with the assistance of a popular person, block leader, or family head who directed the survey enumerators to places where laborers could be found.

#### RESPONSE RATE

The baseline survey captured data from the full sample of 1,616 PCs, and the High Frequency Data Collection (HFDC) rounds from a subset. For HFDC round 1, the study attempted to collect data from all of the PCs assigned to the control group (808), and from those PCs assigned to the treatment group who participated in CCSP during the 2013 minor season (188). During HFDC round 1, 97% of the targeted 996 PCs were interviewed. For HFDC round 2, the study attempted to collect data from all 1,616 PCs in the study sample, and was successful in interviewing 1,613 PCs.

Input sellers who responded to the Input Seller Survey in study communities totaled 22.

For the Labor Wage Survey 14 focus groups were created. Each focus group was comprised of between 7 and 10 individuals.

#### WEIGHTING

None

## Data Collection

#### DATES OF DATA COLLECTION

Start	End	Cycle
2013-08-01	2013-11-01	Baseline
2014-01-01	2014-07-01	HF round 1
2014-06-01	2014-06-30	Labor wage survey and input seller survey
2014-07-01	2014-09-01	HF round 2 module 1
2014-10-01	2015-02-01	HF round 2 module 2

#### DATA COLLECTION MODE

Computer Assisted Personal Interview [capi]

## Access policy

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### CONFIDENTIALITY

Users of the data agree to keep confidential all data contained in these datasets and to make no attempt to identify, trace or contact any individual whose data is included in these datasets.

### CITATION REQUIREMENTS

Use of the dataset must be acknowledged using a citation which would include:

- the Identification of the Primary Investigator
- the title of the survey (including country, acronym and year of implementation)
- the survey reference number
- the source and date of download

Example,

The World Bank & Millenium Challenge Corporation. Smallholder Rice Farmers in Ghana's Kpong and Weta Irrigation Projects. Ref. GHA\_2013-2014\_KIP\_v01\_M. Dataset downloaded from [url] on [date].

## Disclaimer and copyrights

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### DISCLAIMER

The user of the data acknowledges that the original collector of the data, the authorized distributor of the data, and the relevant funding agency bear no responsibility for use of the data or for interpretations or inferences based upon such uses.

## Metadata production

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### DDI DOCUMENT ID

DDI\_GHA\_2013-2014\_KIPS\_v01\_M\_WB

### PRODUCERS

Name	Abbreviation	Affiliation	Role
Development Economics Data Group	DECDG	The World Bank	Documentation of the study

### DATE OF METADATA PRODUCTION

2019-07-15

### DDI DOCUMENT VERSION

Version 01 (July 2019)

## Data Dictionary

Data file	Cases	Variables
<b>hfdc_s1m1_final</b> Data collected at the individual level - specifically primary cultivators (PCs) - during the high frequency data collection (hfdc) round 1. Contents include: land preparation, planting, chemical application, and use of inputs (both chemical and labor) farmers used (Module 1).	1491	246
<b>hfdc_s1m3_final</b> Data collected at the individual level - specifically primary cultivators (PCs) - during the high frequency data collection (hfdc) round 1. Contents include: harvest and post-harvest activities and labor used during these (Module 3).	1445	141
<b>hfdc_s2m1_final</b> Data collected at the individual level - specifically primary cultivators (PCs) - during the high frequency data collection (hfdc) round 2. Contents include: land preparation, planting, chemical application, and use of inputs (both chemical and labor) farmers used (Module 1).	2562	280
<b>hfdc_s2m2_final</b> Data collected at the individual level - specifically primary cultivators (PCs) - during the high frequency data collection (hfdc) round 1. Contents include: harvest and post-harvest activities and labor used during these (Module 2).	2659	217
<b>inputseller_data</b> Data collected at the individual level - specifically primary cultivators (PCs) - for the input sellers survey. Contents include: prices of chemical inputs (insecticides, herbicides, fungicides and fertilizer) for the 2012 Major Season, 2013 Minor Season and 2013 Major Season.	22	838
<b>seca_final</b> CHECK THIS SEC.C dataset here.	3020	12
<b>secb_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module B - household roster.	9494	19
<b>secd_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module D - Education (part of the household roster).	8740	10
<b>sece_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module E - Physical ability and illness (part of the household roster).	9445	5
<b>secf_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module F - Parcel roster (for all household parcels).	5854	14
<b>secg_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module G - Land holding details.	5817	49
<b>sech_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module H - Crop area (all crops farmed by household).	4967	30
<b>seci_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module I - Crop production.	4993	46
<b>secj_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module J - Agricultural inputs (all chemical, mechanical, and labor inputs).	4307	96
<b>secli_final</b> Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Li - Hired labor.	13512	12

<b>secli_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Lii - Safety (farm safety).	1615	12
<b>secm_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module M - Networks (farmer information networks).	4845	4
<b>secn_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module N - Income from wage employment and paid labor (all HH members)r.	9091	12
<b>secnm_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module NM - Non-member roster.	4774	15
<b>seco_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module O - Income from non-farm self-employment.	12392	14
<b>secp_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module P - Livestock.	22467	10
<b>secq_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Q - Physical assets.	66215	8
<b>secr_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module R - Housing quality.	1615	16
<b>secsi_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Si - Credit constraints; loan applications; loans taken; loans given out	4845	15
<b>secsii_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Sii - Credit constraints; loan applications; loans taken; loans given out	1807	20
<b>secsiii_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Siii - Credit constraints; loan applications; loans taken; loans given out	16150	11
<b>secsiv_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Siv - Credit constraints; loan applications; loans taken; loans given out	1615	8
<b>secti_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Ti - Remittances in; remittances out	13039	8
<b>sectii_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Tii - Remittances in; remittances out	11047	6
<b>secv_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module V - Other income	11007	7
<b>secw_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module W - Household decision-making	16150	5
<b>secwii_final</b>	Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module W - Household decision-making	1615	13

**secx\_final**

Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module X - Expenditures 29070 6

**secy\_final**

Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Y - Attitudes 1615 29

**secz\_final**

Data collected at the individual level - specifically primary cultivators (PCs). Contents include: survey instrument module Z - Short term memory test 1615 33

**wagelabor\_data**

Data collected at the individual level - specifically primary cultivators (PCs) - for the labor wage survey. Contents include: labor rates for agricultural tasks Major Season, 2013 Minor Season, and 2013 Major Season. 14 461