REPUBLIC OF MALI

ONE PEOPLE, ONCE GOAL, ONE BELIEF

MINISTRY OF RURAL DEVELOPMENT

PLANIFICATION AND STATISTICS UNIT

BASIC INFORMATION DOCUMENT

ENQUÊTE AGRICOLE DE CONJONCTURE INTÉGRÉE AUX

CONDITIONS DE VIE DES MÉNAGES 2014

February 2016

ACRONYMS

CPS/SDR	Planning and Statistics Unit, Ministry of Rural Development
EAC	Enquête Agricole de Conjoncture
EAC-I	Enquête Agricole de Conjoncture Intégré aux conditions de vie des ménages
LSMS	Living Standards Measurement Study
LSMS – ISA	Living Standards Measurement Study – Integrated Surveys on Agriculture

Contents

1. Introduction

This document provides detailed information on the "Enquête Agricole de Conjoncture Intégrée aux conditions de vie des ménages (EAC-I 2014)": the Mali Conjunctural Agricultural Survey Integrated with Living Conditions 2014. The EAC-I 2014 is the first wave of two panel surveys in Mali. The goal of the survey is to collect data on households, their characteristics, and their welfare with a particular focus on agricultural activities. The survey was financed by USAID – Mali through its Feed the Future initiative, designed by The Living Standards Measurement Study (LSMS) team of The World Bank and, implemented by the Planning and Statistics Unit (CPS/SDR) of the Ministry of Rural Development of Mali with the technical assistance of the LSMS team

The EAC-I 2014, having the same structure as other Living Standards Measurement Study – Integrated Surveys on Agriculture (LSMS-ISA)[1] surveys, fills a gap in the Malian Statistical System which does not include a survey that integrates agricultural questions with living conditions of households. Several factors explain the motivation behind conducting a survey of this type in Mali.

- A first motivation for integrating living conditions to agricultural surveys is to produce pertinent data in a timely fashion as an input for a better evaluation of agricultural policies. In fact, the link between agriculture and important goals like poverty eradication, better nutrition, and gender inequality has often been suggested. A survey like EAC-I 2014 can provide more evidence of this link.
- A second motivation is that the data from an EAC-I 2014 panel would allow dynamic analysis of living conditions of rural households. The panel dimension would enable researchers among many other things to study the mobility between agricultural and non-agricultural jobs, or to rigorously evaluate the impact of specific interventions.
- A third motivation in doing the EAC-I 2014 is to extend the LSMS-ISA project to Mali. This multi-country project seeks to improve the understanding of agriculture in Sub-Saharan Africa to better guide interventions. In fact, despite Mali's being on the receiving had of foreign aid donations from the United States Government and other donors in the agricultural sector, there's a lack of pertinent data to evaluate the impact of these interventions. In order to better design its interventions in Mali, USAID needed a good understanding of the agricultural situation which can be obtained through analysis of the EAC-I 2014 data sets.

The rest of the document is organized as follow: the basic survey characteristics are described followed by an introduction of the survey instruments. Then comes a section detailing the sample design adopted for this survey. This is followed by a description of field work activities. The documents ends with a section on basic instructions on how to use the various data sets

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[1] For more information on the Living Standards Measurement Study – Integrated Surveys on Agriculture program, visit the web site at: www.worldbank.org/lsms

2. Survey Characteristics

The EAC-I 2014 is the first wave of an LSMS-ISA panel survey in Mali. It was carried out in two visits. For 2014, the survey replaced the classical EAC which is cross-sectional survey of 7,000 households carried out annually by the CPS/SDR. The purpose of the EAC is essentially to project (in September) and then estimate (in February) the agricultural production of major crops. The CPS/SDR in partnership with the LSMS-ISA team, revised the classical EAC questionnaires to create new survey instruments. The full LSMS-ISA instruments were applied to about 4,000[2] households.

3. Survey Instruments

The survey instruments consisted of three questionnaires:

- **EAC-I Questionnaire Ménage Lourd** (Household questionnaire)
- **EAC-I Questionnaire Exploitations Agricoles Lourd** (Agriculture questionnaire), which was administered to the household if one or more members of the household participated in agricultural or livestock activities.
- **EAC-I Questionnaire Communautaire** (Community questionnaire), which was administered at the enumeration area level and collected information on the socio-economic indicators of the enumeration areas where the sample households reside.[3]

3.1. Household questionnaires

The Household questionnaire comprises, in total, 18 sections, in addition to the cover page which contains information of a general nature, and section 0 which includes detailed information on household identification and the results of the interview. Some sections were administered during the first visit only, some others in the second visit only and, some in both visits. Annex 1 includes the details about when each section was administered.

- **Cover**: The cover lists household location and identification data. It is completed by field staff which reports the information collected during the 1st visit onto the 2nd visit questionnaires.
- **Section 0**: **Control Information**: It contains detailed information to identify household and the results of the field interview.
- **Section 1: Household demographic characteristics** contains the roster of individuals living in the household, socio demographic characteristics of the household members: their gender, age,

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[2] In order to meet the sample size requirements for the reporting of national cereals productions, CPS/SDR collected data on 5,000 more households for using survey instruments that were subsets of the EAC-I questionnaires. The data for these households is not distributed by the LSMS-ISA team but can be requested from the CPS/SDR.

[3] The Community Questionnaire does not collect information from communities in the sociological sense. The data cannot be used to represent communities in Mali. The data collected at the community level represent information that is common to the households selected for inclusion in the selected enumeration areas.

relationship with household head, their marital status etc. In the second visit, the section includes information on the parents of the members of the households.

- **Section 2: Education** is collected in the first visit only. It treats questions pertaining to the educational attainment of the household members. Some information on the school characteristics and also school expenditures for the individuals who are still attending school.
- **Section 3: Health.** The health section collects general health data: health status, health services utilization and cost (for all individuals) and vaccination information (for children under 5)
- **Section 4: Employment.** This section focuses on characteristics of the labor market and seeks to determine whether the respondent is inactive (retirees for example), unemployed; and in the case of those in employment, to identify the characteristics of their employment (profession, industry, socio-professional category, seniority, working hours, income etc.)
- **Section 5: Savings and credits.** This section gather data on access to formal financial institutions, savings made, loans or credit received, payments made for household members aged 18, and more.
- **Section 6: Non-Agricultural enterprises.** In this section the unit is the non-agricultural enterprise. Information is collected on the enterprise ownership, status, labor, value of stock, sales and, business costs etc.
- **Section 7: Dwelling.** Status of occupancy, nature of the walls, roof, flooring, number of rooms
- **Section 8: Assets.** Value and years of possession of durables good.
- **Section 9: Non-work income**. Income from sources other than employment during the last year, amounts and beneficiaries.
- **Section 10: Remittances.** Sources, frequencies, amount etc. of remittances received and emitted by the household.
- **Section 11: Shocks.** Negative shocks sustained by the household, and the household's response to the shock(s).
- **Section 12: Non-food expenditures.** Non-food expenditures items exclusive of education, health, and accommodation.
- **Section 13: Food consumption.** For a list of commonly eaten items, information is collected on expenditure, auto-consumption, presents and donations for all food items consumed during the past 7 days.
- **Section 14: Food consumption complement:** Additional information on food consumption during the past 7 days with particular reference to food consumption according to food group.
- **Section 15: Fisheries.** Participation in fishing, quantities and types of fish caught etc.
- **Section 16: Safety nets.** Cash in-kind assistance received from the government or NGOs.
- **Section 17: Food security.** Various aspects of food security
- **Section 18: Forestry.** Access and use of forest resources, use of wood for cooking etc.

3.2. Agriculture questionnaires

Similarly to the household questionnaire, the agriculture questionnaire is arranged into different sections. However given the seasonality of the activity the different sections do not repeat between visits except the cover and the control information section. Annex 1 provides the details on which sections were administered in each visit.

- **Cover**
- **Section 0: Control information.**
- **Section 1A: Stocks**. This section collects information on quantities harvested, sold, and in stocks from the previous agricultural campaign.
- **Section 1B: Farm.** Information on access to land, ownership etc. Area of plots, types of soil etc.
- **Section 1C: Crops.** The section records the type of crops, seeds, and farmers' prediction of harvests.
- **Section 1D: Update of Plots and cultures rosters.** Track the change of crop within plots between the two visits.
- **Section 1E: Rosters of plots and cultures for the 2nd visit.** Updated list of plots and crops cultivated during the 2014/2015 campaign.
- **Section 2A: Agriculture Extension.** Relation with agriculture extension services.
- **Section 2B: Labor.** Labor used for planting activities.
- **Section 2C: Inputs.** Quantity of fertilizers, pesticides etc. used and time of application on each plot.
- **Section 2D: Costs of inputs.** Cost of inputs used during the campaign.
- **Section 2E: Inputs subventions.** Access and participation in government input subvention programs.
- **Section 2F: Labor.** Labor used for crops maintenance and harvests.
- **Section 3A: Production and sales.** Production, sales and stocks of crops cultivated during the 2014/2015 campaign.
- **Section 3B: Perennial crops.** Production of perennial crops.
- **Section 4: Livestock.** Livestock, meat production, milk production, food, water, health of livestock.
- **Section 5: Equipment.** Access to agricultural equipment and tools.

3.4. Community questionnaires

The Community Questionnaire collects information that is common for the households in the selected locality. The objective of the questionnaire is to collect socio-economic data on the locality and the prices in that locality. The main questionnaire was administered during the first visit. Prices were collected during both visits. For the sections treating socio-demographic characteristics of the community, interviews were conducted in group made of the main socio-cultural members of the locality (traditional leaders, notables, men, women, young men and women etc.).

- **Cover**
- **Section 0: Names of respondent**
- **Section 1: Social services.** Information relative to the existence and accessibility of social services
- **Section 2: Agriculture.** Characteristics of agriculture in the village/neighborhood.
- **Section 3: Community needs.** Community needs for infrastructure.
- **Section 4: Prices.** Prices in local markets

4. Sample

The EAC-I 2014 has been designed to have national coverage, including both urban and rural areas in all the regions of the country except Kidal. The domains were defined as the entire country, district of Bamako, other urban areas, and rural areas; and in the rural areas: agricultural zones, agro-pastoral zones and pastoral zones. Taking this into account, 51 explicit sample strata were selected.

The target population was drawn from households in all regions of Mali except Kidal which was not accessible for security reasons. Kidal also has very low population density.

The sample was chosen through a random two stage process:

- In the first stage, 1070 enumeration areas (EAs) were selected with Probability Proportional to Size (PPS) using the 2009 Census of Population as the base for the sample, and the number of households as a measure of size.
- In the second stage
    - 3 households were selected with equal probability in each of the rural EAs
    - 9 households were selected with equal probability in each of the urban EAs

The total estimated size of the sample for the survey was 4,218. The sample distribution in terms of number of households by region and area is as follow:

Table 1. Planned Sample Design

Regions	Urban	Rural	Total
Kayes	162	441	603
Koulikoro	90	441	531
Sikasso	153	390	543
Ségou	153	453	606
Mopti	90	510	600
Tombouctou	45	267	312
Gao	45	204	249
Bamako	774		774
Total	1512	2706	4218

5. Training

The training was done in three phases:

- Training of the regional supervisors
- Two trainings (one before each visit field work) for the enumerators and their team leaders held in each of the region capitals.

5.1. Training of the regional supervisors

This one-week training was held in CPS/SDR headquarters in Bamako from June 2nd to June 8th. The participants were the regional supervisors (three per region) of the survey. In the classical EAC organizational structure, these government staff members from regional agricultural offices coordinate survey field work in the region. They are responsible of the selection and the training of the enumerators under the guidance of CPS/SDR. They are responsible of the overall quality control of questionnaires fielded in their region and they coordinate the centralization of questionnaires and their transfer to headquarters for data entry.

The training consisted of classroom sessions on the questionnaires and exercises on individual sections of the questionnaires. Problems were found in the questionnaire in terms of incorrect skip patterns, questions wording, layout issues and quality of responses during the training. Improvements were recommended and taken into account for the final version of the questionnaires.

5.2. Enumerators' trainings

Two enumerator trainings were conducted (one before each visit). The enumerators and team leaders (controllers) were trained by the regional supervisors under the guidance of CPS/SDR field staff with support from the LSMS resident advisors technical missions. Training was held in each regional capital (Kayes, Sikasso, Koulikoro, Ségou, Mopti, Tombouctou, Gao and Bamako). The training consisted of (i) classroom instructions on the questionnaires, concepts and definitions and practice exercises, (ii) interview techniques, and team work organization. In addition, participants did mock interviews and in some cases real interviews in the field with households that were not scheduled to be part of the actual survey sample. Most of the training instructions are detailed in the interviewer's and supervisor's manuals which are also available.

The first visit training was held from June 23rd to July 7th. At the end of the training session, trainees were assessed according to a test that was administered on the material covered in the training process and, an evaluation by the regional supervisors. The second visit enumerator training held from December 8th to December 14th consisted of a review of the second visit questionnaires and a review of common mistakes made during the first visit.

6. Field work

The EAC-I 2014 was implemented by the CPS/SDR with the technical assistance of the LSMS-ISA Team of the World Bank.

6.1. Organization of the field work

The EAC-I was organized as follow:

- Interviews were conducted by teams of enumerators. Each team was made up of 3 to 6 enumerators under the supervision of a controller. On average each team was in charge of 12 EAs and thus every enumerator was in charge of 3 EAs or about 9 households in rural EAs and 27 in

urban EAs[4]. The teams were instructed to move from one EAs to another in group, but in practice this was not observed in many cases because EAC traditionally relies on resident enumerators. In total about 343 enumerators and 83 controllers were used.

- Upon completion of interviews the controller reviewed the questionnaires for completion and errors. In case of mistakes or inconsistencies, he returned the questionnaires to the enumerators who returned to the household as necessary until the work was completed and free of mistakes. Upon review, the controller sent the questionnaires to agriculture regional office.

- Once they received the questionnaires, regional supervisors conducted additional controls of samples of questionnaires and in case of mistakes or incompletions, they returned the questionnaires to the controllers and enumerators. Throughout the duration of fieldwork regional supervisors conducted field supervisions of the enumerators and controllers. Once they deemed the questionnaires valid, the regional supervisors were in charge of sending the questionnaires to headquarters for data entry.

- Data entry was conducted at the CPS/SDR headquarters with 30 data entry clerks and 2 data entry supervisors. Throughout the duration of fieldwork, CPS/SDR staff conducted field supervisions in all regions (except Tombouctou and Gao for security reasons). This was an occasion to check on the advancement of fieldwork and correct mistakes if they were found.

6.2. First visit field work

Data collection followed immediately after the training and was conducted from the end of July 2014 to the beginning of October 2014 in most regions. Field work in Bamako was delayed and thus ended for some enumeration areas at the end November 2014

Table 2. Planned and Actual household visited for the First Visit

Region	Planned	Actual	Loss (%)
Kayes	603	573	5.0
Koulikoro	531	531	0.0
Sikasso	543	540	0.6
Ségou	606	603	0.5
Mopti	600	564	6.0
Tombouctou	312	277	11.2
Gao	249	150	39.8
Bamako	774	771	0.4
Total	4218	4009	5.0

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[4] The enumerator work load between rural areas and urban areas was balanced by the fact that rural area enumerators had to administer a light agriculture questionnaire on 18 additional households (see footnote 2). In addition, rural area households tend to have more members than urban area households and were more likely to be eligible for the administerion of the agriculture questionnaire.

As shown in the table, in many regions not all of the expected households were interviewed during the first visit. In Kayes, Koulikoro and Sikasso, the main reason that households could not be interviewed was for accessibility issues (road not passable because of flood.) In the northern regions (Mopti, Tombouctou and, Gao), many EAs could not be visited because of security concerns.

6.3. Second visit field work

Data collection for the second field visit started in mid-December following a one week training on the 2nd visit questionnaires. This was an occasion for the enumerators to address some of the mistakes detected in their questionnaires during the first visit. Field work for the second visit was finished in February 2015.

For the second visit, enumerators returned to the same households they visited during the first visit. In Kayes, 16 households which could not be accessed during the first visit were interviewed in the second visit. Enumerators were not able to return to 35 households that were interviewed in the first visit. In half of the cases, the reason was that the households had moved to a different region or country. The other half was for security reasons in Tombouctou or Gao

Table 3. Planned and Actual households visited for the Second Visit

Region	Planned	Actual	Loss (%)
Kayes	603	587	2.7
Koulikoro	531	531	0.0
Sikasso	543	534	1.7
Ségou	606	600	1.0
Mopti	600	557	7.2
Tombouctou	312	267	14.4
Gao	249	150	39.8
Bamako	774	766	1.0
Total	4218	3992	5.4

6.4. Data Entry & Data cleaning

Data entry was performed at the CPS/SDR using a CSPro application designed by an international consultant recruited by the LSMS team. The data entry program allows three types of data checks: (1) range checks; (2) intra-record check to verify inconsistencies pertinent to the particular module of the questionnaire; and (3) inter-record checks to determine inconsistencies pertinent between the different modules of the questionnaire.

Data entry for the first visit was done from August 11th, 2014 to November 30th, 2014 and, from February 9th 2015 to March 27th, 2015 for the second visit.

Data cleaning was done from May 2015 to July 2015. Data cleaning was done in a CSPro application. The data cleaning focused on more intra-record and inter-record checks.

7. Basic Counts

The data were collected in two visits to the households. In the first visit, information was collected on 39,203 individuals in 4,009 households (see table 2). In the second visit enumerators were supposed to check on the presence of all individuals interviewed in the first passage and then indicate if those individuals were still living in the household. New members of households were recorded, but not interviewed. Members of households who had left the households were recorded but no attempt were made to interview them. At the end of the second visit, information had been collected for 39,348 individuals in 3,992 households.

In total, information was collected for 39,818 individuals in 4,025 households over the first or the second visit of the EAC-I 2014.

In the final sample of the EAC-I 2014 we keep only the households which were interviewed during both visits. Among these households, 170 were missing key sections in one or the other visit, and had to be removed. The final sample of the EAC-I 2014 is thus distributed as follow:

Table 5. Final Sample Sizes of Individuals and Households by Region

Area Region	Sample Sizes Individuals (Households)		
	Urban	Rural	Total
Kayes	1348 (141)	5003 (407)	6351 (548)
Koulikoro	608 (80)	4933 (431)	5541 (511)
Sikasso	1171 (152)	5177 (372)	6348 (524)
Ségou	1053 (152)	5099 (443)	6152 (595)
Mopti	643 (84)	4296 (434)	4939 (518)
Tombouctou	261 (37)	1633 (224)	1894 (261)
Gao	227 (35)	744 (88)	971 (123)
Bamako	4979 (724)		4979 (724)
Total	10290 (1405)	26885 (2399)	37175 (3804)

8. Datasets

8.1. Description of Datasets

As a reminder, the EAC-I 2014 was implemented in two visits: "1er passage" (July 2014-October 2014) and "2ème passage" (December 2014- February 2015). During each visit three questionnaires were administered:

- Two questionnaires were administered to households respondents
  - o Household questionnaire
  - o Agricultural questionnaire (if applicable)
- One community and price questionnaire administered at the enumeration area level.

The datasets are organized by visits, and then by questionnaire. Please note that some sections of the questionnaires are contained in the same file.

8.2. How to use the data

8.2.1. Naming schemes

Data sets begin with the letters "EACI" followed by letters describing the content or the questionnaire section number (see Annex 1 for a list of the data set names by section). Datasets of the first visit have the suffix "_p1" and datasets for the second visit have the suffix "_p2". For the information collected at the individual level, there is one file containing all of the sections where individual data are collected, for example, education, health, employment, etc. For detailed information of the contents of each data set, please see Annex 1.

The data should always be used in conjunction with the questionnaire. Variable names have from 7 to 9 characters and are based on a system where the first part indicates the section in which the information was collected. For example s04 would indicate employment information in the household questionnaire. Another example would be s3a which would indicate information from the production section of the second visit agriculture questionnaire. This is followed by the question number, for example q07. If the question has multiple parts, the question number would be represented as "q07a". For example, the question s3bq07a is question 7a in section 3b of the second visit agriculture questionnaire: "When did you finish the harvest [DAY]?"

8.2.2. Household data

All household data sets in both the first and second visits contain household identifiers. Households are uniquely identified by combining the grappe (EA sequential number) and menage (household number in the EA). The combination of these variables is used as the unique key variable in the merging of all household type datasets. Individuals are identified by the combination of grappe, menage, and s01q00 (the individual code for each member in the household). The agriculture data uses the same variables to

identify households. Where individual information is collected (often for respondent or plots' manager), the identification code is the same as found in s01q00.

8.2.3. Agriculture data

The agriculture data is collected at the field (bloc) and plot (parcelle) level. Each agricultural section that collects data at the plot level contains identifiers of these plots. Enumerators were instructed to keep the same identification number between sections and over the two visits. A household can have multiple fields and there can be multiple plots within the field. Even in the case of only one parcel within the field, it is necessary to use both variables to uniquely identify each plot exploited by the household.

8.2.4. Community data

The community level data represents information that is common to the area in which the selected households are located. It does not represent a community in the sociological sense. The data do not represent communities in Mali. Community data are identified by "grappe", which is used to merge them with household and agriculture data.

8.3. Geospatial data

To maintain the confidentiality of our respondents, certain parts of the EAC-I 2014 database have not been made publicly available. The confidential variables pertain to (i) names of the respondents to the household and community questionnaires, (ii) village and constituency names, (iii) descriptions of household dwelling and agricultural plot locations, (iv) phone numbers of household members and their reference contacts, (v) GPS-based household and agricultural plot locations, (vi) names of the children of the head/spouse living elsewhere, (vii) names of the deceased household members, (viii) names of individuals listed in the network roster, and (ix) names of field staff.

To facilitate the integration of other spatial data while preserving the confidentiality of sample household and communities, we have computed the average of household GPS coordinates in each EA, applied a random offset within a specified range to the average EA value (the MeasureDHS methodology, with some modifications) and provided the offset EA latitudes and longitudes as part of the file **EACI_Geovariables.**

More specifically, the coordinate modification strategy relies on random offset of EA center-points (or average of household GPS locations by EA in EAC-I) within a specified range determined by an urban/rural classification. In rural areas, where communities are more dispersed and risk of disclosure may be higher, a range of 0-5 km offset is used for 90% of EAs. A range of 0-10 km is applied in 10% of rural clusters, which effectively increases the known range for all rural points to 10 km while introducing a small amount of additional noise. For urban areas, the commune center is used. Urban area communes correspond to arrondissements, and are much smaller in extent than rural communes, resulting in a lower average offset from true location. The commune center (mean center of populated places) is also used in a small number of rural EAs where the 10 km range does not provide sufficient anonymization.

Offset points are constrained at the arrondissement level, so that they fall within the correct area for spatial joins, or point-in-polygon overlays. The result is a set of coordinates, representative at the EA level, that fall within known limits of accuracy. Users should take into account the offset range when considering different types of spatial analysis or queries with the data. Analysis of the spatial relationships between locations in close proximity would not be reliable. However, spatial queries using medium or low resolution datasets should be minimally affected by the offsets.

To increase the usefulness and research potential of the EAC-I data, a set of geospatial variables has also been provided in the file **EACI_Geovariables**. To create the geospatial variables the modified locations are merged with various spatial databases that were available to the survey team and are standardized across LSMS-ISA program countries. These include measures of distance, climatology, soil and terrain and other environmental factors. Time-series on rainfall and vegetation have also been used to describe the survey agricultural season relative to normal conditions. These variables are intended to provide some understanding of how geophysical characteristics vary at the landscape level. The tables in Annex 2 provide the name, type, reference period, resolution, description, and source of each variable.

8.4. Household welfare aggregate

Consumption aggregate:
The consumption aggregate is constructed in three stages. First, the consumption aggregate is calculated at the level of the household. Then to take into account the differences in the composition of households, the aggregate is normalized by dividing it by the household size. Finally, a last normalization is done by dividing by a spatial deflator that takes into account the differences in costs of living between regions and areas (urban/rural) – differences arising from different sources of supply, costs of transport and other transaction costs.
The consumption aggregate includes: (a) food expenditures (including meals eaten outside the home); (b) non-monetary food consumption resulting from consumption of home production, gifts and in-kind payments; and (c) the purchase price of new non-durable goods and services, imputed value of rent for dwellings owned by the household or rented free of charge by a third party, and an estimation of the use value of durable goods. The consumption aggregate takes into account all the specifics of the survey, in particular for the items that can be purchased in both of the two rounds, each of the rounds counts for half.

Food consumption is collected in Section 13 of the questionnaire, using a 7 day recall for both of the rounds. The amounts are annualized by multiplying the data from each round by the ratio 182.5/7. To adjust for the change in prices between the two visits the country is stratified into region and area (urban/rural) of residence for a total of 15 zones. For each of these zones, a temporal price index for the first visit and the second visit is calculated. Each of the indices is normalized by the median of the price indices of the two visits. The food consumption aggregate for the two visits is divided by the normalized price indices.

Non-food consumption (in non-durable goods and services) is collected in Section 12. Annual consumption is derived by multiplying the observed consumption by the frequency of observation. In the case of items

where the consumption expenditure was collected in both rounds, each round counts for one half of the annual expenditure as specified above, without taking into account changes in prices

Imputed rent is calculated for dwellings owned by the household, households that are renting free of charge and some rented dwellings that had no value for rent. Imputed rent is calculated from a linear regression on households paying rent with the logarithm of the amount of rent as the dependent variable, and housing characteristics and dichotomous variables for the region and area of residence as independent variables. In the same way that household's consume only the use of their housing, in terms of poverty analyses, they also consume only the use they get from durable goods. A use value (which is equivalent to consumption) is estimated from the stock of goods listed in the household using their purchase price or their replacement cost value. The durables acquired during the year (transport, household goods, furniture) are not included in the consumption aggregate.

The consumption aggregate that has been calculated at the household level is then divided by household size. The final normalization involves dividing the aggregate by a cost of living spatial deflator.

The consumption aggregate could only be calculated for 3,804 households. The consumption aggregate is stored in data set "EACI2014_agregatconso".

8.5. Weights

In order to produce nationally representative statistics with the data weights or expansion factors need to be applied. These survey weights adjust for differences in the probability of selection within the sample. To accurately use the datasets, the data must be weighted to reflect the distribution of the full population in the country. A population weight was calculated for the households in the sample. It is found in the file named EACIPOIDS.dta.

9. Annexes

Annex 1: description of questionnaires and file names

	SECTION	First Visit			Second visit		
		CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
HOUSEHOLD AND INDIVIDUAL DATA							
0	Control Information	Interviews dates and other control Information	ENUMERATOR	EACICONTROLE_p1	Interviews dates and other control Information	ENUMERATOR	EACICONTROLE_p2
1.	Socio-demographic characteristics of household members	Relationship to household head, date of birth, age, marital status, ethnicity,	Household head or most knowledgeable member/Individual members of the households	EACIIND_p1	Presence of the members in the 1st and 2nd visit. Presence of the parents in the household, education and socio-professional category of absents parent.	Household head or most knowledgeable member/Individual members of the households	EACIIND_p2
2.	Education	Ability to read, write, attendance to formal school, attendance in school in 2012/2013, type of school, result of 2012/2013 school year, attendance in school in 2013/2014, reason for non-attendance, level of instruction, problems encountered at the school, highest level of school attained, highest diploma obtained.	Household members 4 and older. Responses provided by household head or most knowledgeable member or the individual him/herself when he/she is capable.	EACIIND_p1			
3.	Health	Part A. General Health- Health problems in last 4 weeks, type of problem, impact of health problem on normal activities, length of time health problem impacted normal activities, did respondent seek help, why not seek help, where was the first consultation done, who did the first consultation, satisfaction with service, distance of place of service from home, cost of consultation, examinations, medications, hospitalizations, other health costs, use of mosquito net, type of mosquito net.	Part A: Individual him/herself if capable or Household Head or most knowledgeable household member.	EACIIND_p1			
		Part B. Anthropometry, Vaccination, breastfeeding	Part B: children below 5. Responses provided by	EACIIND_p1			

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	SECTION	First Visit CONTENTS	RESPONDENT	FILE NAME	Second visit CONTENTS	RESPONDENT	FILE NAME
			mothers or household head or most knowledgeable household member				
4	Employment	Part A. Activity in the last 7 days, job search in the last 30 days if not employed, length of time without employment, length of time searching for work, methods used to look for work, method used to meet needs.	Household members 6 and older		Part A. Activity in the last 7 days, job search in the last 30 days if not employed, length of time without employment, length of time searching for work, methods used to look for work, method used to meet needs.	Household members 6 and older	EACIIND_p2
		Part B. Principal employment during the last 7 days. Occupation, industry, category of position, type of employer, status of employment, months worked in the last 12 months, average number of hours worked per day, average number of days worked per week, income from work, benefits received, estimated value of benefits, receipt of meals from employment, receipt of retirement benefits, receipt of annual leave, search of another job, availability for another job.	Household members 6 and older	EACIIND_p1	Part B. Principal employment during the last 7 days. Occupation, industry, category of position, type of employer, status of employment, months worked in the last 12 months, average number of hours worked per day, average number of days worked per week, income from work, benefits received, estimated value of benefits, receipt of meals from employment, receipt of retirement benefits, receipt of annual leave, search of another job, availability for another job.	Household members 6 and older	EACIIND_p2
		Part C. Secondary employment during the last 7 days. Occupation, industry, category of position, type of employer, status of employment, months worked in the last 12 months, average hours worked per day, salary	Household members 6 and older				
		Part D. Principal employment during the last 12 months if different from last 7 days. Occupation, industry, category of position, type of employer, status of employment, months worked in the last 12 months, average number of hours worked per day, average number of days worked per week, income from	Household members 6 and older				

	SECTION	First Visit CONTENTS	RESPONDENT	FILE NAME	Second visit CONTENTS	RESPONDENT	FILE NAME
		work, benefits received, estimated value of benefits, receipt of meals from employment.					
		Part C. Secondary employment during the last 12 months. Occupation, industry, category of position, type of employer, status of employment, months worked in the last 12 months, average hours worked per day, salary.	Household members 6 and older				
5	Saving and credits				Possession of a bank account. Type of financial institution used, existence of savings, access to credit, credit requested, type of credit requested, reason for request of credit, amount of credit request, current reimbursement amount.	Household Head or most knowledgeable member	EACIIND_p2
6	Non-Farming Enterprises	Part A: Existence of non-farming Enterprises. Detailed questions about the types of non-agricultural household enterprises possible	Household Head or most knowledgeable member	EACIMEN_p1			
		Part B. Characteristics of household enterprises – principal good or service, ID code of principal respondent, ID code of owner, ID code of manager, date enterprise was formed, number of non-household members working in the enterprise, amount of revenues that go to the household, where the enterprise is located, presence of electricity, presence of running water, presence of a telephone, use of written accounts, does the enterprise have a Fiscal Identification Number, is the enterprise registered in the Commercial Registry, are the workers registered in the CNSS, legal form of the enterprise, expenditures and revenues, number of months in business, identification of household members who work in the	Household Head or most knowledgeable member	EACIENT_p1			

	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
		First Visit			Second visit		
		enterprise, hours worked for men, women and children.					
7	Housing Characteristics	Type of dwelling, number of rooms, status of occupation, monthly rent, payment of rent (or part) by non-household member, monthly rent including services, payment of monthly bills, principal material of the exterior walls, the roof and floors, water connection, monthly water bill, other water expenses, principal sources of drinking water in dry season and rainy season, distance to drinking water source in dry season, time to fetch drinking water, distance to drinking water in rainy season, time to fetch water in rainy season, connection to electricity grid, monthly electricity bill, principal source of lighting, breaks in electric service, number of breaks, average duration of breaks, other expenses for electricity, connection to landline, monthly telephone bill, connection to internet, monthly bill for internet connection, connection to cable or satellite television, monthly bill for cable or satellite television, principal fuels used for cooking, how trash is disposed of, type of sanitation in the dwelling, disposition of waste	Household Head or most knowledgeable member	EACIMEN_p1			
8	Durable Goods	Possession of good, number of items, age of the newest, purchase value, current value.	Household Head or most knowledgeable member	EACIACT_p1			
9	Non-work income	Receipt of retirement pension, widow's pension, disability pension, child support, rental income, interest, dividends, identification of household member who receives, amount received	Household Head or most knowledgeable member	EACIREV_p1			

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
10	Remittances	Part A. Remittances received by the household. ID code of member who received, relationship to sender, nature of good or service, place of residence of sender, method of transfer, total amount received in last 12 months	Household Head or most knowledgeable member	EACITR_p1			
		Part B. Remittances sent by the household. ID code of member who sent, relationship to receiver, nature of good or service, place of residence of receiver, method of transfer, total amount sent in last 12 months.	Household Head or most knowledgeable member	EACITR_p2			
11	Shocks and survival strategies				Negative events during the last 12 months, 3 worst problems, changes in welfare because of shock, strategy adopted to respond to shock.	Household Head or most knowledgeable member	EACICHOC_p2
12	Non-Food expenditures	Part A. Purchase of item and amount spent, last 7 days	Household Head or most knowledgeable member	EACINA7JO_p1	Part A. Purchase of item and amount spent, last 7 days	Household Head or most knowledgeable member	EACINA7JO_p2
		Part B. Purchase of item and amount spent last 30 days		EACINA30J_p1	Part B. Purchase of item and amount spent last 30 days		EACINA30J_p2
		Part C. Purchase of item and amount spent, last 6 months.		EACINA6MO_p1			
		Part D. Purchase of item and amount spent, last 12 months, holidays and ceremonies during the last 12 months.		EACINA12M_p1			
		Part E. Purchase of item and amount spent, holidays and ceremonies during the last 12 months.		EACIFETE_p1			
13	Food expenditures in the last 7 days	Consumption of item, quantity consumed that was purchased, quantity consumed that was from home production, total quantity consumed received as give, as in-kind or by barter	Household Head or most knowledgeable member	EACIALI_p1	Consumption of item, quantity consumed that was purchased, quantity consumed that was from home production, total quantity consumed received as give, as in-kind or by barter	Household Head or most knowledgeable member	EACIALI_p2

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
14	Additional food consumption information	Number of days categories of food were eaten, non-household members eating meals with household, number of days, number of meals	Household Head or most knowledgeable member	EACICOMALI1_p1 EACICOMALI2_p1	Number of days categories of food were eaten, non-household members eating meals with household, number of days, number of meals	Household head	EACICOMALI1_p2, EACICOMALI2_p2
15	Fisheries	Participation in Fishing activities, members participating in the fishing activities (up to 3), non-household members workers, type of fish caught, average quantity of fish caught per week in the past 12 months, use of quantity of fish caught, means of conservation of fish.	Household Head or most knowledgeable member	EACIMEN_p1	Participation in Fishing activities, members participating in the fishing activities (up to 3), non-household members workers, type of fish caught, average quantity of fish caught per week in the past 12 months, use of quantity of fish caught, means of conservation of fish.	Household Head or most knowledgeable member	EACIMEN_p2
16	Safety Nets				Receipts of benefits from government, or NGO's social programs (cash transfers, cereals transfers, school feeding, free healthcare, bed nets, etc.)	Household Head or most knowledgeable member	EACISECURITE_p2
17	Food Security				Worry over having enough to eat during the last 7 days, strategies if did not have enough to eat, number of meals for adults and children, months in the last 12 when did not have enough to eat, reasons for not having enough to eat	Household Head or most knowledgeable member	EACIMEN_p2
18	Forestry				Access and use of forest resources, use of wood for cooking etc.		EACIMEN_p2
	AGRICULTURE DATA						
1A	Stocks	Quantity of agricultural products harvested, sold, and remaining in stocks from previous year campaign. Level of stocks from two campaigns ago.	Household Head or most knowledgeable member	EACISTOCK_1			
1B	Farm	Does household have access to land, details of each parcel, GPS coordinates of parcel, size of parcel (with GPS, farmer estimation), distance of parcel from dwelling, method of travel to parcel, length of	Household Head or most knowledgeable member	EACIEXPLOI_p1			

	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
		First Visit			**Second visit**		
		time to go to parcel, how long the parcel has been used by the household, ownership mode, ID code of owner of parcel, type of property title held, method to acquire parcel, estimated value of the parcel, type of soil, topography, presence of erosion problems, reason for erosion, control of erosion problems, method used to control erosion, principal source of water during the off season, method of drainage used during the off season, second source water during off season, principal source of water during rainy season, was the parcel used during the off season or rainy season, number of consecutive years of use for the parcel, ID code of person in charge of plot.					
1C	Crops	Type of crops on each parcel, system of cropping, amount of land cultivated, type of seeds used, where seeds were acquired, quantity of seeds used.	Household Head or most knowledgeable member	EACICULTURE_p1			
2A	Agriculture Extension	Relations with agricultural extension programs, benefits from programs, type of programs (seeds, fertilizer), and difficulties encountered.	Household Head or most knowledgeable member	EACIINTRANT_p1			
2B	Labor	Labor (family, non-family labor, mutual aid groups) used for each plots for soil preparation. Number of days for men, women and children, amount paid for non-family labor.	Household Head or most knowledgeable member	EACIMAINOUVRE_p1			
1D	Update of Plot-Crops rosters				Plot-crops list from the first visit, was there any changes in the cultures of the first visit, reasons for new or change of culture, list of replacement cultures or new cultures	Household Head or most knowledgeable member	EACIS1D_p2
1E	Plot-Crops updated list for second visit				Plot crops list of 2nd visit (updated from changes recorded in 1D). Quantity and price of seeds used.	Household Head or most	EACIS1E_p2

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
						knowledgeable member	
2C	Agricultural inputs				Was plot exploited during the agricultural campaign, use of organic fertilizers (how acquired, amount used, date it was applied), use of crop residue on parcel, use of inorganic/chemical fertilizer (amount used, date of application), use of pesticides fungicides and herbicides (amount used, date it was applied)	Household Head or most knowledgeable member	EACIS2C_p2
2D	Cost of agricultural inputs				Amount of inputs (detailed list of organic fertilizer, chemical fertilizers, herbicides) used, where acquired, amount spent for purchases, receipt of inputs as gift, where gift was received.	Household Head or most knowledgeable member	EACIS2D_p2
2E	Agricultural Inputs subsidies				Receipt of subsidies for fertilizers, improved seeds, reason for no receipts, use of subsidies, alternate use of subsidies	Household Head or most knowledgeable member	EACIS2E_p2
2F	Labor				Labor (family, non-family labor, mutual aid groups) used for each plots for crops maintenance, and harvest. Number of days for men, women and children, amount paid for non-family labor.	Household Head or most knowledgeable member	EACIS2F_p2
3A	Production and sales				Type of crop, amount of harvest, loss of production, percentage of loss, principal reason for loss, sale, quantity sold, amount received, who purchased the harvest, where sold, number of times sold, costs of transport and other charges, ID code of member who controls the revenue, transformation of product for sale or household consumption, amount transformed, value of sold transformed product, amount consumed by household, amount given as gifts, amount saved for seeds, amount currently as stock,	Household Head or most knowledgeable member	EACIS3A_p2

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
					principal methods for storing stock, protections measures for stock, principal reason for keeping stocks, amount in stock, how many months will the stock last. Charges to commercialize the crops.		
3B	Perennial crops				**Perennial crop production:** Presence of such crops, number of months crops were generated, average amount produced each month, amount consumed by the household, amount given as gifts, amount sold, amount earned from sales, ID code of member who controls revenues, amount spend in transport and other charges for sales.	Household Head or most knowledgeable member	EACIS3B_p2
4	Livestock				**Number and type of livestock:** number of owned or raising of livestock during last 12 months, principal reasons for owning or raising livestock, has household given livestock to another household, how many sent to other household, principal reason for sending livestock to other household, number owned by household, number of animals given to this household by others, what does the household get for raising animals from other households, number from other households, number of animals born during the last 12 months, number of animals given to this household during last 12 months, number of animals given as gifts to this household during last 12 months, number of animals received from the State or and NGO during the last 12 months, number of animals purchased during the last 12 months, where purchased, value of purchases, number of animals	Household Head or most knowledgeable member	EACIS4A_p2

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
					slaughtered during last 12 months, number given as gifts to other households during last 12 months, number stolen during last 12 months, number killed by natural disasters during last 12 months, number died of disease during last 12 months, number sold during last 12 months, where sold, amount paid for commissions for sales, amount paid in taxes on sales, net value of the sales, ID code of the principal person who controls the revenue, ID code of the second person.		
					Meat, leather and skins production: slaughter of animals during last 12 months to produce meat, number of animals slaughtered by month, average weight of animals slaughtered, average amount of meat produced, average amount sold, amount received for sales, where sold product, ID code of member who controls the revenue, amount consumed in the household, amount of meat given to the household that owned the animal, amount given as gifts to other households, amount of other charges for production of meat, production of skins and leather, amount of skins and leather produced, amount of skins and leather sold, amount received for sales, ID code of the member who controls the revenues	Household Head or most knowledgeable member	EACIS4B_p2
					Production of Milk. Number of animals used to produce milk, quantity of milk produced in liters in average, sale of milk production, id code of household members who control the income from milk production, commercialization	Household Head or most knowledgeable member	EACIS4C_p2

	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
		First Visit			Second visit		
					information: place, quantity sold, quantity given, quantity transformed for yoghourt, butter, cheese		
					Production of eggs. Number of eggs produced each year over the past 12 months, number of eggs sold, consumed. Code ID of household members who control income from sale of eggs	Household Head or most knowledgeable member	EACIS4D_p2
					Feeding and health of livestock, number of animals vaccinated during the last 12 months who were already vaccinated, number vaccinated during the last 12 months, who provided the vaccines, what vaccines were used, amount paid for vaccinations, number dewormed during last 12 months, who provided the deworming services, amount paid for deworming, number treated for ticks or other parasites during the last 12 months, who provided the service, amount paid, number with health problems during the last 12 months, use of medical services, who provided the services, amount paid, use of traditional methods to treat illness, who provided the traditional services, effectiveness of the traditional services, amount paid, knowledge of plaints to use for treatments, would respondent like traditional methods to be researched to provide better services	Household Head or most knowledgeable member	EACIS4E_p2
5	Equipment				Possession of equipment, number owned, how much they could be sold for today, age of the newest, price paid at purchase, how many were owned 12 months ago, was the equipment used during the last 12	Household Head or most knowledgeable member	EACIS5_P2

		First Visit			Second visit		
	SECTION	CONTENTS	RESPONDENT	FILE NAME	CONTENTS	RESPONDENT	FILE NAME
					months, equipment rented to other households during last 12 months, amount received for rentals, household rented equipment from other households or an NGO, amount spend for rental.		
C0MMUNITY DATA							
0	List of respondents	Names of respondents, sex, age, function in the community, number of years in the community, level of education	Respondents in the community	EACIS00_p1			
1	Existence and accessibility of social services	Does the service exist, how many in the community, if not in the community, how far away, method of transport to distant services, average time to go to the distant service, principal problems with services in the community	Respondents in the community	EACIS01_p1			
2	Agriculture	Practice of agriculture in the community, number of agricultural cooperatives, names of principal cooperatives, services provided by cooperatives, presence of a tractor, extension service agent in the community, irrigation program in the community, number of participants in irrigation program, principal sources of irrigation, availability of year round water, number of seed sellers, possibility of land sales, presence of sharecroppers, amount paid to agricultural workers, workers in the community, usual month to plant millet, sorghum, rice, cowpeas, onions, peanuts, and tomatoes, usual month to harvest millet, sorghum, rice, cowpeas, onions, peanuts, and tomatoes	Respondents in the community	EACIS02_p1			
3	Community needs	Infrastructure projects in the community during last 5 years, who	Respondents in the community	EACIS03_p1			

	SECTION	First Visit CONTENTS	RESPONDENT	FILE NAME	Second visit CONTENTS	RESPONDENT	FILE NAME
		proposed the project, discussions of project in community, who participated in the discussions, was the project undertaken, source of resources for project, contributions by members of the community					
4	Market prices	Market prices for main consumption items	Field work staff	EACIS04_p1	Market prices for main consumption items	Field work staff	EACIS04_p2
				CONSTRUCTED DATA SET			
	WEIGHT	Household weight		EACIPOIDS			

Annex 2: EAC-I 14 - Geovariables

Theme	Source	Dataset Title	Variable Name	Variable Type	Reference Period	Resolution	Description	Web
	DNR & World Bank	Distance to Main Road	dist_road	Continuous	2007	N/A	Distance to nearest major road (class 'Routes Nationales')	
	T. Brinkhoff: CityPopulation	Distance to Towns	dist_popcenter	Continuous	2009	N/A	Distance to nearest town of >20,000 based on 2009 Census	http://www.citypopulation.de
	UNOCHA/ WFP	Distance to Border Posts	dist_border	Continuous	N/A	N/A	Distance to nearest border control post	
	INSTAT	Distance to Regional Capital	dist_admctr	Continuous	N/A	N/A	Distance to the capital of the region of residence	
Climatology	UC Berkeley	WorldClim Bioclimatic Variables	af_bio_1	Continuous	1960-1990	0.008333 dd	Average annual temperature calculated from monthly climatology, multiplied by 10 (°C)	http://www.worldclim.org/bioclim
	UC Berkeley	WorldClim Bioclimatic Variables	af_bio_8	Continuous	1960-1990	0.008333 dd	Average temperature of the wettest quarter, from monthly climatology, multiplied by 10. (°C)	http://www.worldclim.org/bioclim
	UC Berkeley	WorldClim Bioclimatic Variables	af_bio_12	Continuous	1960-1990	0.008333 dd	Total annual precipitation, from monthly climatology (mm)	http://www.worldclim.org/bioclim
	UC Berkeley	WorldClim Bioclimatic Variables	af_bio_13	Continuous	1960-1990	0.008333 dd	Precipitation of wettest month, from monthly climatology (mm)	http://www.worldclim.org/bioclim
	UC Berkeley	WorldClim Bioclimatic Variables	af_bio_16	Continuous	1960-1990	0.008333 dd	Precipitation of wettest quarter, from monthly climatology (mm)	http://www.worldclim.org/bioclim
Landscape Typology	IIASA-IFPRI	Cropland Map v8	hybrid_V8	Continuous	2009	0.008333 dd	Percentage cropland ranging from 0 to 100	http://ionia1.esrin.esa.int/
	IFPRI	IFPRI standardized AEZ based on elevation, climatology	ssa_aez09	Categorical		0.00833 dd	Agro-ecological zones created using WorldClim climate data and 0.0833dd resolution LGP data from IIASA.	http://harvestchoice.org/production/biophysical/agroecology
	WorldPop	Mali 2009 Population Density v 2b	popdensity	Categorical		0.00833 dd	Population per square kilometer, aggregated from source.	https://www.worldpop.org/

Theme	Source	Dataset Title	Variable Name	Variable Type	Reference Period	Resolution	Description	Web
Soil & Terrain	NASA	SRTM	srtm1k	Continuous		0.00833 dd	Elevation (m), aggregated to 1km block	ftp://xftp.jrc.it/pub/srtmV4/arcasci/
	AfSIS	Topographic Wetness Index	twi	Continuous		0.000833 dd	Downloaded from AfSIS website. Derived from modified 90m SRTM. Local upslope contributing area and slope are combined to determine the potential wetness index: WI = ln (A s / tan(b)) where A s is flow accumulation or effective drainage area and b is slope gradient.	http://www.ciesin.columbia.edu/afsis/bafsis_fullmap.htm#
	FAO	Harmonized World Soil Database	sq1	Categorical		0.083333 dd	Nutrient availability	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq2	Categorical		0.083333 dd	Nutrient retention capacity	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq3	Categorical		0.083333 dd	Rooting conditions	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq4	Categorical		0.083333 dd	Oxygen availability to roots	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq5	Categorical		0.083333 dd	Excess salts	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq6	Categorical		0.083333 dd	Toxicity	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
	FAO	Harmonized World Soil Database	sq7	Categorical		0.083333 dd	Workability (constraining field management)	http://www.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML/
Crop Season Parameters	NOAA CPC	ARC 2	anntot_avg	Continuous	1983-2012	0.1 dd	Long-term average annual total rainfall (mm)	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2
	NOAA CPC	ARC 2	wetQ_avg	Continuous	1983-2012	0.1 dd	Long-term average total rainfall in wettest quarter (mm) within 12-month period	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2
	NOAA CPC	ARC 2	wetQ_avgstart	Continuous	1983-2012	0.1 dd	Average start of wettest quarter in dekads 1-36, where first dekad of Jan =1	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2

Theme	Source	Dataset Title	Variable Name	Variable Type	Reference Period	Resolution	Description	Web
	NOAA CPC	ARC 2	h2014_tot	Continuous	2014	0.1 dd	12-month total rainfall (mm), starting January 2014	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2
	NOAA CPC	ARC 2	h2014_wetQ	Continuous	2014	0.1 dd	Total rainfall in wettest quarter (mm) within 12-month periods starting January 2014	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2
	NOAA CPC	ARC 2	h2014_wetQstart	Continuous	2014	0.1 dd	Start of wettest quarter in dekads 1-36, where first dekad of January 2014 =1	ftp://ftp.cpc.ncep.noaa.gov/fews/fewsdata/africa/arc2
	NOAA CDR	NDVI version 4	ndvi_avg	Continuous	1983-2012	0.05 dd	Long-term average NDVI value in primary growing season (highest quarter)	Google Earth Engine, accessed Jan 2019
	NOAA CDR	NDVI version 4	ndvi_max	Continuous	1983-2012	0.05 dd	Long-term maximum dekadal NDVI value in primary growing season (highest quarter)	Google Earth Engine, accessed Jan 2019
	NOAA CDR	NDVI version 4	h2014_avg	Continuous	2014	0.05 dd	Average NDVI value in primary growing season (highest quarter) in 2014	Google Earth Engine, accessed Jan 2019
	NOAA CDR	NDVI version 4	h2014_max	Continuous	2014	0.05 dd	Maximum dekadal NDVI value in primary growing season (highest quarter) in 2014	Google Earth Engine, accessed Jan 2019